

European Journal of Service Management

Vol. 28/2, 4/2018

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Paper version of the journal is its original version

European Journal of Service Management is indexed in BazEkon database, Index Copernicus and Bazhum

Articles are available at <https://bazybg.uek.krakow.pl/bazekon/przegladaj/E/2450-8535>; <https://wnus.edu.pl/ejsm/pl>

ISSN 2450-8535 (1640-6818, 1898-0511)

SZCZECIN UNIVERSITY PRESS

Edition I. Publishing sheet size 41.0. Printing sheet size 34.3. Format B5. Printed in 100 copies

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CHARGES REFUNDED BY THE CARRIER RESPONSIBLE FOR DAMAGE TO THE CONSIGNMENT

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION K12

KEYWORDS contract of carriage, carrier's liability, other charges incurred in respect of carriage

ABSTRACT In addition to the payment of compensation for damage to carried goods, some transport regulations also oblige carriers to refund the carriage charges, customs duties and other charges (costs) incurred in respect of the carriage of the goods. However, these provisions do not contain a definition of "other charges incurred in respect of carriage". Thus, in academic studies and judicature it is understood differently. The aim of the article is to present possible solutions in this respect. At the same time, the author indicates which solutions she is in favour of, presenting arguments in support of her position. Comments in this respect are preceded by an explanation of the legal nature of the claim for refund of this expenditure.

Introduction

In accordance with Article 23 (4) of the CMR, in addition to compensation for damage to the goods, the carrier is obliged to refund the carriage charge, customs duties and other charges incurred in respect of the carriage of the goods, in full in case of total loss and in proportion to the loss sustained in case of partial loss, but not other damage shall be payable. An analogous regulation is contained in the provision of Article 82 of the Polish Transport Law Act

and in the Article 30 § 4 of the CIM, which additionally states that the refund does not include excise duties for goods carried under a procedure suspending those duties. However, there is no such regulation in other international transport conventions.

At the same time, these provisions do not contain a definition of “other charges incurred in respect of the carriage”. The question then arises as to what should be understood by this term? There are two groups of views on this issue in judicial and literature – one in favour of a narrow and one in favour of a broad approach to this cost.

In order to find the correct meaning of this concept it is necessary to define the legal nature of claim for refund of expenses. Despite some discrepancies in older literature, it seems that this issue has recently been unambiguously resolved (Wesołowski, 2013, p. 536). There is no doubt that, under the provisions in question, the carrier is obliged not only to repay what he himself received in performance of the contract, but also to pay the charges incurred in connection with transport to other persons (forwarder, handling and storage companies, customs and tax authorities) if these expenses have been ineffective because of the damage caused by the goods.

It should be assumed that, as regards the costs incurred for the benefit of the carrier (transport costs, other charges for services related to transport), the claim for their payment is a claim for reimbursement of undue benefit (in Poland Article 410 § 2 of the Civil Code), assuming that the basis for the benefit has been eliminated or the intended purpose of the benefit has not been achieved. In the case of costs incurred for third persons, the claim for repayment by carrier is of a compensation nature (see Kolarski, 2002, pp. 151–152; Ambrożuk, 2011, p. 87).

A restrictive understanding of “other charges incurred in respect of carriage”

The proponents of the narrow classification of “charges in respect of carriage” are of the opinion that it covers only the expenses (costs) normally incurred in concluding a transport contract and the proper transport of the goods to the place of destination. Their repayment by the carrier sometimes depends on whose benefit they were incurred.

In this context, the following are therefore refundable: the freight forwarder’s remuneration, the costs of cargo insurance during transport, expenditure on loading and stowage of goods on the means of transport (e.g. judgment of the German Bundesgerichtshof of 3 July 1974; similarly (Rodière, 1970, p. 315), which stipulated that the repayment is subject to the condition that the activities are carried out by the sender), expenditure incurred in obtaining the required documents.

Such an understanding of the notion under consideration does not make it possible to cover those expenses which are a consequence of the mere fact of damage to the consignment. It is presented primarily in German judiciary and literature. Therefore, representatives of this approach speak out against, among others, the refund of, e.g:

- the costs of expert reports (Jesser-Huß, 2009, p. 1079; Koller, 2013, p. 1116; the Oberlandesgericht Düsseldorf in its judgment of 14 March 2007),
- storage, return transport and disposal (utilization) costs (Jesser-Huß, 2009, p. 1079; Koller, 2013, p. 1116); similarly, the Belgian Tribunal de Commerce in Gand in its judgment of 29 June 1999, which refused to recover cost of cleaning and disposal the goods; similarly, the Cour d’Appel in Anvers in its judgment of 17 June 2002, also commented on disposal costs). However, the German Bundesgerichtshof in its judgment of 3 July 1974, considered that the storage costs of the damaged goods should be refunded,
- costs of VAT and excise duties (see: judgment of the Belgian Tribunal de Commerce in Anvers in its judgment of 12 May 1999, judgment of the Polish Sąd Okręgowy in Łódź of 27 October 2017).

A broad understanding of “other charges incurred in respect of carriage”

Some authors argue that the provision obliging the carrier to return “other charges in respect of carriage” should be interpreted broadly but sensibly. In such an understanding, it includes not only the expenses incurred in connection with the conclusion of the contract of carriage but also any expenses (costs) which are incurred as a consequence of damage caused in the consignment by the carrier or persons for which the carrier is responsible. It does not matter for whom (carrier, third party, e.g. forwarder or tax authority) and by whom (sender, consignee) they were incurred. These costs include, but are not limited to, the following:

- excise tax which the entitled person must pay to customs authorities in connection with the loss of goods (e.g. the House of Lords in the judgment of 9 November 1997; the Cour d’Appel in Anvers in the judgment of 29 June 2009; the Polish Sąd Okręgowy in Łódź in the judgment of 31 July 2015),
- VAT which is not refundable in the event of the disappearance of goods (see, for example, the Belgian Cour de Cassation in its judgment of 30 May 2002; the Cour d’Appel in Anvers in its judgments of 15 June 2009 and 29 June 2009; the French Cour de Cassation in its judgment of 15 October 2002; the Paris Cour de Appel in Paris in its judgment of 30 March 1973),
- the costs of expert reports concerning the damaged goods (see: the French Cour de Cassation in its judgment of 15 October 2003; the Cour d’Appel in Poitiers in its judgment of 31 March 1971; the Rechtbank van Koophandel in Mechelen in its judgment of 18 November 1999; the Tribunal de Commerce in Malines in its judgment of 18 November 1999),
- costs of return transport of goods when the consignee refused to collect them because of damage (e.g. the English Queen’s Bench Division in the judgment of 22 November 1980, which, however, in an earlier judgment of 20 November 1973, refused to award such expenditure),
- costs of storage of damaged goods (e.g. the German Bundesgerichtshof in the judgment of 3 July 1974).

Attempt to solve the problem

It is difficult to resolve the issue of a broad or narrow understanding of the scope of this obligation. The CMR (like the CIM) does not provide clear guidance. The provision of Article 6 (1)(i) of the CMR may be helpful to a certain extent. This provision mentions the following as charges relating to carriage transport: carriage charges, supplementary charges, custom duties and other charges from the making of the contract to the time of delivery (the subsidiary role of this provision is noted both in the literature (Wesołowski, 2013, p. 539) and in judicature – the Tribunal de Commerce in Anvers in its judgment of 12 May 1999, the Polish Sąd Okręgowy in Łódź, in the judgment of 27 October 2017, which refused to grant refund of excise duty and stating that the charges incurred in connection with the transport of goods, in order to be refundable, should be similar to that of a carriage charges and customs duty, which are *expressis verbis* listed in Article 6 (1)(i) of the CMR). Unfortunately, the conclusions drawn from this provision remains limited.

Undoubtedly, only those costs which do not increase the value of goods at the place and time of shipment for transport may be compensated under Article 23 (4) of the CMR (see the Bundesgerichtshof in the judgment of 10 December 2009). The issue of separating the components of the value of goods from the place and time of shipment for transport and the costs associated with transport is not always obvious. This is illustrated by the judgment of the French Cour de Cassation of 5 October 2011, which stated that even if duties on cigarettes are paid

at destination, such duties should be added to the value of the goods and do not constitute costs incurred in respect of carriage within the meaning of Article 23 (4) of the CMR.

The value of the packaging may be also debatable. As a rule, it is a part of the consignment, so packaging costs should be refunded only if the packaging was used for a specific shipment and did not increase the value of the goods at the place and time of shipment (the Queen's Bench Division judgment of 20 November 1973; conversely, however (Rodière, 1970, p. 315), which assumes that the costs of preparing the consignment for carriage and its packaging are not to be refunded because they add to the value of goods, while (Loewe, 1976, pp. 503, 568) takes a similar position on costs of preparing the consignment for carriage; on the other hand (Clarke, 2009, pp. 307–308), accepts that all expenses are refundable provided that the carrier could have foreseen them at the time of conclusion of the contract).

It would seem that, a narrow understanding of the notion of “the charges incurred in respect of carriage” which are repayable by the carrier should be upheld. Such an interpretation of the above notion is supported first of all by the linguistic interpretation of the above mentioned regulations, as they indicate the charges incurred “in respect of carriage” and not in connection with damage incurred in the consignment. In interpreting Article 23 (4) of the CMR in particular, the content of Article 6 (1)(i) of the CMR referred to above cannot be disregarded either.

Not less important is the purpose of the provisions concerning the determination of the amount of compensation due from the carrier in the event of damage to goods. The purpose of these rule is to enable the carrier to calculate the risks associated with transport. Contrary to the mere compensation for damage to goods, which is limited in various ways (e.g. by limits on the amount of compensation), the obligation to refund the charges in question is not limited in any way. In some cases, these charges may therefore be much higher than the amount of compensation for damage to the substance of the goods. Therefore, the rules governing their refund should be interpreted strictly. This means that, in principle, only costs that are strictly related to the translocation of the goods should be included within the scope of such charges. These costs are independent of whether the goods have been lost in whole or in part or whether the transport has been carried out correctly and the goods have been delivered to the consignee.

On the other hand, however, there are some arguments in favour of a broader understanding of the provisions in question. Provisions limiting the liability of the carrier are exceptional in nature. Consequently, questionable issues should be resolved in accordance with the principle of full compensation. Repayment should cover charges incurred in connection with activities incumbent on the carrier under the contract (e.g. care for the goods), and activities incumbent on the carrier under regulations (e.g. environmental protection) but not undertaken by the carrier itself for some reason. This includes, for example, the costs of cleaning up the place of accident, the costs of segregation of goods and their reloading and repositioning on the means of transport, as well as intentional costs incurred in order to minimize the damage. This also applies to rescue costs (see the Oberlandesgericht Düsseldorf in its judgment of 26 July 2004 and the French Court of Cassation in its judgment of 15 October 2002). These costs, often borne by the sender or the consignee due to the carrier's inactivity, should still be borne by the latter if they relate to goods which have not arrived at their destination.

The obligation to refund the charges in question cannot cover further financial consequences of damage directly occurring in the consignment. This is due to the provisions of Article 23 (4) of the CMR and Article 30 § 4 of the CIM, which clearly state that no further damage shall be payable. Therefore, expenses incurred for the disposal or storage of goods are not covered by this obligation (however, the Bundesgerichtshof decided differently

in its judgment of 3 July 1974, in which it considered that the costs of storage of the damaged goods should be covered).

When it comes to the costs of return transport in order to repair a damaged consignment (e.g. by the manufacturer), it should not be forgotten that in accordance with Article 25 of the CMR and Article 32 of the CIM, the compensation for damage to the goods is determined in a way that does not depend on the cost of repair. Sometimes it is more reasonable to sell a damaged item at a reduced price than to repair it. Therefore, the demand to cover the costs of the return transport, as a rule, should be considered unjustified (the following authors argue in favour of the refusal to cover the above costs: (Jesser-Huß, 2009, p. 1079; Koller, 2013, p. 1116; Wesolowski, 2013, p. 540). The English Queen's Bench Division, in its judgment of 22 November 1980, held that it was justified to recover the costs of a return journey where the consignee refused to collect the damaged goods, although in an earlier judgment of 20 November 1973, assumed that the costs of the return of the damaged machine, its storage and inspection were not included in the costs referred to in Article 23 (4) of CMR).

Similarly, contractual penalties or damages paid by the sender or the consignee (e.g. for damages caused by the transported shipment in the property of a third party) cannot be considered as "other charges" within the meaning of the commented provisions.

There are also discrepancies in literature and judicature regarding the costs of taxes, in particular VAT. It should be assumed that if this tax has been paid and the entitled person is not in a position to obtain a refund from the tax office, he may claim from the carrier a refund of the VAT paid under other costs referred to commented provisions. However, a person counting on a tax refund can be a buyer of goods, who did not provide it to the tax office, but paid it to the seller within the price of the purchased goods. Therefore, it is not possible to speak of a tax refund in relation to such a recipient. If he is also entitled to compensation for lost or damaged goods and he cannot be refunded from the tax office for the tax paid in the price of the goods, the compensation for him should be granted (adjudged) at the gross price of the goods, including VAT (the French Cour de Cassation in its judgment of 15 October 2002; the Court de Appeal in Paris in its judgment of 30 March 1973; the Belgian Cour de Cassation in its judgment of 30 May 2002; the Cour de Appel in Anvers in its judgment of 15 June 2009 and in its judgment of 29 June 2009, also applying to excise duties. The Belgian Commercial Cour in Anvers, in its judgment of 12 May 1999, ruled against the reimbursement of VAT. That court limited the costs referred to in Article 23 (4) of the CMR to the costs referred to in Article 6 (1)(i) of the CMR).

With regard to excise duty, attention should also be drawn to the position taken by the House of Lords in its judgment of 9 November 1997. In that judgment, referring also to the French version of the CMR Convention and the rules of interpretation for international law, that court held that a payment for charges incurred in respect of carriage must be interpreted 'meaningfully and broadly' and thus the costs referred to in Article 23 (4) of the CMR also include refund of the excise duty which the beneficiary must pay to the customs authorities in connection with the disappearance of whisky).

Conclusions

As can be seen from the above considerations, the question of repayment by the carrier of the costs in question is highly debatable. Besides the extreme positions, there is a tendency to search for a compromise interpretation of the provisions constituting the basis for awarding a refund of these charges. Such a view would make it possible to request a refund not only for the costs incurred in connection with the conclusion of the contract

of carriage, which turned out to be in vain, but also for some other costs incurred after the damage to the goods transported had occurred. First of all, it concerns the costs of carrying out activities which were incumbent on the carrier and which were not carried out by the carrier himself. However, these regulations cannot be the basis for claiming compensation for other damages incurred due to loss or damage to the shipment, such as costs of disposal (neutralisation) of damaged goods, storage costs.

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Cite this article as: Ambrożuk, D. (2018). Charges refunded by the carrier responsible for damage to the consignment. *European Journal of Service Management*, 4 (28/2), 9–15. DOI: 10.18276/ejasm.2018.28/2-01.

REVITALISATION OF PROBLEM AREAS AS AN INSTRUMENT FOR SOCIAL AND ECONOMIC ACTIVITY IN THE POLISH MUNICIPALITIES

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION I39

KEYWORDS problem areas, revitalisation, social and economic activity, municipality

ABSTRACT The regional policy is becoming one of the most important elements in the development policy, in particular regarding the problem areas. The article aims to analyse the rationality of revitalisation of areas threatened with permanent marginalisation, defined as problem areas. The conducted analysis enabled drawing general conclusions and providing recommendations for decision makers. The research method adopted by the authors is secondary research, based on the analysis of data from government sources and literature review.

Introduction

The sustainable social and regional development requires the participation of smaller cities and rural areas in the development processes. After the political transformation in most of these regions we can observe technical wear and tear of both infrastructure and buildings, in particular residential buildings, as well as adverse demographic and social changes. The phenomena threaten the regions with permanent marginalization. The situation can be

tackled with integrated revitalization activities which will help to achieve positive results in the social, economic and spatial sphere. Revitalization strengthens the residential, economic and cultural functions, which helps to improve the inhabitants' quality of life. These issues have been analysed in this article. The article also examines synthetically the essence of problem areas and their revitalization by presenting the scope and objectives of revitalization process. As a result it was possible to formulate proposals to create development potential in problem areas. In the article, the deduction and inference methods have been applied.

Problem Areas as Areas of Strategic Intervention

In many regions, urban and rural areas in Poland, we can observe numerous conditions affecting their development which require directed support in creating the sustainable development of the country. The sustainable economic development of Poland is related to a great extent with innovative regional as well as municipal economy. In numerous regions and municipalities we can observe areas with negative determinants limiting the opportunities for development. These are areas of low development level and limited availability of services. The regions, as areas threatened with permanent marginalization also defined as problem areas, require support in their development processes, which involves e.g. encouraging local communities to be more active, and develop the local unused potential. It will make it possible to develop social potential and boost social innovation.

According to P. Śleszyński research team, the areas threatened with permanent marginalization occurred in Poland in 2016 in 728 municipalities at the area of 104.8 thou. km² inhabited by 6.1 million people (Śleszyński, Bański, Degórski, Komornicki, 2017). The Strategy for Responsible Development provides that over 1/5 of urban area inhabited by 2.4 million people is subject to degradation processes, and half of them includes old downtown districts (*Strategia na rzecz...*, 2018). 20% of urban areas require coordinated activities to counteract this negative phenomenon (www.sejm.gov.pl). Among many reasons for disparities in the development of regions, urban and rural areas, the reference literature indicates mainly historical reasons, i.e. different social and economic situation during the partitions of Poland, unequal development in the interwar period and the period of centrally-controlled economy, as well as the effects of transformation, globalization and European integration (*Jak rozwijała się...*, 2013). Because of these reasons it is difficult to transform the regions properly, meeting social expectations, which makes these areas lag behind other regions in the country. These regions are most frequently defined as degraded and problem areas, as well as areas of low effectiveness of social and economic, and spatial structures, underdeveloped, poor areas, in need, poorly developed, conflict-prone, endangered, lagging behind others and dilapidated.

These areas are included the national strategic documents, defining the development objectives of the country, regions or municipalities. They include, *inter alia*:

- Revitalisation Act (Official Journal of Laws, 2015),
- National Revitalisation Plan (*Strategia na rzecz...*, 2018),
- Guidelines on revitalization in the operational programmes 2014–2020 (*Wytyczne...*, 2016),
- National Strategy for Regional Development 2010–2020: Regions, Cities, Rural Areas (*Strategia na rzecz...*, 2018),
- National Spatial Development Concept 2030 (<http://mir.bip.gov.pl/strategie-rozwoj-regionalny/17847>),
- National Urban Policy 2023 (*Strategia na rzecz...*, 2018),
- Partnership Agreement – document for programming interventions from the EU funds for 2014–2020,
- Strategy for Responsible Development,

- regional operational programmes,
- local and municipal revitalization programmes.

The fact that the revitalization of problem areas is included in the abovementioned documents denotes that it is a significant process for the local and regional development. It is emphasized that the activities which aim at implementing the said process affect the economic and social as well as spatial and environmental situation of territorial units.

The Revitalisation Act in art. 9. 1 provides that „the municipality area in decline due to the concentration of adverse social phenomena, in particular unemployment, poverty, crime, low level of education or social capital, as well as insufficient participation in the public and cultural life, can be defined as degraded area, if apart from the above, we can observe in the area at least one of the following negative phenomena:

- a) economic phenomena – in particular low level of entrepreneurship, poor standing of local businesses or
- b) environmental phenomena – in particular exceeding the standards of environmental quality, and waste which poses a threat to human life, health or environment, or
- c) spatial and functional phenomena – in particular insufficient technical and social infrastructure or its poor technical condition, no access to basic services or low quality of these services, inadequacy of planning solutions to the changing functions of the area, insufficient transport services, shortage or low quality of public space, or
- d) technical phenomena – in particular technical degradation of buildings, including residential buildings, and non-functioning of technical solutions providing effective use of buildings, regarding in particular energy-saving and environmental protection” (Official Journal of Laws, 2015).

Apart from the statutory definition there are also other concepts of defining degraded and problem areas where various criteria are used to identify them (Rakowska, Wojewódzka-Wiewiórska, 2010). In the National Development Strategy 2020 the problem areas as defined as regions which require particular support in their development processes. They are characterised by the highest concentration of adverse development phenomena of national, sub-regional and regional character. It generates low indicators of social and economic development of these areas. The problematic areas include:

- areas of demographic problems,
- areas of social problems,
- areas with low quality of human resources.

The problem areas were defined in the Act on Spatial Planning and Area Development 2030 (Monitor Polski, item 252) which imposed on the Concept of National Spatial Development 2030 an obligation to determine the problem areas.

The problem areas occur in various typologies of the regions which, despite significant diversification, are combined by the fact that they aim to indicate areas of unstable development possibilities. Moreover, attention is paid to the results of cumulated negative phenomena (in particular demographic phenomena) and possibilities and difficulties to solve them (Domański, 1987). The concept of problem areas involves part of geographic area characterized by negative phenomena of social, economic, and technical character, which results in internal anomalies (Zagożdżon, 1988). The problem area is a spatial unit characterised by abnormality of one or more spatial elements (Bański, 2011). Moreover, S. Ciok indicates that to overcome the negative phenomena, the support from outside is indispensable (Ciok, 1994) since the communities struggling with numerous development challenges,

social and economic issues resulting from the decline of traditional sectors of industry, ineffective economy, sudden decrease in the number of people, social marginalization, permanent poverty, poor infrastructure and poor access to transport and services, require special support.

Areas of Strategic Intervention (OSI)

The above mentioned descriptions of problem areas indicate that they constitute areas of large concentration of negative development phenomena. The areas which are characterised by these negative phenomena and social issues include most frequently post-industrial areas, neglected districts and industrial dwelling areas, block housing areas which constitute, in the largest cities, a significant share in residential resources, former military areas, and post-mining areas. Limiting the adverse phenomena in these areas requires the intervention of state and regional authorities. Only then will it be possible to fulfil the goal of the EU regional policy, namely struggle to strengthen the social and economic cohesion of the regions. To that end, the areas of strategic intervention (OSI) are established. The provisions of the EU and national strategic documents indicate that one of the priority areas of intervention in the financial perspective 2014–2020 should include cities and urban districts which require revitalization.

The areas of strategic intervention (OSI) have been indicated in the National Strategy for Regional Development 2010–2020: Regions – cities – rural areas (Monitor Polski, 2010, item 423) for the purpose of regional policy. They include the so-called growth poles and problem areas. The document provides that OSI shall meet the following objectives:

- a) strengthen cohesion on a national level;
- b) increase availability of public transport to voivodship cities within areas of the lowest availability;
- c) overcome difficulties related to the location of border areas;
- d) restructuring and revitalization of cities and other areas losing their previous social and economic functions;
- e) support for rural areas of the lowest access, on the part of inhabitants, to goods and services which condition the development possibilities.

The Act amending the Act on the principles of development policy and some other acts of 24 January 2014 defines the area of strategic intervention of the state as “the area which constitutes the area with concentrated activities related to the development policy focused on territories, including rural areas” (Official Journal of Laws of 2016, item 338). It has also been indicated that the problem area constitutes a special sub-category (Skubiak, Kryk, 2016) and is the area of strategic state intervention where we can identify phenomena unfavourable for its social and economic development and its inhabitants. It has also been indicated that the areas of strategic state intervention, including problem areas, are defined by medium-term strategy for national development, and in compliance with the Act on voivodship self-government (Official Journal of Laws of 1998, No. 91) they are reflected in the strategy for voivodship development. Such wording leaves the decision making process in this respect in the hands of voivodship self-government.

Essence of Revitalization

The revitalization of degraded areas holds a significant place in the national development policy. It is included in the legal framework resulting from the Revitalisation Act and the Act on planning and spatial development. Under art. 2.1 of the Revitalisation Act, “revitalization constitutes a process which involves recovering the degraded areas from crisis, managed in a comprehensive way, through integrated actions for local communities, public space

and economy, concentrated territorially, run by stakeholders of revitalization in compliance with the municipal revitalization programme" (Official Journal of Laws of 2015, item 1777). Before 2015, the municipalities conducted revitalization under art. 18 para. 2 p. 6 of the Act on local self-government which, as characteristics of municipal council, indicates „enacting economic programmes". Until the end of 2023, municipalities can conduct revitalization activities based on revitalization programme, without enacting the municipal revitalization program compliant with the Act. From the beginning of 2024, revitalization must be conducted under the municipal revitalization programme which constitutes the fundamental document scheduling the related activities.

The Act provides that the implementation of municipality own task requires coordination of revitalization plans with the bodies in counties, voivodship and government administration. As beneficiaries, the Act indicates *inter alia*:

- inhabitants of area under revitalization,
- owners, perpetual usufruct of properties and entities managing the properties within this area,
- entities running or entities which intend to run their business activity within the municipality,
- local authorities and public authorities.

The revitalization of degraded areas, within the meaning of the Revitalisation Act of 9 October 2015, constitutes the municipality non-mandatory own task. It means that not all of the municipalities must implement the revitalization programmes. However, the problems related to degraded areas which constitute barriers for the development of municipalities, including local communities, economies and public space, make municipalities conduct revitalization activities in the degraded areas based on the Revitalisation Act.

Upon indicating the revitalization area (degraded area) the most important is to indicate phenomena resulting from the social sphere which shall occur at all times. The other adverse phenomena from the economic, environmental, spatial and functional as well as technical sphere are supplementary to the social phenomena and indicate the scope and character of degradation which must always include the social element.

The Act provides for the principle specifying that not in every case the revitalization process should be conducted at the same time within the entire degraded area (which may cover even most of the territory of municipality). The area where we can observe particular concentration of adverse phenomena, where the municipality schedules to conduct revitalization activities because of crucial significance for the local development, is determined as revitalisation area. It may cover the entire or part of degraded area, but it cannot be larger than 20% of the municipalities' area. Moreover, the area cannot be inhabited by more than 30% people. Both the degraded area and the revitalization area can be divided into sub-areas. Within the revitalization area the municipality can establish a special revitalization zone.

An essential element of all revitalization activities (from the design of activities through implementation and finally the evaluation of completed process), required by law and adopted as a general principle, involves social participation. It means that the revitalization process must ensure active participation of stakeholders through social consultations and established Revitalization Committee. The direct participation of stakeholders aims to increase the knowledge among the municipality inhabitants about revitalization, help them identify with this process and boost motivation related to social commitment. The commencement of social participation processes is one of the priority goals of revitalisation (*Programowanie...*, 2017).

In order to conduct revitalization activities it is required to:

- a) take account of revitalization as essential element of the municipality development overall vision;
- b) provide complete analysis to indicate revitalization areas and verify problems including social, economic, spatial, functional, technical and environmental issues;

- c) determine hierarchy of needs regarding revitalization activities;
- d) select instruments and interventions properly adapting them to the needs and conditions of particular area;
- e) synchronize activities in the social, economic, spatial, functional, technical and environmental spheres;
- f) coordinate activities and monitor and evaluate the effectiveness of revitalization;
- g) follow the principle of partnership and social participation.

Evaluation of the Previous Results of Revitalization

Between 2007–2013, the expenditure on revitalization projects totalled in all voivodships PLN 8.58 bn, including EU funds in amount of PLN 4.9 m. In the current perspective nearly PLN 7 bn has been planned for revitalization processes (Samorządy..., 2018). For direct support for projects and revitalization activities within the Investment Priority 9b – *providing support for physical, economic and social regeneration of deprived communities in urban and rural areas* there are resources from the Regional Operational Programmes 2014–2020 in amount of over PLN 5 bn. So far 43% of the amount has been allocated, i.e. ca. PLN 2.2 bn (www.zmp.poznan.pl). Details are provided in Table 1.

Table 1. Use of financial resources within investment priority (IP) 9b in 16 RPO as per the status of 15 March 2018

RPO	Co – financing agreement EU Contribution	Application for payment EU Contribution	Basic allocation (MF – limit – PLN)	Contracting	Payment level
				%	%
Dolnośląskie	16,096,820	0	289,908,553	5.6	0.0
Kujawsko-Pomorskie	0	0	211,778,748	0.0	0.0
Lubuskie	96,233,578	2,583,589	125,154,560	76.9	2.1
Łódzkie	648,532,722	491,478	699,124,829	92.8	0.1
Lubelskie	70,234,029	35,012,875	453,978,272	15.5	7.7
Mazowieckie	199,231,806	33,099,852	247,036,634	80.6	13.4
Małopolskie	132,897,000	33,224,250	667,858,350	19.9	5.0
Opolskie	90,425,280	1,802,007	104,068,954	86.9	1.7
Podlaskie	0	0	89,777,182	0.0	0.0
Podkarpackie	0	0	164,275,424	0.0	0.0
Pomorskie	34,0822,084	22,511,248	328,483,609	103.8	6.9
Śląskie	267,359,192	51,968,400	714,003,927	37.4	7.3
Świętokrzyskie	59,733,389	0	195,987,674	30.5	0.0
Warmińsko-Mazurskie	143,667,974	14,610,162	254,150,705	56.5	5.7
Wielkopolskie	112,598,200	28,149,550	333,403,016	33.8	8.4
Zachodniopomorskie	0	0	156,679,200	0.0	0.0
Total	2,177,832,075	223,453,412	5,035,669,637	43.2	4.4

Source: Ocena funkcjonowania ustawy... (2018).

Municipalities have been showing more significant interest in the revitalization programmes. It is reflected in the following data (www.mir.gov.pl):

- a) degraded areas determined by the municipality self-government in the enacted revitalisation programmes in 2016 covered the area of ca. 715,813 ha, which constitutes ca. 1/3 of the city area in Poland, inhabited by ca. 3.9 million people, i.e. ca. 29% of population of municipalities which determined these areas;

- b) municipalities with already developed independent revitalization programme: in 2015 – 255 municipalities, in 2016 – 445 municipalities;
- c) municipalities with already enacted programmes: in 2015 – 59 municipalities, in 2016 – 344 municipalities (including 65 under the Revitalisation Act);
- d) municipalities working on the revitalisation programme: in 2015 – 354 municipalities, in 2016 – 1110 municipalities;
- e) social consultations: in 2015 – 116 municipalities, in 2016 – 360 municipalities (under the Revitalisation Act the municipality is obliged to apply at least three (3) forms of social consultations);
- f) basic undertakings scheduled within the programmes effectual in 2016 – on average 30 undertakings in GPR.

The evaluation of the course and organization of revitalisation processes in Poland were presented in the substantiation for the draft revitalisation act. It provides that between 2007 and 2013, revitalisation activities were often insufficiently concentrated (in terms of both, issues and territory). The revitalisation was frequently conducted fragmentarily and there was no coordination of activities. The flaws and barriers related to revitalisation activities specified in the substantiation included:

- a) frequently observed limitation of revitalisation to the construction process excluding in total or partially the social and economic aspects;
- b) lack of consciously determined objectives of conducted activities, preparing the projects without comprehensive analysis of the local situation;
- c) use of revitalisation programmes only as instrument used to acquire the EU funds, without defining real activities to improve the situation in problem areas;
- d) lack of comprehensive approach in conducted activities, perceiving revitalisation as the construction process, neglecting social factors in preparing and implementing the revitalisation processes;
- e) lack of indispensable coordination between public institutions at developing the revitalisation programmes;
- f) lack of durability, continuity of revitalisation activities in municipalities (which are often at present developed ad hoc, only when there is a possibility to receive external funds);
- g) low level of social participation in the activities when the local revitalisation programmes are developed and projects are prepared, which resulted in low effectiveness of conducted activities related to counteracting the adverse local social and economic phenomena.

The evaluation of revitalisation process also includes the results of inspection conducted by the Supreme Chamber of Control (Najwyższa Izba Kontroli, 2016). The inspection report provides the following conclusions:

- a) revitalisation processes in a limited extent contributed to solving the problems of degraded urban areas;
- b) by conducting activities scheduled in the local revitalisation programmes (LPR), municipalities failed to obtain the effects of spatial cohesion of conducted projects, eliminate the problematic phenomena and permanently improve the living conditions of the inhabitants in these areas;
- c) investment plans included in LPR were implemented only in a limited extent and most often included only single projects which received support in the form of EU funds;
- d) no possibilities were provided to enable full participation of local community at developing the programmes and revitalisation projects, which resulted in the lack of common activities between the inhabitants and local authorities;

- e) LPR were not perceived by municipalities as instruments for integrated management of activities performed by entities which could participate in the revitalisation process to achieve the goals, and only as documents which constituted grounds for applying for EU funds;
- f) municipalities failed to follow the requirement regarding monitoring the implementation of activities scheduled in LPR. Monitoring was not performed or was inconsistent with the assumptions defined in LPR, and as a result the municipalities had no knowledge on the impact of implemented projects on the fulfilment of assumed revitalisation goals;
- g) in the system related to the implementation of financial resources allocated for revitalisation there were no effective mechanisms for evaluating LPR, regarding ensuring by the programmes the results of conducted revitalisation process;
- h) municipalities failed to perceive the revitalisation programme as an instrument for managing the activities of all entities operating within the degraded area to obtain best revitalisation results.

Conclusions and Proposals for Changes in the Organization of Revitalisation Processes

More effective management of revitalisation processes and elimination of the previously specified flaws take on more significance since between 2014 and 2020 revitalisation has been recognized as an important task in the local development policy with allocated financial resources in amount of ca. PLN 25–26 bn.

Managing the revitalisation process within degraded urban areas requires comprehensive and coordinated actions. The condition for obtaining the expected revitalisation results is to take account of social, economic, infrastructural and environmental factors. The correct management of degraded area revitalization processes should be supported to a great extent by the provisions of the Revitalization Act.

The revitalisation programme should be perceived by municipalities as the basic instrument for managing the revitalisation process, which will ensure the completion of activities and fulfilment of revitalisation goals.

In the revitalisation process we shall engage to a greater extent people who are directly related to the revitalised areas, which will exert positive impact on their sense of responsibility for the close vicinity and encourage beneficiaries of the process to create public space as per their needs and expectations. In the process of social participation, more commitment of non-governmental organizations is necessary ensured by boosting direct participation in conducting social activities.

After 2020, access to subsidies from the EU structural funds or other aid resources will be limited and therefore funding the revitalisation projects will be more difficult. More and more often experts indicate that in the future the conducted projects should be profitable and should pay back themselves, and at the same time should bring social benefits. Therefore, after 2020 we should initiate more extensive cooperation between local authorities and private sector in the form of public and private partnership. This form has been significantly promoted by the Ministry of Investment and Economic Development as well as organizations supporting such investments.

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Cite this article as: Babis, H., Janowski, M. (2018). Revitalisation of problem areas as an instrument for social and economic activity in the Polish municipalities. *European Journal of Service Management*, 4 (28/2), 17–25. DOI: 10.18276/ejsm.2018.28/2-02.

DEVELOPMENT OF IT SERVICES IN URBAN SPACE – SMART CITY LOGISTICS

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION O18, Q55

KEYWORDS urban logistics, IT concepts, urban space management

ABSTRACT The topic of this article is innovative IT solutions in urban space – analysis of selected concepts. The author presented practical methods for implementing the concept of management urban space. The development of urbanized areas is not only innovative the trend of implementing innovative solutions but also for the quality of life of residents. Exactly that they are today the most important integrator of cities for which innovative IT concepts are created.

Introduction

An essential role in the proper functioning of urbanized urban areas they are currently playing innovative IT solutions. Focused mainly on solving infrastructural problems – closely related to the development of urban space, they improve mobility and eliminate the negative effects of the activity of city users. Undoubtedly, investment is the

key to improving the prosperity of urban areas for research and development, and better use of existing resources and resources currently available they are often overlooked and wasted.

Striving for development, city authorities implement innovative and often innovative concepts urban space management. Strategic simulations and forecasts for the implementation of selected ideas illustrate the improvement of the quality of life of residents thanks to the improvement of all phenomena taking place in urban space.

The article addressed the topic of innovative IT solutions used in space urban based on selected concepts of urban space management. Author based on the newly the resulting concepts show the effects of implementation in selected cities around the world and make evaluation of the effectiveness of the implemented concept.

A city in motion or the development of urbanized urban areas

The development of globalization and urbanization processes has made cities become human the basic center of functioning. Shaping urban space in a consistent manner and comprehensive is one of the most important problems of modern urban planning (Lorens, 2014, p. 23). The urbanization process leads to both the development of urban areas and its development, as well and the increase in the number of people living in cities and adopting urban lifestyle.

Analysis of urbanization of cities in highly developed countries over the last decades and the current transformations of Polish urban areas proves that all contemporary urban organisms are subject to cyclical structural changes described by L. Klassena as the phase of the urban life cycle (Jałowiecki, Szczepański, 2002, pp. 65–67).

Urbanization is a socio-cultural process expressed in the development of cities, increase their number, increase their areas and the share of residents in the total number population (Ziobrowski, 2012, p. 27). The development of civilization contributes to the development of processes urbanization, where there is the progression of urban areas. The result is also phenomena related, ie conurbation or suburbanization (Tundys, 2008, pp. 52–56). During the suburbanization process there is a further increase, the fastest in the outer zone. This stage is followed by de-urbanization, where there is a decline in the population from the central parts to the parts external. The last stage of populating cities is reurbanisation. This process takes place modernization and reconstruction of cities – the center. There is also an improvement in quality natural environment together with environmentally friendly innovation. These activities affect increased value added for cities and enable the development of innovative management concepts city.

In Poland, the described phases of urban transformation depend on a number of economic processes to which it is first of all (Węgleński, 2001, pp. 64–69):

- a) deindustrialisation – liquidation of inefficient industrial plants;
- b) development of high-tech – the latest technologies sector;
- c) development of services – especially the so-called production services.

The processes of deindustrialisation have meant that nowadays fewer and fewer cities implement innovative solutions solutions in traditional branches of industry such as energy or mechatronics (Węgleński, 2008). As a result of ongoing transformations, areas of industrial areas urban buildings are a powerful environmental threat for residents.

To be able to fight the negative effects of human activity, the agglomeration's rulers municipalities began to apply the policy of the concept of sustainable development. This concept is strictly connected with the management of an innovative city. The problem stems from causes territorial and social, where urbanization processes are

cumulative (Ślodziak, Jakubczyk, 2005, p. 19). Sustainable development is one of the great trends at the turn of the 20th and 21st centuries. Concept sustainable development was initiated during the socio-economic-environmental crisis, which in the second half of the twentieth century began to grow rapidly, taking on global sizes. The concept of sustainable development was first used at the conference in Stockholm in 1972.

The mission and goal of a sustainable urban system is its continuous and sustainable development including modern IT solutions that are friendly to the potential passenger public transport. Sustainable development in this area influences the attractiveness of the city for life of residents, their professional activity, attracts tourists or investors and restricts the broadly understood negative impact of the transport function on the quality of the local environment. An efficient communication system also co-creates an open and tolerant city through liquidation barriers to inclusion in the socio-economic life of people with disabilities. This system should also use the advantages resulting from natural conditions, including specific Oder areas position.

In the face of such an extensive meaning of public communication in the development processes of the city, a mission for entities responsible for the area should be creating such a communication system urban, which will be a viable and desirable alternative to individual transport.

The public transport system in accordance with the demands of sustainable development belongs to be perceived in three aspects: environmental, economic and social. The area of sustainable development is the focal point between the social aspect, environmental aspect and economic aspect. Each aspect has its own criteria, which the city must strive to become sustainable. In the environmental aspect, a big role it plays the state of air and water, measured by the level of pollution. It attaches itself here, too much importance to noise or carbon dioxide emissions as a negative side effect using communication means. Based on the social aspect, attention is paid here convenience and satisfaction of transport users as well as security and social cohesion. If it is about the economic aspect, this is the most important element here is the economic capacity of cities to provision of services, production of goods and employment and trade, including resource saving and energy for future generations (*W kierunku...*, 2013).

The smart development is a practical example of implementing innovative solutions transport in Warsaw. The city purchased an IT system of passenger information at bus stops, which provides necessary information about the bus in time to help the passenger plan their trip and shorten its time (for example, expected time for the bus to arrive) (*Wyzwania...*, 2015). In addition, routers were deployed VPN designed to work in harsh weather conditions, providing a smooth, safe and fast wireless connectivity in both public transport and also at train stations or in city centers.

The great capabilities of the systems as well as the variety of technologies used are visible in most of the planned investments. It can be seen that some ITS solutions in projects implemented in cities become a standard. This applies especially to dynamic mounting stop information or e-kiosks, enabling quick and unlimited time of day purchasing tickets and charging city cards (*itspolska.pl*, 2016). The key to the success of the implemented concept is a constant striving for the excellence of urbanized urban areas management is supported by intelligent IT solutions.

Another practical example of an innovative and innovative idea of space management The Smart City concept is urban. The main assumption of Smart City is the integration of technologies with good management (Szczęsnowicz, 2016). The idea of a smart city is aimed primarily at all improving the activities in the eight categories shown in Figure 1.

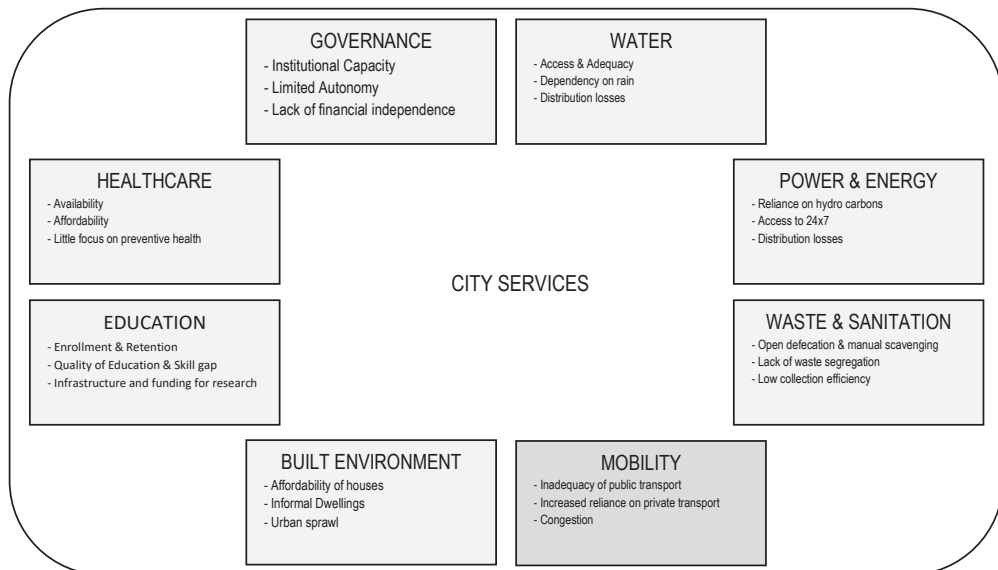


Figure 1. Determinants of the Smart City classification

Source: <https://www.kisspng.com> (2018).

In composition first category intelligent cities includes citizens. Speech is here both about the residents of cities actively using the goods offered by city as well as passive city users who do not use urban goods such as public transport or city bikes. As a citizen, a person is classified lives in the area of a given urbanized area. The offices include institutions that through their activities, they interact directly and indirectly in the urbanized area. Referring to energy, it takes into account the state of its impact on the natural environment. It aims to eliminate as much as possible its negative impact. Another category is energy-efficient buildings, which as a part of the infrastructure are consistent Smart City urbanized system. Transport is a link in the smart concept, which is a big one problem from the point of view of impact on the natural environment. It strives to be as small as possible using own means of communication (e.g. passenger cars), for transport collective. Infrastructure is the sixth link. A number of road networks are included in it in road, rail, air or inland waterway transport, but also in buildings used for safe and collision-free operation of vehicles.

Under the concept of communication is understood as IT technology that helps to integrate all systems inside the area urbanized. Health is the last link in the Smart City category. In this category are taken under Attention factors affecting the state of well-being of city dwellers.

All eight links strive to improve the quality of life in urbanized areas urban areas. Compliance with the principles of these areas results in increased safety, improvement of the condition natural environment and, above all, satisfaction of city users, which is a key issue determinant determining the proper functioning of the Smart City concept.

Examples of smart city concept applications

A practical example of the implementation of Smart concepts is the European initiative “Smart Cities” as part of the social strategy plan in the field of energy technologies (SET-Plan), which supports highly urbanized cities, trying to reduce gas emissions by 40% greenhouse through sustainable use and energy production by 2020. This initiative aims to support sustainable energy sources and transport in European areas urban areas. For this purpose, energy-saving buildings, called ZEBs, are created. They are buildings, which have zero carbon dioxide emissions annually.

The European Strategic Energy Technology Plan (SET Plan) provides a European policy tool in the field of energy technologies for Europe. His main the assumption is to strive for the promotion of low-emission technologies by accelerating development knowledge, technology transfer and implementation of ideas up to 2020 (Kylili, Fokaides, 2015). Activity The SET Plan has been launched since 2010. It is still being implemented by European initiatives industrial, which provide the basis for planning and decision-making.

As part of the SET Plan, the following initiatives are distinguished (Dz.U. UE C, 2010):

1. An initiative regarding the use of wind potential.
2. A European initiative to use solar panels.
3. Initiative for electricity networks.
4. Carbon Capture Initiative – using the transport potential.
5. Initiative for the sustainable use of nuclear energy.
6. Industrial bioenergy initiative.
7. Initiative to use the resources of cities and communities.
8. Technological initiative in the field of fuel cells and hydrogen.

Each of the initiatives, described in the Official Journal of the EU of December 22, 2010, supports pro-ecological activities. They are implemented to protect the natural environment, constantly degrading through highly urbanized areas. The Smart City concept takes into account the scope activities of cities, giving them guidelines that must be met. The SET's initiatives are constantly striving to save resources in order to combine energy, transport, information and communication, and technologies in European urban areas. According to forecasts, from 25 to 30 European cities by 2020 will be at the forefront of a low-carbon economy (Kylili, Fokaides, 2015). The goal is to be achieved by adopting a pro-ecological system approach and innovative management, including energy management, performance control, technology low-carbon and intelligent management of supply and demand, focusing their attention on buildings residential local networks power and transport to be able to use them ecologically.

The future of cities with buildings like ZEB is becoming a more and more real initiative highly urbanized areas. New challenges for building automation systems environmentally friendly, which will reduce energy consumption in the building, have become a priority and goal to be implemented in the near future. Innovative initiatives will be able to save both energy and protect our environment from the negative effects resulting from the expansion of urban areas.

The development within Smart City logistics is both innovative management methods urban systems, as well as supporting their technologies. An exemplary model, innovation is supported by cloud computing. It is a model enabling widespread and generally available use of the network. Data from servers are collected into a shared pool configurable computing resources (e.g., networks, servers, storage, applications and services), which are secured,

and the process of generating them requires minimal management efforts with the website of the service provider (xrgsystems.com, 2015).

Cloud computing is referred to as cloud computing. Smart City is based on effective and pro-ecological prosperity of many companies operating in the city areas the main goal is to make profits with the least possible degradation of the natural environment. This model is mainly oriented at improving work efficiency. Smart City concept it is implemented on many levels of economic life, starting from tactical plans, after strategic plans in areas of urbanized cities (Nowicka, 2008). On every level cloud computing eliminates costs and contributes to limiting unnecessary waste in city logistics. It consists of three distribution models:

1. SaaS (Software as a Service) – is the ability to provide the consumer needed for it functions the appropriate software via the Internet from the selected one provider.
2. PaaS (Platform as a Service) – this is a service that consists in providing the platform IT and appropriate functional tools to facilitate application changes without incurring costs and carrying out works related to their purchase. allows consumers develop their own applications using the tools and services provided by operator. PaaS offers services mainly related to development, testing, dislocation, management and application hosting in the same integrated environment. By eliminating individualism, society can with such the same result, use IT services while caring for the natural environment and contributing to the development of smart cities.
3. IaaS (Infrastructure as a Service) – it is a service that enables providing infrastructure computer. The customer is not obliged to purchase servers, licenses for software, space for the data center, network equipment, and current care backups, security and availability of certain functions in your own infrastructure. IaaS has a positive effect on both enterprises and consumers. offering comprehensive services of enterprises results in consumer satisfaction. Itself fueling cells affect the country's GDP, thanks to which the state develops and his cities are developing.

Cloud computing aims to generate savings for the budget of the cities that have implemented them and they are constantly using. Thanks to this, consumer spending on IT services increases profitability cities and drive their economy.

Conclusions

All innovative trends from the right city policy to IT infrastructure increases the mobility, durability and security of smart cities. Socio-social potential economic and infrastructure-technical means that smart cities are growing territorially, creating innovative agglomerations or metropolises. In cities where innovative solutions for urban space management have been implemented there has been an increase in the quality of life of residents and improvement of the natural environment. It strives continue to improve the state of urban areas by using innovative IT tools to be able to leave the environment and a better quality of life to future generations, future residents.

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Cite this article as: Bachanek, K.H. (2018). Development of IT services in urban space – Smart City Logistics. *European Journal of Service Management*, 4 (28/2), 27–33. DOI: 10.18276/ejsm.2018.28/2-03.

TALENT MANAGEMENT IN THE CONTEXT OF HUMAN CAPITAL

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RECEIVED
ACCEPTED

10 December 2018
28 December 2018

JEL
CLASSIFICATION

J24, M12, M54, O15

KEYWORDS

talent, talent management, competence, intellectual capital

ABSTRACT

The main objective of the article is to present the research on the talent management process in small and medium-sized companies in the Lower Silesian Voivodeship. The research was of a pilot nature. The article defines the essence of the concept of "talent", and describes and characterizes the "house" of the new generation of human resources as well. The results of research on understanding the term "talent" by respondents have been presented. Respondents' opinions on persons responsible for the implementation of development programs have been quoted. The diagnosis was conducted on the functioning of 'talent management' programs in companies employing the surveyed students. The article ends with a summary and presentation of the conclusions from the research.

Introduction

Over the last few decades, the dominant concepts of organization and management have undergone a kind of evolution. Since the 1950s the process of globalization, and thus also a gradual increase in the complexity of the environment of operating enterprises has been observed. The 1970s were a period of global orientation. The organization's environment has been stormy and turbulent. Strategic management has become a tool for

streamlining organizations and management. The last decade of the twentieth century saw more radical changes in management. Knowledge management appeared as a dominant concept integrating all management subsystems. The approach to managing people has changed. People are currently treated as the most valuable “resource” of an organization. It is thanks to them that the organization gains an advantage over the competition. However, it should be noted that the same people constitute a “critical mass” in every organization. The development of employee competencies has become the key activity of the management staff. Managers recognize the importance of talents for the development and operation of an organization. The concept of talent management begins to function. Talent management is becoming an important element of the human capital management process.

The essence of talent management

In the literature on management sciences, the concept of talent is variously defined. The notion of “talent” derives from the Greek word *talanton*, which meant the unbearable burden for one person (Chelpa, 2015, p. 28). The concept of talent can be defined as innate abilities evolving as a result of undertaken actions into appropriate skills and passions, thanks to which an individual can create products or provide socially useful services, and which are subject to evaluation in terms of high quality, beauty or pleasure for the senses of a recipient at a level that is higher than average and difficult to meet by most other manufacturers or performers of a given product or service (Kopeć, 2012, p. 16).

According to A. Pocztowski, a talent is an individual who is guided by an internal goal, unchanged for a long period of time, and at the same time bringing his own goal to an organization (Pocztowski, 2008, p. 36). K. Glowacka-Stewart thinks alike and claims that “a talent is every person who can significantly influence the current and future achievements of their organization” (Glowacka-Stewart, 2016, p. 8). This definition shows that any employee in the organization may be a talent. This definition emphasizes both current results and achievements of an employee as well as his/her potential.

The concept of talent management deserves attention. According to T. Listwan, talent management is a set of activities referring to extremely talented people and undertaken for reasons of their development and efficiency as well as achieving the organization’s goals (Antczak, 2010, p. 191).

In turn, Davis believes that talent management is about recruiting, proper training and development of employees, as well as retaining employees achieving excellent results in an uninterrupted and consistent manner. The talent management strategy is a well-thought-out, structured approach of a given company to recruit and retain employees, as well as train and develop talented individuals in an organization (Davis, 2010, p. 15).

S. Chelpa notes that a talent is constituted by a series of elements and he mentions general abilities (i.e. above-average intellectual potential), directional skills (skills related to specific areas of human functioning) and factors unrelated to thinking (achievement motivation, emotional maturity, mental resilience) among them (Chelpa, 2015, p. 26).

Talents can be directed in a homogeneous way, then they relate to one specific field and in this situation they are referred to as mono skills or special abilities. There are, however, cases that people’s above average aptitudes refer to several dimensions of knowledge and skills – then these are multi skills manifested by multi talented people (Sękowski, 2004, p. 64).

The concept of talents was popularized at the end of the last century. The development of modern technologies caused that the demand for employee talents exceeded their supply. This resulted in the employee talent market has become the most competitive one since the 1990s (Jabłoński, 2015, p. 35).

J. Kopeć distinguishes the following types of talents:

- critical talents,
- leadership talents,
- sales talent,
- talents in the field of knowledge acquisition and processing (Kopeć, 2012, p. 6).

Critical talents are the most valuable for an organization. They ensure effective and efficient functioning of an organization. In turn, with leadership talents, an organization is able to achieve an advantage over the competition. The managers' abilities may result in greater employee commitment to work thanks to trust in managers' decisions. This is essential when, for example, a company emerges from the crisis. In turn, most commercial companies operating in today's economy value sales talents more. It is about individual sales and the highest sales figures achieved by sales teams (heads of these groups). With the ever-growing excessive amount of information necessary to survive and achieve the organization's success, the importance of workers' knowledge is growing.

Employees in an organization occupy diverse positions and perform various functions (e.g. managerial, independent specialists or team leaders). Therefore, they can be differentiated according to various criteria, for example according to the position occupied in the organizational structure and tasks related to the creation of knowledge.

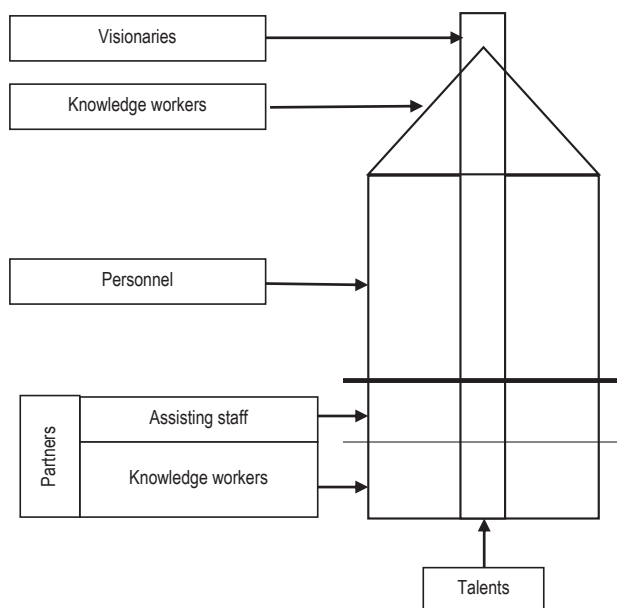


Figure 1. The “house” of the new generation of human resource

Source: Mikula (2012), p. 22.

B. Mikula divides knowledge workers into three groups (Figure 1): knowledge practitioners (first line of business), knowledge constructors (medium-level management) and knowledge commanders -general management (Mikula, 2012, p. 22).

One cross-sectional category of particularly talented people, the so-called talents, may be additionally identified within each of the indicated groups of people working for an organization. Examples of talented employees include:

- a) technologists who carry out innovation on a global scale;
- b) employees belonging to the personnel group performing simple work assisting independent specialists, but possessing high linguistic intelligence that gives them a special ability to learn and use foreign languages; these employees make a significant contribution to establishing new contacts with foreign companies, gaining new distribution channels and promoting goods;
- c) a seller familiar with customer behavior, their expectations and desires, having an incredible ability to make contacts easily, who thus achieves the best sales results from the entire group of sellers;
- d) an external consultant who, in addition to specialized knowledge in the field of organizational behavior, also has extensive emotional intelligence creating a talent that allows him/her to efficiently diagnose and solve problems underlying the functioning of the social working environment (Mikula, 2012, pp. 22–24).

Methods and characteristics of the research sample

The following research methods were used in the studies presented in this article:

- the critical literature review method (literature in the field of talent management, employee development, management of knowledge),
- participant observation method (related to running one's own business),
- the analysis of secondary sources (studies of similar scope),
- diagnostic survey with company employees related to sub-functions of personnel management.

327 students participated in the study. These are students of part-time studies at three universities in the Lower Silesian Voivodeship. Women constituted the majority of the surveyed (75%). Only every fourth respondent was a man (25%). The structure of the studied group by gender is shown in Figure 2.

The respondents were young people aged 19–24. They constituted 56% of the surveyed group. Almost one third of the surveyed students were between 25 to 35 years old (31%). The least numerous group were people over 40 years of age (6%)

Independent variables indicate that the research sample was composed of young people aged up to 29 years are. These people were at the stage of preparing for a career or early career, during which crystallization, narrowing the field of exploration and finalizing the choice of occupation occur. They appreciate the importance of intellectual capital as the most valuable resource of an organization. The capital consists mainly of their competences such as knowledge, skills, experience and attitudes, which are utilized in the work performed. Human capital is a component part of the intellectual capital of an organization. The latter is the sum of everything that everyone in the organization knows and what determines its competitive advantage. This has a huge impact on the organization's creativity and innovation. Therefore, personal development not only affects the growth of individual competences and the competitiveness of an individual on the labor market, but also guarantees a given organization an advantage over the competition. Figure 3 shows the age of respondents.

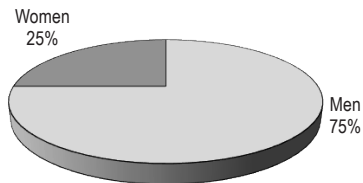


Figure 2. The research group with regard to gender

Source: own study.

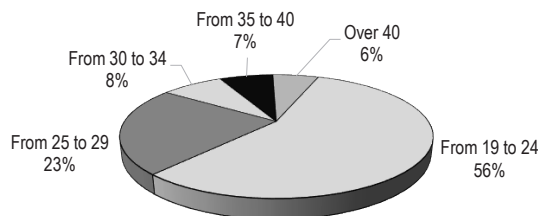


Figure 3. The research group with regard to age

Source: own study.

The vast majority of the surveyed group works in large companies employing over 100 persons (38.5%). About 15.9% of the respondents are employed in companies with from 21 to 50 people, and 14.1% are employees of companies with from 51 to 100 workers. The research was carried out in higher education institutions outside Wrocław. The students are residents of villages and small towns. Therefore, the respondents are employees of small and medium enterprises. The division of the respondents' employment by the size of a company is displayed in Figure 4.



Figure 4. The respondents' place of employment with regard to a company size

Source: own study.

About 45.5% of the surveyed respondents are residents of small towns with up to 25 thousand inhabitants (Figure 5). Slightly less percentage, that is 30%, is inhabitants of villages. A relatively small group of the respondents

are inhabitants of towns with a population up to 50,000 (7.4%). Only 1.6% of them are residents of larger cities. Therefore, the respondents are employees of small and medium enterprises.

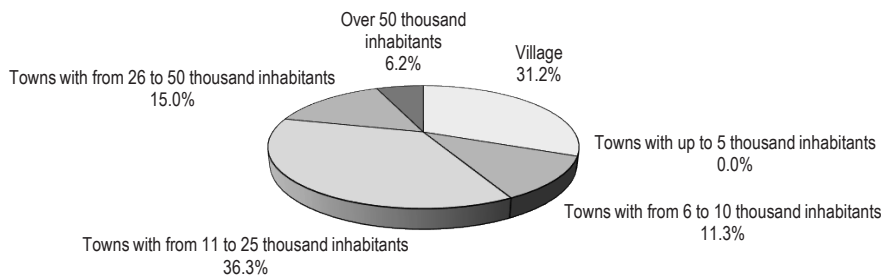


Figure 5. The respondents' places of residence

Source: own study.

Functioning of talent management programs

In the literature on management sciences, there are a variety of definitions of "talent". At the beginning of the research, an attempt was made to define the term "talent". The respondents' opinions on the meaning of the definition of "talent" are shown in Figure 6.

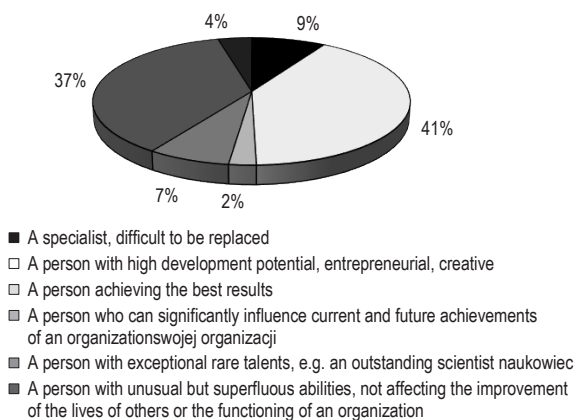


Figure 6. The respondents' views on the meaning of the definition of "talent"

Source: own study.

Fewer than half of the respondents (41%) identify the word "talent" with a person endowed with high development potential, entrepreneurial and creative. Slightly less, more than 37% of the respondents claim that a talented person is one who has exceptional, rare talents (an outstanding scientist). For 9% of the respondents,

a talented person is a specialist who is difficult to be replaced. About 7% believe that a talented person is an employee who can influence the present and future successes and achievements of his/her organization. Surprisingly, only 4% of the respondents consider a person with unusual but superfluous talents, not affecting the improvement of the lives of others or the functioning of a company, as a talent. Only 2% say that the best-performing employee is a talented person. Thus, the hypothesis that talent is an individual feature that is variable over time has been proved. It is shaped by external and internal factors. The internal factors include skills that change through the pursuit of profession. Motivation belongs among external factors. If a person with a high developmental, entrepreneurial and creative potential is recognized as a talent, it should be assumed that environmental factors influence the development of talent. These are, first and foremost, supervisors and associates who “sculpt” the organizational culture of a company. The development of “talent” is also affected by tasks (from simple to more and more complex) and occurrence of completely accidental events

Due to entrepreneurship and creativity, talented people are capable of fulfilling new tasks, taking risks and implementing new ideas. By acting in this way, the employees create the “added value” of a company. The labor market expects an employee to take initiatives in search for new solutions to problems, as well as flexibility and mobility.

In the next question, an attempt was made to identify the persons responsible for the implementation of the “talent management” program in the organization. The results are shown in Figure 7.

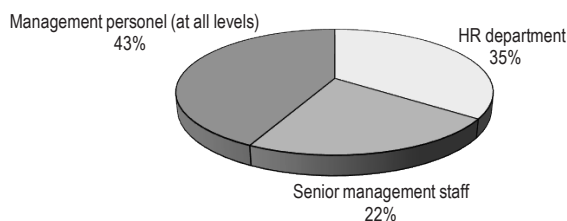


Figure 7. Respondents' opinions regarding responsibility for implementing the “talent management” program in an organization

Source: own study.

A significant part of the respondents (43%) puts responsibility for the implementation of “talent management” plans in organizations on management staff at all levels. According to the respondents, they ought to be the main creators of employee development through the implementation and supervision of “talent management” programs. Subordinates expect their superiors to be involved in developing employee competences and designing individual career paths. It should be remembered that the lower management is “closest” to employees. They must therefore have knowledge of employees’ weaknesses and strengths. Managers should not be afraid to employ people who are more skilled than them; instead, they are supposed to develop their potential and use their talents. It must not be forgotten that it is the managers who shape the company’s organizational culture, where the company’s development is a priority. According to approximately 35% of the respondents, HR departments are to be liable for the implementation of “talent management” programs. Only one in four respondents claim (over 22%) that the senior management staff should bear responsibility for implementing employee development programs.

The research shows that the “talent management” programs do not function in companies in the Lower Silesia Voivodeship. Opinions on the implementation of “talent management” programs are presented in Figure 8.

About 88% of the respondents expressed the opinion that their company did not have a “talent management” program or had no knowledge about it. It can therefore be assumed that most companies do not implement such programs. Only 5% of the respondents indicated that the “talent management” program had functioned in their company for one to three years.

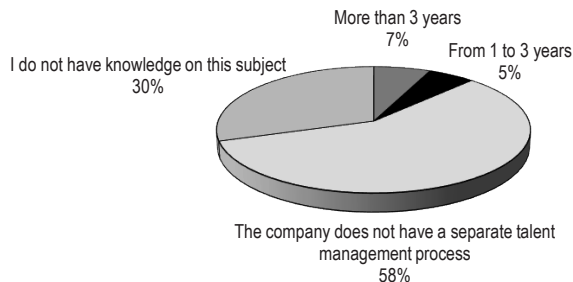


Figure 8. Opinions on implementation of talent management programs

Source: own study.

Among the respondents, 7% said that the “talent management” program had functioned in their organization for more than 3 years. It is satisfactory, therefore, that the number of organizations implementing development programs is growing. Talent management programs operate only in large companies employing over 100 employees (Figure 9). Most “talent management” programs have operated in these organizations for over three years. A quarter of companies introduced “talent management” programs during the past year. This proves the responsibility of the top management and awareness of the role of human capital in the era of competition. They are aware that, their development can achieve a competitive advantage through investing in human resources. In addition, by introducing “talent management” programs, the top management of the organization gives a positive signal to employees in the form of career perspectives.

“Talent management” programs are not implemented in smaller organizations.

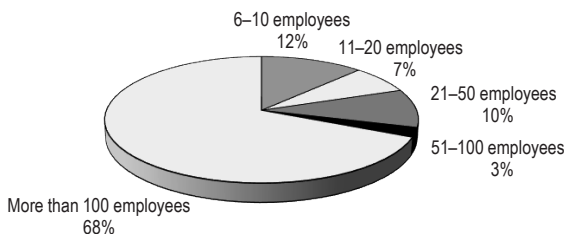


Figure 9. Functioning of talent management depending on the number of employees

Source: own study.

The diagnostic survey attempted to determine what constitutes the basis for qualifying employees for “talent management” programs. This is shown in Figure 10.

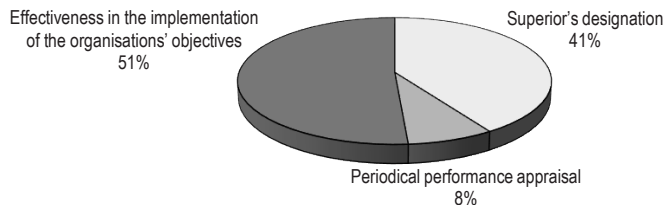


Figure 10. Opinions on the qualification of employees to “talent management” programs

Source: own study.

Over half of the employees (51%) are convinced that they have been qualified for the “talent management” program thanks to their effectiveness in achieving the organization's objectives. Almost 41% of the participants in the “talent management” project claim that they participate in the project owing to designation of their superiors. Only 7.9% of the participants of the program believe that their qualification was determined by a high evaluation of periodical appraisal. It can therefore be assumed that supervisors duly perform managerial functions, know employees and care for their development. An important element is the selection of employees for the program. If people who do not have “talents” are qualified for them, the entire program will lose credibility in the eyes of other employees. When introducing development programs, it should be suitably signaled to the staff that such action makes sense. The organization's authorities should treat these programs as an investment.

Anxiety is aroused by the fact that every eleventh employee was included in the program thanks to the high periodical appraisal. It can therefore be assumed that in these organizations the employee assessment does not fulfill the basic function, namely it does not provide the employees with information about the quality of work performed by them. This periodical assessment of an employee should be the basis for designing the career trajectory. The focus should be on identifying errors in the assessment process (regularity, objectivity and criteria).

Despite the fact that in the majority of companies the “talent management” programs have not been implemented, the “talented” people are identified and motivated by their superiors. This is shown in Figure 11.

One-third of the respondents, over 29%, stated that talented employees are not motivated in their organizations. A large group of employees (22%) are motivated materially by granting them financial bonuses. About 19% of respondents said that talented people in their companies are motivated by extending their powers and responsibilities. They perform tasks that determine the functioning of the organization on the market and provide an advantage over the competition. According to the respondents, talented people have greater freedom in action (9.5%) and receive appreciation on the group forum (9.2%). In a few of the companies, flexible working time for talented people is preferred (7.1%). The reason for not implementing the “talent management” programs is probably the lack of financial resources for the development of employees, as well as the limited number of posts, which is connected with the possibilities of transferring employees to other posts. At the same time, management approves and rewards spontaneous subordinates (talented people), despite the fact that such action is not always consistent with applicable procedures, regulations or stereotypes.

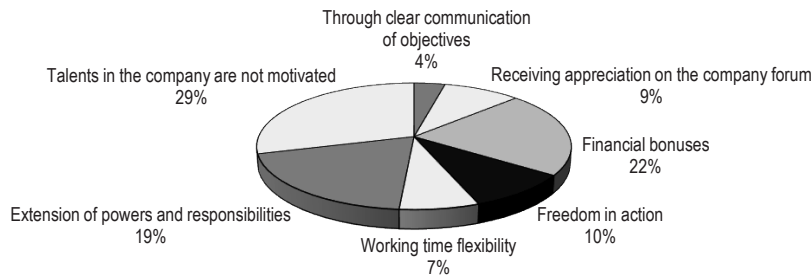


Figure 11. Opinions on motivating talented people

Source: own study.

The respondents were also asked a key question in the survey, namely whether they felt talented. The answers are shown in Figure 12. Most of the respondents considered themselves talented (61%) while 39% said they did not have any talents. In the respondents' view talents are:

- creativity in solving problems,
- organizing skills,
- the ability to learn quickly and the willingness to learn,
- ability to cooperate in a team and manage it,
- the ability to resolve conflicts,
- doing several things at the same time,
- establishing interpersonal contacts,
- language skills,
- artistic skills.

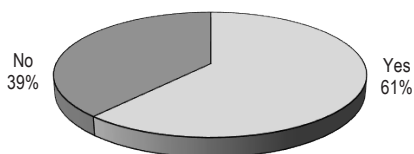


Figure 12. Respondents' opinions on whether they have talents

Source: own study.

The talents indicated by the respondents as talents can be counted among the qualities and skills of "a good manager". It must not be forgotten that managers are the creators of organizational culture, create working conditions and have an impact on both employees and clients. At the same time, it should be borne in mind that due to the managerial skills of the managerial staff, the existence of an organization, its survival or development in a turbulent environment is possible. In addition, it should be added that management is a difficult task and often releases tension, causes stress and frustration. When analyzing the results of research, it should be taken into account that the subjects are students at the faculty of *Management*. Therefore, it can be assumed that, having

such talents, they pursue their passions, and they find professional fulfillment. Moreover, the respondents indicated barriers in developing talents:

- lack of time for development,
- no chance for development due to the place of residence (village),
- lack of willingness to improve one's skills,
- lack of any talents,
- low level of self-esteem.

Conclusions

Summarizing the issue of “talent management”, it should be stated that talents require appropriate conditions to be revealed and developed. It is necessary to get to know the employee's activity area in which information for developing talents will be obtained. Implementation of “talent management” programs is conducive primarily to increasing the company's competitiveness in the market, supporting organizational culture, retaining talented employees in a company, ensuring the inflow of new talented employees as well as creating a positive image on the external labor market

Innovative programs make a company able to prepare plans for the succession of positions, develop employee competencies at all levels of an organization, improve the motivation of employees through clear and transparent principles of career path design, employ persons with exceptional skills that provide unique knowledge to the organization.

The determination and individual desire to develop an employee are usually sufficient to develop the potential. With appropriate support from superiors, this process is carried out much faster. The main effect of talent programs is “acceleration”

Therefore, smaller companies should be encouraged to implement development programs. Based on the research, a number of important conclusions have been drawn:

- a) managers of all levels should participate in the diagnosis of employee talents;
- b) employees with the greatest development potential, creative and entrepreneurial should be considered talented persons;
- c) the idea of the “talent management” process of should be disseminated in smaller companies;
- d) clearly defined rules and criteria should apply in the selection for development programs;
- e) when qualifying employees for development programs, the significance of employee periodical appraisal of should be increased;
- f) financial as well as non-material incentives should be used to motivate talented people.

It should be remembered that there is no one universal “talent management” program. Each company is a different organizational culture and a different development strategy. Development programs vary from each other and are adapted to current and future needs of a company. In practice, this means that talents are defined differently by individual organizations.

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Cite this article as: Balcerzyk, R., Balcerzyk, D. (2018). Talent management in the context of human capital. *European Journal of Service Management*, 4 (28/2), 35–46. DOI: 10.18276/ejsm.2018.28/2-04.

KNOWLEDGE-INTENSIVE BUSINESS SERVICES AND THE VALUE OF EXPERT INFORMATION

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION E71, L84, O31

KEYWORDS business services; economic value; expert knowledge; product-service system

ABSTRACT This article shows a brief perspective on the timeline between knowledge and innovation management and what is now known as Knowledge Intensive Business Services, where knowledge management has a leading role in the establishment of a competitive advantage in business organizations, a strategy that will allow them to reflect their competitiveness in a changing environment by mastering their innovation competence. This implies that knowledge management has both an inherent part of organizations of the post-industrial era and a strong need to respond to the challenges brought by today's society. Such a relatively new way of doing business dictates significant changes to be made in businesses, starting with their human capital as the key element and asset.

Introduction

Services constitute a crucial form of value creation in many countries. In Europe, the service sector was estimated to be 70.9% of the GDP in 2017 (*The World Factbook*, 2018). Among a wide variety of service industries, knowledge-intensive business services (KIBS) are growing rapidly in advanced economies. KIBS, which mainly produce services that are used as intermediate inputs by businesses, are characterized by highly skilled employees

and a high intensity of knowledge. Advanced products and technologies are increasingly made available as services. Digital transformation amplifies the trend of changing business models, towards offering and selling the utility of a product or a service. Enabled through digital technologies, almost everything becomes a service and traditional manufacturing sees advances in services (Kozłowska, 2017, p. 70). Service industries themselves are also transforming into high tech ventures. Retail, news, the media, mobility, and – certainly – finance and insurance, have become hotbeds of digital services that thrive on advances in information technology. Advanced economies are thus characterized by a strong prevalence of complex service systems.

Generally, it is assumed that in the current state of affairs of the economy, only innovative organizations will survive. It is therefore universally accepted that innovation is the key to ensure the future growth and survival of any business. Innovation allows organizations to coordinate themselves with the changes in the environment, market, consumer demand, and shareholder expectations. The innovation process and decision usually have been focused on the choice between internal or external sources of innovation. The increasing complexity and rapid development of the innovation process in the industry and service sector alike from both economic and management perspectives requires a step beyond this simple dichotomy. Surviving means for many organizations not only creating knowledge in order to enhance their product or service – in a highly competitive market there are organizations that create new knowledge, the same ones that disseminate it and, therefore, the same ones that quickly permeate new processes, products and services are also the same ones that recognize information and knowledge as indispensable resources to expand their competitiveness and increase the quality of their expertise to customers, influencing and integrating their markets. With the appearance of the knowledge-intensive business service, a new business model has emerged with the very rationale of how an organization shall create, capture and deliver value to its customers (Stickdorn, Schneider, 2012, pp. 95–96).

The purpose of this paper is to draw a perspective about the creation, use, and value of expert information within the business model of knowledge-intensive business service. Section 1 focuses on the interdependence between knowledge management and innovation competence in business organizations. Section 2 analyses key aspects of value creation process by knowledge-intensive business unit as an external provider of knowledge and innovation service. Section 3 presents some economic based insights of determining the value of external expert information and its use for innovation management process.

Knowledge Management and Innovation Competence

From the social point of view, knowledge management focuses on learning as a proper way of its creation in organizations, making them more flexible and thus more efficient. However, from the economic point of view, management of knowledge is identified with the management of intellectual assets such as the protection and commercialization of innovations and intellectual property, in order to use technology to achieve competitive advantages.

The main objective of an information and knowledge-acquiring strategy is to guide every profit-oriented business organization in developing new product and services for competitive advantage. However, there are many factors influencing the product and technology decisions of a firm. Product development and technology sourcing are both complementary streams in studies published at the beginning of the recent industrial development (Henard, Szymanski, 2001, p. 372). While the product development studies focus more on product development and its managerial process, the latter ones dealing with technology sourcing also view product and process innovation

as the outcome of a business decision. Both are often seen as dichotomous variables (Kotabe, Mudambi, 2009, p. 122). A likely explanation for this dichotomy is that product development, associated with the firm marketing activities, has, in most cases very little to do with the manufacturing process and its technology. Since marketing is traditionally involved in the development rather than the manufacturing of products, both activities of every business organization exist simultaneously.

The process technology-sourcing decision has an additional aspect of the value of analyzing and creating for both, the customer and the firm at the same time. Since the firm faces a highly market-oriented imperative to acquire and incorporate the best possible manufacturing technology, it is the firm objective to manage this in a (cost) efficient way. Rapid changes in technology available to the firm result in a greater concern for possible use of external expert information and its acquisitions. The use of expert information seems to be advisable and in a certain way mandatory, since firms can find it difficult to maintain research efforts along all technological fronts and fields at the same time (Voss, 1994, p. 462). Increasingly important for the firms is, therefore, to focus on the internal development of innovation competence. This happens when implementing within the firm a value-based information and knowledge management system (Tabaszewska, 2002, p. 163). This is how companies have begun to identify and understand that people represent a key factor for their competitiveness since knowledge arises from the human being (Cerchione, Esposito, Spadaro, 2015, pp. 10211–10212). It is through their actions that it is transformed, developed, disseminated and, ultimately, it is applied productively in order to improve the performance and results of the organization. Building the business innovation competence is based on improvement on a personal and organizational level. There is a strong interdependence between personal development and business process optimization. The source of improvement, in this case, is to establish links between and among several single steps and measures of personal development. Subsequently, a chain of well balanced and optimized business operations can be drawn and set up as a business (product developing and manufacturing) procedure. On the organizational level, the main task is to train the learning organization towards the ability to manage its acquired knowledge since knowledge management is associated with the ability to respond to incentives from both internal and external spheres of the firm (Skrzypek, 2000, p. 84). In other words, knowledge management refers to the management of intangible assets that generate value for the organization and, for the most part, has to do with processes related to the acquisition, structuring, and transmission of knowledge. The business innovation competence enables the firm to acquire various information and to process it into knowledge. This seems to be the very core competence of a business organization.

Based on the explanation given by H. Willke (2001, pp. 82–85) a model of production and diffusion of expert information has been formulated (Figure 1). Within this model, core competencies represent the ability to manage the firm activities in all business fields (i.e. sales, marketing, manufacturing, organization, human resources, logistics, financial management, etc.), since the acquired expert information can be applied in all fields. Both perspectives in this top-down approach, namely experimenting for the future and problem-solving at the present time, are equally important as far as the information diffusion is concerned. However, the most important direction is shown from left to the right on Figure 1. Without proper implementing and integrating of the acquired information and knowledge problem solving and experimenting would never become possible. Every kind of core capabilities rigidity influences the firm's risk exposure.

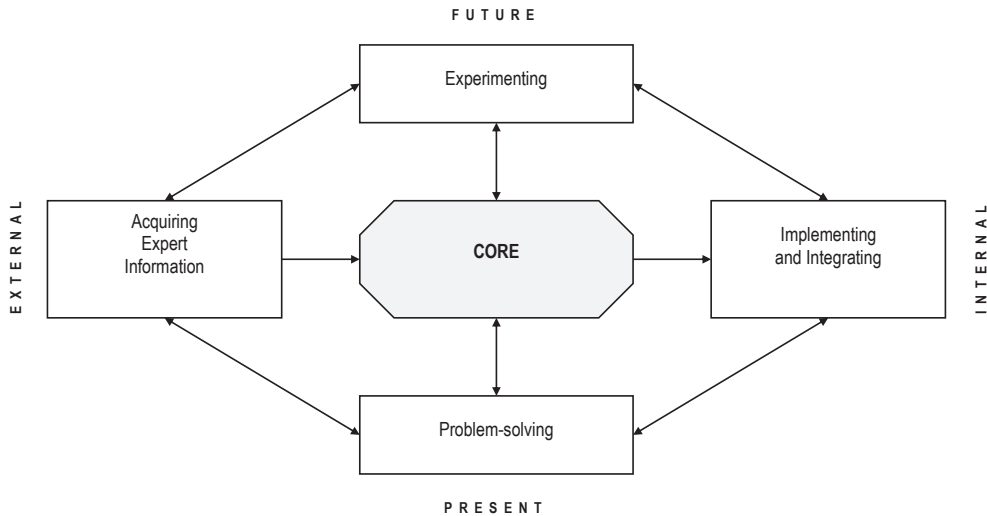


Figure 1. Components of Production and Diffusion of Expert Information

Source: own elaboration based on Willke (2001).

Knowledge-intensive business services and the process of value creation

The development of knowledge-intensive business services in recent decades can be interpreted as one of the indicators of a successful transformation from an industrial into a knowledge-based economy. The visible results of this process are innovations in products, services or processes. Nowadays, enterprises can hire almost any conceivable business activity and asset class as a service (Wirtz, Tuzovic, Ehret, 2015, p. 568). Among many possible service providers, a special part is taken by the knowledge-intensive business. Knowledge is both their main input and output and their underlying business activities consist of the accumulation, creation, and dissemination of knowledge for the purpose of developing contextualized and innovative solutions. Gaining an estimate of an approximate share of external business services interested in providing innovative solutions, based on statistical data is still far from being standardized. In several studies (Baláž, 2004; Koch, Strotmann, 2006; Borodako, Berbek, Rudnicki, 2015) different classifications were employed. In any event, a contract with the service provider must have been a viable strategy for the contracting partner.

KIBS are primarily characterized by their abilities to collect information and knowledge externally and to transform these in combination with internal knowledge into service outputs. Those outputs are in most cases customized to particular user's requirements. Consequently, close customer relations often play a decisive role in the provision of these services (Tether, Hipp, 2002, pp. 164–165). This interaction can be so close that the service cannot be provided without both the service user and provider taking part in its daily operations. This is also the main feature of the innovative characteristics in the business model of KIBS. Against this background, it becomes particularly urgent to enquire whether the primary role of the knowledge provider (i.e. KIBS) is actually the knowledge production. Furthermore, it should be focused even more closely what particular kind of knowledge the KIBS use and what role they perform in the economy.

I. Nonaka and H. Takeuchi (1995, pp. viii–ix) draw on the distinction between the objective and subjective knowledge. The objective knowledge basically represents the explicit knowledge (“knowing about”), while the subjective knowledge essentially stands for the “know-how” or tacit knowledge. The explicit knowledge is believed to be easy to define, transfer and store (scientific publications). In contrast, the tacit knowledge, made of experience or ideas, is to a high extend personal and cannot be easily (if at all?) codified or converted. Equally important is also a clear delimitation between individual and organizational knowledge. The latter consists of both knowledge of individuals and the routines, procedures, etc., which are developed at an organizational level and shared by its members. Thus the process of knowledge transfer and generation is associated with the interaction of organizational and individual knowledge.

It is useful to distinguish further between different types of knowledge. B.T. Asheim and L. Coenen (2005, pp. 1175) distinguished between analytical and synthetic knowledge. Analytical knowledge mainly refers to (scientific) knowledge to understand and explain empirical phenomena (know-why). This knowledge is highly codified, thus reliable and verifiable. In this context, the tacit knowledge remains a necessary complement to understand and validate analytical knowledge. Synthetic knowledge, in turn, refers to a practical know-how and is more tacit and problem-driven. Typically, synthetic knowledge is used to solve a practical problem. This is the very argument, what kind of knowledge customers of the many KIBS shall be provided with. Both KBIS and their clients are keen to ensure that the problem-solving solution results from the synthetic knowledge. B.T. Asheim (2007, p. 225) and B.T. Asheim, L. Coenen and J. Vang (2007, pp. 660–661) later added symbolic knowledge to the knowledge-base classification as a third type of knowledge, used foremost in a social context to produce social and cultural meaning via the media and advertising industries. All three types of knowledge are used and produced in every sector of the economy. However, we can argue that the key type of knowledge underlying innovation processes, as represented by the KIBS, differs substantially between industries. Analytical knowledge is key to the innovation process in science-based sectors, such as the pharmaceutical, biotechnology and nanotechnology industries. By contrast, synthetic knowledge is dominant (Davids, Frenken, 2018, p. 32) in artifact engineering for the vehicle, electronics and construction industries. Symbolic knowledge should be associated with the knowledge of cultural codes underlying cultural industries and advertising.

KIBS perform important functions in the economic system. Firstly, they diffuse knowledge in the form of specific and synthetic expert knowledge. As a result of the increase in the amount of information and knowledge KIBS are closely linked, not only to knowledge diffusion but more generally to the modernization and rationalization process of the economy. Secondly, they integrate different stocks of knowledge and competencies. The combination of knowledge of various functional areas may be of importance during the innovation process. The ability of the KIBS to integrate different types of specialized knowledge explains unequivocally why both informal and formal networks and cooperation play an important role in KIBS business performance. Thirdly, they produce new, foremost synthetic knowledge. During the development of their assigned activity, KIBS collect, transform and create new knowledge, most of the tacit type.

KIBS maintain also long-term relationships with their clients which allow them to acquire both tacit and explicit knowledge about their client firms. This knowledge is used to adapt solutions for innovating problems to the specific structure and culture of client firms. During the process of new knowledge creation existing knowledge is used to develop a solution to a specific problem. This knowledge is available through the expertise of the project team (academics as well as non-academics) or from the results of earlier projects – part of the body of scientific

knowledge. Available knowledge, as well as newly generated context-specific knowledge, is applied in order to solve a specific problem. A spin-off product resulting from the accepted original problem-solving solution is the additional generic knowledge perceived as emerging experience. Generic knowledge is the knowledge that is generally applicable to answer similar kinds of problems the organization is dealing with. As science is interested in the nature and behaviour of observable phenomena it seeks knowledge that has relevance and validity beyond a specific context of the actual assignment. Through reflective processes, single expert and expert teams can use the specific knowledge developed in the project for the further development of existing methods and theory (research). Conclusions of general relevance can be drawn and in this sense, generic knowledge will eventually be developed. The generic knowledge increases the body of knowledge in scientific communities and the knowledge applicable to societal problems.

Determining the Economic Value of Expert Information

A very important economic aspect of contracting and using expert information in the innovation management process is to determine its economic value and cost. The main product of knowledge-intensive service contractor is the expert information and then the value of this product will be of importance for contracting parties. The expert information – almost as a quantum of actual knowledge – bears a solution to the problem addressed and its utility shall not be put in question. Since using external information is an activity of discretionary nature to the contracting firm, it is relatively easy for a manager to make an impact on costs by cutting discretionary expenses related to innovation. The practice of reducing expenditures on research and development, training, advertising (among many others) will have a real effect in the short term. Factors, such as opportunism and bounded rationality, may influence the decision-making process to acquire and process expert information (Williamson, 1985, pp. 30–31). Since costs could be lowered, profits are boosted. There will be, however, other effects in the long term. Contrasting adverse effects will arise on overall business performance as sales drop off due to product or service deterioration, or lack of new products. Wrongly balanced interdependence between the value and cost of expert information can undermine the competitiveness of a given business. Subsequently, the long-term well-being of the firm can be threatened.

Here the question arises: How to determine the value of expert information? One possible solution to this question emerges from well-established accounting methods (i.e. activity-based costing). Methods of this kind have been successfully integrated into today's business management curriculum. The purpose of those methods is to answer the question whether or not a cost based on a single or complex activity does add value to the business process (Tanaka, Yoshikawa, Innes, Mitchell, 1994, p. 172).

Another possible explanation of the expert information value arises when accounting for expected value in case, which means the expert has the information required. Possessing information required by a business firm is like sending a signal. The willingness to pay for the information is a reaction to the incentive received from the expert. As a result, a contract between those parties is signed. The economic rationale behind those stylised facts is that the business expects an improvement, i.e. a positive net effect of using the acquired information, after all costs (including expert's salary) are taken into account. The positive net effect is responsible then for the firm economics of scale (Kalirajan, 1997, pp. 255–256). The acquired information represents itself a measurable value. It is the difference between the expected value of the net effect of using valuable information and the value of the net effect when no valuable information was used.

Conclusions

This article shows a brief perspective on the timeline between knowledge and innovation management and what is now known as Knowledge Intensive Business Services, where contextualized knowledge production has a leading role in the establishment of a competitive advantage in business organizations.

A relation of reflexivity can be found at the core of knowledge production and perception. Producing services, based on synthetic knowledge, seems to be a straightforward approach. The main task is to organize a solution to a problem (in form of an operation or a treatment). It is to place a bundle of capabilities and competencies at the disposal of a client and to elaborate a solution (Gadrey, Gallouj, Weinstein, 1995, pp. 14–15). For KIBS elaborating a solution means conducting a scientifically oriented study with the purpose of the contract, i.e. creation of knowledge artifacts (procedures, treatment) as they are developed and used by people with the goal of solving problems (Hevner, March, Park, Ram, 2004, p. 82). A spin-off product resulting from the accepted original problem-solving artifacts is the additional generic knowledge perceived as emerging experience. The experience and the knowledge stored in the knowledge-intensive business organization memory are not purely historical in their nature. Their purpose can turn to be or become also predictive because the organization experience is not only its memory (Kransdorff, 1998, p. 177). The organizational experience cannot only provide the records and evidence for the business organization, its members or partners in the past, but also function as a dependent frame of reference and an empirical mode for the decision to come (Paoli, Prencipe, 2003, pp. 158–159) and for the collective action. In addition, knowledge-intensive working includes an obvious, though contractual, relation to an experience of a lack, which evolves from the cognitive gap of the addressed, but still unsolved problem.

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Cite this article as: Bednarz, J. (2018). Knowledge-intensive business services and the value of expert information. *European Journal of Service Management*, 4 (28/2), 47–54. DOI: 10.18276/ejsm.2018.28/2-05.

ESTIMATION OF THE DISTRIBUTION OF α -STABLE RETURN RATES OF STOCK MARKET INDICES BASED ON THE CRITERION OF MINIMIZATION OF CHI-SQUARE STATISTICS

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION D53, G11

KEYWORDS return rates, alpha-stable distribution, chi-square test

ABSTRACT

One of the most frequently considered problems related to the capital market is the appropriate modelling of the distributions of rates of return for specific financial instruments. The results of such modelling are often used as an element of a number of tools and methods used for analyzes, diagnoses and forecasts of specific phenomena occurring on financial markets. An adoption a priori of certain assumptions as to the density function of distribution of return rates, seems to be a highly risky approach. A significant deviation of the actual rates of return from the assumed ones may cause a number of negative consequences, including among others that it may be the basis for questioning the credibility and thus the applicability of a number of techniques, methods and models used for analyzes, diagnoses and forecasts of the capital market. The main objective of the study will be to determine the impact of the change in the optimization criterion when estimating the parameters of the stable distribution, on the probability of obtaining a distribution consistent with the theoretical. In addition, the potential impact on this probability of such factors as the adoption of a specific assumption regarding the method of construction of individual numerical intervals or the inclusion of a specific rate of return will also be examined.

Introduction

An element inseparably connected with research conducted on the capital market are issues related to proper modelling of specific financial variables, including in particular the returns on financial instruments. The simplest and at the same time the most commonly used approach assuming the normality of the rates of return, despite high practicality, is unacceptable from a theoretical point of view.

If the deviations from the normal distribution of return rates are large, they may call into question the utility of a number of tools developed within the framework of modern financial theory. For the above reasons, the question of the probability distribution of return rates from shares is an extremely important issue, although there is still no universal way to solve this problem. Therefore, for a long time it has been the subject of interest for both Polish researchers (Tomasik, Echaust, 2008, pp. 34–66; Bednarz, 2012, pp. 103–113; Czyżycki, 2013, pp. 1530–1535) as well as foreign (Piasecki, Tomasik, 2013 work on this subject). There are many schedules that can replace a normal distribution: t-distribution and skewed t-distribution, GED, Laplace distribution. One of the more frequently used is also the alpha-stable distribution.

Unfortunately, apart from three cases (normal distribution, Cauchy distribution, Levy distribution), there are not known explicit forms of distribution of the density function of stable distributions, which is the basic problem in the use of this class of statistical distributions. In the literature on the subject there are a number of proposals related to the estimation of stable distribution parameters, including estimation of parameters by moments method (Press, 1972, pp. 842–846; Fielitz, Rozelle, 1981, pp. 303–320; Kuruoglu, 2001, pp. 2192–2201), by the quantile method (Fama, Roll, 1971, pp. 331–338; McCulloch, 1986, pp. 1109–1136), using the regression function (Koutrouvelis, 1980, pp. 918–928; Koutrouvelis, 1981, pp. 17–28), or on the basis of the Maximum Likelihood Method (Paulson, Holcomb, Leitch, 1975, pp. 163–170). The conducted simulation tests indicate that the worst approximation properties characterize the method of moments, then the regression and quantile method, while the most accurate estimation results are obtained using the method of the Maximum Likelihood Method (Borak, Härdle, Weron, 2005, pp. 21–44). The estimation of parameters of alpha-stable distributions by the Maximum Likelihood Method is not significantly different from the estimation by this method of the distribution parameters of other classes. Having the given observation vector $x = \{x_1, x_2, \dots, x_n\}$, the estimation of the parameter vector $\theta = (\alpha, \beta, \mu, \sigma)$ of the alpha-stable distribution by the Maximum Likelihood Method is obtained by maximizing the logarithm of the likelihood function: estimation of the parameter vector $\theta = (\alpha, \beta, \mu, \sigma)$ of the alpha-stable distribution by the Maximum Likelihood Method is obtained by maximizing the logarithm of the likelihood function:

$$\Phi(t) = \begin{cases} \exp \left[i\mu \times t - \sigma^\alpha |t|^\alpha \times \left(1 - i\beta \times \operatorname{sgn}(t) \times \operatorname{tg} \left(\frac{\alpha \cdot \pi}{2} \right) \right) \right] & \text{if } \alpha \neq 1 \\ \exp \left[i\mu \times t - \sigma |t| \times \left(1 + i\beta \times \operatorname{sgn}(t) \times \frac{\pi}{2} \times \ln(t) \right) \right] & \text{if } \alpha = 1 \end{cases},$$

where: $\alpha \in (0, 2)$ – an index of stability (tail index, tail exponent of characteristic exponent); $\beta \in (-1, 1)$ – a skewness parameter; $\sigma > 0$ – a scale parameter; $\mu \in R$ – a location parameter; $i = \sqrt{-1}$; $\operatorname{sgn}(t) = \frac{1}{|t|}$.

The rate of return on a given financial instrument can be defined either as an arithmetic rate of return or as a logarithmic rate of return. In the literature on modelling rates of return we can meet both forms; moreover, studies conducted so far do not indicate any particular advantage in modelling the distribution of any of these returns (Czyżycki, 2016, pp. 19–29; Bednarz-Okrzyńska, 2014, pp. 11–25).

As previously indicated, the most commonly used test to assess the fit of the theoretical distribution to the empirical distribution of the rate of return is the chi-square test, defined as:

$$\chi^2 = \sum_{j=1}^k \frac{(n_j - \hat{n}_j)^2}{\hat{n}_j},$$

where: n_j – empirical size in j^{th} interval; \hat{n}_j – theoretical size in j^{th} interval; k – number of numerical intervals, wherein the most common assumption is that the width of all ranges is the same. It is possible, however, to assume the existence of the same empirical size or the same theoretical size in particular intervals. Irrespective of the assumptions regarding the method of constructing numerical intervals, the concordance of the theoretical distribution with the empirical distribution is the greater, the smaller the differences between the empirical and theoretical sizes in individual intervals, i.e. the lower the value of the chi-square statistics.

In order to verify such hypotheses, modelling of the following returns was carried out: a daily simple rate of return formed during the period of 25 quotations (monthly estimation period) (Rt_25); a daily logarithmic rate of return formed during the period of 25 quotations (R^*t_25); a daily simple rate of return formed over a period of 125 quotations (half-year estimation period) (Rt_125); a daily logarithmic rate of return formed during the period of 125 quotations (R^*t_125); a daily simple rate of return formed during the period of 250 quotations (annual estimation period) (Rt_250); a daily logarithmic rate of return shaped over a period of 250 quotations (R^*t_250); a daily simple rate of return formed during the 1,250 quotations (five-year estimation period) (Rt_1250); a daily logarithmic rate of return formed during the period of 1,250 quotations (R^*t_1250).

The above rates of return will be modelled from the first quotation in which such modelling is possible (e.g. for a daily return rate covering a period of 250 quotations, the first model was obtained for the 251st quotation of a given index, the second model for 252nd quotation included return rates from quotations from 2 to 251 etc.) until the quotation taking place on June 28, 2018. This means that for the S & P500 index, for each of the analyzed distributions, 12,208 models were obtained for the monthly estimation period, 12,108 for the half-year estimation period, 11,983 models for the annual estimation period and 10,983 models for the five-year estimation period. In the case of the WIG index, the number of models obtained was at 5,913, 5,813, 5,688 and 4,688, respectively.

Findings

In order to verify the hypothesis concerning the impact of the adopted optimization criterion on the probability of obtaining a distribution consistent with the considered stable distribution, the parameters for the previously indicated all variants were estimated. In the next step, based on the Chi-square compatibility test, it was checked for how many of the n distributions obtained there are no grounds to reject the hypothesis that they are consistent with the considered theoretical distribution (p -value = 0.05). Then, based on the test for two structure indices, the p -value level was determined, at which it can be assumed that there is a statistically significant difference in the frequency (probability) of obtaining a distribution consistent with the assumed, taking into account a function of density and Chi-square statistics as a function of likelihood. Based on the results of the above tests contained in tables 1–3, the following conclusions can be drawn: (1) the probability of obtaining a distribution consistent with the assumed one depends on the adopted method of construction of the interval series - this is particularly evident in the case of a short estimation period. The lowest probability occurs when considering the equal width of the numerical intervals, the largest – in the case of assuming the same empirical size in each range; (2) irrespective of the adopted assumption regarding the method of building a numerical series, the probability of obtaining a distribution consistent

with the assumed significantly increases in the case of adopting in the estimation of the parameters of the stable distribution the criterion of minimization of chi-square statistics, instead of the likelihood function described in the formula 1 which is conventionally used in this role. An increase of this probability is inversely proportional to the length of the observation vector (of the length of the estimation period).

Table 1. Results of modelling of selected rates of return using the Maximum Likelihood Method, adopting in the function of likelihood the function of density of stable distribution (ML (1)) and chi-square statistics (ML (2)) and the equal range of the intervals of the numerical series

Distribution	n	Number of consistent distributions		p-value for test for two structure indicators
		ML(1)	MNW(2)	
SP500_Rt_25	12,208	8,735	9,795	0.000E+00
SP500_Rt*_25	12,208	8,760	9,778	0.000E+00
WIG_Rt_25	5,913	4,032	4,567	0.000E+00
WIG_Rt*_25	5,913	4,033	4,566	0.000E+00
SP500_Rt_125	12,108	10,253	10,454	2.431E-04
SP500_Rt*_125	12,108	10,243	10,473	2.630E-05
WIG_Rt_125	5,813	5,009	5,116	3.082E-03
WIG_Rt*_125	5,813	5,022	5,126	3.786E-03
SP500_Rt_250	11,983	10,086	10,192	5.775E-02
SP500_Rt*_250	11,983	10,306	10,400	7.653E-02
WIG_Rt_250	5,688	5,164	5,218	7.299E-02
WIG_Rt*_250	5,688	5,147	5,213	3.002E-02
SP500_Rt_1250	10,983	8,279	8,334	3.874E-01
SP500_Rt*_1250	10,983	8,299	8,357	3.607E-01
WIG_Rt_1250	4,688	3,670	3,722	1.886E-01
WIG_Rt*_1250	4,688	3,669	3,721	1.887E-01

Source: author's own study.

Table 2. Results of modelling selected rates of return using the Maximum Likelihood Method, taking into account in the function of likelihood the function of density of stable distribution (ML (1)) and chi-square statistics (ML (2)) and equal empirical size in particular intervals of the numerical series

Distribution	n	Number of consistent distributions		p-value for test for two structure indicators
		ML(1)	ML(2)	
1	2	3	4	5
SP500_Rt_25	12,208	11,290	11,995	0.000E+00
SP500_Rt*_25	12,208	11,281	11,992	0.000E+00
WIG_Rt_25	5,913	5,426	5,779	0.000E+00
WIG_Rt*_25	5,913	5,430	5,779	0.000E+00
SP500_Rt_125	12,108	10,847	11,002	7.964E-04
SP500_Rt*_125	12,108	10,295	10,466	1.678E-03
WIG_Rt_125	5,813	5,035	5,112	3.210E-02
WIG_Rt*_125	5,813	5,027	5,353	0.000E+00
SP500_Rt_250	11,983	10,305	10,394	9.384E-02
SP500_Rt*_250	11,983	10,306	10,400	7.653E-02

1	2	3	4	5
WIG_Rt_250	5,688	5,161	5,218	5.877E-02
WIG_Rt*_250	5,688	5,165	5,214	1.042E-01
SP500_Rt_1250	10,983	8,104	8,294	3.208E-03
SP500_Rt*_1250	10,983	8,159	8,323	1.057E-02
WIG_Rt_1250	4,688	3,670	3,722	1.886E-01
WIG_Rt*_1250	4,688	3,669	3,721	1.887E-01

Source: author's own study.

Table 3. Results of modelling selected rates of return using the Maximum Likelihood Method, taking into account in the function of likelihood the function of density of stable distribution (ML (1)) and chi-square statistics (ML (2)) and equal theoretical size in particular intervals of the numerical series

Distribution	n	Number of consistent distributions		p-value for test for two structure indicators
		ML(1)	ML(2)	
SP500_Rt_25	12,208	9,064	9,790	0.000E+00
SP500_Rt*_25	12,208	8,946	10,317	0.000E+00
WIG_Rt_25	5,913	4,104	4,761	0.000E+00
WIG_Rt*_25	5,913	4,423	4,584	5.116E-04
SP500_Rt_125	12,108	10,444	10,626	5.039E-04
SP500_Rt*_125	12,108	10,467	10,660	2.010E-04
WIG_Rt_125	5,813	5,323	5,439	4.100E-05
WIG_Rt*_125	5,813	5,034	5,115	2.408E-02
SP500_Rt_250	11,983	10,383	10,521	7.578E-03
SP500_Rt*_250	11,983	10,306	10,400	7.653E-02
WIG_Rt_250	5,688	5,161	5,218	5.877E-02
WIG_Rt*_250	5,688	5,165	5,214	1.042E-01
SP500_Rt_1250	10,983	7,814	8,067	1.365E-04
SP500_Rt*_1250	10,983	8,299	8,357	3.607E-01
WIG_Rt_1250	4,688	3,670	3,722	1.886E-01
WIG_Rt*_1250	4,688	3,669	3,721	1.887E-01

Source: author's own study.

Based on the information contained in figures 1–3, which present graphically the differences in the frequency of obtained distributions consistent with the assumed (positive value means the advantage of the distributions obtained assuming minimization of chi-square statistics as a function of likelihood, while negative value – the advantage of distributions obtained assuming maximizing the function of likelihood, taking into account the function of density of the stable distribution), the hypothesis on a higher probability of obtaining a distribution consistent with the stable distribution can be additionally confirmed with the assumption of minimizing chi-square statistics.

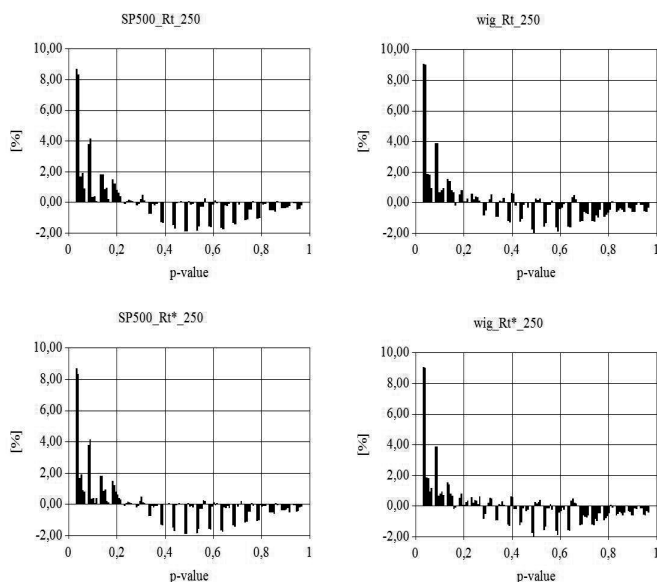


Figure 1. Differences in the frequency of obtained distributions consistent with the stable distribution with a differently defined function of likelihood in the Maximum Likelihood Method, the estimation period of 250 quotations and the equal range of the intervals of the numerical series

Source: author's own study.

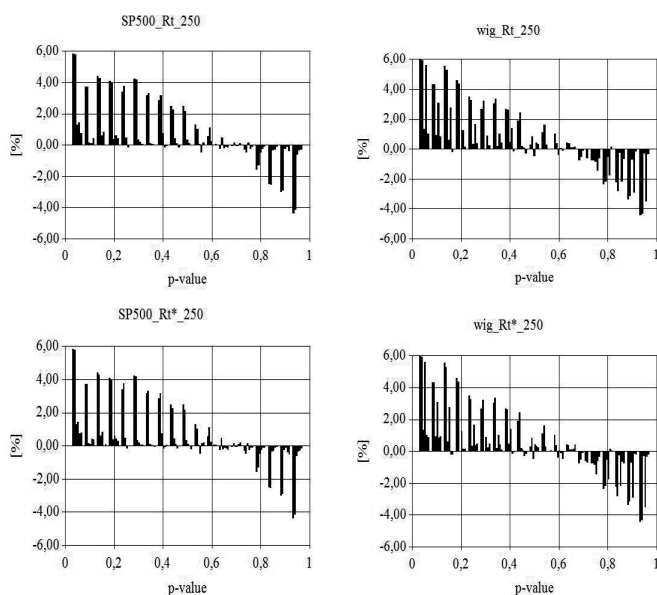


Figure 2. Differences in the frequency of obtained distributions consistent with the stable distribution with a differently defined function of likelihood in the Maximum Likelihood Method, the estimation period of 250 quotations and equal empirical size in particular intervals of the numerical series

Source: author's own study.

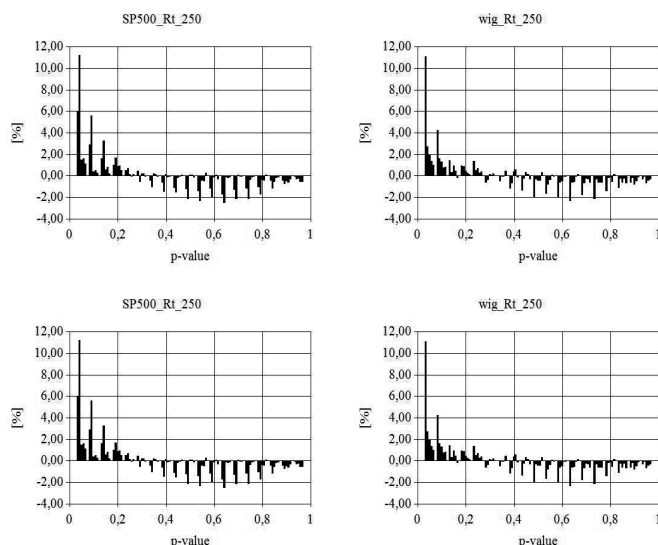


Figure 3. Differences in the frequency of obtained distributions consistent with the stable distribution with a differently defined function of likelihood in the Maximum Likelihood Method, the estimation period of 250 quotations and equal theoretical size in particular intervals of the numerical series

Source: author's own study.

In order to verify the additional hypothesis (H2), which states that the probability of obtaining a distribution consistent with the assumed one is the same in developed and developing capital markets, the results of modelling these rates for the SP500 index and WIG index were compared. However, the results obtained in this respect are ambiguous. In the case of a fixed spread of numerical intervals, the probability of obtaining a distribution consistent with the assumed one was different in a statistically significant way for both markets irrespective of the optimization criterion adopted. In the case of assuming a constant empirical size in individual intervals, the lack of such a difference can be seen in logarithmic modelling of the rate of return for the monthly estimation period ($n = 25$), while with the same theoretical sizes in particular intervals of the distribution series, the lack of differences in the probability of obtaining a distribution consistent with the assumed one occurs in the case of a logarithmic rate of return and half-year estimation period ($n = 125$), taking into account the classical likelihood function and the arithmetic rate of return for the monthly estimation period and the logarithmic rate of return and half-year estimation period in the case of chi-square statistics as a function of likelihood. Detailed information on the results of the conducted study is presented in tables 4–6.

Table 4. Values of p for the test for two structure indices, examining the frequency of occurrence of distributions consistent with the assumed one for the rates of return from the WIG index and SP500 assuming an equal spread of the intervals of the numerical series (based on data from Table 1)

Distribution	p-value for test for two structure indicators	
	ML(1)	ML(2)
Rt_25	3.290E-06	3.069E-06
Rt*_25	8.713E-07	7.902E-06
Rt_125	8.645E-03	1.935E-03
Rt*_125	1.539E-03	1.663E-03
Rt_250	0.000E+00	0.000E+00
Rt*_250	0.000E+00	0.000E+00
Rt_1250	9.128E-05	1.750E-06
Rt*_1250	2.673E-04	7.606E-06

Source: author's own study.

Table 5. Values of p for the test for two structure indices, examining the frequency of occurrence of distributions consistent with the assumed one for the rates of return from the WIG index and SP500 assuming an equal empirical size in particular intervals of the numerical series (based on data from Table 2)

Distribution	p-value for test for two structure indicators	
	ML(1)	ML(2)
Rt_25	9.088E-02	1.633E-02
Rt*_25	1.754E-01	2.269E-02
Rt_125	4.630E-09	1.149E-09
Rt*_125	9.753E-03	0.000E+00
Rt_250	0.000E+00	0.000E+00
Rt*_250	0.000E+00	0.000E+00
Rt_1250	2.445E-09	1.475E-07
Rt*_1250	1.174E-07	1.050E-06

Source: author's own study.

Table 6. Values of p for the test for two structure indices, examining the frequency of occurrence of distributions consistent with the assumed one for the rates of return from the WIG index and SP500 assuming an equal theoretical size in particular intervals of the numerical series (based on data from Table 3)

Distribution	p-value for test for two structure indicators	
	ML(1)	ML(2)
Rt_25	7.162E-12	6.069E-01
Rt*_25	2.902E-02	0.000E+00
Rt_125	0.000E+00	0.000E+00
Rt*_125	7.804E-01	9.254E-01
Rt_250	6.217E-15	4.663E-15
Rt*_250	0.000E+00	0.000E+00
Rt_1250	0.000E+00	2.887E-15
Rt*_1250	2.673E-04	7.606E-06

Source: author's own study.

Conclusions

On the basis of the conducted considerations, it seems justified to propose the following conclusions:

1. In the case of estimating the parameters of the stable distribution with the Method of Maximum Likelihood, using the minimization of chi-square statistics instead of the usual maximization of the likelihood function based on the density function of the stable distribution significantly increases the probability of obtaining a distribution consistent with the assumed one.
2. In the case of chi-square compatibility test, an adopted assumption related to the method of determining empirical and theoretical sizes in particular intervals of the distribution series has a significant effect on the probability of obtaining a distribution consistent with the assumed one. The lowest probability occurs in the case of accepting the equal width of the numerical intervals, the largest - in the case of assuming the same empirical size in each interval.
3. The probability of obtaining a distribution of the return rate, consistent with the theoretical one, does not depend significantly on the rate of return adopted for modelling. Both in the case of the simple and the logarithmic rate of return, the chance of obtaining a distribution consistent with the theoretical is the same regardless of the length of the assumed horizon of estimation.
4. The degree of development of the capital market is significant. In the case of emerging markets, which is undoubtedly the Polish capital market, the probability of obtaining a distribution consistent with the modelled one is significantly smaller compared to the modelling of indices of developed stock markets (SP500).

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Cite this article as: Bednarz-Okrzyńska, K. (2018). Estimation of the distribution of α -stable return rates of stock market indices based on the criterion of minimization of chi-square statistics. *European Journal of Service Management*, 4 (28/2), 55–64. DOI: 10.18276/ejism.2018.28/2-06.

MICROINSURANCE IN LIMITING INSURANCE EXCLUSION

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION G15, G22, G32

KEYWORDS insurance exclusion, microinsurance, poverty reduction

ABSTRACT Microinsurance provides indigent households with protection against basic threats, especially in developing countries. When compared to the general population, poor households are usually more often subject to risk such as illnesses, accidents or property losses, and are therefore more dependent on insurance services. However, due to their low economic attractiveness, they are often not served by traditional insurance companies. In Europe, particularly Central and Eastern Europe, microinsurance is a relatively new concept that is developing comparatively slowly. Thus, this situation constitutes an opportunity to develop a microinsurance system that can become an active instrument in reducing the risk of insurance exclusion in developing and developed countries. The purpose of the article is the micro-insurance specifics in the aspect of insurance exclusion. The research process required the use of the following research methods and techniques: critical literature analysis, desk research, observation, qualitative methods and graphic presentation techniques of research and analysis results. The main conclusions that flow from the article is an opportunity to develop micro-insurances not only in poor countries. They give the opportunity to increase the insurance capacity of insurers. It is also a chance to have insurance coverage by a larger group of households.

Introduction

Financial exclusion is a social problem faced by both developing and developed countries. This phenomenon is related to the inability of some social groups to access basic financial services in a proper way. It covers a wide range of social groups that for various reasons do not use insurance products at all or use them insufficiently. At the same time, it can be observed that in the financial market the problem of insurance exclusion is treated as a matter

of secondary importance, which increases the relatively low confidence in insurance institutions. Microinsurance may be a solution, as it is understood as a simple product with high development potential. Nevertheless, this requires a certain remodelling of the market and creating an offer tailored to the needs of those affected by the insurance exclusion. Moreover, of necessity are systemic measures, which are subject to the competence of institutional entities operating on the insured market.

Materials and method

The research process required the use of the following research methods and techniques: critical literature analysis, desk research, observation, qualitative methods and graphic presentation techniques of research and analysis results. The analysis of the literature aimed at assessing the state of knowledge about the phenomenon of insurance exclusion and microinsurance. In the phase of gathering the actual knowledge, desk research method was used, and as a result, the most commonly used solutions in the field of microinsurance were selected. When examining industry reports (Swiss Re) and analysing the available statistics, conclusions were drawn about the possible use of these instruments and further prospects for them. Furthermore, the available microinsurance products have also been identified. On this basis, final conclusions were formulated.

Insurance exclusion against the background of financial exclusion

Financial exclusion is a social problem faced by both developing and developed countries. This concept is defined by, among others, E. Kempson and C. Whyley, who understand financial exclusion as a limited access to mainstream financial services, without focusing on physical or geographical barriers (Kempson, Whyley, 1999, pp. 5–8). On the other hand, the European Commission refers to the definition presented in the “Financial Services Provision and Prevention of Financial Exclusion” (2008) report, according to which, financial exclusion refers to a process whereby people encounter difficulties accessing and/or using financial services and products in the mainstream market that are appropriate to their needs and enable them to lead a normal social life in the society in which they belong. In this definition, the focus is put on entities providing services on the main market. For example, as far as the banking market is concerned, one can talk about strictly basic and alternative markets (secondary), whereas in the case of insurance products, such markets simply do not exist. Thus, insurance solutions in the context of financial exclusion remain the domain of insurance companies operating in the main market.

On the other hand, insurance exclusion can be understood as a situation in which a group of people does not use insurance products at all. This may take place for a variety of reasons. First of all, it is conditioned by the lack of an offer tailored to the needs of people affected by this type of exclusion and a physical lack of access to products. It may directly result from the fact that financial capabilities of such people are very limited. Furthermore, the poor and people suffering from bad financial situation are often unable to reduce their consumption in order to pay an insurance premium. Thus, despite the higher usefulness of insurance, they do not acquire the necessary insurance protection (Solarz, 2011, pp. 363–371).

Insurance exclusion is also aggravated by social reasons, such as aging of society and a technology gap. It is also the result of low awareness and economic knowledge in the field of insurance, which for many people seems to be too difficult and incomprehensible. There is also a group of people who voluntarily stop using insurance products, thus self-excluding themselves. This mainly stems from the previous negative experience with insurance institutions and the resulting loss of trust.

Furthermore, the exclusion from the insurance market is very often caused by the insurers themselves. As commercial intermediaries whose goal is to maximize profits, they concentrate their activities mainly on clients to whom they can sell the most profitable products. When looking for the best benefit-cost ratio, they limit the service to those who absorb resources without generating the expected benefits. Hence the strong concentration of insurance branches in cities and their negligible number in remote locations and rural areas. Another reason is that insurance companies often do not adapt their offer to the needs of potential clients, as well as demand too high prices for insurance products. Moreover, poorly educated households often perceive the insurance premium as an unnecessary and excessive expense. It should be pointed out that the prices of basic insurance in relation to earnings in Poland have been among the highest in Europe for years. At the same time, according to the Social Diagnosis 2015, trust in life insurance companies is at the level of 48.7%, whereas in the case of property insurance companies it amounts to 34.4%, and is definitely lower than trust in banks, for which it reaches the level of 77.2% (Czapiński, Panek, 2015, pp. 151–153). Thus, the phenomenon of insurance exclusion is additionally strengthened by low trust of customers in the insurance institution itself.

Social groups vulnerable to insurance exclusion

About 50.5% of the world's population aged 15 and more is subject to financial exclusion. Although this phenomenon mainly concerns developing countries, it also occurs in the European Union. According to world statistics, at least 1.5 to 3 milliard people for various reasons do not have any insurance policy protecting their lives, health or property against the negative effects of fortuitous events (Eling, Biener, 2011, pp. 403–404).

Insurance exclusion, as a part of a financial exclusion, usually concerns the following social groups:

- people of low income,
- unemployed people,
- women,
- single parents,
- younger and older people,
- non-employed people due to illnesses,
- the disabled,
- people living in rural or poorly urbanized areas,
- immigrants.

Certainly, low-income households, including the unemployed, are the most vulnerable to insurance exclusion. The next social group that has difficult access to the insurance services market are the elderly as well as the sick and the disabled.

The above-mentioned groups make up a large part of society, however the threat of insurance exclusion does not have to necessarily concern them.

The characteristics and scope of the microinsurance

Microinsurance is part of microfinance, which originated in developing countries in the 1970s and 1980s. In addition to microcredit and microloans, they are the basic product offered on the so-called microfinance market. These are products targeted at the poorest part of society for whom basic commercial insurance is not available due to financial reasons (Bednarczyk, 2016, pp. 23–32). Microinsurance concerns simple and cheap products

with a limited scope of insurance protection addressed to people who need insurance in the baseline option. Thus, the origins of microinsurance are related to the Third World countries. They have been well implemented in countries such as India, Bangladesh, China, Brazil, Bolivia, etc. They are also an instrument used by governments and international organizations to reduce and alleviate poverty and financial exclusion in developing countries. Moreover, they constitute a natural mechanism replacing the social safety net (Kawiński, 2010, pp. 311–324). Therefore, microinsurance can be generally defined as simple and cheap insurance products with a limited scope of insurance protection addressed to poor people.

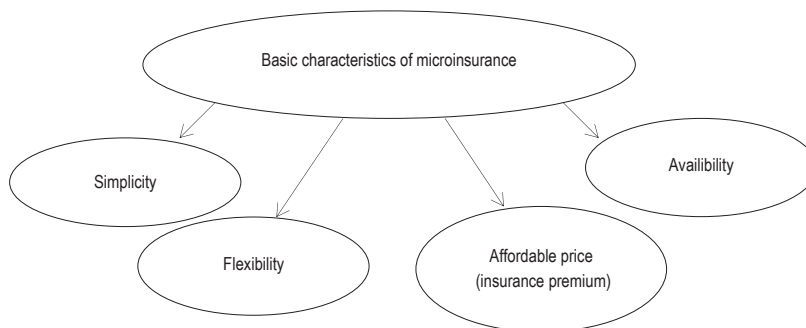


Figure 1. The most important characteristics of microinsurance

Source: own work based on Sigma, Swiss Re (2010).

Accessibility is related to the fact that microinsurance is directed to a special group of people with low, often irregular income. At the same time, in poor households, the risk in such areas as accidents, illness or theft is higher than in a typical household. Affordable price is connected with the fact that the premium for insurance protection should be definitely low, with the possibility of splitting it into instalments. A kind of solution is the involvement of state institutions and subsidizing this type of insurance. Flexibility is related to the fact that the recipients of this type of insurance are primarily people with irregular income and hierarchical goals different from people with a stable financial situation. Therefore, these products should be very well tailored to various recipients' insurance needs. Simplicity, which should be manifested not only in the product structure, but also its distribution and the method of collecting the insurance premium. It concerns both the construction of contracts and general conditions of insurance as well as the principles of claims settlement.

The differences between traditional insurance and microinsurance are presented in Table 1.

Thus, in the light of the presented comparison, the following definitions of microinsurance can be adopted in the article. This term is understood as insurance cover offered to financially marginalised people (low income, the poor) for specific risks, in exchange for an insurance premium calculated on the basis of limited actuarial data, and proportional to the probability and cost of risk. At the same time, alternative channels of distribution (Singh, Bihari, 2018) are the optimal solution for delivering these products to target groups. These include distribution agreements with microfinance institutions and banks, local government and non-government organizations, as well as suppliers of other services, such as post offices, supermarkets, work cooperatives, hospitals, medical centres, schools, etc.

Table 1. Microinsurance and traditional insurance – differences

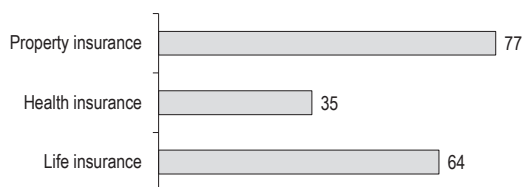
	Microinsurance	Traditional insurance
Target market	<ul style="list-style-type: none"> – natural persons with low income and insurance knowledge, – high-risk customers 	<ul style="list-style-type: none"> – persons with middle- and high-income who know and understand the essence and benefits of insurance products, – clients with a fairly well-known risk
Product characteristics	<ul style="list-style-type: none"> – simple insurance products (transparent language, no or low number of exceptions, low guarantee amount, group policies), – premiums calculated based on limited actuarial data 	<ul style="list-style-type: none"> – extensive products, various general insurance conditions with multiple liability inclusions, – premiums calculated based on available historical data and individual risk assessment, – high guarantee amount
Distribution and marketing	sold via unconventional intermediaries, often microfinance institutions	sold with the help of licensed insurance intermediaries or directly to individual clients and entrepreneurs
Insurance premium	irregular, cash, split in instalments	regular premiums, usually paid in a non-cash form
Claim settlement	a simplified and easy procedure with low insurance sums	a complex process requiring the involvement of significant human resources and associated with extensive documentation

Source: own work, Sigma, Swiss Re (2010).

It is worth noting that in the canon of microinsurance definitions one can find many interpretations, which are given both by insurance institutions (for example the International Association of Insurance Supervisors), as well as many researchers dealing with the issue of microfinance. Nevertheless, the common denominator that links them together is the target group of the so-called low-income recipients, who are often socially marginalized.

Types and possibilities of microinsurance in the aspect of financial exclusion

The largest share in the provision of microinsurance is held by professional insurers and reinsurers operating internationally, including: Interpolis Re, Axa Re, Swiss Re, Munich Re, etc. Microinsurance covers three basic product groups: life, health, and property insurance. The estimates of Swiss Re and the World Bank indicate that 135 million people currently have microinsurance, which is about 5% of the potential market, ranging from 1.5 to 3 billion people (Biener, 2010, p. 8). On the other hand, the microinsurance market is presented in Figure 2.

**Figure 2.** Global insurance market (in million USD, 2016)

Source: Microinsurance Network (2017).

Life insurance is among the products that enjoy the most popularity. It is part of micro-credit packages, including accident, disability and funeral costs insurance. In this group, life microinsurance with capital funds is less popular. The other group consists of micro-health insurance (primary care, hospitalization, maternity), which

is mainly offered by non-governmental organizations, and is subsidized in many situations. On the other hand, property insurance provides financial protection of tangible assets against the basic risks in this respect, i.e.: fire, theft, flood, etc.

Microinsurance is offered in the form of individual insurance products as well as package products and index insurance.

In broader terms, this catalogue includes the following microinsurance products – Table 2, which also have the following advantages.

Table 2. Types of mainstay microinsurance products and benefits

Products	Sub-types	Benefits
Health	Hospitalisation, primary care, critical illness	Protects the beneficiaries against illness, injury, diseases, coverage often limited to hospitalization
Life-Credit	Life protection (bundled with micro credit)	Protects the lender for credit loss resulting from the death of the borrower, offers limited value
Life-Protection	Term life, funeral accident, disability	Provides monetary benefits to the beneficiary in the event of death (accident) disability of the policyholder
Life-Savings	Endowment, pensions, investments	Combination of savings and protection, mobilises savings for the policyholder dependents
Agriculture/Index	Crop insurance, livestock and index covers	Protects agricultural income/returns from weather events pest infections, catastrophes, etc.
Assets	House/huts, business assets	Usually linked with loans, indemnifies the beneficiary in case of loss of covered assets due to named perils
Microtakaful	Family takaful and general takaful	Offers shariah-compliant insurance to low-income Islamic population

Source: Sigma, Swiss Re (2010).

New microinsurance products are being designed and launched for the benefit of low-income individuals in emerging markets. Many of these products feature innovative designs, leverage extensively on new technologies and make use of various conventional and alternative channels. There is continuous drive for innovation by risk carriers and distributions as they look for the optimal solutions to meet the needs of the low-income population, reduce transaction costs and expand the reach.

The following arguments support the development of microinsurance in the context of financial exclusion. Microinsurance is a simple instrument in combating poverty and secondary illiteracy, which also allow shaping the knowledge and insurance culture of the poorest individuals. Moreover, it is possible to include these products in the so-called misselling transactions, a fact which, in turn, increases the development of the insurance market as a part of the financial market. Microinsurance can also contribute to the development of insurance education and increase trust in insurers.

At the same time, microinsurance may also be a form of social entrepreneurship, which can also be effectively developed on the level of sustainable social development.

Conclusions

Nowadays, financial education is a key condition for the development of the financial market, including microinsurance. Without knowledge about not only the benefits, but also the risks that the purchase of insurance

brings, even the poorest consumers will not be able to choose the product that best suits their needs. Financial knowledge facilitates proper management of even low income and affects the development of financial culture. The success of microinsurance programs in practice comes down to the use of innovative insurance distribution channels. Another solution is also introducing system incentives that encourage people to purchase insurance, e.g. subsidies or tax reliefs. The awareness campaigns carried out in the press and various media are also necessary. This task should be implemented by insurance institutions.

Thus, despite the fact that the problem of microinsurance is developing quite slowly and is still considered the product associated mainly with the poorest countries, microinsurance constitutes a significant market potential also for developing and developed countries. The insurance gap in these markets remains high. This, however, requires the adoption of an appropriate strategy by insurers, who should skilfully recognize the insurance needs of people affected by financial exclusion in this respect and use this opportunity to create an offer of microinsurance products. They are the main suppliers of these products, as the possibilities of developing an alternative market are currently very small.

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Cite this article as: Bera, A. (2018). Microinsurance in limiting insurance exclusion. *European Journal of Service Management*, 4 (28/2), 65–71. DOI: 10.18276/ejsm.2018.28/2-07.

WAREHOUSE AND LOGISTICS CENTRES IN POLAND

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION R33, R49

KEYWORDS logistic centre, warehouse centre, warehouse stock, Poland

ABSTRACT This article analyses the distribution and development of selected logistical infrastructure facilities in Poland. The distribution of warehouse and logistics centres as well as the development of the modern warehouse space market were examined. The article presents the number of facilities and their warehouse area in 2012 and 2017. Furthermore, concentration areas of this type of infrastructure and companies that manage them were indicated, as well as potential logistics centres were characterized. The differences between a warehouse and a logistics centre were presented. The analysis was based on the Cushman & Wakefield's offer and information published by logistics centre operators and port authorities. In 2018, there were approximately 200 warehouse centres in Poland with a total warehouse area of over 15 million m² and only 2 logistics centres: Silesian Logistics Centre in Gliwice and CLIP Logistics in Swarzędz. The biggest industrial developers that offered warehouse area to let in 2017 were: Prologis, Logisor, Segro and Panattoni. Most of the warehouse centres provided services using exclusively road transport.

Introduction

The aim of this article is to analyse the distribution and development of selected logistical infrastructure facilities in Poland. The location of warehouse and logistics centres, as well as the development of the modern warehouse space market were examined. These facilities constitute important elements of logistical infrastructure. Concentration areas of this type of infrastructure and companies managing them were indicated, as well as potential

logistics centres were characterized. Moreover, the differences between a warehouse and a logistics centre were presented. Attention was put on the access of such facilities to various modes of transport (multimodality).

The data regarding warehouse centres presented in the article were obtained from Cushman & Wakefield's offer. The company is one of the world's largest consultancy and intermediary companies in the field of commercial property leasing, including warehouse areas – it operates in 58 countries (Piekarski, Juściński, 2005; *Przegląd rynku...*, 2004).

In accordance with the definition presented by the European Association of Logistics Centres "Europlatforms", a logistics centre is a designated area where all the activities relating to transport, logistics and goods distribution – both for national and international transit are carried out. Services are provided by various entities on a commercial basis. A logistics centre should (Europlatforms, 2017):

- be open to all interested companies,
- be multimodal, i.e. provide access to several modes of transport and support intermodal transport,
- offer public services to users,
- comply with European quality and performance standards.

In Polish literature, a logistics centre is most often defined as: a spatial object with its own organization and infrastructure which allow independent enterprises to perform actions on goods in relation to their storage and transportation between the sender and the recipient, including support for intermodal transport and providing various services to users (Kisperska, 2009, p. 287).

Table 1. Comparison of selected logistics facilities

The type of object	Infrastructure										Scope of services													
	warehouse building	Intermodal terminal	office rooms	office building	customs post	vehicle refueling station	technical service point for vehicles	car wash	catering facility	motel	storage	cross docking	sorting packages	intermodal reloading	forwarding	customs service	telecommunication services	financial services	packaging rental	packaging cleaning and repair	fuel sales	vehicle servicing	catering services	hotel services
Logistic centre	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Warehouse centre	+	-	+	-	-	-	-	-	-	-	+	+	+	-	+	+	+	-	-	-	-	-	-	-

Source: own elaboration based on Kisperska-Moro, Krzyżaniak (2009).

In addition to logistics centre, there can be distinguished warehouse and distribution or logistics-distribution centres. The main difference between a logistics centre and a warehouse centre is the range of offered services and access to various means of transport. A logistics centre has to have access to at least two modes of transport, and have an intermodal terminal as one of its elements. It also offers a range of services related to the supply chain management process. In most cases, a warehouse centre only includes storage facilities with an office part, and is only serviced by road (Table 1). The difference is already visible at the investment stage. Warehouse centres were built by one investor, most often industrial developers, in accordance with standard projects, whereas logistics centres were created by many entities, often with the participation of local-government. It should be emphasized

that not all facilities called logistics centres are them in reality. Often the name resulted from the marketing strategy of a given company, e.g. for the determination of a finished goods warehouse or a central warehouse (Fechner, 2004).

Development of warehouse infrastructure in Poland

Warehouse facilities built by industrial developers were created as a part of Build-to-Suit (BTS) investments – their localization, space, as well as technical and performance characteristics were agreed with the lessee before the construction started, or as semi-speculative projects – the infrastructure did not have a predetermined lessee. The number of modern facilities and warehouse complexes in Poland has been dynamically growing in recent years. Modern warehouse areas are facilities put to use after 2000. In 2012–2017, 80 warehouse complexes, and a total of over 3.6 million m² of warehouse area (Table 2) were built in Poland. In 2018, the total warehouse area in modern warehouse complexes exceeded 15 million m². The biggest developers in terms of the number of warehouse complexes offered were: Pannattoni – 24 in 2012 and 30 in 2017, and Prologis – 26 in 2012 and 21 in 2017. In the analysed years, this group was joined by: Logicor, Segro and Goodman that at the end of February 2017 managed respectively 19, 14 and 12 warehouse centres. In terms of warehouse area in 2017, Prologis was the largest one with 2,218.9 thousand m², Logicor – 844.6 thousand m², Segro – 757.7 thousand m², and Panattoni – 570.6 thousand m² (*Marketbeat Poland...* 2018; own elaboration based on the offer Cushman & Wakefield 02.2012 and 02.2017).

Table 2. Warehouse stock in Polish voivodeships in 2012 and 2017

Voivodeship	February 2012		February 2017	
	the number of warehouse centres	warehouse area (sq. meters)	the number of warehouse centres	warehouse area (sq. meters)
Poland	105	5,910,940	185	9,510,457
Dolnośląskie	8	525,900	19	1,108,377
Kujawsko-Pomorskie	2	65,100	5	165,101
Lubelskie	–	–	4	93,187
Lubuskie	–	–	1	4,700
Łódzkie	14	858,230	21	1,300,834
Małopolskie	6	109,780	12	339,284
Mazowieckie	40	2,143,780	60	2,960,968
Opolskie	–	–	–	–
Podkarpackie	2	48,390	2	53,229
Podlaskie	–	–	–	–
Pomorskie	4	137,000	8	446,336
Śląskie	19	1,209,740	30	1,715,466
Świętokrzyskie	–	–	–	–
Warmińsko-Mazurskie	–	–	–	–
Wielkopolskie	9	766,360	19	1,130,132
Zachodniopomorskie	1	46,660	4	192,843

Source: own elaboration based on the offer Cushman & Wakefield.

The highest concentrations of warehouse centres were located around large cities: Warszawa, Poznań, Wrocław and Łódź agglomerations, the Katowice and trójmiejska urban areas, as well as Kraków and Szczecin. On the other hand, Opolskie, Świętokrzyskie, Podlaskie and Warmińsko-Mazurskie voivodeships did not have

warehouse centres (Figure 1). In 2018, the first warehouse centre was opened in Białystok in Podlaskie voivodeship. At that time, the first warehouse complexes were under construction in Świętokrzyskie and Warmińsko-Mazurskie voivodeships (Cushman, Wakefield, 2018).

In addition to the developers, warehouse centres were owned by logistics operators, e.g. Sistema Poland – 5 (Tychy, Łódź, Bieruń, Sosnowiec, Bielsko-Biała), Muller die Logistyk – 2 (Gliwice, Wrocław), Ost Sped – 2 (Kalisz and Gądk) (Based on information published by the listed companies). Large retail chains had their own warehouse infrastructure. Some of these distribution centres had access to railways – including facilities belonging to: Ikea Hanim Poland SA, Castorama Polska Sp. z o.o., Jysk Sp. z o.o. and Blum Polska Sp. z o.o. (Bocheński, 2014).

Warehouse centres established in Poland were focused on providing services using mainly road transport. Warehouse facilities were often located in the vicinity of road junctions on motorways and expressways, away from railway lines and stations. Only 14% of them had access to the railway in 2013 – had their own siding. A characteristic feature was that a significant part of the facilities was located near container terminals (Figure 1), which made it possible to use intermodal transport. About 42% of warehouse complexes were located within a radius of 10 km from the nearest container terminal (Bocheński, 2014).

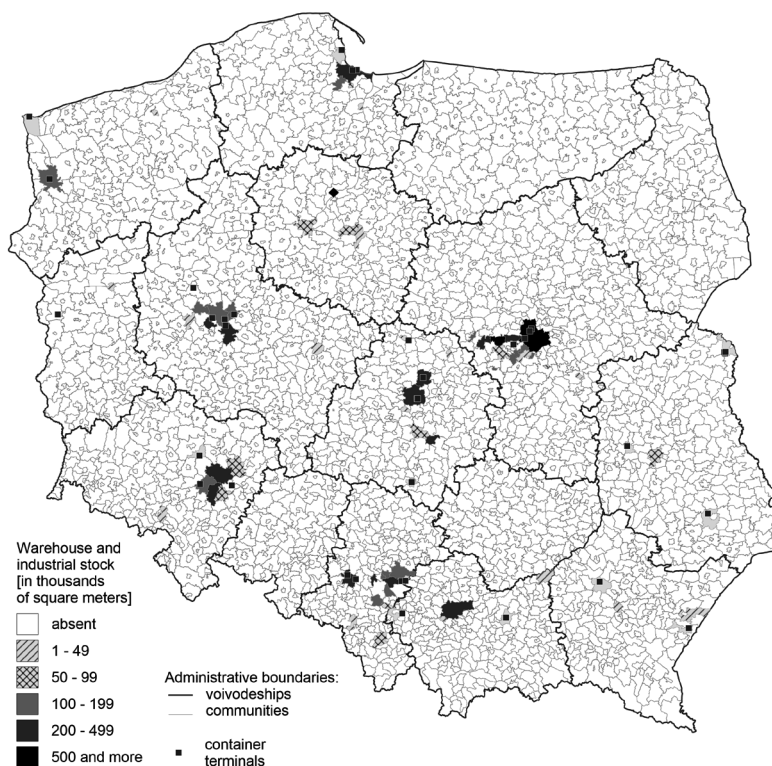


Figure 1. Warehouse and industrial stock in communities and location of container terminals in Poland – February 2017.

Source: own elaboration based on: the offer Cushman & Wakefield from February 15, 2017; information published by the Silesian Logistics Centre and Wielkopolska Logistics Centre; Bocheński (2018).

Logistics centres in Poland

There is no network of logistics centres in Poland. Demand for modern warehouses has been met by industrial developers who have built and managed warehouse centres. The existing logistics centres were created as a result of local initiatives. This was due to the lack of national policy in the area of logistics infrastructure development (Fechner, Krzyżaniak, 2013, pp. 97–107). There can be distinguished about 10 potential logistics centres in Poland (Table 3). However, only 2 of them met most of the criteria for logistics centres: Silesian Logistics Centre in Gliwice and CLIP Logistics in Swarzędz.

Table 3. Equipment of potential logistics centres in Poland

The name of the object	Container terminal	Warehouse building	Customs warehouse	Customs service	Storage area		
					storage yards for containers (TEU)	covered warehouses (m ²)	other storage yards (m ²)
Euroterminal Sławków	+	–	+	+	3,700	8,500	118,200 ^a
Silesian Logistics Centre in Gliwice	+	+	+	+	2,850	28,000	25,000
CLIP Logistics in Swarzędz	+	–	+	+	4,500	300,000	–
Wielkopolska Logistics Centre Konin-Stare Miasto	–	+	+	+	–	13,000	–
Pomerania Logistics Centre (Goodman)	+ ^b	+	–	+	55,000 ^b	500,000 ^c	–
West Pomerania Logistics Centre in Szczecin seaport	+ ^d	–	+ ^e	nd	4,000 ^d	56,000 ^e	140,000 ^e
Logistics Centre of Gdynia seaport	+ ^f	+	+	–	~30,000 ^f	31,840	–
Logistics Centre PKP Cargo in Małaszewicze	+	–	+ ^g	+	1,872 >3,200 ^g	nd	45,000
Logistics Centre PKP Cargo in Medyka-Żurawica	+	–	–	+	80	nd	7,596
Logistics Centre in Łosośna	–	–	–	+	–	1,137	50,000

nd – no data.

^a – including steel product (8,200 m²) and bulk cargo (110,000 m²); ^b – maritime container terminal DCT; ^c – target area; ^d – maritime container terminal of DB Port Szczecin; ^e – Free Customs Area on the general cargo terminal of DB Port Szczecin; ^f – maritime container terminals BCT and GCT; ^g – including terminals Europort and Adampol.

Source: own elaboration based on information published by managers of logistic centres and seaports.

The initiatives to create logistics centres were undertaken in, among others, the hinterland of the main ports in Gdańsk, Gdynia, Szczecin and in dry ports at the interface between normal and wide tracks in: Sławków, near Przemyśl and Małaszewicze. In 2007, Zachodniopomorskie Centrum Logistyczne was created next to DB Port Szczecin container terminal. So far, only truck parking lots have been constructed on it site, and the majority of the area remains undeveloped. In Gdańsk, in the vicinity of the DCT terminal, a warehouse centre was built by the developer Goodman (Bocheński, Palmowski, 2015). Whereas in Gdynia, the concept of creating the so-called Logistic Valley, stretching west of the port of Gdynia was developed. The Gdynia Port Authority directly invested in the construction of warehouses for rent (Gdynia Maritime Port Authority SA, 2017). The potential logistics centre was Euroterminal Sławków located within the Katowice urban area at the end of the Broad-Gauge Metallurgical Railway Line. A similar function was performed by PKP Cargo facilities in the Medyka-Żurawica reloading area near Przemyśl and Małaszewicze. There were reloading unit assemblies belonging to different operators, located at the

junction of broad-gauge (1,520 mm) and European standard-gauge (1,435 mm) railway lines (Bocheński, 2017; Bocheński, 2018).

In 2015, 6 Polish centres belonged to the European Association of Logistics Centres "Europlatforms": Pomeranian Logistics Centre in Gdańsk, the Port of Gdynia's Logistics Centre, Zachodniopomorskie Logistics Centre in Szczecin, Euroterminal Sławków, Silesian Logistics Centre in Gliwice and CLIP in Swarzędz.

The problem of existing logistics infrastructure facilities in Poland was primarily the lack of access to at least two modes of transport and insufficient scope of additional services. Multimodality is one of the most important elements of a logistics centre, one of whose tasks is to support intermodal transport.

Conclusions

At the current stage of the development of the logistics market in Poland, the creation of a network of logistics centres similar to other European countries seems unlikely. This is due to the omission of this issue in the state's transport policy. The demand for modern warehouse areas is met by dynamically developing warehouse centres built by developers. In 2018, there were about 200 warehouse centres in Poland with a total warehouse area of over 15 million m². The biggest industrial developers that offered warehouse area to let in 2017 were Prologis, Logisor, Segro and Panattoni. Among the potential logistics centres, only 2 met most of the criteria for logistics centres: Silesian Logistics Centre in Gliwice and CLIP Logistics in Swarzędz.

The examined logistics infrastructure was concentrated in the largest agglomerations: Warszawa, Łódź, Wrocław, Poznań and the trójmiejska and Katowice urban areas. Opolskie voivodeship did not have any of this type of infrastructure, whereas in Podlaskie, Świętokrzyskie and Warmińsko-mazurskie voivodeships, the first facilities of this type had not been created until 2018. A majority of the facilities were operated by car transport alone. The lack of fully developed logistics centres and the focus of most warehouse centres on providing services only by road transport hampered the development of intermodal rail transport.

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Cite this article as: Bocheński, T. (2018). Warehouse and logistics centres in Poland. *European Journal of Service Management*, 4 (28/2), 73–79. DOI: 10.18276/ejasm.2018.28/2-08.

THE ROLE OF INNOVATION IN CONTEMPORARY BUSINESS MODELS – THE COGNITIVE-EMPIRICAL STUDY

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION M21, M29, O12, O31

KEYWORDS business economics, innovations, business models, innovative business models – business models based on innovations

ABSTRACT The paper initiated a scientific discussion on the importance of innovations in the development and implementation process of modern business models in order to deliver real benefits by this virtue. The structure of work consists of four following parts, which is subjected to research intentions. The first is the introducing part, which is targeted at formulating a research problem and justifying undertaking the subject research. The second is the cognitive part, which includes a synthesis of theoretical contents on subjects of research, based on critical literature studies. The third part has an empirical dimension, which verifies developed theoretical assumptions based on own research findings. The fourth is the summary part, which recapitulates research studies, i.e. presents main research conclusions. Although the empirical research concerns the exemplification of undertakings in the tourism sector, due to a considerable heterogeneity of research sample (diversity of accommodation establishments, eating places, entities providing associated services, such as recreation, cultural, information, marketing and organisational services as well as transport undertakings and trading companies) obtained results can be generalised in relation to Polish service companies. Such an approach to research is justified not only by the diversity of entities surveyed having regard to the nature of business in subjective terms but also by their objective inhomogeneity, i.e. due to sector and ownership form, organisational form and size of company.

Introduction

The present-day management conditions determined by competitive pressures, growing quality requirements, technical and organisational progress and reduction of product and service life cycles make that – apart from mentioned phenomena – the questions of innovativeness of undertakings become increasingly important. This innovativeness should be implemented on an ongoing basis and only as a complement – as ad hoc actions based

on innovations resulting from a brainwave or intuition. In addition, development activities based on creation and implementation of innovative projects should be reflected in management systems of economic operators, i.e. both in action strategies, tactical plans, operational plans and developed plans, in particular, in effectively implemented business models.

On the basis of the above assumptions, the answer to the following question is deemed the main objective of the paper: What role do innovations play in modern business models aimed at boosting growth and development of businesses, thus growth of their competitiveness? Justification for undertaking this subject is also its topicality and importance for social and economic development from different management levels.

The explanation of research problem is based on theoretical-cognitive and empirical research. It is worth noting that the inferential dimension of performed theoretical studies resulted in formulating certain theorems relevant from the point of view of theory and economic practice as well.

Methods of research

A research approach, based on wide literature studies, in particular their critical analysis, is used in the course of performed theoretical works, as well as on this basis – generalising inference – the obtained results of cognitive research are applied to Polish enterprises.

Results of own surveys carried out in 2016 among operators representing the tourism sector are used in the empirical part. Factual materials on subjects of research are analysed in this part. A representative research sample (1,508 business units) was selected by means of a simple random process in the first stage of research. 254 correctly completed surveys were returned which made that basic statistical parameters amounted accordingly to: level of confidence – 0.94, however, statistical error increased by 1% compared to pre-defined error of 5%. The results presented in the paper complement a wider a scientific and research programme completed in 2018. Detailed research characterisation is included in the monograph, entitled Innovative business models in economic tourism operators in which the research approach by specific stages, i.e. starting from an initial phase linked to research design (conceptualisation stage) through proper implementation, inference and verification phase, to concept phase, is described. Importantly, the statistical population surveyed was concretised as well as – adequately to a research procedure – statistical statement, sample method and technique were selected and statistically justified sample size was determined in the conceptualisation stage (Brojak-Trzaskowska, 2018, pp. 137–144).

The place of innovation in business models – results of theoretical studies

At the present time, innovations are of common interest, i.e. interest of businessmen, politicians, representatives of different non-economic organisations and academics, including those ones who connect theoretical studies with pragmatic research demonstrating a high level of application. In the field of science innovations are objects of research within technical, physical and chemical science, humanities and social science as well as biological, agricultural, medical and other sciences. To some extent this is an implication of the rank of innovations in almost every aspect of human life, both in the social, cultural, political and economic area.

A review of the research literature leads to the conclusion that the importance of business models for achieving a market success by enterprises is steadily increasing. These are most often innovative business models, i.e. concepts of business function and growth based on innovation development (acquisition) and diffusion.

This is confirmed, inter alia, by the fact that 11 from among 27 companies from the Fortune 500 list were successful due to implementation of business model based on innovative activities (Johnson, Christensen, Kagermann, 2008, pp. 50–59).

Apart from previously mentioned researches, questions of innovation in developing business models are underlined, inter alia, by G. Hamel, M. Trapp, M.W. Johnson, E.J. Altman and others. G. Hamel, in his considerations, depends on the potential of profit created by effectiveness, originality, internal consistency and ingenuity. In this context the business model is based on introduction of innovations (in particular, radical innovations) in all areas of organisation functions, however, it is essential to integrate links between individual components of this model (Hamel, 2002, pp. 73–74; Trapp, 2013, p. 16). Attention must be paid to the need to implement “innovative innovations” and the fact that in case of innovations in the management area, in principle, we deal with gradual changes. Dynamic changes in environments and companies themselves make that it is necessary to create so-called “agile” organisations based on innovativeness and innovative business models. The presented approach reflects the concept of *Agil Management* (Denning, 2018, pp. 103–107). It can be added that features of development projects, such as ingenuity, originality in the context of novelty of implemented changes, as well as economic viability are inherent attributes of innovations.

This conclusion is universal, i.e. it can be used in the entire economic system, thus, in every company, regardless of its legal form, scale of operation or other classification criteria. Break-through innovations may not always be key to development and growth of a specific entity. In certain cases the success may be founded on imitative innovations but of high degree of novelty of implemented changes from the point of view of implementing entity, however, product innovations themselves are not enough to ensure conditions for survival and development of companies. Innovations must be viewed as a whole, in strategies as well as in business models designed on the basis of key resources and processes.

Modern business models require structuring a process of design and offering of products covering customers’ unmet needs and expectations or coordinating a process of design and offering of new-market-centred products. Such projects include three stages (Anthony, Johnson, Sinfield, Altman, 2008, p. 149; Johnson, 2010, pp. 3–20):

1. Incubation, i.e. a process of identification of key areas jeopardising the success of a specific entity. This stage includes also testing creative proposals. During incubation of a new model, attention should be given to integration of all elements which are of major importance for a customer.
2. Acceleration, which means intensification of experiments, standardisation and monitoring of processes laying down new rules in business.
3. Change, which is identified with making a decision on reintegrating previous activities, i.e. including a new “core” to the existing structure or even creating a separate entity.

In the development and implementation process of business model, innovation should be considered in the context of its uniqueness, originality, usability – innovation should contribute to improve functionality, decrease in costs, increase in margin of profit or their specific combination (the first cognitive context). In addition, innovation should be considered as regards a specific method because it is a process that takes place somewhere in a company or in someone’s mind (the second cognitive context). The last context of innovation refers to the outcome because innovation results in a new concept, product, strategy or specific process (Hitt, Duane Ireland, Hoskisson, 2015, pp. 27–29).

In the development and implementation process of business model, it is important to clarify if innovations are connected with a specific model or these are fragmented and rather represent its component part. In the first case it is an innovative business model, however, in the other case we deal with innovations as one of structural elements of this model.

It is proven that both innovations and customers are essential components of business models. There are two forms of dependence between innovations and customers. The first form is based on creating innovations by customers, but the other one assumes creating innovations for consumers (Bombol, 2017).

By organising the tools of innovative operations useful during the discussed structuring process of subject activities (Eveleens, 2010, pp. 112–121; Lopes et al., 2010) it should be mentioned their following groups:

- knowledge management instruments, including instruments for mapping and audit of knowledge resources (Huizenga, 2014, pp. 5–20),
- techniques for market intelligence – search for new technologies, business analysis, network tools for development of project teams, chains of supply,
- instruments for stimulating employees' creativity – brainstorming, SCAMPER methodology, improvement technique for processes, e.g. comparative analyses,
- instruments concerning projects – single projects and entire portfolios of projects, including computer-aided design (Hidalgo, Albors, 2008, pp. 113–127).

The previous scientific reflections on subjects of research allow for the conclusion that modern business models should take account of systematic introduction of innovations in business activities, i.e. both dissemination of new products, services, organisation methods of operations and business processes as well as improvement of the status quo, mainly through triggering human creativity, stimulating divergence thinking and simultaneously non-schematic measures, courage in action, i.e. taking risks while respecting the classical principles of responsibility at the same time, even if a part of duties and powers is delegated.

Although, from the formal point of view, the innovative business model has not yet achieved the status of scientific company management method, but, for sure, it constitutes a logic way of its operation which, consistently applied in practice, contributes to achieving determined objectives, including, to generating values through implementation of innovations. It forms a set of useful but not only postulatory assumptions, what is essential, adequate to processes occurring in the economic reality (Brojak-Trzaskowska, 2018, pp. 66–67).

The place of innovation in business models – results of pragmatical studies

The results of empirical research, both in reference to innovations (Brojak-Trzaskowska, 2012, pp. 189–194) and innovative business models (Brojak-Trzaskowska, 2018, pp. 197–223) allow for the formulation of following scientific syntheses:

1. Innovativeness of Polish service companies measured by the number of implemented innovations and percentage of innovative enterprises increases, e.g. the results of the survey from 2016 showed that in case of the entire population surveyed 71% of respondents might be considered as innovative entities.
2. In the subpopulation of companies developing business models (so called active companies – P_A) a share of entities introducing innovations in the total number of undertakings surveyed was formed at a high level and amounted almost to 92%, however, in the subpopulation of companies which did not develop such models (so called passive companies – P_B) – 28%. This result indicates the rank of innovations in

modern undertakings as well as it confirms the correlation between implementation of innovations and development of business models.

3. In the entire population surveyed ($n = 254$) there is noted an advantage of innovative entities over these ones which do not implement innovations at all. This phenomenon is characteristic of almost every entity surveyed, regardless of its legal form and size, therefore, in this cognitive context it is a favourable situation. We deal with an exception in case of recreation and restaurant services – taking account of a criterion of service activities – i.e. with a negative assessment of innovativeness.
4. Results of innovativeness research by administrative division of Poland show that the most favourable situation is characteristic of Mazowieckie Voivodhsip where it is noted the highest value of difference between innovative companies and entities which do not initiate such activities (+16). At the same time, it is noted that Pomorskie Voivodhsip has the worst result in terms of the size surveyed (–4). In addition, taking account of the impact of a company, the businesses functioning on international markets (+46) and on a domestic market (+30) receive the highest score, however, locally operating entities are assessed negatively (–2).
5. Due to the analysis of the importance of innovations in business models formed by the companies from the subpopulation P_A it is concluded that in case of:
 - a) entities treating innovations as one of key elements of business model the following classification enterprise categories are dominant: public limited liability companies (23% of total positive answers), small enterprises (every third indication), complex service of tourists (50%), private sector (84.6%), entities in Mazowieckie and Podkarpackie regions (in total 26%) and entities serving international markets (38%) and domestic market (36%);
 - b) respondents stating that innovations are not an important element of business model architecture there is noted an advantage of limited companies (29% of answers), SME sector (71%), entities providing complex tourist services (35.7%), private sector (71.4%), including entities of domestic ownership (35.7%) and mixed ownership (28.6%), companies in Pomorskie and Śląskie regions (in total 43% of indications) as well as entities serving a countrywide market (35.8%);
 - c) respondents treating innovations on equal terms with other structural elements of business model the main role is played by limited companies (32.3% of indications), medium-sized entities (41.9%), complex tourist services and so-called other services (in total 58%), private sector enterprises (90.3%), entities located in Pomorze Zachodnie, Mazowsze, Warmia and Mazury regions (in total 23%) and international entities (42%).
6. When analysing the structure of innovation there is concluded that 33% of total indications is accounted for service innovations (introduction of new or improved services), however, 20% for process innovations (changes in service provision methods, creation of new cooperation platform) and the same value for marketing innovations, e.g. initiated in order to gain a new customer base or to increase a share in the present market, however, 11% is accounted for organisational innovations.

Conclusions

Innovations should play a particularly role in current and prospective business activities. At the same time, owners, management, employees and other stakeholders should be aware that innovative initiatives should be

of a multi-faceted nature, i.e. these should concern not only typical product, technical and technological but marketing and organisational aspects as well. In addition, they should take account of corporate social responsibility objectives and meet the general criteria of return on investment at the same time.

The complexity of innovation processes as well as turbulent external and internal changes impose the need to organise innovative activities. Furthermore, mentioned exogenous and endogenous transformations make that undertakings – typically, of a limited unit development potential – should join systems of „open” innovations, should engage in innovative cooperation as part of integrated innovation networks.

The creation of values for customers and development of sustainable cooperation platforms based on different (physical, financial and non-material, including information) flows should be the pillars of modern business models. Apart from the creation of values for customers, great importance is given to the development of value for the enterprise itself and other groups of interest.

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Cite this article as: Brojak-Trzaskowska, M. (2018). The role of innovation in contemporary business models – the cognitive-empirical study. *European Journal of Service Management*, 4 (28/2), 81–86. DOI: 10.18276/ejsm.2018.28/2-09.

STAKEHOLDER MAP IN THE CULTURAL PROJECT MANAGEMENT PROCESS ON THE EXAMPLE OF ST. DOMINIC'S FAIR

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION Z10

KEYWORDS cultural project, stakeholders, stakeholder map

ABSTRACT This article is an attempt to use one of the tools used in project management, which is stakeholder analysis, for the preparation of St. Dominic's Fair. One of the elements of this analysis, called stakeholder mapping, was used in the article. As a result, it was possible to identify stakeholders of key importance for good organization of the fair, including, among others, the MTG SA, the authorities of Gdańsk, exhibitors and organizers of accompanying events

Introduction

Trade and cultural events, such as markets and fairs, have accompanied people from the earliest times, although they have now taken on a slightly different character. These used to be cyclical events whose main purpose was to facilitate trade (Środa-Murawska et al., 2015, p. 126). Today, these are tourist products, often organized or initiated by local governments or entities associated with local governments, which are part of cultural tourism and

whose main task is, above all, to attract tourists. The complex nature of fairs nowadays requires good management. It seems that the project approach, which provides a number of tools for planning and implementing such a cyclical event well, including managing relations with the stakeholders, is particularly useful in this case.

The main objective of the study was to assess the significance and character of the identified stakeholders as well as their relations with a local government project such as St. Dominic's Fair in Gdańsk. The study focused on two stakeholder maps based on two-dimensional matrices. The assessment of individual stakeholders' positions was made using the expert method of brainstorming. During the analysis, source data made available by the MTG SA (Gdańsk International Fair Co.) was used.

Cultural project stakeholders

The concept of a project, in practical terms, is presented in the light of project methodologies. According to Project Management Institute (PMI), a project is a temporary endeavor undertaken to create a unique product, service, or result (*A Guide...*, 2017, pp. 4–5). On the other hand, according to International Project Management Association (IPMA), a project is a time and cost constrained operation to realize a set of defined deliverables (the scope to fulfil the project's objectives), up to quality standards and requirements (IPMA, 2018). The Office of Government Commerce (OGC) definition assumes that a project is a temporary organization that is created for the purpose of delivering unique defined deliverables or results in a given period of time and with the use of defined resources (*What...*, 2018). The ISO 10006:2017 standard defines a project as: a process, consisting of a set of coordinated activities with precisely defined start and end dates; it is a process aimed at achieving an objective within defined time, cost and resource constraints (*ISO 10006:2003...*, 2018).

There are various, characteristic features of projects. One of them is a specific objective, characteristic for each project, defined as a basic parameter. Achievement of the objective is possible thanks to the creation of end products assigned to a given project. Another characteristic feature of each project is its uniqueness, understood as its certain difference in relation to other projects. Next, project is an activity that takes place within a specific time frame – each project has its own specific start and end, which means that its implementation is associated with a certain temporariness. Individual projects are both implemented and created by specially appointed teams. This feature is largely due to the diversity of projects - since each project is different, different teams will be needed to implement them, equipped with different resources necessary during the course of activities. A consequence of this is high interdisciplinarity of activities undertaken during the project implementation each time. The above-mentioned project features influence another characteristic feature that can describe each such undertaking – this is risk. Risk means both threats and opportunities that may arise during the project implementation. A characteristic feature of each project is the fact that its implementation often does not take place in a separate environment, but takes place in an environment that has the potential to influence the changes occurring during its implementation (Nicholas, Steyn, 2015, pp. 27–30).

Organizations increasingly use projects as a tool for achieving success, which results in a parallel implementation of the entire project portfolio within one organization. Individual projects are connected with one another in a specific way, if only due to the fact that they are implemented by one entity. Apart from institutional links within the project portfolio, other types of connections can be distinguished, i.e. time or financial. Managing a project

portfolio in an organization means allocating resources between projects in such a way as to achieve the company's objectives (Brzozowski, 2014, p. 72).

Projects are implemented both in economic and public practice, as well as in the case of other activities carried out by people, e.g. in the field of culture. By cultural projects, we mean activities characterized by the presented features, whose objectives are related to the area of culture.

Undoubtedly, effective implementation of various projects is possible thanks to the use of a number of tools proposed within the framework of individual project management methodologies – one of such tools is project stakeholder analysis.

The different stages of the project's impact value chain involve different stakeholders. The problem of stakeholders is so wide that, despite many attempts to define and group them, there are still many discrepancies.

The vast majority of stakeholder theories concern the organization level, the prism of projects is only occasionally included. Based on a literature review, the most common and universal definition by R.E. Freeman (1984, p. 53), considered to be the main promoter of stakeholder theory, dates back to 1984. The author originally promoted stakeholders as individuals or groups that influence or are influenced by the organization under analysis. Later, R.E. Freeman proposed modifications to his original approach. His definitions have gained a lot of popularity, which does not mean widespread public acceptance precisely because of the focus on the aspects related to the construction of the organization (Jepsen, Eskerod, 2009, pp. 335–343; Mitchell, Agle, 1997, pp. 854–886). Examples of definitions of stakeholders at the project level are presented in Table 1.

Table 1. Selected definitions of stakeholders at the project level

Author (year)	Project stakeholder definitions
Cleland (1986)	Individuals and institutions that share a stake or an interest in the project
Turner (1999)	People or groups whose lives or environment is affected by the project but who receive no direct benefit from it
McElroy, Mills (2003)	Person or group of people who have a vested interest in the success of a project and the environment within which the project operates
Bourne, Walker (2005)	Individuals or groups who have an interest or some aspect of rights or ownership in the project and can be impacted by the project
Walker et al. (2008)	Individuals or groups who have an interest or some aspect of rights in the project, and can contribute to, or be impacted by, either the work or the outcomes of the project
Ward, Chapman (2008)	Various parties who may affect the form, progress and outcomes of a project
PMI (2008)	Individuals and organizations that are actively involved in the project or whose interests may be affected as result of project execution or project completion

Source: Aaltonen (2010).

However, it is more important to identify stakeholders' attitude towards the project than to define them, because only then we can manage their attitudes and respond to their actions. Examples of classifications of attitudes and impact of stakeholders on a project based on the literature are presented in Table 2.

Table 2. Examples of attitudes and impact of project stakeholders

Author (year)	Attitude and impact of project stakeholders
Goodpaster (1991)	Fiduciary Non-fiduciary
Clarkson (1995)	Direct impact Indirect impact Peripheral, secondary impact
Blair et al. (1996)	Potential cooperation Potential risk
Mitchell et al. (1997); Driscoll, Starik (2004)	Power Urgency Legitimacy Proximity
Trocki, Sońta-Drączkowska (2009)	Consubstantial Contractual Contextual

Source: own literature review.

Analyzing the reports of various organizations on the subject of culture, the following universal groups of stakeholders in cultural projects can be distinguished:

1. Originators (culture and art animators, institutions and organizations working in culture).
2. Decision – makers (public institutions at local, regional, and national level).
3. Politicians.
4. Implementers and contractors (people involved in the technical and organizational sphere of the project).
5. Institutions supporting cultural projects and culture at the national and international level.
6. Financing institutions (e.g. banks, cultural foundations, public institutions).
7. Consumers of cultural goods and services (recipients, customers, audience et.).

The identification of stakeholders, their classification and attributed impact enable stakeholder management, which in turn determines successful implementation of a cultural project.

Methodology

Managing relations with project stakeholders consists of several phases, started by the activities related to the widely-understood stakeholder analysis (Trocki, Sońta-Drączkowska, 2009, p. 371; *A Guide to...*, 2017, pp. 16–18). This analysis is not an easy one, mainly due to the large number and diversity of the surveyed subjects and relations, as well as due to its qualitative nature.

The first step in stakeholder analysis is their identification. Next, each identified interest group must then be subjected to a detailed and multi-criteria analysis. The results of the analysis of individual stakeholders are multidimensional characteristics, which then enable the stakeholder evaluation. This evaluation allows to determine the significance of each stakeholder for the success of the project, their attitude towards the project and possible behaviors (Trocki, Sońta-Drączkowska, 2004, pp. 369–381). In this phase of the works, the stakeholder maps are applied.

Various approaches to stakeholder mapping can be found in the literature. For the purpose of the study authors decided to concentrate on the approach based on the use of different types of two-dimensional matrices.

In this approach, placing a specific stakeholder on such a map means they are classified into one of the categories proposed in a given model, which is the starting point for the project or organization managers to decide whether to adopt an appropriate action strategy (Łada, Kozarkiewicz, 2010, pp. 23–28; Johnson, Scholes, Whittington, 2008, pp. 181–184). Out of various proposals for such maps, two were selected for the purpose of this study.

The first proposal is a tool enabling the assessment and classification of stakeholders on the basis of their potential for threatening the venture and the potential for cooperation. The matrix constructed on the basis of such criteria included four categories of stakeholders (Savage, Nix, Whitehead, Blair, 1991, pp. 65–67):

1. Entities with a high potential for cooperation, but at the same time capable of posing a real threat (mixed blessing), for whom collaboration is recommended.
2. Entities with a high potential for cooperation and a low potential for threat (supportive stakeholders), who should be involved as widely as possible in the activities undertaken.
3. Entities to whom the defense strategy should be applied, due to their high potential for threat and low possibility to support the organization's activities (non-supportive stakeholders).
4. Stakeholders of minor importance (marginal stakeholders) who do not constitute any significant support or threat and should be limited to having their actions monitored.

The second map is a proposal for the classification of stakeholders according to their level of interest in a given project and their ability to influence its course. Close cooperation is recommended for interest groups with a high interest in and significant impact on the project, referred to as key or leading players. In the case of stakeholders who may exert a significant impact on the course of the project, but do not show much interest in the project, the organization's efforts should focus on ensuring their satisfaction. Interested stakeholders who are not in a position to exert a significant impact on the project require mainly information activities, while those with no significant impact and showing little commitment require minimal effort that in principle consists solely of monitoring (Johnson, Scholes, Whittington, 2008, pp. 156–157).

The popularity of stakeholder maps results from the fact that they allow a simplified, synthetic, and at the same time pictorial way to present the conclusions drawn from often very detailed and extensive descriptions of particular groups. Thus, they are a tool supporting the decision-making process related to the selection of appropriate action strategies. It should be remembered, however, that their usefulness depends on the extent to which they reflect the actual state of relations with stakeholders, and as the latter are dynamic in nature, stakeholder maps should be periodically reviewed and updated.

Stakeholder maps of St. Dominic's Fair

Every year in Gdańsk, on the last Saturday in July, begins, lasting 23 days and considered the largest in Poland and one of the largest open-air commercial and cultural events in Europe, St. Dominic's Fair. The origins of this event date back to 1260. For centuries, the fair was a great attraction, even at a time when the importance of this type of events began to decline. After 1989, this event became a tourist product, building the tourist attractiveness of Gdańsk and the whole region. In recent years, the fair has become a huge event, where for three weeks visitors can get acquainted with the rich offer presented at nearly a thousand stalls and trade stands (*Tu brzmi...*, 2018).

Such a large undertaking requires good preparation, including good stakeholder identification. At St. Dominic's Fair, there are many interest groups representing different areas of social and economic life. A list of the most important identified stakeholders of this project is presented in Table 3.

Table 3. Stakeholders of St. Dominic's Fair

Symbol	Stakeholder
A	Gdańsk International Fair Co. (MTG SA) – the main organizer of the event
B	City of Gdańsk – the originator of the event and the site administrator
C	Authorities of Pomeranian Voivodeship
D	Gdańsk Tourist Organization and other such entities
E	Exhibitors (craftsmen, traders, artists, etc.)
F	Organizers of accompanying events (concerts, exhibitions, etc.)
G	Local catering companies
H	Local accommodation services
I	Local shops
J	Suppliers of the services and goods for the needs of the entities participating in the fair
K	Local cultural institutions
L	Sponsors
M	Residents of Tricity visiting the fair
N	Tourists
O	Inhabitants of the center of Gdańsk
P	Companies and institutions not directly related to the fair, located in the center of Gdańsk
Q	Local transport companies
R	Domestic/foreign transport companies (airlines, railways, etc.)
S	Financial sector companies
T	Inspection bodies
U	Security services (police, health service, etc.)
W	Municipal cleaning services
V	Media (traditional and electronic)
X	Non-governmental organizations
Y	Dominicans – former organizers of the fair
Z	Other cities with competitive tourist offers

Source: own elaboration based on research.

The first stakeholder map allowed for assessment of potential stakeholder behavior, taking into account their tendencies and potential for cooperation for the fair, as well as potential threat they may pose, thus hindering its efficient implementation (Figure 1).

The general conclusion arising from the analysis of the above matrix is that in the case of the analyzed project, entities with a relatively high potential for cooperation dominate among the stakeholders, with a large part of them classified as supportive stakeholders. However, there is also quite a large group of entities that can be described as a „mixed blessing”, i.e. as stakeholders who, under certain circumstances, may become a threat to the project implementation. Such stakeholders require special attention, including: security services, companies responsible for maintaining order, inspection bodies, and the media.

The second map allowed to group stakeholders on the basis of their level of interest in the project itself, its course and effects (both positive and negative), as well as their impact on the project (Figure 2).

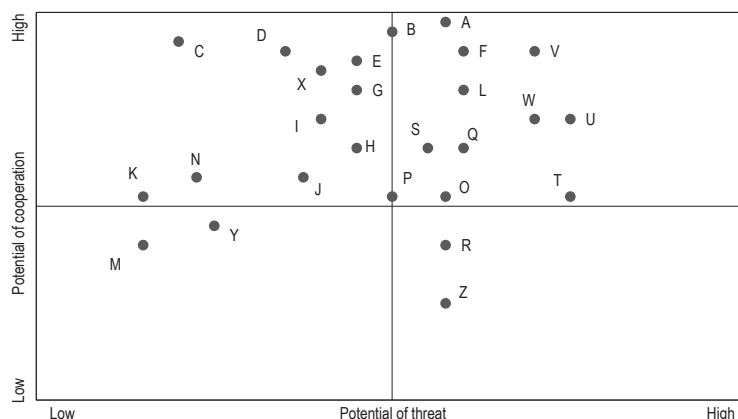


Figure 1. A map of St. Dominic's Fair stakeholders (potential for cooperation/potential for threat)

Source: own elaboration based on research.

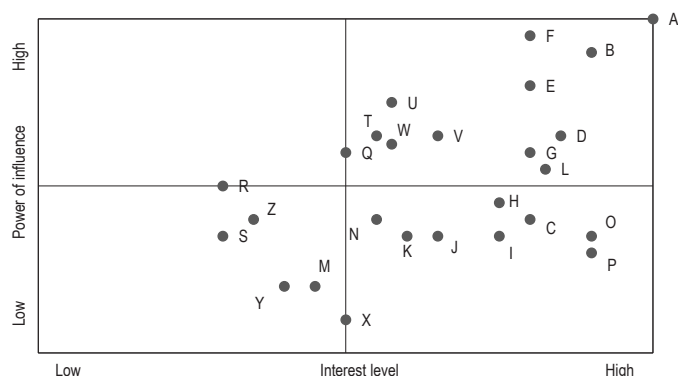


Figure 2. A map of St. Dominic's Fair stakeholders (level of interest/power of influence)

Source: own elaboration on the basis of research.

The analysis of the map allows us to conclude that the fair's stakeholders are definitely dominated by those who are interested in the event and its course. This means that good communication will play an important role in managing relations with these groups. This will be particularly important in the case of the "key players" who include, among others: MTG SA (along with their employees), the authorities of Gdańsk, exhibitors and organizers of accompanying events.

On the basis of a comparison of the results of the analyses presented on both maps, it is possible to create a list of particularly significant stakeholders. These include: the entity responsible for coordinating the entire project

(MTG SA), the City of Gdańsk, organizers of various cultural events which increase the attractiveness of the event, sponsors, inspection bodies, local services responsible for order, transport and security, and the media.

The conclusions drawn from the presented stakeholder maps do not, of course, give a full picture of the analyzed entities and their relations with them. Nevertheless, they make an important contribution to the process of managing a complex and multidimensional undertaking that is St. Dominic's Fair. An important element of this process is the development and implementation of appropriate strategies for dealing with individual stakeholders, and the overall view that such instruments give certainly facilitates decision-making when planning subsequent editions of this project. The analysis may be the basis for the risk management process of the analyzed cultural project.

Conclusions

Contemporary cultural projects, including fairs, can be described as complex undertakings requiring skillful management. Their success is influenced, among other things, by good management of relations with often very diverse interest groups. These groups can influence the implementation of this type of project to varying degrees and in different ways, which means that they can be seen as support or a potential source of risk.

In this study, we have used stakeholder map – a tool which is helpful in the process of managing complex cultural projects, such as St. Dominic's Fair, which allows the assessment of potential impact of specific interest groups on the project. Their application allowed, among other things, to identify those stakeholders who, due to their potential, willingness to cooperate, or interest in the project should be of particular interest.

The work on stakeholder maps of St. Dominic's Fair led to the conclusion that the general analysis of project stakeholders, a fragment of which is presented in this study, should be complemented by a similar analysis carried out for individual events making up the event known as the fair. Individual events included in the analyzed cultural event can be treated as separate projects. It appears, therefore, that managing such a project is, in fact, managing the whole portfolio of smaller and larger projects. In the case of such an approach, the links between individual projects forming St. Dominic's Fair should be taken into account. To sum it up, it can be stated that stakeholder analysis is a tool facilitating implementation of a cultural project in accordance with the planned objectives.

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Cite this article as: Chmielewski, M., Płoska, R., Próchniak J. (2018). Stakeholder map in the cultural project management process on the example of St. Dominic's Fair. *European Journal of Service Management*, 4 (28/2), 87–95. DOI: 10.18276/ejsm.2018.28/2-10.

SHAPING THE RELATIONSHIPS OF YOUNG CONSUMERS BASED ON VIDEO CONTENT IN THE SOCIAL MEDIA ENVIRONMENT IN THE LIGHT OF DATA CLUSTERING

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RECEIVED
ACCEPTED

10 December 2018
28 December 2018

JEL
CLASSIFICATION

L82, L86, M31

KEYWORDS

social media, relationship building, consumer, television, cluster analysis

ABSTRACT

Continuous progress in all areas of life affects the decision-making processes of the society and their consumption decisions. In recent years, through constant technological development, a continuous drop in television viewing has been observed. Individual television stations, multimedia service providers, however, try to regain the viewer and create websites and applications for mobile devices in which you can watch live TV, play programs or movies at any time or see episodes that will be played in television in the future. The Polish VoD market, social media and YouTube are undoubtedly market leaders, which compete with traditional television and even become its replacement. The aim of the article is to show that the following changes in the market, change consumer habits among buyers, with particular emphasis on young people, in the field of video in relation to classic television, YouTube, streaming platforms and social media. The article uses own research, which was carried out on the basis of cluster analysis. Based on profiling of social media users, due to the selected characteristics, five clusters were obtained, each of which describes a certain YouTuber profile

Traditional television and its popularity

Undoubtedly, classic television belongs to the mass communication tools because through it can reach a wide audience with transmitted content and with advertising content. Traditional television has already had years of greatest popularity and has been recording declines in viewership for a long time. The managers of the individual stations compete in making creative programs, series, films, just to attract the viewer in front of the TV set.

The development of technology, however, means that viewers are moving away from traditional television viewing in favor of vod solutions, other paid platforms for video viewing and social media. In addition, it starts to create series and programs that are available to the viewer only on specific streaming platforms. TV stations perceive progressive changes among viewers in the search for a variety of content on the web, not television. In addition, there is a steady increase in the use of tablets, smartphones and laptops on the market, which “discriminates” classic TVs. This is especially true for generations of young people. Mass communication can be examined by focusing mainly on selected issues, analyzed from the point of view of the sender and the recipient, referring to the information content and the effectiveness of the means used and information methods. Most often, two problems emerge: the first concerns the transmission of information, determining how effective the media is, who is reached with the information, whether there are gaps, social groups lacking information, and the second measuring the power of information transmission on shaping attitudes and social opinions and ways of behavior (Światowy, 2006, p. 122). As clear from the data of the Nielsen Audience Measurement (April 2018), which studies TV viewing in Poland, the television viewers’ projections developed by the Wirtualnedia.pl portal are falling, which is detailed in Table 1.

Table 1. TV audience in April 2017 and 2018

Wirtualnedia.pl		All 4+				Dynamics
		April-17		April-18		
no.	station	AMR	SHR %	AMR	SHR %	%
1.	Polsat	733 274	11.17	625 114	10.47	−6.27
2.	TVN	684 195	10.42	561 622	9.41	−9.69
3.	TVP1	578 431	8.81	524 778	8.79	−0.23
4.	TVP2	516 437	7.87	497 794	8.34	5.97

Source: Kurdupski (2018).

The results compare TV audience in April 2017 and 2018 indicating its negative dynamics. This trend is constantly being analyzed by other research results, year-on-year. These surveys are usually carried out every month, their results are similar, the seasonal trends of popularity of individual TV stations, selected programs and series are visible.

Social media, streaming platforms, YouTube as the successor of traditional television

Social media are an indispensable element of modern times. Social media means applications that are created in a Web 2.0 environment and progressive technological development, the purpose of which is to interact with their users. The exchanged content has a diverse form from text messages through photos, video, insight, and live coverage. A great example of how social media and TV are constantly changing is the first in Poland advertising made “live” by Skoda (issue 6/10/2018), which was also live on TVN (contextual broadcast as part of the “Got Talent” program), in social media channels, on leading internet portals, at sales points, the cinema and on influencers’ channels. Each of the above mentioned forms, depending on the specific medium, has many own variants. Along with their development, their functionality changes, and so does the way users use them. Social media are increasingly becoming a substitute for traditional television. Deciding by the user what content and in what form he/she wants to watch fits into the assumptions of the theory of use and gratification derived from functionalist

(behavioral) tradition, which for 80 years has been a research facility for scientists who are trying to find out why and what for the people use the media. Theory of use and gratification assumes that people are aware of their needs and are oriented towards achieving specific goals. They actively search for such media and content that are able to meet their expectations and provide appropriate reinforcements, that is various types of individual prizes (gratuities) (Iwanowska, 2016, pp. 171–172). The consumers of younger generation often change this shopping behavior by using the Internet while shopping. Thanks to Internet access and mobile technologies, the virtual world is as important and attractive for the Millennials as the real world (Bilińska-Reformat, Stefańska, 2016, p. 124).

On the basis of many reports from surveys that occur on the market, it appears that for several years each subsequent year is a year of video, because on the basis of observations of companies' activities on the market, there is an increasing focus on video marketing. This is because of the awareness of the availability and efficiency of this form, the possibilities of formats on Facebook and Google, both for smaller and larger companies, and 89% of Internet users primarily watching video content (Kuchta, 2018). Attractive spots can fall into the recipient's memory for a long time, and their potential to present the product is really big. A number of possibilities to show yourself through a moving image are provided by YouTube and Facebook. Network users spend a billion hours a day watching movies, and according to Cisco, by 2019, 80% of Internet traffic will be just video. Considering that it is more difficult to catch the attention of the recipient in the network with the help of text, creating engaging video is a direction that should be taken so that the actions are effective. Influencers who are authentic and for whom the internet is a natural environment are especially helpful in this. The following data indicate that video (video marketing) is not just a buzzword, because (Odziemek, 2018, p. 60):

- 67% of recipients want to watch instructional videos and tutorials and 34% of product and information films (Marketing Think),
- in 2018, 79% of video content will constitute the Internet (MarketingProfs),
- 64% of consumers purchase after watching the video on social media (Tubular Insights),
- Facebook video posts have up to 135% more organic coverage than Social Media Today,
- video on social media can generate as much as 1200% more shares than text posts and photos (SmallBizTrends).

According to Katarzyna Legutko from ContentHouse, “users will definitely appreciate a film made with a simple camera or a phone that meets their needs, rather than a television advertisement” glued “to the Internet” (Kuchta, 2018). The confirmation of this fact comes also from the PwC survey results carried out in December 2016 among Internet users, according to which a statistical internet user in Poland to watch video content – on TV or on the Internet – spends 4 hours a day. The most popular video content website is YouTube – 74% of respondents declared the use of it, followed by TV Polsat (44.8%), Player.pl from TVN (33%) (Pallus, 2017). Popular Facebook or Instagram (IGTV) also offers its users inserting videos of various lengths, content, recorded either by means of telephones or specialized equipment. In these media, there is also the possibility of “live broadcasting”. Facebook is currently testing the functionality of watching together, for example, a match or movie with someone else who is not sitting next to just your device, e.g. in another country. Another alternative for traditional television are streaming platforms, which have been developing significantly over the last few years. Based on the research conducted in April 2018 by Gemius, it appears that among all streaming platforms the most users had Vod.pl - over 3.7 million people. Next in the ranking are cda.pl (premium version, 2.6 million users), tvp.pl (2.4 million users) and player.pl (2.3 million users), Netflix (2 million users), lpla (1.8 million users), wp.pl (1.7 million users), Showmaks (1.3 million users) and HBO

GO (1 million users). The VoD market combines materials typical of classic television as well as large productions for premium cinema and VoD services (Czechowicz, 2018a). YouTube is a platform that users use in an intentional manner. Most often, they search for films in person, but they can also use YouTube's recommendations. It is a great platform for content-marketing communication and gives a wide range of advertising opportunities. (Daniłóś, 2018, p. 58) Streaming platforms differ in many respects from YouTube. Their range of activities is wide but due to the subject matter of the article, they can be divided in terms of video content and their implementation. The first group allows to watch movies, series, programs - all these forms are recorded in a professional manner, are planned, have scenarios. On the other hand, on YouTube (and its similar channels) there are videos uploaded by users of the site, often shot in a much less professional way – often using phones, laptops, etc. on all possible topics of interest among the channel's recipients. First and foremost, there are accounts of well-known people who publish their statements on various topics: they advise, train, inspire, motivate, teach, make us laugh. The element that connects these media is their constant development - they improve their offer to attract the largest group of recipients to their medium.

For example, on YouTube, videos are uploaded by users, this service has movies on demand and recently in the US has already introduced the option of watching some materials for free. It is certainly a desire to offer services similar to Vod and it will probably be transferred to the European area over time. (Czechowicz, 2018b) A few months ago, YouTube Kids appeared in Poland - which reminds more of the vod platform than YouTube. Children can safely and easily discover the world by watching movies online – regardless of whether it is their favorite story, song or educational film showing how to make a volcano model. (Luzak, 2018). The results of Kantar Millward Brown's research Generation Z, Millennials, Generation X, Baby Boomers: what role television plays in their lives (implementation December 2017 to February 2018 using the CAPI method on a group of 612 respondents) showed that each of the surveyed groups uses Facebook the most (Generation Z 98%, Millennials 86%, Generation X 52%, Baby Boomers 17%) then YouTube (Generation Z 92%, Millennials 73%, Generation X 47%, Baby Boomers 19%) and Instagram (Generation Z 49%, Millennials 25%, Generation X 11%, Baby Boomers 3%). The Netflix platform ranked seventh (Generation Z 11%, Millennials 12%, Generation X 5%, Baby Boomers 1%) and Showmax (Generation Z 8%, Millennials 11%, Generation X 3%, Baby Boomers 0%). The respondents were also asked how much time they spend on social networking sites during the ordinary day? The following times were indicated: Generation Z 36 minutes (real daily time per user 2h 05 m), Millennials 34 minutes (real daily time per user 1h 36 m), Generation X 31 minutes (real daily time per user 36 m), Baby Boomers 10 minutes (real daily time per user 25 m). In the younger groups, the leading role is played by laptops and smartphones.

Methodology and results of own research

Cluster analysis assigns objects to groups to allow for the greatest possible similarity within groups and the largest differences between them (Churchill, 2002, p. 827). Based on the variables characterizing the examined objects, these methods allow the extraction of object classes that are more similar to objects from the same clusters than to objects from other clusters. (Muszyński, Mroziński, 2009, p. 24) In own research, as an analytical tool, a cluster analysis method was proposed to classify objects. As a result of the analysis of profiling of social media users (age group 18–34) due to specific characteristics (age, gender, current job situation, the best tool for building a personal brand due to a set of features, impact of the personal brand on different areas of the respondent's life , popular

topics on YouTube, preferred actions on YouTube, compliance with various statements regarding YouTube, building a personal brand with the definition presented) five clusters were received. As a method of agglomeration, the Ward method was adopted, while as a measure of the distance between objects – a measure of percent discrepancy (as variables are measured on categorical measuring scales: nominal and ordinal). 504 respondents took part in the survey. The first cluster consists of 7.5% of respondents, the second cluster includes 12.1%, the third cluster 20.4%, the fourth cluster 21.4% and the fifth cluster 38.5%. Respondents were asked to state their compliance with the statement: I have more confidence in YouTube than television and other traditional media. The respondents of the first cluster declare that they agree (57.9%) with the quoted statement (Figure 1). Slightly more than 18% of respondents indicate that they disagree with this statement.

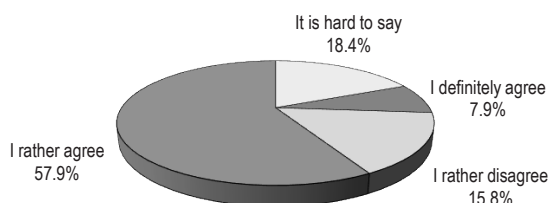


Figure 1. I have more confidence in YouTube than TV and other traditional media – first cluster

Source: own elaboration.

The respondents from the second cluster strongly agree with the quoted statement (54.1%) – Figure 2. Nearly 20% of respondents indicate that they rather agree. Only 6.6% of respondents negate. 19.7% indicated the “it’s hard to say” option.

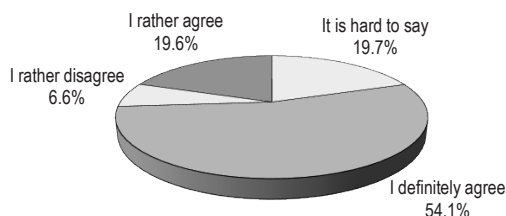


Figure 2. I have more confidence in YouTube than TV and other traditional media – second cluster

Source: own elaboration.

Respondents (third cluster) in the largest percentage indicate that they tend to agree (38.8%) or they find difficult to express an opinion (25.2%) regarding the analyzed statement. The clear agreement is indicated by 24.3%, while the total incompatibility is represented by only 1% of the respondents.

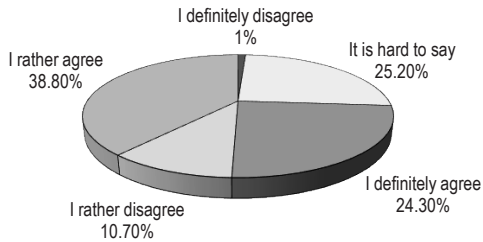


Figure 3. I have more confidence in YouTube than TV and other traditional media – third cluster

Source: own elaboration.

The respondents representing the fourth cluster in the largest percentage indicate that they have no opinion on the analyzed topic (40.7%). The “rather agree” option was given by 28.7% of the respondents from this group. The total lack of conformity was indicated by 10.2% of respondents.

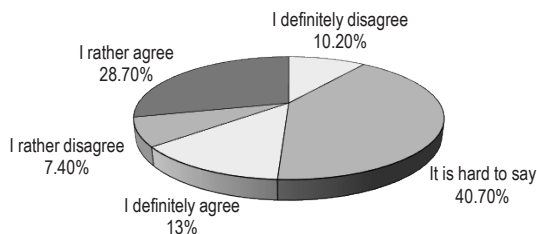


Figure 4. I have more confidence in YouTube than TV and other traditional media – fourth cluster

Source: own elaboration.

Participants in the study (fifth focus) in the largest percentage indicate that it is difficult for them to express an opinion on the analyzed statement (37.1%). The “I rather agree” and “I strongly agree” option was indicated by 25.3% and 21.1% of respondents, respectively. The total negation was represented by 5.7%.

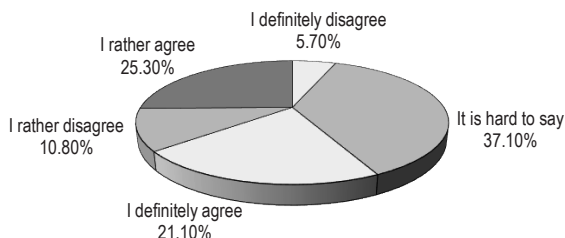


Figure 5. I have more confidence in YouTube than TV and other traditional media – the fifth cluster

Source: own elaboration.

Summing up the presented results of own research it can be stated that the vast majority of respondents agree with the statement that they have more confidence in YouTube than television and other traditional media. It is worth noting that among the respondents there are few who have chosen the answer that they strongly disagree with this statement. The results of our own research confirm the changes taking place on the market, which were described in the first part of the article. Society (to varying degrees in specific age groups) is moving away from traditional television and is looking for alternatives in solutions available on the market.

Conclusions

The occurrence of new functionality in a specific social media forces competing applications to introduce something similar or much more advanced than the competition has. In addition, trends operating and appearing on the market among users, divided into their generation, should be observed. The presented results of secondary and own research suggest the following conclusions. First of all, the consumer determines what he/she needs and at what time and place he/she wants to use it. Secondly, the video with the appropriate content is the content desired by the recipients analyzed in the media article. Thirdly, traditional television is losing in importance and YouTube, streaming platforms and other social media are gaining. The popularity of YouTube also results from the fact that more and more often young people are looking for video with people they trust, which they want to listen to because they are known and liked and are more credible, even when telling them about a product or recommending a book than advertising in television. Due to such a large competition, each application must build relationships with its users, meet their expectations to use the solution as long as possible and not to reach for a competitive medium. Certainly, it is not a simple task because the statistics of use in the described media change but also indicate a continuous interest in them from the audience. Apart from the competition analysis, the creators of individual media should carry out continuous research among their recipients, asking them about their needs in relation to a given medium. In the future, own research should be extended to the most-watched and sought-after content in the analyzed media by young people and their assessment of media functionality - what they use, which is unnecessary and what they lack.

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Cite this article as: Chraćol-Barczyk, U., Grzesiak, M. (2018). Shaping the relationships of young consumers based on video content in the social media environment in the light of data clustering. *European Journal of Service Management*, 4 (28/2), 97–104. DOI: 10.18276/ejssm.2018.28/2-11.

GENERAL DATA PROTECTION REGULATION – RESULTS OF A PILOT STUDY

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION C89, L86, O33

KEYWORDS GDPR, data protection, privacy

ABSTRACT The article focuses on the social aspects of the GDPR implementation. Paper presents the results of a study conducted in 2018, after the introduction of legislative changes. The study was exploratory and its aim was to find out how administrative employees evaluated and feels about GDPR. The survey was conducted as an online survey questionnaire. The article presents the results of the study, initial conclusions after its implementation, and a proposal for further research.

Introduction

The beginnings of the discourse on the protection of personal data date back to the 19th century, while the first legal regulations in this area began to appear in Europe already in the 1970s (Jatkiewicz, 2015, p. 11). Significant challenges in creating legal regulations for data protection date back to the beginning of the 1990s, when the methods of manual collection and preservation of information began to be gradually replaced by electronic

systems. It is the modern technological progress, changes within the specifics of information processing as well as the appearance of new telecommunication products (Budziejewicz-Guźlecka, 2009), which imply the necessity of introducing new and effective legal regulations in the protection of personal data (Sakowska-Baryła, 2016, p. 127). In Poland, the basis for the protection of personal data and privacy are the provisions contained in the Constitution of the Republic of Poland of April 2, 1997. However, the Act of 29 August 1997 on the Protection of Personal Data is recognized as the first important legal act comprehensively regulating this issue (Dereń, 1998, p. 5).

Prior to the entry into force of the GDP in all 28 EU Member States, Directive 95/46/EC of the European Parliament and of the Council of October 24, 1995 was applicable. It was implemented by individual EU Member States to varying degrees. Taking into account the technological progress, this state of matters generated numerous difficulties (Jakubowska, 2018, p. 115).

The General Data Protection Regulation (GDPR) is in force from May 25, 2018. The Regulation is universal and applies equally to public and private sector entities (Sakowska-Baryła, 2017, p. 34). The purpose of the GDPR introduction was first and foremost the need to harmonize the law on data processing and their flow in the EU Member States as well as to increase the privacy protection of individuals (Grzelak, 2017, p. 12). The authorities responsible for their protection have been obliged to be attentive in monitoring the implementation of the GDPR and to apply the extended scope of possible sanctions in the event of the Regulation breach. Violation of the GDPR regulations may involve imposing fines of up to 20 million EUR or 4% on the entity processing the data global turnover from the previous year, using a higher amount (Butarelli, 2016).

The entry into force of the Regulation resulted in the necessity to change the provisions regarding the processing of private data and a number of consequences for the functioning of entities processing such data. The legal changes defined within the RODO are among others (Malinowski, 2017, pp. 102–103):

1. Change in the scope of the definition of personal data (broadening the definition taking into account new technological possibilities allowing for the acquisition of e.g. biometric data).
2. The obligation to appoint a Personal Data Inspector.
3. Clarifying the obligations of data processing entities.
4. The need to obtain consent for the processing of data from the data subject, as well as the right to access, change and supplement them, as well as transfer between systems.
5. Introduction of the so-called "Right to be forgotten" – this involves the need to delete personal data when they are no longer needed, and at the request of the data subject (except when there is a need for data in connection with the implementation of procedures or services). The processing company is also obliged to permanently delete personal data in a situation where the prior consent for their processing is withdrawn (Baran, Południak-Giez, 2017).
6. Introduction of the obligation to report breaches to the responsible authority as well as to the data subject.
7. Privacy (protection) by design – already at the stage of the data planning process, it is necessary to assess whether their use is compliant with applicable regulations.
8. Risk based approach – the obligation of data processors and administrators to carry out independent analysis in the scope of ongoing processes and risk assessment in each case. A smaller number of possible threats means fewer obligations for the data processor.

The subject of research interest in this article are the social aspects of the entry into force of the GDPR, and the main goal is to get to know the opinions of administrative employees on the subject of the GDPR and related procedures.

Methods

In July 2018, that is after the entry into force of the changes under the GDPR, a pilot exploratory survey was carried out, in which the employees of the university administration (from one faculty) and the educational institution took part. The study consisted of two stages: the first part was of a quantitative nature and was carried out in the form of an online survey questionnaire via the www.ebadania.pl website. The questionnaire contained two types of questions: closed single-choice questions and semi-open questions, in which respondents had the opportunity to develop a response in the form of a comment. Queries were sent to all administrative employees within the surveyed units (a total of 41 inquiries) and the return of correctly completed questionnaires counted 23 polls. The study was anonymous and voluntary, and its results serve scientific purposes, which the respondents were informed about. In the second part, a qualitative study was carried out in the form of interviews with selected employees (5 in total). The article presents the results of the survey, initial conclusions after its completion as well as proposals regarding the direction of further research.

Results

The study shows that the attitude of respondents to the fact itself of introducing the GDPR is diverse, and respondents' answers are distributed quite evenly as it is shown in Figure 1.

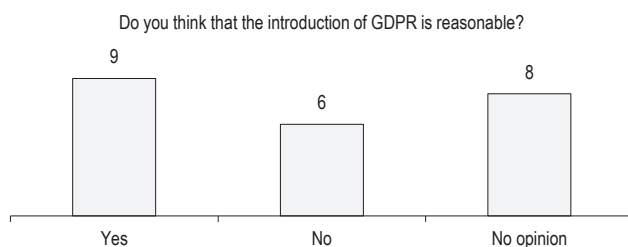


Figure 1. Respondents opinions regarding the legitimacy of introducing the GDPR

Source: own study.

It is also worth mentioning that respondents replied that in the institution where they work there were trainings on the subject of the GDPR, in which all the respondents participated. However, most of them declare rather moderate knowledge about the regulation. Data regarding this issue are presented in Figure 2.

It is visible, that the majority of respondents positively evaluate their knowledge about GDPR, but only 2 people have found it as "high". Further research should verify why, despite the participation in training, the respondents do not feel fully competent. This question was asked in a qualitative study, which the authors devoted to a separate article.

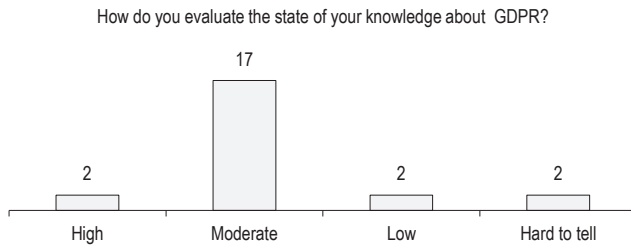


Figure 2. Opinions of the respondents regarding their state of knowledge about GDPR

Source: own study.

Another issue that has been addressed in the survey is the attitude of respondents to the possibility of expanding their knowledge about the GDPR in the future. Figure 3 presents the distribution of responses.

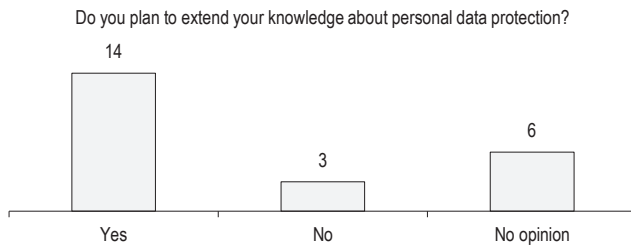


Figure 3. The attitude of respondents to the possibility of expanding their knowledge about GDPR

Source: own study.

The majority of respondents declare their willingness to broaden their knowledge about GDPR, which can be considered as a positive manifestation and expression of openness to change. However, research on the reasons for this state of matter should be deepened, as it may result both: from the willingness to constantly improve their competences, as well as from difficulties in finding themselves within the maze of regulations. This might be especially important due to the fact, that a significant number of respondents had difficulty assessing the clarity of the new regulations (as you can see in Figure 4).

On the other hand there are positive signals as only a small number of people declared that they have experienced fears in relation to the GDPR. This is presented in Figure 5. Also only a small number of respondents declared that after the entry into force of the Regulation they experienced problems resulting from it (Figure 6). However, it is worth noting that over 30% of respondents had difficulties to determine whether they were afraid of the consequences of non-compliance with the Regulation. This issue, as well as an attempt to explain this attitude, was undertaken and described in a more detailed way in a separate article.

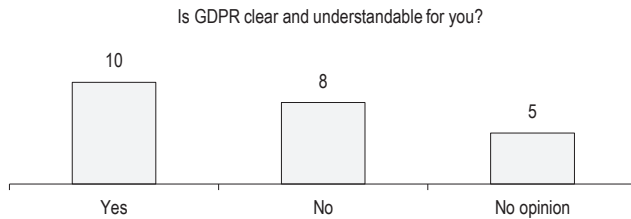


Figure 4. Opinions of the respondents regarding the clarity of GDPR rules

Source: own study.

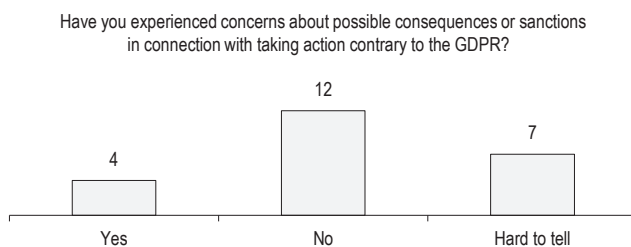


Figure 5. Concerns regarding sanctions for non-compliance with the GDPR in the opinion of the respondents

Source: own study.

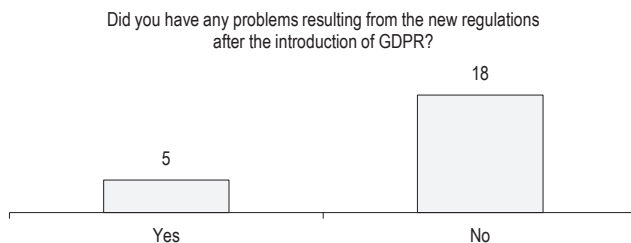


Figure 6. Declaration of respondents regarding problems resulting from the introduction of new regulations

Source: own study.

The conducted study clearly indicates that the majority of the administrative employees covered by the survey did not encounter additional difficulties in their work after the introduction of the General Data Protection Regulation. However, the results indicate that the GDPR for some of them was a source of a problematic situation. The respondents in the open question could indicate the type of difficulty implied in their work by GDPR. This issue was later on analyzed in a qualitative study. As the main serious problem, the respondents most often reported a longer working time due to the necessity to implement measures in line with the new regulation, as well as some admitted that they had difficulties in taking lawful actions tailored to specific situations.

The results of the survey indicate that currently more than half of the respondents are not afraid of the consequences of breaking the regulation, while some people have difficulties determining their attitude in this regard. During free, in-depth interviews, the employees of the administration declared, that initially they were afraid of the scale of changes, sanctions resulting from failure to adapt to new procedures, as well as from extension of working time in connection with new duties. In the examined institutions, additional, detailed instructions were implemented, and some activities within the organization were systematized. The respondents pointed out that despite the initial anxiety their work did not change radically.

Among the most important changes, the respondents most often indicated the necessity to appoint a personal data administrator, as well as the implementation of data protection instructions processed both electronically and traditionally. Data encryption instructions, protection of computers and mobile devices containing personal data as well as physical protection in enclosed cabinets have been introduced. Interlocutors paid attention to the fact that they collect information in a minimal scope, serving only statutory and educational purposes. An important role in a smooth adaptation to changes and in reduction of employee uncertainty after the implementation of the new regulations is provided by trainings on the GDPR issue, in which each of the respondents participated. The interlocutors particularly positively evaluated by those trainings having application values and practical information tailored to the specifics of the industry in which they work.

Conclusions

The entry into force of the GDPR aroused numerous controversies. Regulation infringement may involve the imposition of sanctions and high financial penalties on the entity processing the data, amounting to as much as 20 million EUR or 4% of the total global turnover from the previous year, with a higher amount (art. 83 point 5 of the GDPR). Many organizations, especially small and medium-sized enterprises, expressed concerns about possible sanctions, as well as a lack of understanding of some provisions or awareness of the scale of changes and the consequences of failure to adopt measures to adapt procedures to the new legal order (Sumińska, Postuła, 2017, p. 116).

The conducted research indicated a diverse attitude of the administration employees towards the introduction of the GDPR adapted to the European Union legislation. Most of the respondents positively assessed their state of knowledge about the new regulations, and it is worth noting that all respondents took part in at least one training on the implementation of practices consistent with GDPR. We can also see the openness of administration staff to broaden knowledge about the ways and possibilities of personal data protection, which is reflected in the declarations of participation in training and the will to expand knowledge in the aforementioned scope. It is worth noting that the employees did not report any major problems resulting from the adaptation of their own activities after the entry into force of the Regulation, except extended working hours and an occasional problem in the selection of right actions to a specific situation. Despite the discourse in the media on the possibility of financial sanctions, the majority of respondents are not afraid of penalties resulting from non-compliance with the regulation.

The results presented in this article are only exploratory in nature and signal the most important areas for further analysis, indicating new and important fields for potential future research. The issue of GDPR implementation has various social contexts (it can even cause digital exclusion (Budziewicz-Guźlecka, 2010), depending mainly on the type of organization and the method of data processing. In order to better understand the problem, the authors

conducted further analyzes, with particular emphasis on the conclusions from in-depth interviews, which enabled them to reach the most important causes of ambiguities and problems indicated in this article.

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Cite this article as: Czaplewski, M., Modzelewska-Stalmach, A., Popiołek, M. (2018). General Data Protection Regulation – results of a pilot study. *European Journal of Service Management*, 4 (28/2), 105–111. DOI: 10.18276/ejsm.2018.28/2-12.

BASIC DIRECTIONS OF CONTEMPORARY POSTAL SERVICES MARKETS TRANSFORMATION

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION L87, O14

KEYWORDS postal services market, digitalization, Internet, innovative information and communication services

ABSTRACT On modern postal markets the demand for traditional services is falling and it is clearly visible especially on the letters market. This forces postal operators to undertake the provision of innovative information and communication services. Entering the area of these services, postal operators start by offering so-called hybrid services, e-deliveries and engaging in e-commerce.

Introduction

Modern postal services markets (PSM) are subject to significant transformations, which can be divided into changes related to:

- liberalization and deregulation of PSM,
- increasing impact digitization and the Internet on the PSM.

The transformations related to the introduction of liberalization and deregulation as well as the consequences of these processes have been widely described in the scientific literature. The literature proves that liberalization and deregulation processes carried out in the area of PSM lead in particular to the elimination of monopoly and the introduction of competition in this market (Buko, 2009, pp. 89–105; Dehnen, 1990; Drab-Kurowska, 2007, pp. 237–242; Sondej, 2012, pp. 134–141).

Current changes in the PSM area are mainly connected with the development of digitization and the Internet. The aim of the article is to try to identify the main reasons for the growing interest of postal operators in digitization and in the Internet as well as the basic directions of the impact of digitization and Internet on the PSM and to show the impact of digitalization and the Internet on the market activities of postal operators.

To accomplish the assumed goal, the author used:

- critical analysis of scientific literature on the subject PSM,
- available empirical data showing changes occurring in contemporary PSM,
- observation of the behavior of postal operators involved in the use of digitization and the internet.

Basic reasons for the growing role of digitization and the Internet in the PSM area

The interest of postal operators in the increasing use of digitalization and the Internet is largely due to the fact that the market for traditional letters, which played a fundamental role in the activities of postal operators, is not very promising. This is evidenced by the data presented in Figure 1, showing the decrease in the number of letters in selected countries in the period covering the years 2007–2012.

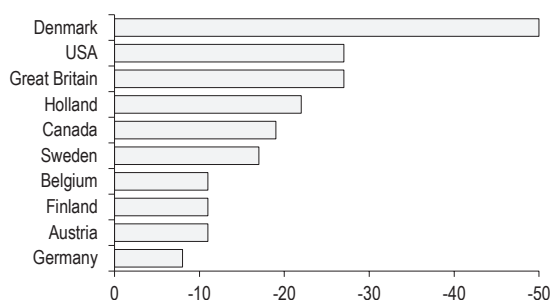
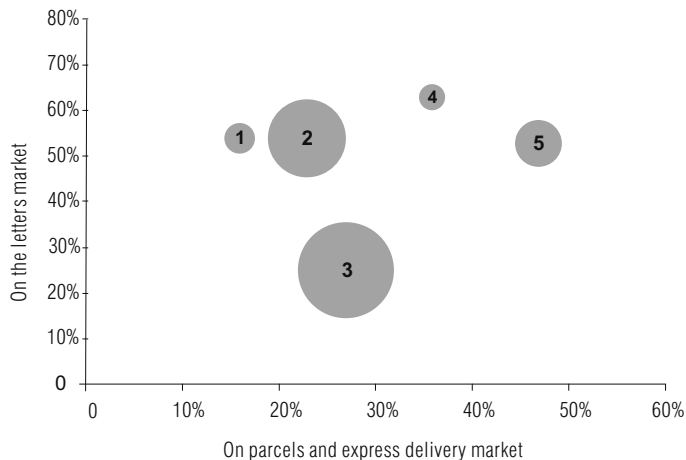


Figure 1. Decrease in the number of letters in selected countries in the years 2007–2012 (% of the number of letters sent)

Source: Statista (2014), after: *Die Revolution im...* (2017), p. 2.

The falling demand for traditional letters means that the service of parcels and express parcels is becoming increasingly important in the activity of postal operators. Information on the percentage of large EU postal operators measured in terms of turnover in the area of the letters and parcels market is presented in Figure 2.



Explanatory notes: 1 – Dutch postal service (PostNL) – 4.3 billion euro, 2 – French postal service (La Poste) – 22.0 billion euro, 3 – German post (Deutsche Post) – 56.0 billion euro, 4 – Austrian postal office (Österreichische Post) – 2.4 billion euro, 5 – British postal service (Royal Mail) – 11.0 billion euro.

Figure 2. Percentage shares of selected significant incumbent operators in the letters market as well as the parcel and express parcel market

Source: *Monitoring Brief...*(2014), p. 21.

The emerging new conditions of the PSM characterized by a permanent and growing decline in demand for traditional letter shipments, formerly the main source of revenue for postal operators, force these operators to change their existing business models.¹ Looking for a business model adapted to the new conditions of the PSM, postal operators begin to focus on two areas of activity. On one hand, they continue to provide traditional services, i.e.:

- delivering letters, advertising and press,
- delivering parcels and courier shipments,
- retail operations carried out at post offices, including, among others, provision of financial services and conducting of small trade, e.g. sale of stamps, stationery.

On the other hand, they expand their traditional activities by:

- hybrid services, e.g. letters sent electronically between post offices, printed and packaged in traditional envelopes and delivered to the recipient in this form,
- services related to the operation of Internet-based activities, e.g. undertaking the delivery of shipments ordered electronically (e-commerce), as well as developing the so-called. e-deliveries (as a modern form replacing traditional registered items delivered with confirmation of receipt).

¹ Detailed information on the essence of a business model and principles of its shaping is included in the study of M. Czaplewski (2015).

The main areas of digitization and Internet use on SPM

The growing interest of postal operators in the provision of so-called hybrid services, developing the so-called e-deliveries, constituting a modern form of shipments replacing traditional registered mail as well as growing interest in e-commerce, including in particular the service of delivery of e-commerce orders, results mainly from the real potential possessed by postal operators and their skills in organizing packages and letters shipments.

The material potential possessed by postal operators creates in particular a relatively modern and well-developed distribution system that allows them to adapt to the growing expectations of customers regarding the speed of shipments delivery. The availability of a large number of well-located outlets by these operators favors the fulfillment of the accessibility requirement important for customers. Having such advantages, incumbent operators are natural partners for companies running e-commerce and seeking suppliers of goods sold by them.

To make the best use of this potential to offer innovative information and communication services, postal operators strive to further modernize their infrastructure networks, including automatic sorting centers. The modern distribution centers built by incumbents allow not only to improve transport and logistics processes, but also enable these operators to transform into sellers of a wide range of innovative services, including the following ones (*Die Post...*, 2008, p. 19):

- printing letters and enveloping them (after providing the customer with a pattern of content and addresses),
- printing advertising mails, insurance policies and guaranteeing their delivery,
- scanning of shipments.

Having such distribution centers creates good conditions for postal operators to engage in the growing area of hybrid services,² the segment of e-mail services³ and in the rising e-commerce, promising further dynamic development.

The dynamic development of e-commerce and the assumed prospects for its further development make postal operators pay special attention. For postal operators, the benefits of e-commerce development are manifested in two basic ways:

- growing demand for parcels,
- limiting the falling demand for letters, as a result of their increasing use for delivery of small goods ordered electronically by clients.

The importance of developing e-commerce for the results of postal operators' activities causes their strong involvement in improving the quality of services connected to the e-commerce process.⁴ In the case of postal

² An example of such services are letters sent by electronic mail between post offices, then packaged in traditional envelopes and delivered to the recipient in this form. There is a growing demand for these services reported by the Small and Medium Enterprises (Niederpruem, 2018).

³ The development of e-mail services results not only from the convenience of using this modern information and communication service. An important factor supporting the development of this service is also the central regulations in force in some countries, which assume the priority treatment of electronic communication in the contacts of citizens with governmental administration. Five European countries have already applied such a solution: Denmark, Estonia, France, Netherlands and Sweden (Jung, 2018). This forces postal operators who want to maintain an important position in the provision of innovative information and communication services, to develop and implement solutions that will make it easier for clients to contact the state offices electronically.

⁴ Information on the methods used to improve the organization of e-commerce, especially the delivery phase in the e-commerce process is presented by M. Czaplewski (2016).

operators, this is manifested first of all by the common introduction of the following solutions (Bender, Hildebrand, 2018):

- informing recipients using SMS about the planned delivery date,
- providing the recipient with the possibility of continuous tracking of the shipment's location,
- providing the recipient with the possibility of choosing a specific delivery method, e.g. to the house, to a specific point of sale,
- providing the recipient with a choice of a specific time interval of delivery of the parcel.

Basic activities of Polish Post using digitalisation and the Internet

The development of various forms of internet-based activities, especially e-commerce,⁵ coupled with a drop in demand for traditional postal services, means that postal operators invest increasingly in building a strong position in the growing new market segment. The scale of these investments depends on resources, and these have, in particular, the so-called incumbent postal operators. This is indicated, among others, by the situation on the Polish PSM.

The main operator of this market – Poczta Polska – has created a 24-hour monitoring center, coordinating the work of postal logistics to ensure timely delivery of all shipments. Poczta Polska also increased the number of collection points for parcels by signing contracts with the convenience stores chains like Żabka and Freshmarket as well as with Ruch and Orlen stations, thanks to which it is possible to collect courier parcels sent via Poczta Polska. The adopted line of action is the response of this operator to the increasingly popular by customers Click & Collect solution, allowing online buyers to decide where to pick up the purchased goods.

Dynamically growing e-commerce requires not only an attractive organization of the delivery stage, but also safe and easy payment. Among other things, the Polish Post has equipped all couriers with payment terminals enabling card payments and so-called Blik payments. In September 2017, it established the digital brand of the Bank Pocztowy – Envelo Bank. This bank proposes, among others, the so-called Envelobonus, allowing the reimbursement of some money to online buyers, who choose Pocztex courier as a delivery form (Kuraszkiewicz, 2017). Another example of the emphasis placed by Poczta Polska on developing digital operations is the establishment of Poczta Polska Usługi Cyfrowe – PPUC Envelo. Thanks to the Envelo.pl platform, it is, among others, possible to (www.envelo.pl, 2018):

- buy electronically a postage stamp with your own graphics,
- send a letter or card, receiving a scan of your own shipment (so-called Neolist, Neokartka),
- set up an Envelo account.

It should also be emphasized that in August 2016 an agreement was signed between Envelo and Poczta Polska on one side, and the Ministry of Digitization and the Ministry of Infrastructure and Construction, on the other side, indicating the need to integrate the Envelo digital platform with the state systems and develop principles for the provision of e-delivery services.⁶ Moreover, Poczta Polska plans an investment project in remodeling of its

⁵ More on the development of e-commerce see (Skorupska, 2017; Czaplewski, 2018, pp. 161–162).

⁶ It is estimated that in Poland, the introduction of e-deliveries instead of traditional registered mail with confirmation of receipt will save about PLN 104 million on an annual basis (*Envelo lider...*, 2017).

logistics network, assuming the construction of a logistics hub in the vicinity of the Central Communication Port to be established in Poland (*Poczta postawi...*, 2017).

The presented information indicate that the main operator of the Polish PSM is trying to use:

- new technological solutions (digitization, Internet, special self-service boxes for sending and receiving parcels by customers),
- new organizational solutions (delivery of parcels to the customer's home, to various commercial outlets, dispatching of payment terminals by couriers).

To develop these solutions it uses the potential of:

- own internal units (e.g. IT department, logistics division, some Post Bank structures),
- external units with which Poczta Polska cooperates (e.g. Post Bank, Orlen)

This means moving away from previous solutions using only their own internal units and supporting themselves with the services of specialized external units. This makes it easier for Poczta Polska to master new competences needed to provide innovative information and communication services.

Conclusions

The emphasis on the provision of innovative information and communication services by postal operators is primarily due to the decreasing demand for traditional letters. This emphasis is strengthened by the introduction, by some countries, regulations requiring priority treatment of electronic communication between citizens and governmental administration.

Taking into account the possessed competences, postal operators interested in developing electronic communication, firstly engage in the implementation of the so-called hybrid mail, e-mail and e-commerce services. Postal operators interested in the development of these areas of activity increasingly take them into account within the undertaken investments, prioritizing investments necessary for the provision of innovative information and communication services.

In the conditions of falling and expected further decline in demand for traditional letters, the growing involvement of postal operators in the provision of innovative information and communication services should be considered fully justified.

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Cite this article as: Czaplewski, R. (2018). Basic directions of contemporary postal services markets transformation. *European Journal of Service Management*, 4 (28/2), 113–119. DOI: 10.18276/ejsm.2018.28/2-13.

EXPLOITATION OF MODERN IT SERVICES TO RECOVER THE POLISH LOOTED ART BY THE EXAMPLE OF THE LOST MUSEUM

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION A12, M14

KEYWORDS history, education, virtual museum, e-museum, IT services

ABSTRACT The article presents the exploitation of global modern IT services required to create the new museum project called virtual museum. Its premise is to acknowledge the museum objects around the world. The example of The Lost Museum shows how the modern IT solutions give the possibilities to generate contemporary and peculiar museum projects. The international virtual museum project called The Lost Museum is created to meet the needs of the Polish Ministry of Culture and National Heritage. Its aim is to gather information and to show the Polish pieces of art stolen after the Second World War by the Nazi German and Soviet forces. The works of art were lost. The Lost Museum publishes the art images being on the list of war losses to help their recovering. The IT services facilitate the publication of information about the huge amount of Polish pieces of art robbed during the war on unimaginably enormous scale in the history. The virtual museum brings them back in memory, showing at the same time their importance for Polish heritage and explaining to the young generation how they were engaged in constructing the national identity.

Introduction

The rapid development of informative society gives the possibility of the exploitation of e-services in culture, particularly in museums. It is facilitated by the massive information needs and character of information spread as well the general way of use, technical possibilities of their gathering and stocking without taking into account time or space. The main feature of the informative society is using the information the way it gives unlimited access to the

internet (Bujak, 2010, p. 96). The e-service market is accessible to the greater number of e-clients. The traditional access is often restrained and expensive (Dąbrowska, Janoś-Kresło, 2010, p. 46).

One of the basic functions of informative society is education which popularize the acquisition of the knowledge in common way. Internet as a cheap and global media takes part in promoting the culture. It englobes the way of social human conduct, material and spiritual human heritage gathered and strengthen from one generation to the other. Its development depends on the learning and teaching possibilities (Dąbrowska, Janoś-Kresło, 2010, p. 125). On the one hand, nowadays we observe the phenomenon of homogenization of culture where people become less sensible to cultural differences as part of consolidated world (Bujak, 2010, p. 97). On the other hand, the broad access to information database, the fast exchange of numeric data open the door to cultural distinctness, absorbing information on global scale which would be restrained in traditional way. The local cultures can be spotted more easily in that modern way. The contemporary society and culture become numeric (e-culture). The digitalization together with new medias and informative technologies used in practice are the fundamentals for the culture development. The technical progress started the online promotion of art. The new ways of transformation and popularization of art objects have been desired. The digitalization permitted the full access to the cultural database (Dąbrowska, Janoś-Kresło, Wódkowski, 2009, p. 86). Due to the digitalization process, the traditional cultural institution changed its function and let internet take place in cultural life. There is an ample range of websites exposing all branches of art. New technologies change the way of art functioning. The art comes out from traditional museums and galleries and find its place in virtual world, a place of art distribution, promotion and presentation (Dąbrowska, Janoś-Kresło, Wódkowski, 2009, p. 95). The internet connection is the only condition to become the e-culture connoisseur. The cyberculture, new domain emerges, together with the virtualization of cultural goods.

Virtual museum

The virtual museum was created thanks to the strong development of tele-information services. It gave the possibility to see museum objects almost from four corners of the world. It wouldn't be at hand in traditional way. The function of a long-established museum as an institution is gathering, preserving the cultural human heritage, material and unmaterial one, informing about the importance of stocked collections, promoting the basic Polish and worldwide historical, scientific and cultural values, forming the cognitive and esthetic sensibility and of course the consultation of gathered collections. The museum as the public institution becomes today the service provider for the citizens as part of the informative society where the information is a product and the area of services is strongly developed. The evolution of multimedia technologies in tele-information and cultural transformations related enlarge the notion of a museum. New functions that even recently have been excluded from the meaning of a museum institution, today they gain interest in museology (Bentkowska-Kafel, 2013, pp. 159–166).

Digitalization process permit to share the collections of cultural institutions with the users which are welcome to take part in cultural knowledge acquisition. The online gallery and museum visits become familiar. The e-museum uses the latest informative technologies to present its collections. It can exist partially as a traditional museum, represented by a museum website or it can become entirely virtual. The last one was at first created to serve as a honeypot to attract people to visit the traditional museum, custom way to acquire knowledge or alternative to traditional museum for those who cannot have a wander because of distance or any other reason. Many museums in Poland join this idea (www.e-muzeum.eu). There are ones that propose only to have a look at the photos of the objects and others invite to a virtual walk. The last proposition like online tours is more advanced and exclusive way

to present art (Dąbrowska, Janoś-Kresło, Wódkowski, 2009, p. 95). The museum in Versailles (France) is a perfect example of online tour where a visitor can relocate to sit in a coach thanks to the gallery in 3D.¹ Today, the Polish museums like National Museum in Warsaw (<http://cyfrowe.mnw.art.pl/dmuseion>) often choose the online presentation of their collections e.g. paintings. They expose works of art but also their digital images and data about works of art.

The aim of the article is presenting the possibilities of modern multimedia solutions to create the virtual museum project. Modern IT solutions make a vast range of museum projects work and popularize Polish museum collections worldwide thanks to the Internet. Moreover, new particular projects are created like the exposition of collection of Polish heritage lost during the second world war. Basing on the case study method of the Lost Museum, the possibilities of application of the modern and customized IT solutions in museum projects were described. The article is based on the analysis of The Lost museum websites.

The idea of the Lost Museum

The Lost Museum is a particular form of the virtual museum. There is only one museum of this type in the whole world. The Lost Museum is an outstanding project existing only in virtual world (<https://muzeumutracone.pl>). The museum collects special objects- works of art and applied art which had been exposed before the second world war. They were robbed and till today they remain unknown. The objects presented are unique because they are on the list of Polish war losses. The online publication aims at helping to find them out. In the article, the case study method is of use to promote The Lost Museum in Poland and around the world. It's a project organized by the Association of Marketing and Communication SAR and Art Foundation Ad Artis SAR supporting the actions of Culture and National Heritage Ministry to recover the lost collections. The fundamental role of the museum is making people aware about the objects wanted and those already founded. Following the citation that "publishing an image of looted art is the first step to recover it", The Lost Museum has an online gallery on the website www.muzeumutracone.pl where it presents the photographic reproductions of paintings, graphics, sculptures, archeological collections or art crafts. The project is realized with the collaboration of Royal Palace and the Warsaw City Hall. The museum project is a starting point for further discussion about the education and promotion of looted art during the second world war. According to the founders of the project, the chances of recovering the lost pieces are very low. It's much more the mental restitution of the works of art for society. From 1992, the Ministry of Culture and National Heritage gathers information about the war losses which means the mobile cultural goods looted after 1945 due to the second world war. The losses are tremendous. The huge amount of objects were robbed. It's the phenomenon on worldwide scale. At first, all the documentation was done as part of the Bureau of the Government Plenipotentiary for Polish Cultural Heritage Abroad. Today, the works are continued by the department of wartime losses incorporated in the department of cultural heritage which collects the information about the wartime losses. It also does researches to recover the looted museum objects in the country and abroad (Czym są..., 2018).

The department has its Database of wartime losses - the electronical register of cultural goods in Poland, lost due to the second world war. It is composed of 23 branches e.g. paintings, sculptures, graphics, cloth, porcelain, glass, gold, militaries, numismatics and archeology. There are 63 000 of lost objects counted and registered. Robert G. Storey, American attorney, a participant of Nuremberg trials attested how Polish culture was parceled out. The Nazi – German loot was greater than the collections from Metropolitan Museum in New York, British

¹ www.chateauversailles.fr/decouvrir/domaine/ecuries-royales.

Museum in London, Louvre in Paris, Tetrakov Gallery in Moscow put together. Over one million of single works of art disappeared from Poland. Because of the destruction of catalogues done before the war, many objects didn't find their place on the list.

The preparations for loot of the Polish culture goods were launched in Germany long before the war. The Nazi – Germans focused on the most precious works of art, from the museums and private collections. The list was elaborated by a group of Art Historians who were well-informed about the Polish art. After the end of September campaign 1939, the systematic confiscation regulated by the specific occupant laws took place. It was realized by the institutions purposely created for that action. It was quickly transformed into illegal thefts by enemy forces and their officials. At the end of the country occupation they took form of seized loots. Many cultural goods were massively transported away, mostly from west and north part of Poland by special forces of soviet war administration.

Poland suffered from the colossal war losses. It's impossible to estimate the quantity of them because there is no sufficient sources and registered documentation of the losses done just after the war. The majority of the information like inventory books was transported away or destroyed on purpose by the Nazi German occupant or the soviet forces. In this case, the total reconstruction of the content of the important collections is practically impossible. The estimated number of 516,000 of single lost pieces of art (transported away and destroyed) is based on archival data and it doesn't indicate the immensity of losses. It contains only the objects registered after the war. Particularly, they are objects of ancient art. It's not possible to define the totality of war losses in art (after the year 1992, only 63,000 of museum objects lost in Poland were registered by the Ministry of Culture and Art).

The information gathered in the database is regularly updated on the Ministry website (<http://kolekcje.mkidn.gov.pl>) and on the international websites like Central Registry of Information on Looted Cultural Property 1933–1945 (www.lootedart.com) and Art Loss Register (www.artloss.com). The information is also published in the departmental series edition *Losses of the Polish Culture*. There have already been 19 volumes of catalogues presenting the wartime losses for Polish and international paintings, ancient art, graphics and drawings. The catalogues of wartime losses are sent to the national museums, the most exclusive auction houses in the world, diplomatic posts, consular offices, institutions and organizations doing provenance trials. Thanks to the efforts of Ministry of Culture and National Heritage, many works of art have already returned to Poland. The majority of them was recovered due to the information passed by the museum staff, collectors or simply the art enthusiasts.

Presentation of lost objects

The Lost Museum has its own website where there is a presentation of looted objects (it's usually a black and white photography). It has about 40 collections for example Entail of the Princes Czartoryski – Castle in Gołuchów, Gierymscy, Stanislas August, Graphics and Drawings, Polish Paintings, National Museum in Poznań etc. There is a browser founded to do the research of the objects.

Since 2010, the animation films have been realized. It's a kind of multimedia show of The Lost Museum where looted pieces of art and those which have already been recovered, are displayed. It's a main attraction of the museum during the Night of Museums organized in the biggest cities of Poland. The films are projected in the Castle Square in Warsaw, in front of the Presidential Palace and in Łazienki Park. The Minister of Culture and National Heritage is present. The DVD with the film is sent to the national museums and culture institutions. The last film dated from 2018 is entitled *Royal dream*. It presents the Łazienki Park, the palace of the last king Stanislas August Poniatowski, the history of Łazienki and the pieces of art collected there. The films tell about the history

of the Polish works of art. It's dedicated to the youngest generation. The film from 2014 presents four histories of lost collections belonging to Czartoryski family. The Polish actors relate the history of travels of the paintings of Leonardo da Vinci, Rafael Santi, Rembrandt van Rijn which citizens tried to hide during the November Uprising or the Second World War. The film tells also the history of 259 ancient vases coming from the Entail of the Princes Czartoryski in Goluchów. Almost all the vases were destroyed during the war. It was the most precious one after the British Museum vase collection. On the museum website, in the overlap reporting, there are coverages from Nights of Museum and film shows. It's a proof that the Lost Museum is of great interest for Poles.

Educational campaign Lost Recovered

In 2013, the Ministry together with famous Poles organized the campaign entitled *Lost Recovered*. It realized 50 films where people were telling about lost paintings. The campaign *Lost Recovered* was organized as part of a project of the Lost Museum. The campaign makes people aware of the scale of the loots and damages of Polish works of art. Among famous people we find the representatives of the Ministry of Culture and National Heritage, main art historians, directors of the greatest museums in Poland, writers, actors, sportsmen- Olympiad participants, philanthropists, popular musicians, satirists, reporters, ad agency employees and confectioners. The National Museum in Warsaw together with National Museum in Poznan, National Museum in Gdansk, Historical Museum in Cracow, Royal Castle in Warsaw and the Foundation of the Princes Lubomirski were the co-organizers. The Polish radio and television sponsored the action.

Contemporary museums face new challenges which are generated rapidly by the continuous changes in science and technics, the development of informative and communication technologies. The museum visitors are accustomed to the common use of the multimedia and internet. They learn by experience awaiting interesting and various guided tours. In the last few years, the blossom of massive culture was observed together with its commercialization. It englobed the area reserved to high and elitist culture (Rottermund, 2005, p. 13). The museums were forced to learn marketing technics and analyze the needs of the public. They had to find new ways to make the museum object more authentic and one-off and inform more efficiently about their importance in the history than it had been done so far (Rottermund, 2005, p. 14). The contemporary museums have to almost fight for their clients. For traditional museums, the exploitation of new informative services and creation of new exposition areas is an alternative. For contemporary ones, it's a question of life or death. For the Lost Museum, it's the only way of existence. It's based on numeric image. In first place, the museum project is orientated toward the recovery of the works of art, education and science.

The latest multimedia solutions and mobile technics make way to the promotion of the looted art which had constituted a big part of national culture and had been constructing the national identity through ages.

Art Scherlock

As part of the project of recovery of Polish Art around the world, a free mobile application is designed. It is sponsored by the Ministry of Culture and National Heritage. Every user can easily spot if a painting, a drawing or a museum cloth isn't a looted art lost during the second world war. The application uses the electronic database of wartime losses shared by the Ministry of Culture and National Heritage. In any place in the world, a user can take a picture of an object that is verified on the spot. The application automatically gives an answer if a photographed object is a wartime loss. A user can stay anonymous (without filling in any credentials or publishing the ones

registered in the mobile system where the app is installed). It is extremely important in case of precious works of art. The application has already brought positive results.

In September 2017, one of the application users identified the painting *Exotic view* of Frans Post (1612–1680). It's registered in the database of wartime losses under the number 29861 (*Aplikacja...*, 2018). The same goes for the recovery of Oswald Achenbach's painting "Via Cassia Near Rome", returned to the National Museum in Poznań in 2014.²

Conclusions

The looted Art is an exceptional project of e-culture which uses the high informative technology to recover the lost works of art belonging to Polish national collection. The notion of looted art is promoted thanks to the high-tech solutions which guarantee the existence of the museum. The Lost Museum is a perfect example of virtual museum. It plays an influential role in historical and cultural education. It performs also a social function. It brings back memories about the precious mementos of Polish culture counted as wartime losses which were crucial for building the national identity. The lost pieces of art may never be recovered but they will always remain part of national heritage. The contemporary museum is a product of high technology of the informative society. It teaches how to exploit the IT services to enhance contact with the culture and to level it up within different communities. The results of the analysis show that the museum projects of this kind are valuable in first place for general knowledge acquisition and for the other they have practical use. In this case, they serve to recover lost pieces of art. In brief, it's not only learning the history but also using it in practice.

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Cite this article as: Dąbrosz-Drewnowska, P. (2018). Exploitation of modern IT services to recover the Polish looted art by the example of the Lost Museum. *European Journal of Service Management*, 4 (28/2), 121–126. DOI: 10.18276/ejsm.2018.28/2-14.

² <http://lootedart.gov.pl/en/news/139-join-the-most-spectacular-search-for-looted-art-in-recent-memory>.

THE FUNCTIONING OF THE RAILWAY WORKS SIDINGS WITH REGARD TO THE LIBERALIZATION AND CONCURRENCY OF THE FREIGHT RAILWAY TRANSPORT ON THE POLISH MARKET

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION R40, R42

KEYWORDS railway transport, freight railway transport, railway sidings, company railway sidings

ABSTRACT The railway sidings located within the area of companies of freight railway transport are of great importance. Every active railway siding constitute a natural source of creation of flow of freight railroad cars. In consequence, the increased transport is observed on the company railway network. Recently, there has been a decrease of number of sidings. It is related also to the question of optimization of costs of functioning of the industrial companies in possession of railway sidings. The article presents different solutions to be applied in practice in matters of functioning of company railway siding tracks taking into account the current conditions of functioning of this branch of transport in Poland. It's an approach from point of view of a railway transport client who is not a railway company.

Introduction

The liberalization and concurrency on the market of freight railway transport are fundamental causes of changes within railway transport in European Union. Both created distinct conditions of functioning for the users (clients) of this branch of transport. It goes the same for industrial companies in possession of railway sidings used for many purposes (raw materials transport, semi-finished products or finished products).

It concerns the railway sidings of various size and range of work. In particular, the big companies in possession of railway sidings where the circulation of railroad cars (in many cases they are stations apart) is high, benefited from the liberalization and concurrency on the freight railway transport market. All the freight railway companies together with PKP CARGO, a joint-stock company separated from the national integrated enterprise are concurrent and they fight for work contracts to provide freight transport services to those clients. In majority of the cases, the expedition and reception on the railway sidings concern full trains load that require the minimum of maneuvering work which means lower costs and higher rentability of that transport in comparison with others. There is no doubt that all the companies fight for more commands of this type and, in the same time, build the good relation with this kind of client.

Due to the opening of the freight railway transport, new freight companies blossomed. They are issued from ancient departments of enterprises providing the company railway sidings services. They are equipped with locomotives, wagons and all the technical service. They constitute the full property of the company. With the statutory monopoly on the functioning of the national enterprise PKP,¹ there was no possibility to use the PKP network for transport. The particular companies were restraining their services only to railway siding track maneuvering operations like loading, unloading railcars from delivery and acceptance tracks. In new conditions, a part of ancient transport departments transformed into freight transport companies providing the transport services for the mother company (raw material and finish products transport), operating their own railway sidings (half products transport) and also providing services for other subjects.

The best example of this kind of solution is the company *Pol-Miedź-Trans* limited liability company created as part of the ancient department of KGHM Polska Miedź SA which operates many railway siding tracks of that partnership.² It provides also services for external clients.

In the article, the question touched is the functioning of the company railway sidings in relation to the subjects deprived of license to execute freight rail transport and the subjects who use transport services.

Company railway sidings

The transport companies are interested in cooperation with the owners and the users of the company railway sidings. It's more profitable when the rotation of the given railway siding is high and when there are more transport in a form of full train load (Jakubowski, 2009, p. 88). It exists for expediting and receiving. There is a natural contradiction between the expectation of transport companies and enterprises using the railway siding. The transport company would like to have the longest access to operate two-way transport to railway siding tracks and from it. The best option would be to have an exclusive access (mostly for full train load). The enterprise using the railway siding would also like to have a possibility of choice of different transport companies and negotiate the prices. In this case, the conditions of functioning and operation of the company railroad spur tracks should be taken into account as a start and end point for railway transport processes in which the given company is participating (as a freight expeditor or receiver). The optimal conditions of functioning should be guaranteed to a an enterprise using railway siding (Nowosielski, 1999, p. 360).

¹ The trade railway companies (mining, forest and sandy railway) were the only exception. They weren't concurrent to PKP because they didn't have public transport. They were operating on their own networks and they couldn't use the public network (the PKP one).

² It's an inter-company transport.

Examining the question of full access to a railway siding, the connection of the railway siding tracks with the tracks of national railway network. It becomes significant when the tracks going from the railway siding don't link directly to the tracks of the infrastructure manager. It's the situation when the railway siding tracks are connected at the station with the other tracks than the main ones belonging to other user than a subject. Free choice of a transport company by a user of a railway siding would be significantly restrained or even impossible in that case. The same goes for the situation where the tracks going to a company railway siding split off from the track system of other railway siding used by different subject. This situation may limit the free choice of a transport company (Kozłowska, Rolek, 2017, p. 13). Above problems are only outlined. The situation when tracks of a railway siding are directly connected with route or main tracks (company manager network PKP Polish Railway Lines, a joint stock company) at the station will be of leading analysis in the article.

Three basic solutions in matter of functioning of railway sidings could be enumerated:

1. Railway siding is a part of organizational structure and enterprise management which uses it (traditional solution).
2. Railway siding services are managed by a company issued from ancient organizational enterprise department which use a railroad siding.
3. Railway siding services are provided by external companies.

Railway siding is a part of organizational structure and enterprise management

It's a solution where all the productive asset, in particular the maneuvering locomotives and their supply base, the track system is a property of a company. The employees hired for providing the railway siding service are at the same time employees of the company with all the consequences. All the costs as salary payments, maintenance and amortization of the railway siding asset, property tax are in the charge of a company. A company can freely contact the PKP CARGO, a joint stock company and other freight transport companies via hand-over point placed at intersection of a railway siding with national network. A company has a final word in the range of the freight maneuvering and shipping by a railway transport when expediting and receiving. It should be underlined that free access to a railway siding doesn't necessarily mean a free choice of a transport company in a given transport relation. It is issued from specific freight railway transport market (see e.g. Zalewski, 2002).

Railway siding services are managed by a company issued from ancient organizational enterprise department

One of the ways of restructuration of a company is extracting some company activities and basing on their activity create separated partnerships. It's related to the outsourcing idea which means extracting additional activities from the organizational structure. In that way, it's easier to manage a *slimmed down* company. It becomes more tangible for the changes on the market.

In many companies, the transport service as an auxiliary activity was subjected to the transformations of this kind. The companies in possession of the railway sidings were transforming the ancient transport departments, in organizational structure, into separated partnerships which were providing the railway sidings services. They were taking over the employees, the productive asset and maneuvering locomotives and their technical facilities from the mother company (Pilarczyk, Tomczak, 2018, p. 21).

In relation to the railway infrastructure and other (railway traffic management, signaling control, shipment points, devices and others) as well as the property where a railway siding is placed, there are two solutions:

1. The assets are incorporated to a partnership and they become its property.
2. The assets remain the property of a an enterprise and the use is regulated by a tenancy contract between the partnership and an enterprise.

Taking into consideration the conditions of functioning of a railway siding and free access to it, this distinction is essential. The question is continued in other part of the article.

The created partnership sign a contract with a company to which a service is provided. The contract contains the conditions of railway siding services. They are favorable for a company because in the first period it has the majority of shares in a new established partnership. The owner of a partnership may decide about the sale of totality or part of the shares as part of the restructuration processes or when the renovation or reconstruction of a railway siding asset is needed. If a company still have a majority of the shares in a partnership after the sale of a part of them, the company situation concerning the railway siding services will remain unchanged in relation to the previous period. The sale of the totality or a major part of the shares of a partnership providing the railway siding services could be a danger. The conditions of railways transport services provided to a company would deteriorate. The limitation of a transport company access to a railway siding would also take place. When there is a decision about the sale of partnership shares, the scope of realization of a railway siding service in three basic areas should be analyzed:

- maneuvering service,
- freight service,
- shipping service.

The basic possible solutions within this range are presented in the Table 1.

Table 1. Possible solutions for the implementation of services on the railway siding

Types of assigned tasks	Options of solutions		
	1	2	3
Maneuvering service	X	X	X
Shipping service		X	X
Freight service			X

Source: own work.

For the analysis of the options presented in the Table (1, 2, 3), the previously presented solutions about the railway infrastructure property and another railway siding (A, B) should be taken into consideration. It results that there are six possible options within this range to be weighted up (1A, 2A, 3A, 1B, 2B, 3B). For very option, the position of a company to which the service is provided, will vary.

For options 1A, 2A and 3A, a company is still the owner of a railway siding infrastructure with all the consequences. The use of a railway siding by a partnership is regulated with the tenancy contract. For every option, a maneuvering service of a railway siding, a partnership has a monopoly on managing it. The monopoly is conditioned with the specifications related to organization and realization of the maneuvering work. In this situation, a company is forced to make contract to provide services only with one operator. In option 1A a company can freely provide shipping and freight service but also it is subjected to all the costs related to them.

The sale of a partnership in this option doesn't bring a serious danger for a company to which a service is provided. It can freely choose a transport company because a partnership provides only a maneuvering service and it cannot decide which freight transport company would provide transport for expedited and received freight. Moreover, the fact that a partnership isn't the owner of a railway siding infrastructure makes the cooperation with a company work efficiently as the management of a partnership is aware that a company would resign from the services and don't prolong the contract. The company to which a service is provided can make pressure on a partnership to constantly take care about the quality of the services provided.³ For options 2A and 3A, the range of a service provided increases. A company forward next areas in the hands of a partnership. It's not rare or uncommon situation. There are many companies which outsource the shipping or freight service to external companies. It doesn't make harm on their functioning. They even make profits thanks to the professionalism and the specialization of the companies. It goes also with the reduction of the costs when an additional company activity is handed over. When a company shares equities with a partnership, it has more influence on the second one. In the same time, the sale of majority of the shares doesn't necessarily mean the considerable deterioration of the conditions of services. The key to secure the company interests is the well-established contract, precisely defining all the aspects related to the realization of the services by a given subject that means a railway siding service in favor of a company. The company property of a part of a railway siding infrastructure gives a company a firm argument in the contract to secure its interests with a subject realizing a railway siding service. In the situation when a new partnership is at the same time owner of a railway siding infrastructure, the position of a company to which a service is provided significantly deteriorates. It becomes dependent of a partnership because the second one has only access to freight points in a company. In every succeeding option (1B, 2B, 3B) another kinds of company services are handed over to a partnership. Even if a maneuvering service is only commanded, it can also influence a company shipping service because the access to a railway siding will be limited to some of transport companies. The sale of a partnership which is the owner of a railway siding infrastructure causes the dependence of the new owner's politics. The last one should be in accordance with the interests of a company to which a service is provided. Being in possession of the infrastructure, the owner of a partnership can make pressure on a choice of a transport company and the conditions of a railway siding service.⁴ The sale of a partnership providing railway siding services and being the owner of the infrastructure is an unfavorable solution for a company to which the services are provided. The management of this enterprise should be aware of this point while making decision about the sale of a partnership.

Railway siding services are provided by external companies

A service is outsourced in the situation where a company to which the service is provided doesn't have a specialized organizational department providing a railway siding service. It's applicable to railway sidings with low and medium rotation. In the period when PKP had monopoly on transport, the maneuvering service of a railway siding was entirely provided by PKP enterprise as part of the contract signed for its service and a service plan resulting from that contract. The current situation changed as many new transport companies and specialized

³ E.g. with prolongation or a negotiation of a contract for maneuvering service.

⁴ The situation becomes extremely unfavorable when an enterprise establish a good cooperation with a chosen transport company.

companies offering a complex railway siding service turned up. There is an analogical situation as presented previously for options 1A, 2A, 3A.⁵ There is one more combination in relation to a company transport service. Currently, the railway transport companies are interested in signing contracts for railway siding services or in buying a partnership providing a railway siding services. For a transport company, it's a possibility to make a company dependent on their services. This final question should be taken into consideration when making a decision about the sale of an partnership providing a railway siding service or the sale of a railway siding asset.

Conclusions

The continuous tendency to optimize the costs of an enterprise functioning makes the companies search the ways of organization of the transport service. However, the optimization of costs shouldn't go together with deterioration of conditions of a company transport service. It's a backfire. It causes very often the cost increase and it ruins the initial saving effects at a later stage. Any change should be made, taking into consideration the optimized service conditions. It's a primordial criteria for any change within this range. This is very often forgotten while restructuring this activity area of an enterprise. The faith in power of market mechanisms comes up at first place. It affects particularly the railway transport. The analysis of the principles of functioning of this branch is made by the analogy to the road transport. In terms of content, it's incorrect and it can lead to wrong solutions with negative results for an enterprise branch to which a service is provided.

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Cite this article as: Drewnowski, A. (2018). The functioning of the Railway Works Sidings with Regard to the Liberalization and Concurrency of the Freight Railway Transport on the Polish Market. *European Journal of Service Management*, 4 (28/2), 127–132. DOI: 10.18276/ejasm.2018.28/2-15.

⁵ It's the situation when the sale of the totality of shares in a partnership took place.

ECONOMIC CONDITIONS OF THE DEVELOPMENT OF ELECTROMOBILITY IN POLAND AT THE BACKGROUND OF SELECTED COUNTRIES

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION L91, L94

KEYWORDS electromobility, electric car

ABSTRACT The text addresses the issue of the development of electromobility in the context of barriers and economic benefits. The first part presents legal regulations in the area of electromobility, which were implemented in Poland. The National framework for alternative fuels infrastructure policy, the act on electromobility and alternative fuels and the act on biocomponents and liquid biofuels have been defined and characterized. The next part identifies the most important economic changes that minimize the barriers to the implementation of electromobility. There are also examples of economic solutions for electric car owners in the USA, China, Great Britain, Switzerland, Norway and Sweden.

Introduction

Periodically in the media are presented different theories about the resources of the raw material that is oil. The development of technology and the increase in demand for raw material creates one of theories that states that oil is enough for less than 30–40 years. According to information published by British Petroleum, if new deposits are not discovered and oil consumption remains at its present level, it will end around 2050 (BP Energy Outlook,

2017). The Rystad Energy company presented data in 2017, which shows that the extraction of oil barrels is the lowest in 70 years and amounts to about 7 billion (Rystad 1, 2017). An alternative to the ending oil reserves may be an electric motor, which at the end of the second half of the nineteenth century was applicable not only on land, but also on water, under water and in the air.

Electromobility is an area that has become very common in recent years, and thus topics related to it are often mentioned in various media. Increased ecological awareness combined with technological progress and increase in oil prices led to a rebirth after almost half a century of forgetting the design of an electric car. For the revival of the idea of an electric car in the 21st century can be considered the introduction to the market in 2008 of the Tesla Roadster car, which was the first EV produced on a mass scale, equipped with lithium-ion battery. From then on, the number of electric vehicles is increasing. According to the International Energy Agency report, the number of fully electric, hydrogen and hybrid plug-in vehicles in the world reached in 2017 the level of 3.1 million copies, which is an increase of 57% from the previous years (IEA, 2017). At that time, more than 1 million electric cars were sold globally – 580 thousand in China (IEA, 2017), an increase of 54% compared to 2016. The second place was taken by the United States, in which 280 thousand pieces were sold. France dominates in Europe, with nearly 120 thousand units sold (Statista, 2018). In the coming years, the expansion of electromobility will include Poland. This is thanks to the introduction of the governmental Strategy for Responsible Development adopted by the Council of Ministers on 14 February 2017, as well as detailed plans for the development of electric transport, which includes guidelines for determining the pace of changes in Europe and the world. The International Energy Agency estimates that the number of new electric cars will grow. By 2020, there will be around 20 million units, up to 60 million by 2025, and by 150 million by 2030 (IEA, 2017).

Law regulations in the area of electromobility

The Polish government considered electromobility as a key area, which is an indispensable element to ensure Poland's sustainable development based on innovation. The most important Polish strategic documents, that directly refer to the concept of electromobility includes the so-called *Clean Transport Package*, which consists of:

1. Electromobility Development Plan in Poland (Development plan, 2017).
2. National framework for alternative fuels infrastructure policy (*National framework...*, 2017).
3. Act amending the act on biocomponents and liquid biofuels (Act on biocomponents, 2018).

The Electromobility Development Plan in Poland is the basic document defining the scope of development in this area for the coming years. The main scope of this act is the development of electromobility for society, industry and stability of the power network, which is an important factor due to the change of load resulting from connecting electric cars to chargers. The last element, which is an important element of energy security, focused on the attention of Polish Transmission System Operator S.A. and thus it was used to develop an analysis of changes in the demand for electricity. The purpose of this analysis was to estimate the impact of electric cars on the energy peak demand by 2030 and to develop potential preventive steps.

There are three main development stages according to the Polish Development Plan which differ in the maturity of the market and the necessary level of state involvement. The first preparatory phase will last until the end of 2018 and includes all work on appropriate legal regulations for public transport, conducting research projects, launching the first pilot projects, creating prototypes of Polish electric cars and targeting public financing in this fields. In the second phase, estimated for 2019–2020, it is planned to create business models for the

dissemination of infrastructure and vehicles, construction of infrastructure in selected agglomerations and along the TEN-T network, commercialization of research projects launched in the preparatory phase, transition of Polish producers from the prototype phase to the production and support for the purchase of electric vehicles. The last path of the program includes a five-year period during which the electromobility market in Poland is expected to stabilize by gradually withdrawing instruments to support the purchase of electric vehicles, creating strong industrial entities working for the Polish electric cars, widespread use of electric vehicles by public administration, completion of electricity network preparation for cooperation with electric vehicles and entry into the landscape of Polish cities of electric transport.

The second document from the Package for Clean Transport is the National Framework for Alternative Fuels Infrastructure Policy. The document concerns the infrastructure for all alternative fuels being a substitute for crude oil. The most important guidelines of the adopted document include the definition of targets for the number of charging points for electricity. The document predicts that by 2020, there will be 50 thousand electric vehicles in Polish cities. Whereas the aim by 2025 is 1 million electric cars moving on Polish roads (*National framework...*, 2017).

The third document is the Act on biocomponents and liquid biofuels (the Act on biocomponents, 2018), in which the creation of the Low-Emission Transport Fund is an important element. The essence of the Act is supporting the development of infrastructure for alternative fuels, producers of low-emission vehicles, low-emission public transport and co-financing of parking fees for EV.

The Electromobility Development Plan in Poland together with the national policy framework for the development of alternative fuels infrastructure was the basis for the work on the Act on Electromobility and Alternative Fuels (Act on electromobility, 2018), which, after approval, came into life on 22nd February 2018. The development of the Act by the Ministry of Energy aimed to implement Directive No. 2014/94/EU of the European Parliament and of the Council of 22nd October, 2014 on the development of alternative fuels infrastructure, defining conditions and rules for the deployment of alternative fuels infrastructure in transport and rules for the provision of services charging electric vehicles and refueling vehicles powered by natural gas. In addition, the Act defines the obligations of public entities in the area of development of alternative fuels infrastructure and related obligations to public all required information. The Directive obliges Member States to build a charging infrastructure for electric vehicles by 31st December, 2020. This should ensure free movement of electric cars in urban and densely populated areas. In the created model, the government focus on the creation of an appropriate legal framework aimed at necessary development for charging infrastructure for electric, hybrid and natural gas or hydrogen-powered vehicles, which has been developed without appropriate regulations so far. The legislator introduces regulations to create specific infrastructure of charging points. According to the current law, about 6 thousand stations will be created in Poland by the end of 2020 for electric vehicles up to 22 kW, as well as 4 hundred with a power exceeding 22 kW. They will be deployed in 32 urban agglomerations and densely populated areas. If such a minimum infrastructure is not created by then, the obligation to build a certain infrastructure will rest on the distribution system operators. The act provides for the possibility of separating by self-government the clean zone transport. This will allow the local authorities to designate a zone to which only vehicles powered by electricity, hydrogen and special fueled with natural gas will have free entry. In addition, the legislator assumes a system of incentives, among others exemption from parking fees, abolition of excise duty on electric cars, increase in amortization write-offs for companies, or the possibility of moving electric cars on bus lanes. The Act on electromobility and alternative fuels also imposes

an obligation on local governments to develop ecological transport by providing a 50% share of electric vehicles in the state fleet. Obligation to design and build public utility buildings and multi-family residential buildings in a way that allows the parking spaces to be equipped with recharging points, or eliminating the obligation to obtain building permits for stations and vehicle charging points, are subsequent regulations included in the Act. The entry into force of individual provisions of the Act has been spread over time and will take place in stages up to 2028. The legislator also provides transitional periods to adapt current activities to new regulations. Another important document for the development of electromobility in Poland is the Strategy for Responsible Development (Development Strategy, 1999). In the area of electromobility, the priority is to increase transport accessibility and improve services related to the transport of goods and passengers, while reducing the negative impact on the environment using electric vehicles. The strategy assumes 16% share of alternative fuel buses, including electricity, in the total number of buses used for urban transport in 2030.

Barriers and economic benefits in implementing the principles of electromobility in Poland compared to selected countries

Electromobility, which today is a new branch of industry and economy for Poland, can become one of the key elements of development. One should strive to create inseparable forms of business cooperation between the public and private sectors. Electromobility is inseparable from the area of new technologies, therefore it is necessary to move in the area of innovation and research and development activities. This approach requires the involvement of many entities and institutions operating in the area of new technologies, products and services.

The most important element that should be considered as one of the first goals to achieve is an adequate level of market saturation with electric vehicles (1 million cars estimated), especially in metropolitan areas. This number of cars will generate an additional demand for energy at the level of 4.3 TWh per year, which will contribute to an increase in revenues by 20 billion PLN from the sale of electricity, assuming that the average life of an electric vehicle will be about 10 years. The additional demand for electricity can be satisfied not only by the construction of new generation sources, but also by more efficient use of existing capacities. Proper investments are required to achieve expansion of network. The implementation of electric cars on the market will also contribute to the development of medium and low voltage networks and will also compensate for the so-called *night valley* or a drop in energy demand in the night (thanks to charging electric cars during the night). The increase of electric cars will significantly reduce the demand for oil consumption, which will increase energy independence. Compensate *night valley* bring better balancing the system and facilitating its integration with renewable energy sources. There will also be an opportunity to popularize innovative solutions, such as energy storage or intelligent management of energy sources. Today, it is difficult to say what challenges the energy sector will have to face, because there are no exact calculations indicating what investments should be made for the needs of the development of electromobility. According to the assumptions of the Ministry of Energy, by 2020 there should be up to 400 charging points. The ambitious targets for the development of electromobility in Poland will also require investments in the area of smart grids and smart metering. They will require access to significant capacities. The ambitious targets for the development of electromobility in Poland will also require investments in the area of smart grids and smart metering. This is due to the need for energy management when charging electric vehicles, which will be an unstable energy receiver. This is related to the model of behavior of electric vehicle users, who in most cases will load vehicles at the same time. With the assumption of the legislator (million electric cars) connecting such a number of vehicles even using low-power

loaders, on the order of 4–5 kW, may increase the demand for power in the amount of 4–5 GW. Today, it accounts for about 10% of the installed capacity in the Polish power system (*Cicha rewolucja...*, 2016). The energy sector is already pursuing the ambitious goal set by the European Union, which talks about replacing at least 80% of meters for smart meters by 2020 (Directive, 2009). The development of the electromobility area can significantly accelerate the implementation of smart meters by facilitating the acquisition of financing for this purpose.

In recent years, the battery production market has become a rapidly growing area that gives distribution network operators the opportunity to create a demand management tool and apply new system services. Thanks to intelligent charging of electric vehicles, it will be possible to control the time of their access to the network depending on the period of demand or the power deficit in the energy system. It will allow smoothing the daily profile of energy demand and thus facilitating the management of the power units. The use of an intelligent power system will create a new area of services and new markets. Information from intelligent measuring systems will be received, processed and made available in real time, which will enable dynamic control of power consumption or dynamic management of energy prices. The market will create innovative companies in the field of ICT, information and communication technology and the demand for smart grid programming and smart metering services will increase. The applicable standards are insufficient and should be extended to include the integration of an electric vehicle with smart grid systems, smart metering, a home energy management system to ensure interoperability principles, communication interfaces as well as data models.

An important obstacle to the implementation on the mass scale of electric vehicles in Poland is their relatively high cost of purchase and operation, which results mainly from the high cost of batteries. Observing the battery production market, the forecasts are promising because the battery costs are getting smaller. An additional element causing a fall in prices of an electric vehicle will be its popularization, as well as emphasizing economic benefits that will result from the use of an electric vehicle in the form of achieving savings in relation to fuel costs. Publicly presented reports and studies of scientific units indicate that the cost of purchasing an electric vehicle is 60% higher than that of a conventional internal combustion engine (Media EFL, 2018). The significant cost of building fast-charging infrastructure combined with a high purchase cost and lack of incentive creates at the current stage of development of electromobility in Poland a certain dissonance. The Act on electromobility and alternative fuels focuses on the development of infrastructure and the legislator has scarcely devoted his place to the development of the electric vehicle market. Without a proper system of incentives allowances for electric vehicle users, Poland will not gain a competitive advantage from other economies. Nowadays, the only incentive is (for an ordinary user) the exemption from excise duty, while on the other hand for companies it is possible to recognize depreciation of earning an increased amount of 30 thousand EUR. An important role in reducing the economic barrier will have public institutions, which through the mechanisms of financial support in the interim period, will be able to stimulate demand for electric vehicles. When the electric cars start to compete on price with combustion cars, such support will be withdrawn. The system of incentives that have already been implemented in Europe and have been successful in the implementation of electromobility should be analyzed. This is important enough because Poland is a country characterized by high import of used cars powered by internal combustion engines. The incentive created should include, for example, subsidies for the purchase of an electric car while scrapping the combustion vehicle.

Analyzing current financial instruments implemented in Europe for electric car users, the most commonly used instruments to lower the purchase price are:

- a discount on the sale price,

- exemption from sales tax or registration fees,
- VAT exemption,
- discounts in other taxes,
- exemption from parking fees, toll sections of roads or tunnels.

The government in China, as part of the central program, encourages the purchase of new electric vehicles, thanks to which the buyer can get a discount up to 8 thousand USD. In addition, residents of selected cities can obtain an additional discount of 9 thousand USD, which is paid from local government funds. A similar solution was used in Beijing and Shanghai, where the drop was to 6 thousand and USD 4,500 respectively (Electric vehicles, 2017). In France a situation where the buyer scrapes a diesel car in addition to a basic amount of EUR 6 thousand he receives an additional payment of 3,700 thousand EUR. Purchasers of an electric car living in the Paris agglomeration who scrapped an old car can obtain additional purchase support amounting to 25% of the value of electric vehicles (including cars, motorbikes, scooters or electric bikes). Entrepreneurs purchasing business electric vehicles receive tax breaks for purchase and for installation devices for charging electric vehicles (*Electric vehicles...*, 2017). In the USA, the owners of electric cars are entitled to federal tax relief of up to USD 7,500 as well as direct state subsidies of up to USD 2,500. Since 2011, the British government has been subsidizing the purchase of cars that emit less than 75 grams of CO₂ per kilometer. The government supports the purchase of up to 4,500 pounds. The owners of electric van receive up to 8 thousand pounds. In Sweden, however, the surcharge is not an element of the vehicle price or other factors and amounts to approximately USD 4,400. (*E-mobility...*, 2017). A separate approach has been applied by Norway and Switzerland, which do not spend budgetary resources on support. The exemption of buyers of electric cars from certain taxes was applied, which in fact gives a similar result, because in both cases the price difference between comparable models of electric and combustion cars is significantly reduced. This approach is effective when there is an adequate level of taxation on the purchase of an internal combustion car.

Owners of electric cars in Denmark are exempt from the so-called *green tax*, and other taxes covering cars, and by the end of 2015 were also exempt from the registration fee. However, since the beginning of 2016, even electric cars have been subject to the basic registration fee rate, which will be increased every year until 2020, when all new vehicles will be covered by the same fees amounting to 105% of the car's value up to 79 thousand DKK (including VAT, or about 45 thousand PLN) and 180% from the rest of the car's value (Denmark, 2015). The lowest tax breaks are obtained by buyers of electric cars in Switzerland, where they are exempt only from the import tax, which is 4% of the value. Decisions on additional incentives for the buyer are made in individual cantons and.

Transport policy tools are also important. They refer to a non-financial incentives, although some of their elements have a financial dimension, e.g. exemption from parking fees or exemption from charges, so-called *congestion charging zones*. The most important non-financial incentives include:

- the possibility of moving in a low-emission zone or zones with banned vehicles with internal combustion engines,
- exemption from periodic traffic bans,
- the possibility of driving bus passes,
- access to free parking lots,
- exemption from entry fees to congestion charging zones.

It is important to ensure high functionality of electric cars when making longer journeys, which today in Poland is a significant obstacle to the development of electromobility. That is why the most popular support instruments in this field, both at the central and regional level, include:

- a) subsidizing the purchase of a charging point for an electric car for private purposes;
- b) development of public charging stations for electric cars, including points for quick charging near highways;
- c) lowering the tariff for electricity for households with an electric car or reducing charging charges at public points.

In the area of electromobility, it is important to integrate organizational solutions in the metropolitan areas with the development of passenger car charging infrastructure and at the same time for the needs of public transport. "The main goal in the field of electromobility is to create a sustainable, open and effective mobility system for goods and people. Implementation of multimodal public transport, supporting alternative means of transport (apart from cars) and increasing the accessibility of public transport for the residents are the three main axes that will reduce congestion, pollution and increased efficiency of transport connections" (Drożdż, 2018, p. 128). Appropriate organizational activities, combined with introduced incentives to purchase private, company and public vehicles, will aim at creating expectations for the creation of the market, which will translate into multiplication of works in the field of infrastructure construction and the development of the electromobility industry in Poland.

Conclusions

Presentation of economic barriers and benefits of the development of electromobility is an attempt to signal the complexity of the presented issues, which concerns a new direction of development of the energy, automotive and IT market. Presented assumptions and thoughts along with the implementation of the assumptions of the Act will probably be verified by the market and users of electric vehicles in the near future. This will allow for further theses and assumptions regarding the evaluation of the electromobility development plan in metropolitan areas and thus the impact on economic factors of the implementation of electromobility in Poland. The development of electromobility is a continuation of the trend of electrification of the world economy and transport. The Electromobility Development Plan in Poland approved by the Polish government is not a new solution compared to other European countries. The specific goal of 1 million electric cars in 2025 is close to the one that Germany adopted in 2010 (BMVI, 2009). Similar assumptions were also adopted in 2014 in California (Leginfo, 2014). In recent years, electromobility strategies in the Netherlands, Sweden, Norway and other European countries have become comparable to the Polish strategy.

A significant impact on the development of electromobility in Poland is the cooperation of state authorities with the local authorities of individual regions and cities. It is also necessary to support public authorities in the creation of charging points infrastructure, implementation of tax concessions and subsidies.

In Poland, unlike many European countries, facilitations for electric vehicle owners are at the stage of creation and initiated at the level of local governments, eg exemption from fees in areas of parking. The high cost of buying an electric car and a small number of points for charging causes that people interested in new technologies or have high ecological awareness decide for the purchase. A visible problem in the subject of electromobility development is the social aspect in which one should bear in mind limited confidence in the implementation of innovative technologies related to the use of electric vehicles as well as infrastructure for charging electric vehicles. The correct approach to the issue of corporate social responsibility (CSR) will be important here, which in relation to sustainable

development is to maintain the balance point between actions aimed at ensuring the achievement of objectives in the ecological, social and economic aspects.

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Cite this article as: Drożdż, W., Starzyński, P. (2018). Economic conditions of the development of electromobility in Poland at the background of selected countries. *European Journal of Service Management*, 4 (28/2), 133–140. DOI: 10.18276/ejsm.2018.28/2-16.

SPECIFICATION OF ENVIRONMENTAL CONSULTING SERVICES IN POLAND AND WESTERN POMERANIA

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION Q28, Q51

KEYWORDS environmental management, environmental consulting services, environmental impact assessment

ABSTRACT The work describes services within the scope of environmental consulting and management in Poland, as a result of developing of legal system of environmental protection. Legal sources for the needs of such services for entrepreneurs were defined and compared to the market offers of companies dealing with environmental services. The spatial distribution and size of companies in the West Pomeranian Voivodeship and in the country scale are presented also.

Introduction

Almost since the beginning of the system-economic transformation of the 90s the influence of environmental regulations has been influencing the functioning of the economy and the investment process. This phenomenon has a number of reasons, including inter alia:

- a) progressive contamination of the elements of the environment;

- b) spatial expansion of towns and different forms of business activity resulting in specific „hunger” for space especially in economically attractive locations (Drapella-Hermansdorfer, 2005, pp. 35–43; Opdam, Steingröver, van Rooij, 2005, pp. 322–332);
- c) increasing ecological awareness of the community (Chojecka 2014, pp. 48–54; Mierzejewska, 2015, pp. 9–22);
- d) development of the system of spatial forms of nature protection (Dziemianowicz, Peszat, Przyborowski, 2015, pp. 86–103; Zuzek, 2017, pp. 169–178);
- e) necessity to adjust the Polish legal system to the regulations of the European Union.

As a result of the processes a very complicated legal system was created, governing the principles of using the environment and assessing impact on the environment in the process of allocating, realizing and functioning of the investment. Focal legal acts are surrounded with numerous regulations which significantly affect everyday functioning of the enterprises. A large number of different obligations requiring specialist knowledge, often also specialist measuring and calculation tools, create favorable conditions for a gradually maturing market of specialist services in the scope of the environmental advisory. Numerous provisions which govern the environmental issues are addressed to the entities using the environment for economic purposes or which just barely intend to use the resources of the environment in connection with the activity planned.

Legal conditions of the market of services in the scope of environmental advisory

Legal norms in the area of the environment protection define the purposes and tasks and at the same time form the tools (means of realization) protecting the environment. The applicable provisions are shaped by 3 groups of economic entities in connection with the planned and/or realized usage of the resources of the environment:

- obtaining initial permit for the realization of the investment in the form of decisions on environmental conditions,
- obtaining permits and approvals entitling to use the environment and defining the conditions to use it in connection with planned business activity,
- documenting actual usage of the environment and the changes introduced therein.

A legal basis of the obligations of the first of these groups is the Act on making information available on the environment and its protection, participation of the community in the protection of the environment and on the assessments of the impact on the environment (Journal of Law of 2018 item 2081). The legislator established two documents presenting a characteristics of the planned undertaking defining the demand for the resources of the environment and forecasting the type and scale of potential impact on the environment in the phase of its realization, exploitation and liquidation:

- information card of the undertaking, constituting basic evidence material to issue the decision on environmental conditions,
- report on impact of the planned undertaking on the environment constituting a key evidence material in the assessment of the impact on the environment.

Both said documents are submitted to the body of the environment protection by the investor, whereas the report on impact of the undertaking on the environment may be prepared or advertised only by the author fulfilling requirements defined in the scope of education and experience.

Obligations of the entrepreneurs concerning obtaining permits and approvals entitling to use the environment and defining the conditions of using it in connection with the planned business activity are dispersed in a few acts of act level:

- act of 21.4.2001 Environment law (i.e. Journal of Law of 2018 item 799 as amended), governing the mode of obtaining permits for introducing into the environment the substances or energy (like immision of the gases or generation of waste),
- act 20.7.2017 Water law (i.e. Journal of Law of 2018 item 2268 as amended) governing the issues of permit for performing water devices and granting water-legal consents,
- act of 14.12.2012 on waste (i.e. Journal of Law of 2018 item 992 as amended), governing broadly understood waste management.

Current functioning of the company in agreement with the provisions creating the law system of the environment shall require to prepare company catalogue of obligations defined in nearly 30 legal acts in the rating of the Act. These obligations cover first of all required measurements of the emission, preparing lists and registers, self-calculating fees and preparing reports on using the environment or conducting business activity which affects the environment.

Economic entities connected with environmental advisory

The companies providing advisory services in environment are characterised by significantly developed range of the services offered, which makes it difficult to respect their number. In Polish Classification of Economic Activity (PKD 2007) the mentioned activities are ascribed to many sectors and sections. The most often realized forms are placed in the section M (professional, scientific and technical activity):

- 71.11.Z – urban development and architectonic shaping the landscape,
- 71.20.B – performing tests, measurements and chemical and biological analyses of the composition and cleanliness of water and air,
- 72.19 – scientific research and developmental works,
- 74.90 – advisory in natural environment.

This section covers advisory activity, performance of the documentation connected with the investment process, project works in the scope of shaping landscape and measurements and analyses (including often the works performed involving registration of natural biodiversity – stock-taking, lists, identification tests).

In section O (Public administration and economic and social politics) one may distinguish one class of services:

- 84.13 – Managing in the scope of economics effectiveness,

covering the activity with the outsourcing nature in the scope of conducting environmental issues (documentation, reporting, monitoring, service of the investment) for the administration and commercial economic activities.

Last significant section PKD is the section P (education):

- 85.59.B – other non-school forms of education,
- 85.60 – activity supporting education.

The economic entities most often deal with preparing and conducting supplementary educational classes and specialist trainings within non-school education (mainly in the scope of the economic subjects in the environment protection).

Review of the services within environmental advisory

Services dedicated to the investment activities

One of the main areas of operation of companies offering the environmental services is to support the investment process in the scope of the selection of the location and assessment of the impact on the environment. A wide scope of services shall require constant cooperation with the investor, designers and bodies of environment protection in order to develop one position, which will allow to obtain the consent. Most often it is also the first stage of long-term cooperation between entrepreneur and consulting company. A range of services (Table 1) is very broad.

Table 1. Services dedicated for the investment activities of the entrepreneurs

No.	Services offered
1.	Developing applications for the funds for the development in agreement with the purposes of the environment protection
2.	Preparing information cards
3.	Preparing reports on impact of the planned undertakings
4.	Analyses of the impact of the planned undertakings on the environment (landscape, acoustic, emission analyses, climatic sensitivity)
5.	Environmental screening with an indication for the optimum location for the selected type of the undertaking
6.	Collecting samples, testing contents of the substances causing the risk and assessment of the pollution of soil and land against purchase-sale transactions of the property
7.	Assessment of the collision with an investment intention and planning natural compensation (i.a. consequent planting in.)
8.	Cooperation with designers, limiting the impact on the environment
9.	Performing post-realization analyses resulting from the decisions issued
10.	Representing the investor before the bodies environment protection
11.	Developing water-legal quantity surveys for the construction of water devices
12.	Conducting natural supervision in the phase of realization of the investment

Source: own elaboration.

Services dedicated to preparing the company to start activity

Another very important section of services in the scope of environmental advisory is the support for proper, legal commencement of activity. A complicated legal system of the natural environment makes that on the stage of commencing the functioning of the company, installation or the firm, the investor frequently uses the environmental advisory. Entrusting to the external company all environmental obligations connected with commencement of the activity releases the entrepreneur from the necessity to participate in complex administration procedures or complicated process of preparing detailed studies. Below (Table 2) the services of the market of environmental advisory which allows for the entrepreneur to start the activity properly.

Table 2. Services dedicated to prepare the company to start activity

No.	Offered services
1.	Developing applications for issuing permits and approvals in the scope of environment protection
2.	Legal advisory in the scope of environmental requirements
3.	Preparing the entrepreneur and participation in the control of the company before giving the permit or the approval

Source: own elaboration.

Services dedicated to conducted business activity

Within the frames of the services offered in the category (Table 3) there is also performing current obligations of the company in connection with the use of the environment, review of the correctness of these obligations as well as cooperation with entrepreneurs in actions of control bodies of environment protection. Thus, one may call the sector of the activity (Carey, Subramaniam, Ching, 2006, pp. 118–141) environmental outsourcing causing transferring by the enterprise a part of its competences to the specialized external entities (Gilley, Rasheed, 2000, pp. 133–147). Cooperation with the experienced consulting team means optimising the costs in the area of the environment protection, fulfilling legal requirements, guarantee for the punctual fulfilling the obligations and many times also avoiding penalties (Smużniak, 2013, pp. 31–54).

Table 3. Dedicated services offered of the business activity

No.	Offered services
1.	Environmental audit in the company (monitoring of legal obligations)
2.	Cooperation in performing decisions, ordinances and post-control recommendations
3.	Representing the company before the bodies of environmental, self-government appeal boards and administration courts
4.	Preparing information required by the provisions, lists and reports on activity in the scope adjusted to the specifics of the company
5.	Reminding the changes in law
6.	Conducting documentation and register of using the environment with introducing data into the defined bases and registers
7.	Charging due amounts for using the environment, product, recycling, including advisory in optimisation of costs
8.	Selection of cooperators providing services connected with environment protection
9.	Implementing and monitoring the system of environment management
10.	Creating specialist IT tools dedicated to realize the environment obligations
11.	Collecting environment samples and performing required tests
12.	Conducting trainings for the employees

Source: own elaboration.

Usually complete environmental outsourcing is recommended to small and medium companies which have no separated section dealing with the environment protection. The external company takes over then partial or all obligations and liability resulting from the provisions of law in this respect.

Analysis of the entities providing services of the environment advisory in Wester Pomerania region

Quantity and quality analysis of economic entities dealing with the services of the environment advisory is difficult due to varied nature of the activity. The statistical information available in the Bank of Local Data (BDL) refers to sections and divisions while the sectors described above of operation of the companies providing services of environment advisory constitute a set of classes and sub-classes. As a result, the list presented below shows a wider topic scope of activity of the entities. In the analysis the quantity variety of the entities registered was presented registered in class M 74, in which a basic scope of activities is placed. As the section covers, besides the environment advisory, also other sections (i.a. photo services, translations and specialist design) one should presume that the actual number of the environment companies in the unit covers not more than 20–40% presented values.

Per country, a number of the registered entities is very varied and fluctuates from about 2–3 thousands of entities (2017) in seven regions (Figure 1), by 5 regions in which it reaches the value of 6–8 thousands, to above 17 thousands in the mazowieckie region. The companies declaring the activity in the section achieve the largest population in the regions characterized by a high degree of business activity based on urban agglomerations (mazowieckie, dolnośląskie, małopolskie, wielkopolskie, śląskie).

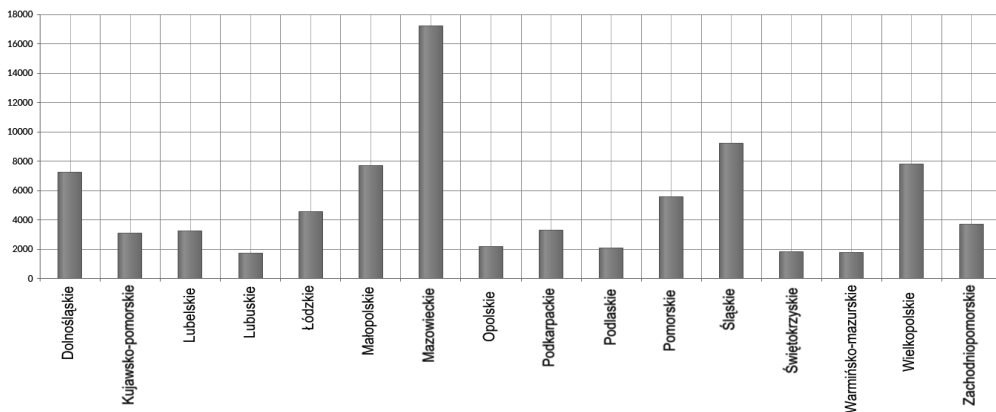


Figure 1. A number of economic entities of section M 74 in Polish regions (2017)

Source: own elaboration.

In the West Pomerania region, in 2017, there were 3,711 entities of the type were registered which gives 8th place in a domestic list. Out of this number, there are 3,381 natural persons conducting business activity, 328 companies and 2 cooperatives. A majority of the companies are the enterprise of private domestic capital. Barely one company of state treasury and self-territorial government each was observed and 48 with a share of the foreign capital. A majority of the entities registered are the small ones, one-person frequently – barely 21 of them employ more than 10 persons. The competition and difficulty in functioning on the market of such enterprises are proved by the fact that within a year (2016–2017) with a minimum change of the population of the registered companies (drop by 1) as many as 1,045 deregistered in the period their activity.

A spatial location of the entities is confirmed by a strong connection with the level of the economic development of the region. Its specifics is characterised also by a large natural value of the area of the region. The high percent of the area covered with different area forms of the natural protection, directs the development of the region towards more sustained management of the area and creates a number of limitations in the investment process. These advantages however extend the market of advisory services.

Spatial location of the enterprises presented in the region points for their relations with large municipal centers (Figure 2). The entities registered in the municipal poviates of Szczecin (1,539) and Koszalin (404) have an overwhelming dominant position. The affiliation with large cities, in which the investments are concentrated and large enterprises being the clients of the sector is proved by the quite high number of enterprises in the

Police (252), stargardzki (185) and kołobrzesci (160) poviates. In the remaining poviates, a number of entities does not exceed 100.

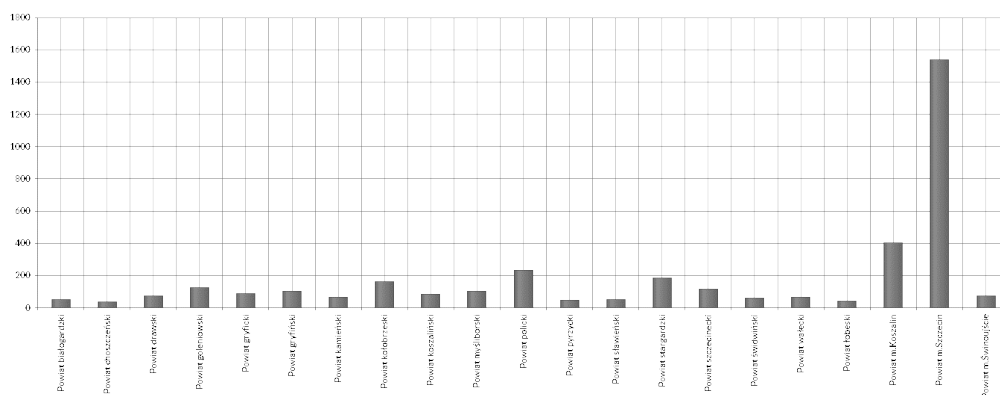


Figure 2. A number of economic entities of section M 74 in zachodniopomorski region (2017)

Source: own elaboration.

Conclusions

Specifics of the presented sector of services included a broad scope of activity. It forces frequently the cooperation of the small, often one-person companies providing them. Broad and multi-aspect tasks force creating consortia or employment of a number of specialist subcontractors. Most often these are persons connected with the academic sector. The entities providing the environment services declare activity in the area of the whole country but due to a significant share of field activities a majority of them is of local nature, where the limitation of the area of operation are the costs of trips and activity in the distant locations.

A requirement for certification of results makes the companies disposing of a proper equipment and measurement background facilities. Therefore, usually they use services of certified laboratories limiting to the collection of attempts. The exception here are the stock-taking works in such areas as dendrology, ornithology, florist and eco-physiographic tests.

One should presume that due to the tendency of constant changes and in the legal system which is anyway very complicated, the environment protection and growing threats connected with its excessive exploitation (adaptation to climatic changes, transformation of power engineering, spatial conflicts), market of advisory services in environment protection will develop further on. However, the quantity and quality structure of the enterprise will be subject to dynamic transformations with an increase of competitiveness of enterprise and development of their specialization.

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Cite this article as: Dusza-Zwolińska, E., Kupiec, M., Kiepas-Kokot, A. (2018). Specification of Environmental Consulting Services in Poland and Western Pomerania. *European Journal of Service Management*, 4 (28/2), 141–148. DOI: 10.18276/ejasm.2018.28/2-17.

FRAGILE, ROBUST AND ANTIFRAGILE SERVICES

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION D81, H12, L80

KEYWORDS Taleb's concept; fragile, robust and antifragile services

ABSTRACT The contemporary economy, including the service sector, is exposed to strong, violent and unexpected impacts (shocks, crises, challenges, opportunities) of an internal and external nature. The purpose of the paper presented here is to attempt to characterize and classify service activities in the light of Taleb's concept, who divided all existing real things into three categories: fragile, robust, and antifragile. Each of these types of things react differently to changes, especially those least expected and leading to fundamental changes, called by Taleb "black swans". The conditions of such changes in relation to the service activities were given. Also were determined general features of consumer, business, and public services according to fragility, robustness and antifragility, as well as some examples of them. The statements contained in the article are hypotheses, but according to the author, sufficiently justified by the current state of knowledge.

Introduction

Service activities form the backbone of the modern world economy, and the majority of employees work in them. In highly developed countries, they form the dominant part of GDP, in less developed they create numerous jobs with higher efficiency than agriculture, fisheries or mining. They also help to improve the quality of life. These activities, strongly diversified, were adopted to be called the tertiary sector, according to the Fisher-Clark concept

(see e.g. Kwiatkowski, 1980; Zajdel, 2011; Skórska, 2016). Despite intensive research conducted within various disciplines, knowledge about the functioning and development of services is still incomplete and imperfect. One of the reasons is the emergence of new service activities, related to technical progress and changing needs of consumers, public organizations, and enterprises.

The contemporary economy, including the service sector, is exposed to strong, violent and unexpected impacts (shocks, crisis, challenges, but also opportunities, chances) of an internal and external nature. In the studies of these interactions, and in practice, in order to minimize of their negative effects, we need different approaches from those commonly used. One of such approaches is the concept of describing and explaining the reactions of complex systems to threats and opportunities in terms of their fragility, robustness, and antifragility, developed by Nassim Nicholas Taleb (2013). These concepts have come to general scientific knowledge and are defined as follows:

Fragility. Susceptibility of an item to breakage, failure, or loss of value from the impact of external forces, measured as the amount of force required to cause the damage.¹

Robustness. Characteristic of product, process, or system designed for continuous operation with very low downtime, failure rate, variability, and very high insensitivity to a continually changing external environment.²

Antifragility is a property of systems that increase in capability as a result of stressors, shocks, volatility, noise, mistakes, faults, attacks, or failures. According to N.N. Taleb (2013) "Antifragility is beyond resilience or robustness. The resilient resists shocks and stays the same; the antifragile gets better".³

In this article, presented above way of thinking about complex objects will be called the "Taleb's concept". This approach was already used by the author in the research of the maritime economy and coastal cities in Poland (Dutkowski, 2017). The purpose of the considerations presented here is to attempt to characterize service activities in the light of Taleb's concept. The statements contained below are hypothetical, but these are hypotheses, according to the author, sufficiently justified by the current state of knowledge.

The Taleb's concept

Nassim Nicholas Taleb (2013) divided all existing real things, systems and units into three categories: resistant, fragile and antifragile. This author refers to another own concept of the so-called "black swans", i.e. unpredictable events, initially seemingly insignificant, but causing, after some time, severe disturbances and leading to profound and irreversible changes (Taleb, 2014). The appearance of the "black swan" in the life of some complex thing (ecosystem, person, family, social group, nation, state, economic sector, institution, enterprise, region or city) means that nothing is the same anymore and everything is happening differently. Such events may be positive or negative. Negative "black swans", or "catastrophes" and "unlucky events" can have three different consequences: fragile things undergo devastation and decay, robust ones are able to withstand the shock and without fundamentally changing their structure and operating principles, return to the smooth functioning and development whereas the antifragile things are obviously disturbed, even very severely, but ultimately they emerge from the crisis stronger, better, and more developed. Positive "black swans", or occasions and "won in the lottery" are not used by robust

¹ www.businessdictionary.com/definition/robust.html.

² www.businessdictionary.com/definition/fragility.html.

³ <https://en.wikipedia.org/wiki/Antifragility>.

things, because they often do not see them, disrespect them or are very reluctant to any changes, fragile things are so overwhelmed by the new situation that they are not able to use all the possibilities resulting from them, and the best are the emergence of positive “black swans” antifragile things, which by nature are ready for change, await their great opportunity and constantly hope that they will succeed.

Complex things are not condemned to one type of reaction to crises. It also depends on the type of crisis. In some cases, fragile things can show immunity, and resistant to react like anti-friction. Again an analogy to the health condition of a human being – the resistance to viruses and bacteria can be combined with psychological fragility in difficult situations, and people of poor health may show significant resistance to stress. In general, however, very complex and complex things show a certain integrity, resulting from their structure and the most common ways of acting, and belonging to one of the types from the Taleb's concept is their essential property determining the response to crises.

Sources of crises in the services sector

The sources of sudden and significant challenges for enterprises and their groupings in the services sector may be internal or external. Internal sources are a faulty market strategy, inefficient management and personnel problems. Each of them, and especially together, may be the cause of a serious, most often unexpected crisis. Prevention and counteracting such adverse events is the subject of a separate field of crisis management knowledge and activities (e.g. Baubion, 2013). These types of internal threats concern, in fact, all enterprises, public institutions and social organizations, regardless of the economic sector or the sphere of social activity.

External sources, which are more important, can be divided into natural, social, technological and market ones. Natural disasters are most often unexpected, especially when it comes to them in the same place and time. These types of crises are caused by earthquakes, volcanic eruptions, hurricanes, floods, waves of heat, droughts, expansion of alien species of animals and plants, but also epidemics among people and among animals. This is despite technologically advanced monitoring and warning systems against natural disasters and epidemics.

Natural disasters destroy and damage primarily buildings and technical infrastructure. They also lead to financial losses and cause long-lasting psychological and social effects. Of course, they require extraordinary activities of public administration, police, emergency and medical services, and sometimes even army. Service activities, whose operation depends to a large extent on buildings, equipment and technical infrastructure, may react differently, showing fragility, robustness or antifragility. Numerous empirical studies show that local communities, as well as public and private providers of basic services related to people's existence, saving lives and health, securing damages and rebuilding from destruction, show antifragility in such situations.

The strongest social sources of crises in the services sector are international and domestic armed conflicts. Similar negative effects bring revolutions. Also violent, non-military conflicts leading to strikes and street riots. The change in the political system (such as the transformation of the Soviet bloc countries since 1990), resulting in a thorough change in the legal conditions of the functioning of the economy, is the source of numerous challenges for the services sector. As experience indicates, some use them as an opportunity and achieve revenues that are incomparable to the times of peace (e.g. trade of weapons, medicines, sometimes food). However, public services suffer huge losses, even for armed forces and police.

Economic sources of crises in the services sector are the result of social crises, but often they are the result of rapid changes in economic relations: currency and foreign trade, banking, budget, but also changes in customer preferences and resulting changes in demand. Such crises also create both opportunities and threats.

Technological sources of crises in the services sector result from the emergence or disappearance of technological solutions used by service providers or customers. The emergence of the Internet, smartphones, artificial intelligence, medical therapies and the possibility of modifying the human body has led to the disappearance of certain types of services (e.g. postal services) and the emergence of new ones (e.g. internet commerce).

General features of fragile, robust, and antifragile services

Using the Taleb's concept, one can indicate the features of service activities, which can be attributed to the property of fragility, robustness and antifragility. Such typical features, based on a table published by N.N. Taleb (2013, pp. 48–52) are presented in the Table 1. As already mentioned above, the features of three types of services presented in this table – fragile, robust and antifragile, which also concern other sectors of the economy, have the character of a theoretical and methodological proposal. Only empirical studies of individual companies, their groupings and industries will allow them to assess them. At this stage of application of the Taleb's concept in scientific research they seems to be justified and legitimate.

Table 1. General features of services activities in the light of Taleb's concept

Features of service activities	Service activities		
	fragile	robust	antifragile
Company size	big	medium to big	small to medium
Owner	corporate/public	public/private	private/personal
Amount of customers	large	large to medium	small to large
Diversity of customers	low	average	high
Amount of products	low	average	small to large
Diversity of products	low	average	high
Specialization	not specialized	specialized	not specialized
Profitability level	high	average	low to high
Diversification of profitability	low	low	high
Dependence on technology, equipment, and facilities	high	average	low to high
Qualifications of the staff	high	average	low to high
Ability to learn	low	medium	high
Epistemology	truth/false	useful/not useful	gull/not a gull
Propensity to risk	low	medium	high
Financing	debt (public)	public/equity capital	venture capital
Black Swans	exposure to negative Black Swans	indifference towards Black Swans	exposure to positive Black Swans

Source: own study based on Taleb (2013), pp. 48–52.

Classification of services according to the criteria of fragility, robustness, and antifragility.

The notion of “service activities” could be defined in different ways, depending on the purpose of the research or applications. However, there is a general agreement that services are economic activities aimed at satisfying collective and individual needs without transfer of material goods. They can be classified by the criterion of their

character, impact range, frequency of use, hierarchy, location and sources of financing. The most important classifications of service activities are: the United Nations' International Standard Industrial Classification (ISIC), the Statistical Classification of Economic Activities in the European Community (NACE), and national systems, e.g. in Poland – Polska Klasyfikacja Wyróbów i Usług (PKWiU).

Taleb's concept introduces different criteria for the classification of service activities. Due to the diversity of the frequency of fragile, robust and antifragile services, it is justified, however, to adopt a simple and commonly accepted division of service activities according to the criteria of their recipient on: consumer, business, and public services.

According to these three groups, examples of service activities are classified on the basis of the features presented in Table 1 to be described as fragile, robust or antifragile. The intended scope of this article does not allow for a wider justification of such an assignment, it should be treated as hypothetical, but justified by available knowledge and knowledge of individual cases. The various types of service activities classified according to the Taleb's concept and presented in Table 2 were discussed only in a general way.

Table 2. Classification of service activities in the light of Taleb's concept

Types of service activities due to the type of their clients	Types of service activities due to their reactions to sudden crises		
	fragile	robust	antifragile
Consumer services	<ul style="list-style-type: none"> – Hospitality services – Legal and financial services for private individuals – Movie theatres – Private medical and care services – Radio, television and printed press – Theatres, philharmonics, operas – Sport, tourism and leisure services 	<ul style="list-style-type: none"> – Death care – Gambling – Private maternity services – Sexual and porn services 	<ul style="list-style-type: none"> – Construction, repair, maintenance and household management – Direct delivery of individual customer goods – Gastronomy – Individual transport services – Information services – Performing arts productions – Beauty services – Retail trade
Business services	<ul style="list-style-type: none"> – Financial services – Risk management 	<ul style="list-style-type: none"> – Logistics – Technical infrastructure management 	<ul style="list-style-type: none"> – Business functions (general) – Information services
Public services	<ul style="list-style-type: none"> – Armed forces – Internal and external security agencies – Police – Public administration – Public utilities connected with facilities and technical infrastructure 	<ul style="list-style-type: none"> – Education – Public death care – Public maternity services – Public medical and care services – Public rescue services – Religious services 	<ul style="list-style-type: none"> – Spontaneous public rescue, medical, and security services

Attention: Types of services in individual columns have been sorted alphabetically.

Source: own study.

Fragile service activities include both numerous consumer and public services. Most of them are large, hierarchical enterprises or their groupings and state institutions, related to internal or external security, media supply, road and rail infrastructure, but also sport, tourism and recreation, but also sexual and porn services. They are sensitive to various types of crises, discussed above. The most dangerous for the entire economy and society is the fragility of financial services for business and individual clients, especially large banks and insurance companies, as evidenced by the events of 2008/2009. Budgetary difficulties also lead to deterioration in the

activities of many public services. Long-term political conflicts, especially the break-up and collapse of states, result in the disintegration of the state administration, the police and the armed forces. Of course, the lost war leads to similar effects. Examples of this type of events, however, vary in their range, include Iraq, Somalia, Greece and, more recently, Venezuela.

Robust service activities include not very diverse types of service activities. They are related to the basic needs of people associated with birth, health, education, religious faith, care for children and the elderly and the disabled, saving lives and property and death, but also the needs related to gambling, prostitution and pornography. Robustness exhibits logistics and technical infrastructure management among business services. Of course, various types of crises may lead to a deterioration of the quality or limitation of the offer, but historical experience indicates that even gambling and prostitution are permanent elements of numerous, though not all, civilizations. People are born, get sick, grow old and die, which causes demand for certain services. Both in exclusive neighborhoods and in the slums. Both in Kuwait and South Sudan.

The most interesting in the context of the Taleb's concept are the antifragile service activities. These include, above all, services related to satisfying the above-basic needs of people, are subject to rapid technological and cultural changes and influences of fashion, media and trendsetters: home maintenance and repairs, cleaning, repair of cars and other equipment, delivery services to home, transport of people, provision of information (currently implemented mainly via the Internet), beauty services (including plastic surgery). Among the antifragile business services are accounting, secretarial and information services. An important type of antifragile services is any artistic activity, from composing operas and writing novels to street dance and graffiti makers. The success in all these activities results not only from talent and diligence, but often also from happy coincidences and the whims of consumers of artistic activity. The most diverse antifragile services, however, are located in retail and catering – from the offering of a few bananas or a bowl of cooked rice traders in the slums of African cities to luxury department stores and boutiques as well as restaurants and cafes of New York, Paris, London or Tokyo and the Wal-Mart or Amazon network as well.

Conclusions

The Taleb's concept is an interesting starting point for a different view of the services sector from the previous view. If you accept the division of service activities as useful, it opens up a new research perspective of managing services and providing services fragile and robust to antifragile.

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Cite this article as: Dutkowski, M. (2018). Fragile, Robust and Antifragile Services. *European Journal of Service Management*, 4 (28/2), 149–155. DOI: 10.18276/ejasm.2018.28/2-18.

CONSEQUENCES OF LEGAL CHANGES FOR THE TOUR OPERATORS' ACTIVITIES IN 2018

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION Z31, Z32, Z38

KEYWORDS the tourism market, tour operators, the Act on package travel and related tourist services

ABSTRACT Tour operators are important players in the tourism market in regards to the provision of organization and brokerage services. The business activity of tour operators must be adapted to the new legal provisions that entered into force at the beginning of July 2018. On the one hand, the new Act includes provisions that impose more duties on tour operators, and on the other, provides greater protection of clients (tourists). The aim of this article is to indicate changes regulated by law that are essential for the business activities of the tour operators.

Introduction

Tour operators are important players in the tourism market. The basic task of these entities is to combine individual partial services into a coherent whole and offer them to tourist agents in the form of a tourist package. Tour operators carry out activities on their own account, bearing the risk of not selling the offer to the client. Dynamic changes in the national economy and intensive development of services, in particular tourist and financial services,

as well as continuous expansion of distribution channels, development of the online offer, increasing individualization of package travel and the possibility of selecting and combining various tourist services, necessitated legal changes in the area of tour operators. Provisions regulating the issue of tourist services (both on the basis of Polish and EU law) stopped reflecting the realities of the tourism market.

In July 2018, the Act on package travel and related tourist services entered into force and introduced a number of amendments important for both tour operators and consumers of package travel. The aims of this article are to indicate changes regulated by legal provisions relevant to the business activities carried out by tour operators.

Tour operators as tourism market entities

In accordance with the assumptions of the classical economy, the basic and most effective mechanism regulating the functioning of the economy is the market. In the literature on the subject, this term is broadly defined. The market is understood as a place where purchase and sale transactions take place. This term can also be understood as general relations and relationships between buyers, who report demand for goods and services, and sellers, who offer these goods and services, i.e. create supply (Altkorn, 1994, p. 18).

In the case when tourist services are the subject of purchase and sale transactions (single, in the form of tourist packages, or complementary to tourist packages), we are dealing with the tourist services market. As indicated by A. Panasiuk, the tourist services market is an integral part of the tourism market, which, in terms of supply, includes not only tourist services provided mainly by travel companies, but also tourism offer of non-commercial entities, i.e. local government administration units and tourist organizations (Panasiuk, 2014, p. 37).

The functioning of the tourist services market is connected with the occurrence of the following elements (Kurek, 2007, p. 353):

- market entities, i.e. purchasers representing demand and sellers representing supply,
- goods and services that they want to exchange, i.e. exchange market items,
- technical, social and legal conditions for conducting such exchange,
- prices that determine the market value of goods and services as a result of the game of interests between sellers and buyers.

The tour operator market is a part of the tourist services market. Together with the tourism market, it creates an indirect relation through the market of tourist destinations, to which tourist flow, resulting from the provision of services offered at tourist destinations, is directed. The processes of direct consumer (tourists) service are carried out by entities that provide partial services, while the sale of tour operator's services takes place via an intermediary for the sale of tourist services (Panasiuk, 2017, p. 55).

Tour operators, commonly referred to as travel agencies, are specialized entities of the tourism market, who provide services in the scope of organization and sale of package travel (set of services of partial benefit service producers). Organizers of package travel are divided into those offering extensive tourism (popular among a large group of buyers) and the specialized entities, preparing offers for selected, niche segments of demand. On the other hand, a travel agent is understood as a tourist agency which, on the basis of an agency contract, sells or offers for sale package travel created by a tour operator.

The main purpose of tour operators' activities is to tailor the offer to the individual needs of consumers. In order to build a competitive advantage, these entities have to offer unique package travel that stand out from others. The development of online technologies has created a new type of travel agencies that do not employ classic

forms of direct sales that require personal contact between the client and the employee. For this reason, entities dealing in the organization of package travel are more and more often divided into traditional and online companies.

As a result of the tour operator's actions, the client can purchase a ready-made, bundled set of services, hence freeing themselves from the risk associated with the organization of package travel, which lies on the organizer's side. The purchase of a ready package travel can also save time and money. The total price of the package is usually lower than the sum of partial services, purchased separately by the tourist from the producers. When reporting wholesale demand for tourist services, usually throughout the year or for extended periods, tour operators create economic reasons for calculating prices at a much lower level than in the case of temporary concentration of demand and uncertainty as to the extent to which the potential of the base will be used (Konieczna-Domańska, 2008, p. 134).

Legal conditions for the tour operators' business activities before 1.07.2018

Tour operator and other enterprises operating in the tourism industry are required to act primarily in accordance with horizontal legal acts regarding running a business in the Polish legal system. The most important legal acts include: the Act on the Tourist Services (Act of 29 August..., 2017),¹ the Act on Freedom of Economic Activity (Act of 6 March..., 2018), the Civil Code (Act of 13 April ..., 2018), the Commercial Companies Code (Act of 21 April..., 2017), the Act on the National Court Register (Act of 21 April..., 2017), the Act on the Provision of Services in the Territory of the Republic of Poland (Act of 4 March..., 2010) and many others (e.g. regulations on consumer protection, labour law, environmental protection, construction, fire protection, sanitary, tax, insurance).

The most important legal act in force until the end of June 2018 was the Act on Tourist Services, which entered into force on July 1, 1998. Since then, it has been amended 17 times under various legal acts, including three major amendments under the Act amending the Act on Tourist Services in 2000, 2004 and 2010.

Significant problems with the application of the provisions of the Act on Tourist Services arose in 2012, when in the face of insolvency (bankruptcy) of three travel agencies, the amount of financial collateral of travel agencies were insufficient to cover the costs of bringing tourists back to the country or refunding payments for unrealized clients package travel. At that time, the situation prompted the Ministry of Sport and Tourism to carry out an assessment of the Act on Tourist Services. The first stage of the evaluation concerned a consultation in 2013 conducted by representatives of the Ministry of Sport and Tourism with sixteen voivodship marshals and entities from the tourism and banking-insurance industries. On this basis, conclusions were drawn up and material regarding "Analysis of the functioning of the Act on Tourist Services with particular emphasis on the financial security system" prepared (*Rekomendacje...*, 2013), and submitted at the meeting of the Parliamentary Subcommittee on Tourism on December 13, 2013.

The following stage included an assessment of the Act and the regulations defining the principles of running a business. As part of this study, on the basis of the submitted problems and barriers, recommendations for amendments to the Act on Tourist Services and its implementing acts were prepared, as well as for any other acts that are not within the competence of the Minister of Tourism.

¹ The act was in force until June 30, 2018.

The problems related to Act on Tourist Services concerned, first of all, the lack of tools enabling verification, control and monitoring of the financial condition of tour operators and travel intermediaries due to the simplified business registration process.

In the case of running tourist activities in the form of a natural person carrying out business in their own name, the company had to be registered in the Central Register and Information on Economic Activity (CEIDG). In the case of running a business in the form of a partnership or capital company, the company had to be entered in the National Court Register (KRS) (kept by district courts competent for the seat of the established company). As part of simplifying administrative procedures related to running a business, less documents, certificates and attachments to applications from entrepreneurs were required. The registers (KRS and CEIDG) have been publicly available on the Internet since the beginning of 2012, therefore, public administration bodies cannot require entrepreneurs to display, share or attach certificates of entry in CEIDG to their applications.

Another significant problem for tour operators resulted from the unfavourable relation of tour operators and travel intermediaries' ownership capital size to their revenues. The applicable minimum share capital was, according to the entrepreneurs, too high and often constituted a barrier that hindered the commencement of business activities in the form of a capital company. Thus, in 2009, the requirements regarding the amount of share capital of limited companies were reduced. The applicable share capital in the case of a joint-stock company is PLN 100,000, whereas in the case of limited liability companies it amounts to PLN 5,000.

It should also be emphasized that the provisions of the Accounting Act, in particular the obligation to submit to the relevant court register the annual financial report consisting of, inter alia, the balance sheet and profit and loss account, concern practically only those tour operators and travel intermediaries who operate in the form of commercial companies – which is only little over 20% of all entrepreneurs.

Lack of sufficient financial collateral funds to cover the costs of bringing customers back to the country or refunding claims for non-performance of the package travel contract, as well as difficulties encountered by marshal offices carrying out the process of bringing insolvent travel agents' customers back to the country, showed that the Act on Tourist Services requires modifications in some key aspects. Furthermore, Poland, as a member state of the European Union, was obliged to implement into its national legislation the Directive (EU) 2015/2302 of the European Parliament and of the Council of 25 November 2015 on package travel and linked travel arrangements, repealing Council Directive 90/314/EEC.

The Act on Package Travel and Related Tourist Services as an example of new tourism legislation

In 2018, significant changes in tourism legislation that secure consumers of tourist services and regulate the activities of tour operators were introduced. The current Act on Tourist Services, effective from 1 July 2018, changed its name to *the Act on Hotel, Tour Leader and Tourist Guide Services* (Journal of Laws, No. 133, item 884, 1997). The new wording of the Act specifies only the terms of providing hotel, tour leader and tourist guide services on the territory of Poland, as well as abroad, if contracts with travellers for the provision of these services are concluded in Poland. There were repealed regulations regarding tour operators, travel intermediaries and travel agencies, the Tourist Guarantee Fund, protection of clients, and fines, which were included in the new *Act of 24 November 2017 on Package Travel and Related Tourist Services* (Journal of Laws, item 2361, 2017).

The new legal Act specifies the terms of offering sales and implementation of package travel and related tourist services on the territory of Poland, as well as abroad, if travel contracts are concluded by travel companies established in Poland.

The Act introduces significant changes related to the functioning of tour operators, which are presented in Table 1.

Table 1. Selected changes related to the functioning of tour operators on the tourism market

Extended definition of a tourist service	Tourist service is widely understood as the carriage of passengers (by air, rail, coach, ferry, ship), accommodation for other purposes than temporary accommodation, rental of motor cars or other motor vehicles, as well as other services provided to travellers, existing and provided as a separate service
Defining the concept of a tourism business entrepreneur	Tourism business entrepreneur is a tour operator, an entrepreneur facilitating the purchase of related tourist services, a tourist agent, or a tourist services provider, being an entrepreneur within the meaning of Article 43 of the Act of April 23, 1964 – the Civil Code or conducting activities in return for payment
Excluding short trips	The Act does not apply to related travel services lasting less than 24 hours, unless they include accommodation. Furthermore, the Act does not apply to related travel services, which are offered and whose ordering and implementation is facilitated on an occasional and a non-profit-making basis only to a limited group of travellers, as well as business trips organized on the basis of a general contract
Travel intermediary as operators	Under the new Act, travel intermediaries become tour operators who shall be entered into tour operators and entrepreneurs register facilitating the purchase of related tourist services. The new register replaced the current register of tour operators and travel intermediaries
Wider scope of the Act	The new Act included additional entities that may offer dynamic packages, i.e. package travel and related travel services (this concerns, for example, tourist accommodation establishments, car rental companies, airlines which, while offering their services, offer other additional travel services to clients, e.g. field trips)
Acceleration of the procedure for refunding payments or costs incurred in the event of insolvency of tourism business entrepreneur	In case of insolvency, tour operators and entrepreneurs who facilitate the purchase of related tourist services shall immediately inform the voivodship marshal about the situation by submitting the declaration specified in the Act. In the event of failing to fulfil this obligation and if insolvency is evident in the light of the circumstances (e.g. in the case of obtaining media information confirmed by travellers), the marshal of the voivodship has the right to initiate the procedure of organizing the return of travellers to the country (including the mobilization of financial security) without such a statement
The tourist agent's activity does not require an entry in the register	In accordance with the new Act, an agent is a tourism business entrepreneur other than a tour operator who, based on an agency agreement, sells or offers for sale package travel created by a tour operator
The possibility of printing an entry in the register from the website	The printout has the same legal value as a document issued by the voivodship marshal, provided it contains the address of the website on which current information about tourist companies entered in the register and an identifier allowing confirmation of this printout are posted
Clarifying the information obligation for travellers	If, before the conclusion of the contract for participation in a package travel, information obligations regarding additional charges or other costs have not been fulfilled, the traveller shall not bear these fees or costs

Source: own work.

The new Act contains important provisions from the point of view of tour operators. The concepts of a tourist service, package travel, or tour operators have been redefined, as well as the previously not existing definitions of a tourism business entrepreneur and related tourist services have been introduced. The introduction of the new definition of “a tourism business entrepreneur”, comprising, in addition to economic activity, chargeable activity, meant that, among others, non-governmental organizations, educational institutions, sports clubs and parishes that statutorily deal with tourism and sightseeing, support and promote physical culture or activities for children and youth, including leisure, came within the material scope. However, not every trip will be covered by the Act, due to the fact that the act does not apply to package travel carried out on an occasional and a non-profit basis, which is limited only to a group of travellers. Thus, exclusion may, for example, include various forms of local history and tourism (e.g. trips, forest schools, training camps, camps).

The amendment to the regulations assumes that more entities will have to pay contributions to the Tourism Guarantee Fund. Until now, only travel agencies have been obliged to pay monthly contributions to the fund constituting additional security in the event of bankruptcy of the agency. Moreover, the new Act requires entrepreneurs, who sell the so-called related travel services, to pay premiums, which will result in more people being protected by the fund.

Travel intermediaries have been included in the group of tour operators, a fact that has significant consequences. A travel intermediary, just like any tour operator, will have to meet the appropriate conditions to be able to legally operate on the tourist services market, i.e. maintain financial security in the forms provided for by the law, or provide the marshal of the voivodship with the necessary information on their financial collateral (Bieniek, 2018).

The Act eliminates the mediation of the voivodship marshal both in the procedure of collecting and verifying travellers' declarations, as well as payment of funds from the financial security system and pursuing claims in court, leaving these issues to the exclusive discretion of the travellers. At the same time, the voivodship marshal's competence to demand the funds for implementation of statutory tasks by way of legal proceedings from financial security system institutions was upheld, i.e. the organization of the return of travellers to the country (Bieniek, 2018).

The new regulations that implement the EU directive provide greater protection for tourists. A tour operator or a travel agent is forced to provide full information before entering into a contract with the client, including whereabouts, route, and duration of package travel, means of transport or total cost of the trip. If the contract does not include additional costs (for example, for air-conditioning, TV remote control, mini-bar, towel or sunbed on the beach), the organizer will pay for the expenses. It should be noted that in the Act on Tourist Services from 1997, a tour operator or a travel intermediary were obliged to provide the client with a much smaller scope of information. The travellers did not have to be informed about additional fees and costs if they could not be estimated earlier.

Moreover, the new law introduces a three-year period of limitation on the validity of claims, in the case when the tourist offer does not meet the real conditions. Until now, the customer had 30 days to file a complaint. In the event of unforeseen circumstances at the destination place, which are hazardous to the health or life of tourists, the customer may withdraw from the contract until the departure, without incurring any costs. In addition, a tourist who travels with a travel agency can continue the stay in accordance with the contract, even if the agency goes bankrupt. So far, if the travel agency was becoming insolvent, a tourist was guaranteed a return to the country, but without the possibility of completing the leave.

Conclusions

Repeatedly amended provisions that have been in force since 1998 stopped reflecting the modern market realities. Such a state of affairs did not provide, among others, customers using package travel with access to comprehensive information on the details of offers and the necessary security in the event of their non-performance, improper performance, or insolvency of travel agencies. The adoption of the Act on package travel and related tourist services was dictated by the need to implement the EU Directive on Package Travel and Related Tourist Services, which updates and extends existing legislation on tourism, and obliges Member States to maximize harmonization in this area.

The Act implements various regulations which will significantly affect the tour operators' activities. Some legal provisions included in the Act raise doubts as to their correct interpretation and the manner of proper implementation. Difficulties of interpretation appear, for example, in Article 46, which contains the wording "minor change" referring

to the organizer's right to unilaterally change the terms of the contract. However, the Act does not specify when the modification can be considered significant and when minor. The statement about "a clear way of informing the travellers about the change" is also not explained. The operator can only presume whether the clear way of informing is message provided via telephone, e-mail or a formal paper agreement.

Numerous ambiguities resulting from the necessity to apply the new Act by entities dealing with the organization of Package Travel and Related Tourist Services still require numerous consultations or trainings organized by relevant public administration bodies.

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Cite this article as: Gardzińska, A. (2018). Consequences of legal changes for the tour operators' activities in 2018. *European Journal of Service Management*, 4 (28/2), 157–163. DOI: 10.18276/ejasm.2018.28/2-19.

LIABILITY FOR THE PARTICULARS IN THE CONSIGNMENT NOTE

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION K12, K22

KEYWORDS contract of carriage of goods, consignment note, Transport Law Act, CMR Convention

ABSTRACT This article deals with the liability for the particulars in the consignment note issued during the performance of service of transport of goods. The author considers the regulations in force in Polish domestic law and in convention regulating international road transport (CMR convention). Taking into account the conclusions resulting from the analysis of strenghts and weaknesses of both acts, the author formulates *de lege ferenda* demands concerning possible directions of development of domestic law.

Introduction

The legal acts governing the contract of carriage contain a number of provisions concerning the most important transport document, namely the consignment note. In addition to the basic regulations regarding the manner in which it is drawn up and the information contained therein, the liability of individual participants of carriage for the content of the document is also provided for. This issue will be analysed within the framework of this article in the

light of the regulations of the Polish domestic law (Transport Law Act¹), as well as the act regulating international road transport (CMR convention²).

Polish domestic law

Under national law, the matter in question is regulated by Article 72 (1) (1) of the Transport Law Act. This provision stipulates that the sender is liable for damage resulting from providing in the consignment note (or in any other form) indications and statements which are inconsistent with the facts or are inaccurate, insufficient or made elsewhere than in the allotted space. The liability in question is not limited as to the scope of the damage and will therefore cover both *damnum emergens* and *lucrum cessans* (Szancilo, 2008, p. 344; Kolarski, 2002, p. 125). It shall also be regarded as absolute liability (Wesołowski in: Ambrożuk, Dąbrowski, Wesołowski, 2014; p. 336; Kolarski, 1987, p. 237; Kolarski, 2002, p. 126; Stec in: Rajski, 2011, p. 885). This does not mean, however, that the consignor will always be liable to the carrier. Some particulars may originate from the carrier itself and therefore it is clear that the sender will be liable only for the damage caused by his actions, i.e. the particulars originating from him (See also Kolarski, 2002, p. 238; Górski, Wesołowski, 2006, p. 189; Stec, 2005, p. 287). At the same time, the sender will also be able to exonerate himself if he proves that his wrongful act or omission was caused by the carrier, e.g. by providing incorrect information (Kolarski, 1987, p. 238; Górski, Wesołowski, 2006, p. 189; Stec, 2005; p. 287; Kolarski, 2002, p. 126; Szancilo, 2008, p. 344). Nevertheless, the question arises as to the liability of the carrier vis-à-vis the sender for the content of the particulars originating from the former. National law does not provide any regulations in this respect, which is undoubtedly a consequence of the fact that the consignment note is, in this case, a document originating from the sender. Therefore, the entity which is the most exposed to damage due to the incorrect content of the consignment note is the carrier and not the sender. However, in those rare situations where the damage is caused by the sender as a result of the entries made by the carrier (e.g. when the carrier in accordance with Article 69 of the Transport Law Act finds it impossible to deliver the consignment after the deadline specified in Article 52 of the Transport Law Act), the contractual liability on general terms should be referred to.

In the doctrine a dispute arose over the scope of entities to which the liability in question applies. On the one hand, a strict view is presented, limiting it only to the relationship between the sender and the carrier (Górski, Wesołowski, 2006, p. 189; Wesołowski in: Ambrożuk, Dąbrowski, Wesołowski, 2014, p. 336; Górski, Żabski, 1997, p. 247; Kolarski, 1987, p. 237). It is justified by the fact that it is a liability related to the contract of carriage and does not refer to other legal relations, e.g. the contract of sale between the sender and the consignee. In the opinion of the proponents of this view, a different position would lead to the creation of non-contractual liability, unknown to the Polish law. In the opposition there is a liberal view, according to which the liability under Article 72 of the Transport Law Act is applied to all entities. It is emphasized that this is a specific type of non-contractual liability, which is not limited only to the parties to the contract of carriage (Stec, 2005, p. 291; Kolarski, 2002, p. 125). Undoubtedly, it is difficult to dispute the arguments supporting the liberal theory relating to the absence of a personal limitation in Article 72 (1), unlike in Article 72 (2), which introduces the sender's liability for costs of the carrier, or Article 73, which provides for the liability of the sender or the consignee respectively for damage to the carrier's property during the loading or unloading operations (Szancilo, 2008, p. 343).

¹ Ustawa z dnia 15.11.1984 r. Prawo przewozowe. Dz.U. no. 53, item 272.

² Convention on the Contract for the International Carriage of Goods by Road signed in Geneva on 19 may 1956.

However, acceptance of the liberal view would mean that the provision at hand is at the same time the basis for non-contractual liability towards third parties and contractual liability towards the carrier, which seems difficult to accept. Moreover, one may have doubts as to the axiological justification for such a broad interpretation. It must not be forgotten that for the third parties the consignment note is a document of equal value to any other private document. It has no particular function, nor is it a security or an official document. There are also no reasons to attribute any particular evidentiary value to the sender's statements contained therein, if they are not addressed to the carrier with whom the sender is bound by a legal relationship. It is therefore difficult to find grounds for attributing such a far-reaching liability for the content of this document towards entities other than the carrier. Although it is possible to imagine a situation in which, as a result of the sender's actions, damage to third party will occur, but in order to settle such disputes, the application of the general principles of tort liability under Article 415 of the Polish Civil Code³ would be sufficient. However, the current wording of the provisions does not allow for an unambiguous acceptance of the thesis on the impossibility of applying the liability under Article 72 of the Transport Law Act to persons other than the carrier.

CMR Convention

The provisions of the CMR Convention stipulate that the sender is liable to the carrier for damage caused by inaccuracy or inadequacy of the particulars in the consignment note. Pursuant to Article 7 (1) of the CMR, this applies to the data listed in Article 6 (1) (b), (d), (e), (f), (g), (h), (j),⁴ the particulars listed in Article 6 (2)⁵ and any other particulars or instructions given by the sender to enable the consignment note to be made out or for the purpose of their being entered therein. Unlike the Polish domestic law, the CMR convention also provides for the liability of the carrier vis-à-vis the consignor, but limits it to the absence of the paramount clause (Article 6 (1) (k)⁶). Under the CMR convention it is also assumed that the liability for the content of the consignment note is absolute and covers both forms of damage (Górski, Wesołowski, 2006, p. 263; Wesołowski, 2013, p. 214; Dąbrowski in: Ambrożuk, Dąbrowski, Wesołowski, 2015, p. 119).

However, it is not clear whether the liability of the consignor applies only to the inaccuracies and insufficiencies, as suggested by the literal wording of the cited provisions, or whether it should be assumed, according to the *a minori ad maius* reasoning, that the consignor is also liable for the complete absence of relevant particulars (Wesołowski, 2013, p. 213). In the author's opinion, the first position is correct. In order to justify this view it is submitted that, in the absence of a specific particular, there is no risk of misleading the carrier, unlike in case of an incorrect particular (Dąbrowski in: Ambrożuk, Dąbrowski, Wesołowski, 2015, p. 118; Koller, 2013, p. 969). In addition to the above

³ Ustawa z 23.4.1964 r. Kodeks cywilny (tj. z 10.05.2018 r., Dz.U. 2018, item 1025.)

⁴ The name and the address of the sender (b), the place and the date of taking over the goods and the place designated for delivery (d), the name and address of the consignee (e), the description in common use of the nature of the goods and the method of packing, and, in the case of dangerous goods, their generally recognized description (f), the number of packages and their special marks and numbers (g), the gross weight of the goods or their quantity otherwise expressed (h), the requisite instructions for customs and other formalities (j).

⁵ A statement that trans-shipment is not allowed (a), the charges which the sender undertakes to pay (b), the amount of "cash on delivery" charges (c), a declaration of the value of the goods and the amount representing special interest in delivery (d), the sender's instructions to the carrier regarding insurance of the goods (e), the agreed time limit within which the carriage is to be carried out (f), a list of the documents handed to the carrier (g).

⁶ A statement that the carriage is subject, notwithstanding any clause to the contrary, to the provisions of the convention.

argument, account must also be taken of the fact that the sender's liability for the content of the consignment note is selective. It is reflected in the fact that the sender is responsible only for some of the particulars. Some of the indications, e.g. those referred to in Article 6 (1) (a) CMR, are not covered by the liability of either party. The situation is different under Article 11 (2) CMR, according to which the consignor is liable for any damage resulting from the absence, inadequacy or irregularity of the documents required for the custom formalities. In view of the fact that the legislator has limited the liability of the consignor as to the nature of the particulars in the consignment note, it should be assumed that it has not by accident also narrowed the liability with regard to the nature of the irregularity. There is therefore no justification for a broad interpretation.

The analysis of the most typical example of the sender's responsibility for the content of references also supports this view. This is the case where the sender indicates a weight of the goods lower than the actual weight and then the carrier bears the administrative liability for exceeding the maximum permissible laden weight of the vehicle. It is understandable that the sender should be liable to the carrier if it was he who misled him. However, there is no basis for similar position where the consignor has not provided information on the weight of the goods. After all, the sender does not have a general obligation to provide all possible information about the goods, including its weight. At the same time, it does not mean that the carrier is completely helpless when the sender fails to provide him with the necessary information. The carrier is still able to take appropriate acts of diligence, e.g. by requesting information in this respect or by weighing the goods on his own.

Moreover, in the light of the CMR convention, some other problems may arise in connection with the application of the rules of liability. The convention does not specify the entity from which the consignment note originates. It is therefore assumed that it is a joint document created by the sender and the carrier (Clarke, 2009, p. 58; Wesołowski, 2013, p. 176). In spite of this, the act mainly holds the sender liable for the content of the consignment note. It even provides that if, at the sender's request, the carrier enters some particulars referred to the consignment note he shall, in the absence of proof to the contrary, be deemed to have acted on behalf of the sender (Article 7 (2) CMR). The intention of the authors of the convention is understandable. The purpose was to protect the carrier from the consequences of giving inaccurate or false particulars by the sender, even if they are technically entered by the carrier. In most typical case this is justified and may, for example, relate to the consequences of incorrect indication of the address of the consignee, which delays the delivery.

In some situations, however, this provision may lead to unacceptable results. If the sender, pursuant to Article 8 (3) CMR, requests that the weight of the goods or its contents be checked, the actions related thereto will have to be carried out by the carrier and the results of the check will be entered in the consignment note. It should be assumed that even if the carrier makes an entry in the consignment note himself, he will act at the sender's request under Article 8 (3) CMR. Given the presumption provided for in Article 7(3) CMR, this will normally result in their being deemed to have been entered by the sender or by a person acting on behalf of the sender. If reference is made again to the earlier example, in which the carrier is held liable for exceeding the maximum permissible laden weight of the vehicle, the sender might be liable towards the carrier in this respect, despite the fact that the inspection of the goods was carried out by the carrier himself.

The sender could then try to rebut these presumptions or invoke the carrier's contribution to the damage. However, the burden of proof in this respect would remain with the sender. Moreover, with regard to the second argument, it should be borne in mind that under Polish law, pursuant to Article 362 of the Polish Civil Code, it is assumed that the duty to remedy the damage in such a situation is only reduced. The possibility of its total exclusion

is not uniformly perceived (see: Decision..., 2009; Banaszczyk in: Pietrzykowski, 2008, p. 1007). If, in particular case, the court accepts the view as to the inadmissibility of the total exclusion of liability and at the same time the sender could not rebut the presumption from Article 7 (3) CMR, it would lead to the unjustified liability of the sender. This problem may be solved by the interpretation that the Article 7 (1) CMR applies only to the particulars which are given strictly by the sender. However, the linguistic interpretation of the provision does not allow such a conclusion to be drawn unequivocally and this issue can be ruled on differently. If interpreted to the disadvantage of the sender, this will result in the carrier being privileged too far-reachingly and without taking into account the interests of the sender.

Conclusions

Each of the acts in question contains regulations regarding the liability of the sender. The CMR convention relates mainly to liability for the specific particulars, while Polish domestic law focuses on the personal criterion. The convention also lays down some rules on carrier liability. It can therefore be concluded that in this aspect provisions of CMR are exhaustive, so that the carrier is liable only to the extent indicated therein. Thus, it is not possible to apply general rules on liability at the same time. The national law leaves the question of the carrier's liability unresolved. On the one hand, it opens up the possibility of recourse to the general rules. On the other hand, it is doubtful whether it is sufficient to ensure a balance between the parties, especially in view of the fact that the liability of the carrier will not be absolute, as in the case of the liability of the sender.

In formulating *de lege ferenda* demands with regard to the Polish Transport Law it should be noted that the limitation of the liability only to the entries made by the particular person is correct. It allows to avoid the problems arising under the CMR convention regarding the possible unjustified liability of the sender in some situations. However, in order to balance and clarify the parties' position under domestic law, it is possible to propose a rule according to which each party is liable to the other for the content of the information they put in the consignment note. This type of liability should exist only between the parties to the contract of carriage, while the liability towards the third parties should be covered by general rules. Such a solution would, however, result in significant documentary difficulties, because in practice it can not be easily determined from whom specific particulars come from. Bearing in mind the solution provided in Article 7 (3) CMR, legal presumptions can be used to alleviate these difficulties. The aim of these is to determine the most likely course of events in situations where it is not possible to establish certain circumstances and based on evidence that is easier to carry out than the relevant fact (Radwański, Zieliński in: Safjan, Radwański, 2012, pp. 442–443.). In this case the legal presumption should be based on the assumption that the particulars in the consignment note originate from the sender. This will be the most typical situation, coherent with the general construction of the consignment note adopted under the Transport Law Act. At the same time, it could be a rebuttable presumption. The sender would be able to prove the opposite circumstances and thus it will be possible for the carrier to be held liable on the same conditions as the sender.

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Cite this article as: Garnowski, K. (2018). Liability for the particulars in the consignment note. *European Journal of Service Management*, 4 (28/2), 165–170. DOI: 10.18276/ejsm.2018.28/2-20.

RURAL DEVELOPMENT PROGRAM AND ITS IMPACT ON RURAL DEVELOPMENT (ON THE EXAMPLE OF THE WEST POMERANIAN VOIVODESHIP)

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION Q12, Q14, Q19

KEYWORDS Common Agricultural Policy, rural areas, rural development, West Pomeranian Voivodeship

ABSTRACT The aim of the article is to analyze and assess the diversity of the volume of funds used under the Rural Development Program (RDP) divided into two periods, 2007–2013 and 2014–2020 in the West Pomeranian Voivodeship. A research question was posed as to how these measures influenced rural development and the activation of rural residents. The research was carried out on the basis of statistical data analysis methods as well as comparative analyzes. The data from the Local Data Bank of the Central Statistical Office, the voivodeship labour office, the West Pomeranian Voivodeship and the Agency for Restructuring and Modernization of Agriculture were used for the research. On the basis of the analysis of the use of EU funds under the RDP, it can be pointed out that they were transferred to the objectives serving rural development and certainly contributed to the development of the Polish countryside, reducing its level of backwardness, poverty and unemployment rate.

Introduction

The process of integration with the European Union has contributed to significant changes in the policy of rural development in Poland (Zięba, Kowalski, 2007, pp. 187–191). Common Agricultural Policy, structural funds and other EU instruments have strengthened the increasingly multifaceted view of rural development. Poland is one of the

largest beneficiaries of Common Agricultural Policy funds and cohesion policy in the EU. Sectoral orientation is complemented by a territorial perspective through the European Agricultural Fund for Rural Development (EAFRD).

Rural areas are important for Poland – they are inhabited by about 35% of the country's population and they produce about one-quarter of gross domestic product. In the context of stable economic growth, the Polish countryside has developed impressively (GDP growth per capita in rural areas by 61% in 2000–2014) (OECD, 2018). In comparison to other rural areas of the OECD, in the Polish countryside, the increase in GDP per capita is one of the highest, partly due to the catching-up process. Despite such extraordinary results of economic growth, the majority of rural regions did not match the national GDP per capita.

Characteristics of the West Pomeranian Voivodeship

The West Pomeranian Voivodeship is the fifth largest region of Poland, with an area of 22.9 thousand km², and the eleventh in terms of the number of residents, most of whom live in cities.

Despite the high degree of urbanization, agriculture is one of the key branches for the region's economy. The condition of West Pomeranian agriculture was significantly strengthened as a result of Poland's accession to the European Union. In the years preceding the accession (2001–2003), the average value of global agricultural production, realized by farmsteads operating in the West Pomeranian Voivodeship, amounted to PLN 2,291 million and in 2009–2016 – PLN 3,526 million (Malkowski, 2017, p. 2).

Funds transferred under the Rural Development Program, both in the years 2007–2013 and 2014–2020, had an impact not only on the increase in agricultural production thanks to measures serving the development of rural areas but also indirectly affected the unemployment rate of rural residents.

The unemployment rate in the West Pomeranian Voivodeship for a long period was higher than the average rate of unemployment in the country. The situation has improved since 2013. At the end of December 2017, the total of more than 1 million unemployed people remained in the registers of labour offices in the country, while registered unemployment in the West Pomeranian Voivodeship was 8.7% (Wojewódzki Urząd Pracy w Szczecinie, 2018).

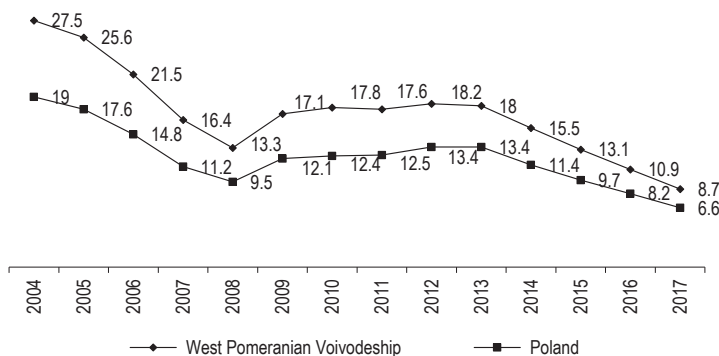


Figure 1. The registered unemployment rate in 2004–2017 (%)

Source: own study based on data from the voivodeship labour office.

The situation of declining unemployment both in relation to Poland and the West Pomeranian Voivodeship, has a strict impact on unemployment in rural areas (Figure 2).

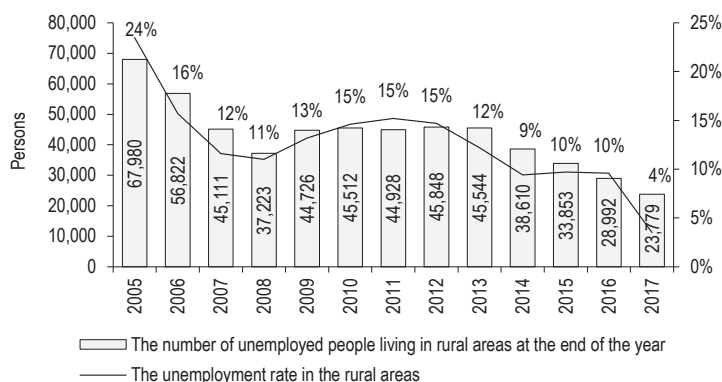


Figure 2. The number of unemployed people living in rural areas and the end of the year

Source: own study based on data from the voivodeship labour office.

During the implementation of agricultural support under the RDP for 2007–2013, unemployment in rural areas in the West Pomeranian Voivodeship remained at a similar level (about 45 thousand people). After completing this stage of funding, since 2014 unemployment has been gradually decreasing, both in absolute figures as well as in the size of the unemployment rate.

Despite the increased availability of jobs also in rural areas, there is still high international emigration (temporary and permanent). This phenomenon mainly concerns young people who may no longer return to their places of residence, which reduces the potential of the regional labour market and the possibilities of increasing the region's economic potential (com. Zieliński, 2014, pp. 63–75). For this reason, the funds received under the RDP are also to help investors who create new jobs in rural areas, inter alia, so that the villagers find employment in the region and are not forced to emigrate abroad.

Implementation of the RDP in 2007–2013

The Rural Development Program for the years 2007–2013 offered support for investments in agriculture and processing, which were to improve the competitiveness of the agri-food sector (com. Nowak, 2013). The program also included financial resources for providing assistance to investors who create new jobs in rural areas, for the development of ecological management methods and for projects that protect the natural environment and the advantages of the rural landscape. It was also possible to obtain from RDP 2007–2013 co-financing for rural renewal, actions improving the quality of life of the inhabitants and the implementation of team initiatives that stimulate the activity of local communities. The Agency for Restructuring and Modernization of Agriculture (ARiMR) was responsible for the implementation of the entire programme, under the supervision of the Ministry of Agriculture and Rural Development.

Poland was the largest beneficiary of funds from this Program among the EU countries. There were 17.4 billion Euros available, of which approximately 13.4 billion Euros from the EU budget, the rest came from the national budget. Thanks to the funds coming from the Rural Development Program for the years 2007–2013, the largest modernization process of the Polish countryside and agri-food sector was carried out in recent years.

RDP 2007–2013 has been divided into 23 so-called measures (Podlińska, 2015, pp. 291–292). Implementation of the 15 of them was entrusted to ARiMR, and the remaining as part of delegated measures went to voivodeship self-governments, Agricultural Market Agency and Foundation of Assistance Programmes for Agriculture (FAPA). The measures listed have been included in four programme axes:

Axis 1: Improving the competitiveness of the agricultural and forestry sector.

Axis 2: Improving the condition of the natural and rural environment areas.

Axis 3: Quality of life in rural areas and diversification of the rural economy.

Axis 4: LEADER.

Measures concentrated in the first two axes served mainly to adapt the agricultural and forestry sector to the growing community-based requirements, including those related to environmental protection, and they were directed mainly to agricultural producers. Measures supported under the third axis complemented the measures defined under the first two axes and were to synergize the development of rural areas by diversifying economic activities and creating non-agricultural jobs as well as improving the quality of life in rural areas. The implementation of the measures of the fourth axis, LEADER, was based mainly on the use of knowledge and the experience of the local community for the region's development. It was important to involve the social and economic partners to plan and implement local initiatives to better define the problems of the area and find better ways to solve them.

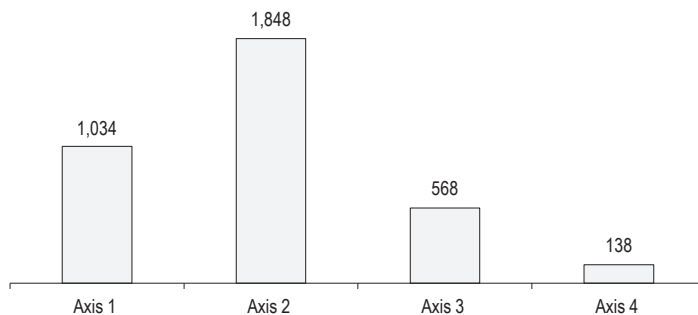


Figure 3. The amount of payments made under RDP 2007-2013 in the West Pomeranian Voivodeship (million PLN)

Source: Local Data Base (2018).

The total amount of RDP funds used under 2007–2013 programmes in the West Pomeranian Voivodeship amounted to PLN 3,588 million. The largest part, PLN 1848 million, was assigned to tasks related to the improvement of the natural environment and rural areas, the smallest payments were allocated to measures from Axis 4, LEADER, which amounted to PLN 138 million.

When assessing the use of funds under the RDP 2007–2013, it should be noted that payments made under the first axis, aimed at improving the competitiveness of the agricultural and forestry sector came in second and were lower than the funds allocated to the second axis by almost 800 thousand. PLN, which due to the nature of measures related to the first axis means that the funds from the RDP were not focused only on the development of rural areas.

A detailed breakdown of funds for individual measures has been presented in Table 1.

Table 1. Amounts of payments made under RDP 2007–2013 in the West Pomeranian Voivodeship according to individual measures (PLN)

Axis	Measures	PROW 2007–2013
Axis 1	Measure 111. Professional training for people employed in agriculture and forestry	0
	Measure 112. Facilitating the start of young farmers	73,425,000
	Measure 113. Structural pensions	266,689,847
	Measure 114. Use of advisory services by farmers and forest owners	420,960
	Measure 121. Modernization of farms	355,972,795
	Measure 123. Increasing the added value of basic agricultural and forestry production	142,956,521
	Measure 125. Improvement and development of infrastructure related to the development and adaptation of agriculture and forestry	120,570,047
	Measure 126. Restoring the potential of agricultural production	4,089,988
	Measure 132. Participation of farmers in food quality system	2,896,216
	Measure 141. Support for semi-subsistence farms	23,385,495
	Action 142. Groups of agricultural producers	43,878,920
Axis 2	Measure 211, 212. Supporting farming in mountainous areas and other areas with unfavourable farming conditions	505,203,873
	Measure 214. Agri-environmental programme	1,280,449,139
	Measure 221, 223. Afforestation of agricultural land and afforestation of land other than agricultural land	45,211,079
	Measure 226. Restoration of forest production potential damaged by disasters and the introduction of preventive instruments	17,392,827
Axis 3	Measure 311. Diversification into non-agricultural activities	38,812,173
	Measure 312. Creation and development of micro-enterprises	98,657,417
	Measure 321. Basic services for the economy and rural population	312,167,407
	Measure 313, 322, 323. Rural renewal and development	118,283,427
Axis 4	Measure 413. Implementation of local development strategies	114,045,984
	Measure 421. Implementation of cooperation projects	2,409,946
	Measure 431. Functioning of the local action group, acquisition of skills and activation	21,546,341

Source: Local Data Base (2018).

The largest amount of RDP funds in 2007–2013 was used for Measure 214 under Axis 2, i.e. “Agri-environmental program” – PLN 1 280 million. This represented 35.7% of the total amount of RDP payments in this period. The second largest realized payments were also measures belonging to axis 2 (211, 212) related to “Supporting farming in mountainous areas and other areas with unfavourable farming conditions”. In this area PLN 505 million was used, that is 14.1% of the total amount of RDP payments in this period. The remaining funds were heavily dispersed between the remaining measures from individual axes.

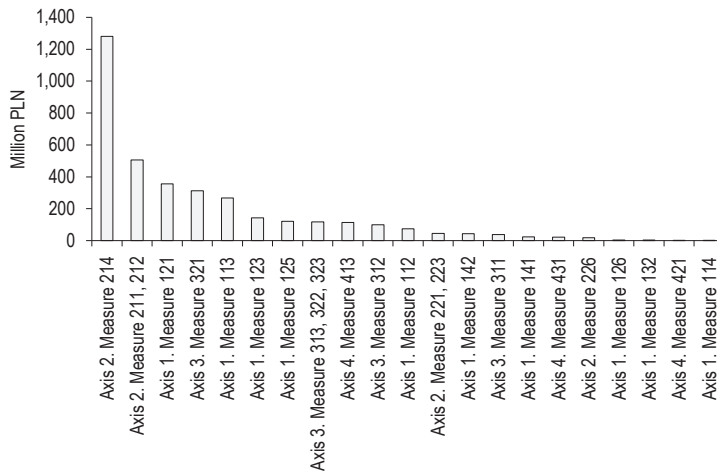


Figure 4. The amount of payments made under RDP 2007–2013 in the West Pomeranian Voivodship according to measures in individual axes

Source: Local Data Base (2018).

Although payments under Axis 1 were lower than payments made under Axis 2, it can be stated with certainty that, thanks to the RDP funds for the years 2007–2013, agricultural holdings underwent modernization, the added value of basic agricultural and forestry production was increased, many micro-enterprises were established and the existing ones could develop. Many people and farms could diversify their activities in the non-agricultural sector. These funds have also improved the quality of life in the countryside, as evidenced by modernized or equipped day-care centres, recreation and sports centres as well as the constructed water supply and sewage networks.

RDP for 2014–2020

The main objective of the Rural Development Programme for 2014–2020 is a continuation of the Programme from the years 2007–2013. It has been defined as an increase in the competitiveness of agriculture taking into account environmental objectives. The programme has been designed to implement the priorities set for the EU rural development policy, which include:¹

1. Facilitating knowledge and innovation transfer in agriculture, forestry and rural areas.
2. Improving the competitiveness of all types of farming and increasing the profitability of agricultural holdings.
3. Improving the organization of the food chain and promoting risk management in agriculture.
4. Restoring, protecting and strengthening ecosystems dependent on agriculture and forestry.
5. Supporting the efficient management of resources and the transition to a low-carbon and climate resilient economy in the agricultural and food sectors and forestry.
6. Increasing social inclusion, reducing poverty and promoting economic development in rural areas.

¹ www.prow.info.pl.

The total public funds allocated for the implementation of the Rural Development Programme for the years 2014–2020 amount to EUR 13.5 billion, of which EUR 8.6 billion will be EU funds (EAFRD) and almost EUR 5 billion will be the national contribution.

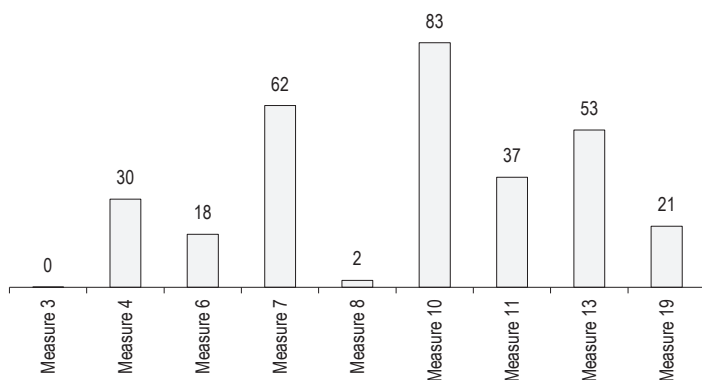


Figure 5. The amount of payments made under RDP 2014–2020 (until 30/06/2018) in the West Pomeranian Voivodeship (million PLN)

Source: Local Data Base (2018).

The total amount of RDP funds used under the 2014–2020 programs in the West Pomeranian Voivodeship until 30.06.2018 amounted to PLN 306 million. The largest part was attributable to Measure 10 “Agri environmental and climatic measure” (PLN 83 million), Measure 7 “Basic services and village renewal in rural areas” (related to the construction and modernization of local roads – PLN 62 million) and Measure 13 “Payments for areas with natural constraints or other specific restrictions” (the so-called LFA payment) (PLN 53 million).

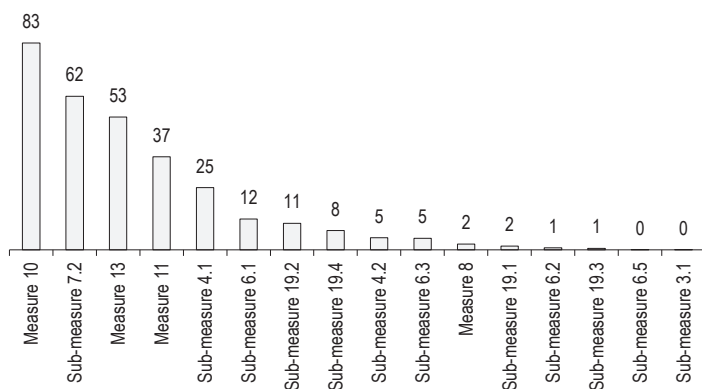


Figure 6. The amount of payments made under RDP 2014–2020 to 30.06.2018 in the West Pomeranian Voivodeship according to measures and sub-measures (million PLN)

Source: Local Data Base (2018).

Most funds under the RDP for 2014–2020 in the West Pomeranian Voivodeship were used until 30.06.2018 for Measure 10 Agri environmental and climatic measures – PLN 83 million. This represented 27.1% of the total amount of RDP payments in this period. The second largest realized payment was Sub-measure 7.2. Support for investments related to the creation, improvement or development of all types of small infrastructure, including investments in renewable energy and energy saving (funds were allocated for the construction or modernization of local roads) – PLN 62 million (20.1% of the total RDP payments in this period).

Conclusions

Despite the large allocation of EU funds under the Rural Development Programme in both perspectives, the rural economy in Poland is insufficiently diversified and measures with higher added value are still needed (Smoleń, 2018, pp. 36–46). Despite a noticeable decline,² the highest level of poverty is still in rural areas, the highest in farmers' households. Therefore, we should positively assess the fact of shifting the rural areas policy axis towards a wide range of policies relevant to life in these areas – education policy, infrastructure, entrepreneurship, environmental protection, etc., while at the same time traditional pressure is applied to the modernization of agriculture. Thanks to this, young farmers have an easier start to run their own business.

Poland has greatly benefited from joining the European Union in every respect, and in particular, in terms of the scale of funds received and used. They made it possible to pursue a policy aimed at the development of a given local government unit and in relation to RDP funds for the development of rural areas.

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Cite this article as: Gorzałczyńska-Koczkodaj, M., Koczkodaj, R. (2018). Rural development program and its impact on rural development (on the example of the West Pomeranian Voivodeship). *European Journal of Service Management*, 4 (28/2), 171–178. DOI: 10.18276/ejsm.2018.28/2-21.

² 4.3% people lived in extreme poverty in 2017 against 4.9% in 2016, and in relative poverty – slightly less than 13.4% in 2017 against 13.9% in 2016, from data of the Central Statistical Office (GUS). It means a drop in the range of extreme poverty and relative poverty.

THE USERS PERCEPTION OF MOBILE APPS OF POLISH BIGGEST SERVICE COMPANIES

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION M31, M37

KEYWORDS apps, mobile marketing, service companies

ABSTRACT The use of smartphones is still increasing in Poland. 64% of Poles used a smartphone device in 2017. Mobile marketing is therefore an ever increasingly important component of a firm's overall promotional strategy. The importance of this medium can be seen through time spent on mobile media, number of searches, and direct and indirect mobile generated sales. The objective of the paper is to investigate the perception of the use of mobile apps by the biggest Polish service companies. By the use of a dedicated research tool, the paper investigates changes that occurred during the two years period. It was revealed that the mean evaluation of mobile apps by android users declined in the research period (years 2016-2018). It constitutes a serious threat for researched service companies, as it may indicate a poor level of satisfaction of their customers from their mobile marketing actions.

Introduction

The use of smartphones is still increasing in Poland. According to the report "Polska jest mobi" [Poland is mobi] 64% of Poles used a smartphone device in 2017. Although, according to this report there is not recorded a dynamic growth of smartphone penetration (as it happened in previous years), there can be observed a noticeably grow of intensity of use of the "mobile" channel. Therefore mobile marketing is an ever increasingly important

component of a firm's overall promotional strategy. The importance of this medium can be seen through time spent on mobile media, number of searches, and direct and indirect mobile generated sales (Berman, 2016, p. 432). Many marketing studies have shown that mobile channels bring value to customers and improve operating efficiency (Qin, Tang, Jang, Lehto, 2017, p. 174). A crucial aspect of a mobile channel are the mobile apps offered to customers. The objective of the paper is to investigate the perception of the use of mobile apps by the biggest Polish service companies. By the use of a dedicated research tool, the paper investigates changes that occurred during the two years period. The importance of the study is based on the assumption, that understanding how and why consumers engage with mobile apps is critical to the success of ubiquitous mobile marketing (Kim, Baek, 2018, p. 148).

Mobile marketing concept

According to the Mobile Marketing Association (2018) "Mobile marketing is a set of practices that enables organizations to communicate and engage with their audience in an interactive and relevant manner through and with any mobile device or network." In the definition the "set of practices" includes a wide variety of activities, such as advertising and media, direct response, promotions, relationship management, CRM, customer services, loyalty creation and maintaining, social marketing – in general any marketing actions. The other part of the definition includes "communication" and "engagement". The engagement reflects the creation and maintaining of relationships, generation of activities, stimulating social interaction and be present at a time a consumer expresses a need. This part refers to widely understood relations, a basic for modern approach to marketing. As it can be seen, this definition of mobile marketing emphasis the marketing actions implemented on mobile device. Therefore, for the purpose of this paper the author defines mobile marketing as "all marketing activities using mobile device, medium or technology as channel for reaching receivers" (Gracz, 2016, p. 34).

In particular, these activities include: apps, mobile websites, photocodes (QR code), sms/mms marketing, geolocation, augmented reality, mobile advertising (display, video and others). This paper focuses on one of the mobile marketing activity: the mobile apps.

The role of apps – literature analysis

Mobile phone applications (apps) are specific m-marketing tools designed for the interchange of information, networking, and leisure (Kuan-Yu, Yu-Lun, 2012, p. 116). D.G. Taylor, T.A. Voelker, I. Pentina (2011, p. 61), defines mobile apps as small programs that run on a mobile device and perform tasks ranging from banking to gaming and web browsing. According to Deepak Kumar, Keyoor Purani and Shyam Viswanathan apps are software programs that are installed in a mobile device, and which often display an identity of the brand (Kumar, Purani, Viswanathan, 2018, p. 133)

The five main objectives of branded mobile apps, according to Zhenzhen Zhao and Christine Balague (2015, pp. 306–307) are:

- communication,
- CRM,
- sales,
- product innovation,
- and marketing research.

The authors note that individual branded apps can have more than one business objective and individual brands can design multiple mobile apps to target different products and business goals.

The special interest in the paper is put on mobile apps designed by companies for marketing purposes. The mobile apps have become important marketing stimuli in shaping customers' brand experience in m-commerce. The high level of mobile usage has resulted in a plethora of mobile applications used increasingly by businesses for multiple marketing purposes that help manage customer relationships including precision targeting, acquisition, loyalty and retention management (Pentina, Zhang, Bata, Chen, 2016, p. 410). The instituting and maintenance of mobile apps have become a vital part of mobile marketing strategy of many companies who want to expose app users to brands in innovative and effective ways (Liu, Zhao Li, 2017, p. 71).

Research method

The instituting and maintenance of mobile apps have become a vital part of mobile marketing strategy of many companies who want to expose app users to brands in innovative and effective ways. The research method for analyzing the perception of mobile apps of Polish biggest service companies is a research that has been conducted for two years. The first choice of companies made on 2015 using a well known and established ranking: "Lista 500 Największe Firmy Rzeczypospolitej 2104" (the list of 500 biggest enterprises according to "Rzeczpospolita" newspaper from 2014). Out of 20 biggest enterprises 12 service companies were indicated, namely: 8 banks (PKO BP SA; Bank Pekao SA; Bank Zachodni WBK SA; mBank SA; ING Bank Śląski SA; Bank Handlowy w Warszawie SA; Bank Millennium SA; Getin Noble SA), 1 insurance company (PZU SA) and 3 mobile phone operators (Polkomtel SA; T-Mobile Polska SA; PTK Centertel sp. z o.o. – Orange Polska SA).

The study was focused on Android as it is an operating system with the largest market share in Poland (and in the world).

The first data was collected on January 2016, by searching the Google Play store with the phrases of the names of the companies. The research was conducted in using Google Chrome Version 43.0.2357.124 m, with the use of incognito mode to prevent any possible disruptions in searching. The research results were then analyzed by choosing the most popular/mostly used apps. The following aspects were recorded:

- the number of total results occurring after searching by a company name,
- the number of official apps offered by a company (the apps that were not created or offered by a company, e.g. fan apps, were not considered); in case a company operates on market using many brands all brands were taken into account,
- the type of app created by (or ordered by) the particular company (if applicable),
- the mean evaluation in Google Play store (if applicable)
- the number of comments,
- the number of downloads.

The research was repeated in October 2018, with the use of Google Chrome Version 70.0.3538.110, with the use of incognito mode to prevent any possible disruptions in searching. The same category of data was collected. As some of the apps changed during that period (for example a company changed their brand and introduced a new app or the old app was removed and replaced with an entirely new one), only the apps that existed both in January 2016 and October 2018 were taken into account.

The aspect that is especially taken into account is the mean evaluation in Google Play store. As it is done by users themselves, it can be treated as an indicator of consumers' overall satisfaction with the app. It is based on the mechanism that allows users to rate releases using scores (i.e., star ratings) and text reviews. The former (i.e., the score) is usually expressed as a choice of one to five stars, and the latter (i.e., the review) is a free text description that does not have a predefined structure and is used to describe informally bugs and desired features. The review is also used to describe impressions, positions, comparisons, and attitudes toward the apps (Palomba et al., 2018, p. 150). Therefore it may be concluded, that the mean evaluation of an app presents the overall attitude of consumers towards this app. The aspect that is research in the paper is the difference in the mean score achieved by the apps within 2 years period.

Research results

Out of the eight banks (PKO BP SA; Bank Pekao SA; Bank Zachodni WBK SA; mBank SA; ING Bank Śląski SA; Bank Handlowy w Warszawie SA; Bank Millennium SA; Getin Noble SA) researched in 2016, seven were considered in 2018, as one bank (Bank Zachodni WBK SA) rebranded during that time and introduced a new app, which made it not possible to compare with 2016. The results of the comprehension between 2016 and 2018 are presented in Table 1.

Table 1. The comprehension of the mean evaluation of the most popular apps created by 7 biggest Polish banks

The name of the company	Name of the app	Category	January 2016	August 2018	Change in the mean evaluation
			mean evaluation (1 – very bad, 5 – very good)		
PKO BP SA	IKO	finance	4.4	4.7	0.3
	supermakler mobile	finance	3.3	3.0	−0.3
	Token iPKO biznes	finance	4.1	3.7	−0.4
Bank Pekao SA	PeoPay	finance	4.2	3.7	−0.5
	PekaoToken	finance	4.2	3.6	−0.6
	PekaoBiznes24	finance	4.1	3.7	−0.4
	Mobilny Planer Zakupów	finance	3.8	3.6	−0.2
mBank SA	mBank PL	finance	4.1	4.6	0.5
	Program Partnerski mBanku	finance	4.6	4.1	−0.5
ING Bank Śląski SA	INGBusiness	finance	4.0	2.8	−1.2
	INGMobile	finance	4.7	3.8	−0.9
Bank Handlowy w Warszawie SA	Citi Handlowy	finance	3.4	2.9	−0.5
Bank Millennium SA	Bank Millennium	finance	4.6	4.6	0.0
	Bank Millennium Firmy	finance	3.5	3.3	−0.2
Getin Noble SA	Getin Mobile	finance	3.8	4.1	0.3

Source: own research.

There is a clear trend in the evaluation of the most popular apps created by 7 biggest Polish banks: most of them are declining. There are some notable exceptions, namely IKO app by PKO BP SA increased the mean evaluation from 4.4 to 4.7 (which can be named a very good result); the mBank PL app by mBank SA increased the mean evaluation from 4.1 to 4.6 (the biggest growth in researched apps) and Getin Mobile by Getin Noble SA

increased the mean evaluation from 3.8 to 4.1. One app – Bank Millennium by Bank Millennium SA kept the good score of 4.6. The other apps all declined in mean evaluation.

The next researched sector was insurance. One company belongs to the research sample, it is the PZU SA. However, the apps offered by this company changed entirely within the researched period. Therefore, it is not possible to present the results of the comprehension between 2016 and 2018 for this company

The third researched sector was mobile telephony. The results of the comprehension between 2016 and 2018 are presented in Table 2.

Table 2. The comprehension of the mean evaluation of the most popular apps created by three mobile phone providers

The name of the company	Name of the app	Category	January 2016	August 2018	Change in the mean evaluation
			mean evaluation (1 – very bad, 5 – very good)		
Polkomtel SA	Plus online	tools	3.9	3.6	−0.3
	Nawigacja Plus	travel & local	3.6	4.1	0.5
T-Mobile Polska SA	Mój T-Mobile	communication	3.3	3.3	0
	Nawigacja T-Mobile	tools	3.7	4.2	0.5
ORANGE POLSKA SA	Mój Orange	Tools	3.8	3.6	−0.2
	Nawigacja Orange	travel & local	3.3	3.9	0.6

Source: own elaboration.

In the case of mobile telephony providers, the main app designed for direct interaction with the customers remained at relatively low level in the case of one provider (T-mobile Polska SA) and decreased in the case of Polkomtel SA and Orange Polska SA. There is however some increase in the other type of the app these companies offer their customers – navigation. The means evaluations of these apps increased significantly.

Research limitation

The first limitation of the research is the fact that the research was conducted on one platform only – Android. It is the biggest operation system in the world. However, the research did not include the second system – iOS. The results for iOS may be different.

Another research limitation is caused by dynamic changes in the mobile apps market. As some of the apps changed during the 20 months period of study (for example a company changed their brand and introduced a new app or the old app was removed and replaced with an entirely new one), only the apps that existed both in January 2016 and October 2018 were taken into account. Therefore the research may not include new apps, that can be better (or worse) in the eyes of the consumers.

The next limitation is related to the assumption that the mean evaluation of an app is directly correlated with the overall user satisfaction. There may be some other factors, which require some additional research.

Conclusions

For researched companies the following conclusion can be drawn from the conducted research:

1. Most of the researched companies are aware of the mobile marketing and importance of mobile apps as a new, interactive channel of reaching the audience, as they all offer various mobile apps.

2. With some exceptions, which may be seen as best practices, most of the researched apps' mean evaluation decreased.
3. The fact that the mean evaluation of analyzed apps decreased constitutes a serious threat for researched service companies, as it may indicate a poor level of satisfaction of their customers from their mobile marketing actions. In the context of growing importance of mobile marketing this threat should be taken seriously.

According to the literature, there are many advantages of mobile marketing as compared with other marketing programs (Berman, 2016). Mobile marketing is always on, always connected, and always with the consumer (marketers can generate offers based on special weather conditions and natural disasters, can quickly match a competitor's price offer or use short-term price reductions to reduce inventory levels and can quickly assess the effectiveness of different campaigns); mobile marketing is able to generate locationsensitive offers (marketers can develop special offers to consumers within a given distance to both its own and competitors' retail locations and can provide special product information to consumers within a specific aisle); mobile marketing can send relevant personalized messages and offers (marketers can tailor messages and offers can be tailored to each consumer based on their purchase history, social media usage, demographic data, and usage data and can present different offers to current consumers, heavy users, lapsed users, relationship customers, and transactional customers). The poor performance of the apps can make it very difficult or even impossible to fully utilize these advantages. Therefore, the following recommendations for the future actions can be drawn:

1. To utilize the potential of mobile marketing the companies should improve their apps and offer new ones in order to strengthen the relations with stakeholders.
2. There is an immediate need to understand the causes of the significant decrease in the mean evaluation of the apps
3. There should be significant work put on the quality and usability of the offered apps.
4. The comments made by users should be analyzed carefully to understand their opinions and behaviors.

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Cite this article as: Gracz, L. (2018). The users perception of mobile apps of polish biggest service companies. *European Journal of Service Management*, 4 (28/2), 179–185. DOI: 10.18276/ejism.2018.28/2-22.

ELECTROMOBILITY DEVELOPMENT IN SELECTED EUROPEAN COUNTRIES IN THE LIGHT OF AVAILABLE TAX CONCESSIONS

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL CLASSIFICATION Q01, Q48, Q28, L94, R40

KEYWORDS economic geography, tax concessions, Electric Vehicles market, EV policy

ABSTRACT The legal regulations concerning the development of the alternative fuel vehicles market introduced by individual European countries are designed to minimize the impact of transport on the environment and to increase the independence from oil. Tax concessions are an important factor of electromobility development in Europe. The aim of the publication is to analyze the differentiation of electromobility development level in selected European countries in the context of tax concessions. The applied research methods are: critical analysis of the literature on the subject (theoretical approach to issues related to low-emission economy and electromobility), secondary analysis of documents (desk research) involving the interpretation of sales data and tax concessions in selected countries and the method of logical reasoning contributing to the presentation of applications and implementation of the purpose of publication. The conclusions included in the final part of the article concern the identification of the interaction planes of tax concessions impact on the EV's (Electric Vehicles) market development.

Introduction

The development of modern technologies in the field of low-emission transport is highly related to the global environmental pollution reduction plans. The increase of the awareness of modern societies about the importance of ecology stimulates both legislative changes as well as shopping preferences. One of the most noticeable manifestations of this change is the increase of EV's sales. Until now, the leading models among EV's

were the models that used a hybrid system, ie one that combines two independent engines: traditional and electric. Global trends indicate successive but slow displacement of purely internal combustion vehicles from the market (Kurtyka, 2018, p. 19). These changes are dictated not only by the mentioned increase in the consumers ecological awareness but also by the first declarations of the authorities of countries such as Norway, Germany, Great Britain, France or the Netherlands, which set deadlines for the final withdrawal of diesel and petrol powered cars from the market (Dugdale, 2018).

The essence of electromobility and types of the electric vehicles

Electromobility is a concept that focus at all the problems related to wheeled transport (technical, infrastructural, legislative and market) carried out by electric vehicles supplied with energy stored in batteries (Mataczyński, 2018, p. 11). The social effects, increasing social awareness and ensuring demand for transport services using electricity through the development of zero- and low-emission vehicle fleets and public transport are not without significance for the development of electromobility. These activities are aimed at reducing emissions, and consequently improving the quality of air and the health of people (Pilecki, 2019). Due to the type of drive used, we distinguish the following basic classes of passenger electric vehicles:

1. Battery Electric Vehicle (BEV) – a battery-powered electric vehicle equipped exclusively with an electric motor and a battery, without the support of a traditional internal combustion engine. The vehicle is powered by connecting to an external source of electricity through a dedicated charger. Like other electric vehicles, BEV can recharge its batteries in a process known as regenerative braking, which uses the electric motor of the vehicle to slow down the vehicle, and recover some of the energy usually converted from the heat generated by the brakes (Carley, 2014, p. 3).
2. Plug-in Hybrid Electric Vehicle (PHEV) – hybrid vehicles. They are powered by both traditional fuel and electricity. PHEV hybrids can charge batteries through regenerative braking as well as connection to an external electrical charging socket. (<https://www.ergon.com.au>). Cars of this type at distances up to 50 km mainly use an electric engine, whereas the internal combustion engine is activated on longer routes.
3. Hybrid Electric Vehicles (HEVs) – colloquially called the “full hybrid” it uses the power of the internal combustion engine and electric motor. From a PHEV vehicle it is distinguished by the lack of the possibility of recharging batteries from an external source of electricity.
4. Fuel Cell Vehicles (FCV) – uses fuel cells, powered by hydrogen, which produce electricity for the electric motor and batteries cooperating with it as a result of a chemical reaction.

Each of the above-mentioned types of vehicles can be considered ecological in relation to classic internal combustion drives. However, when comparing individual vehicle classes (EVs), they can be divided into those that emit a limited amount of carbon dioxide and other toxic substances (PHEV and HEV) and so-called “Zero-emission” vehicles (BEV and FCV). The concept model representing the BEV zero-emission vehicle class is shown in the Figure 1.



Figure 1. Audi Aicon at Motor Show Poznań 2018

Source: author.

Hybrids, compared to zero-emission cars (currently offered in dealerships) have the advantage of real range. According to the BEV car test carried out by the automotive magazine Auto Świat, the vehicle with the largest real range turned out to be the Tesla S model, which covered 422 km on one charge (Mroczek, 2018). Vehicles of the FCV type, such as the Toyota Mirai, have similar range as BEV cars, but they also have one significant advantage, namely the time of their charging / refueling is much shorter.

Sale of cars with electric drives in selected European countries

There is no doubt that the automotive market is currently dynamically changing. Everything indicates that we are entering the era of electric vehicles. The number of alternative vehicles sold is growing each year. A list of sales of such vehicles in selected European countries is provided in the Table1.

Table 1. Electric car stock (BEV and PHEV) in selected European countries, 2010–2017 (in thousands)

Country	2010	2011	2012	2013	2014	2015	2016	2017
Norway	0.79	2.63	7.15	15.67	35.44	69.17	114.05	176.31
France	0.30	3.03	9.29	18.91	31.54	54.49	84.00	118.77
Germany	0.25	1.89	5.26	12.19	24.93	48.12	72.73	109.56
Netherlands	0.27	1.14	6.26	28.67	43.76	87.53	112.01	119.33
Sweden	–	0.18	1.11	2.66	7.32	15.91	29.33	49.67
Finland	–	0.06	0.24	0.47	0.93	1.59	3.29	6.34
United Kingdom	1.68	2.89	5.59	9.34	24.08	48.51	86.42	133.67

Source: own elaboration based on data from the International Energy Agency... (2018).

Based on the data in the table above, the following observations can be deduced:

1. The electric car market in Europe was born around 2010.
2. Norway is the leader in terms of the largest number of cars sold.
3. The largest increase in sales of cars from year to year was recorded in Norway.

4. The smallest increase in sales of cars from year to year was recorded in Finland.
5. Each year, there is a general increase in sales in every country.
6. The sale of electric cars is forecasted to grow for the coming years.

Certainly, it is also worth paying attention to several aspects that can affect the sales indicators in a real way. These include, for example, the level of development of the available infrastructure (charging stations) for EV's, the level of affluence of the society or available tax concessions (presented in the next paragraph). An important feature is also the use of EV's and hybrids in transport companies. The use of cost concessions (more precisely in the next paragraph) makes it easier to build an electric fleet as a tool for business owners that develop in accordance with the principle of corporate social responsibility, for example sustainable development with maintaining environmental protection. Transport companies emit significant amounts of exhaust gases into the atmosphere, which is why it is an important element of their activity to reduce bad emissions. This is also related to the low-emission economy, which is characterized by economic growth while reducing greenhouse gas emissions, mainly due to limiting the use of fossil fuels (Pilecki, 2018, p. 212). Currently, from the car fleet owner point of view, electric vehicles are not profitable, among others due to the limited range of use. In the future, technological progress is expected to improve this indicator. However, it is invariably extremely interesting, constantly monitored by transport companies, direction of development of the automotive market.

Available tax concessions related to the purchase and use of alternative-powered vehicles in selected European countries

Alternative cars are now promoted as an ecological alternative to diesel and petrol. And although we see them more and more on the road, for many drivers the price of such a vehicle is still too high. In order to develop a stable and developmental market for electric vehicles, many benefits associated with the purchase and use of these vehicles are presented. These are both law regulations (in the form of laws and norms) and economic premises (Table 2).

Table 2. Tax incentives for electric vehicles in the selected European countries

Country	Incentives
1	2
Norway	<ul style="list-style-type: none"> – no purchase/import taxes, – exemption from 25% VAT on purchase, – no annual road tax, – charges were introduced on ferries with upper limit of maximum 50% of full price, – charges on toll roads were introduced with upper limit of maximum 50% of full price, – parking fee for EVs was introduced locally with an upper limit of maximum 50% of full price, – access to bus lanes, – 50% reduced company car tax, – company car tax reduction was lowered to 40%, – fiscal compensation for scrapping of fossil vans when converting to a zero emission van, – allowing holders of driver licence class B to drive electric vans class C1 (light lorries) up to 2450 kg

1	2
France	<ul style="list-style-type: none"> – each region have the option to provide an exemption from the registration tax (either total or 50%) for alternative fuel vehicles (ie electric, hybrids, CNG, LPG, and E85), – electric vehicles and vehicles emitting less than 60 g CO₂/km are not subject to the tax on company cars, – electric and hybrid electric vehicles emitting 20 g/km or less of CO₂ benefit from a premium of € 6,000 under a bonus-malus scheme, – an incentive scheme grants an extra € 4,000 for switching an eleven year or more diesel vehicle for a new BEV (or € 2,500 in case it's a PHEV)
Germany	<ul style="list-style-type: none"> – electric vehicles are exempt from the annual circulation tax for a period of ten years from the date of their first registration, – from July 2016, the government granted an environmental bonus of € 4,000 for pure electric and fuel-cell vehicles and € 3,000 for plug-in hybrid and range-extended electric vehicles
Netherlands	<ul style="list-style-type: none"> – zero emission cars are exempt from paying registration tax, – passenger cars with zero CO₂ emissions are exempt from motor vehicle tax up to and including 2020, – zero emission cars pay the lowest percentage (4%) of the income tax on the private use of a company car
Sweden	<ul style="list-style-type: none"> – 'climate bonus' (Klimatbonus) is available for the purchase of new vehicles with CO₂ emissions of maximum 60 g/km. It ranges from SEK 60,000 for electric vehicles (BEV) with zero emission to plug-in hybrids (PHEV) with emission of 60 g/km, – electric cars and plug-in hybrids are exempted from paying annual circulation tax for five years 40% reduction is applied on company car taxation for electric cars and plug-in hybrids
Finland	<ul style="list-style-type: none"> – pure electric vehicles always pay the minimum level of the CO₂ based registration tax
United Kingdom	<ul style="list-style-type: none"> – from April 2018 until March 2021, cars that emit less than 50 g/km qualify for 100% first year writing down allowances (FYAs), – zero emission vehicles attract a zero rate of vehicle excise duty (VED), – ultra-low emissions and electric vehicles pay reduced company car tax rates

Source: own elaboration based on data from ACEA's Overview on tax incentives for electric vehicles in the EU and Norwegian EV policy on Norsk elbil forening.

The presented solutions are designed to encourage a potential client (private and enterprise) to buy an EV car. Tax concessions introduced by local governments place electric cars in a better position than vehicles with a standard internal combustion engine, both when it comes to purchasing for private persons and companies interested in building a fleet. Norway is a definite leader when it comes to a number of advantages and privileges. In addition, the legal regulations introduce minimum fees depending on the emission, and even exempt the tax on registration of the vehicle (Norway, France or the Netherlands). Entrepreneurs are also expected to be attracted by a low income tax on incomes achieved using electric cars (the Netherlands or United Kingdom). Financial subsidies are also used when replacing an old car with a diesel engine for an electric or hybrid vehicle (France). There are also a number of privileges generally used in all of the countries listed above. Electric vehicles as well as hybrids can move with lanes intended only for public transport (bus lanes). In addition, Clean Air Transport Zones are located in many European capitals for the improvement of air quality. Another bonus is the fact that EV cars can move freely in these areas without additional charges, as opposed to cars with increased emissions for which the proportional charges apply. Electric car is in many respects more attractive than a standard combustion vehicle. Both in terms of the comfort, design, driving or even failures, since the owner of such vehicle does not have to worry about troublesome oil changes or filters. One of the most important arguments for buying an electric car is also the cost of use. In the era of constantly rising costs of fuel prices, the costs of electricity needed to charge the vehicle are relatively low and can be a serious alternative. Combining benefits related to the purchase and operation of EV, this is definitely an interesting alternative for existing vehicles with a combustion drive.

Conclusions

The EV's market is developing dynamically. Despite many legal and economic conditions regarding the purchase of vehicles, every year there is a significant increase in sales, often several hundred percent. The unquestionable leaders in the development of the EV's market in Europe are those in which on the one hand, the final dates of withdrawal from the sale of cars were declared on the internal combustion engines (Great Britain, Germany, the Netherlands, Norway and France), and on the other hand, a system of incentives and tax incentives is being built to encourage potential private, institutional and business buyers to purchase. The dynamic development of fast charging and energy storage technology for the automotive industry means that new car models entering the market are characterized by an increasing range and shorter charging time. However, it should be noted that there are differences in the dynamics of EV sales growth between selected countries. Undoubtedly, it has a connection, not only with the application of restrictions on the sales of cars with traditional propulsion, but above all with the use of various tax concessions.

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Cite this article as: Jaworski, J. (2018). Electromobility development in selected European countries in the light of available tax concessions. *European Journal of Service Management*, 4 (28/2), 187–192. DOI: 10.18276/ejsm.2018.28/2-23.

REGIONAL DIFFERENTIATION OF THE SERVICE SECTOR DEVELOPMENT IN SELECTED EUROPEAN COUNTRIES

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION L80, O14, R12

KEYWORDS European countries, regional differentiation, service sector, tertiarisation

ABSTRACT The aim of the work is to assess the contemporary state of structural changes in the service sector in the basic territorial division units of France, Germany, Poland and Ukraine, with particular emphasis on the group of producer and business services considered as one of the leading factors of regional development differentiation. Very significant differences were found in the level of development and structure of regional service systems of the countries surveyed, which essentially reflect their different socio-economic experience. Attention was also paid to the presence of certain universal, typical for all considered countries, developmental regularities, which concern primarily the concentration of producer and business services in the most prosperous regions. They constitute, in each case, specific poles of growth, in which the most important developmental impulses are transferred successively to other territorial units of the country.

Introduction

Currently, in the majority of developed countries, the participation of the services sector in generating GDP and total employment exceeds 60–70% and shows a tendency to further increase. This process is determined in the source literature as tertiarisation understood primarily as a global process of infiltration of services to all other types of activity and transformation of this sector into the leading domain of socio-economic development

(Peneder, Kaniowski, Dachs, 2003). Numerous empirical studies carried out on materials from various countries (e.g. Beyers, 2005; Bryson, Rusten, 2005; Deza, López, 2014; Genaro, Melchor, 2010; Jennequin, 2008; Moyart, 2003; Skórska, 2016) underline the widespread nature of this phenomenon and its resonant influence on the development of the studied countries, as well as the special role of services for entrepreneurs in this process, referred to as producer, business, professional, advanced, knowledge-intensive etc. They are considered as a kind of driving force of national and regional production systems due to the high potential of implementing modern forms of management and organization of work, transfer of new technologies or adaptation of local enterprises to the changing conditions of production and trading (Moyart, 2003).

A natural element of the development of the services sector is its regional differentiation resulting from various kinds of geographical-historical and socio-demographic factors, the specificity of the institutional environment and external relations, dominant social beliefs and political and legal norms etc. At the same time, it should be taken into account that the very dynamic development of producer and business services observed in recent years may contribute to the increase of regional inequalities due to the specific predispositions of this type of services to focus on urban areas, especially in large cities and agglomerations (Deza, López, 2014).

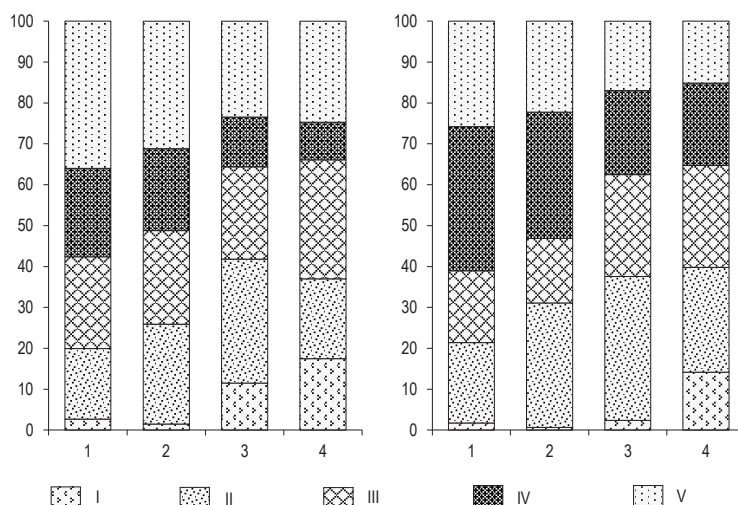
Therefore, the aim of this work is to assess the current state of structural changes of the service sector in the regions of selected European countries, with particular emphasis on the group of producer and business services considered as one of the leading factors of regional development differentiation. The study covered the basic units of the territorial division of four countries: France, Germany, Poland and Ukraine. These countries, in addition to a relatively large area and population, are characterized by a well-diversified structure of the economy. At the same time, they form a continuous latitudinal orientation line, which can be interpreted as the main European geo-economic vector, where France represents a developed market economy, Germany is an example of integration of the market economy (western part) with the transformed economy (eastern part, former GDR), Poland is a young market economy, while Ukraine is still somewhat a transforming country.

In the case of three EU countries, the material for research comes from the electronic database Eurostat (2018), while the data for Ukraine was taken from the website of the State Statistics Service of Ukraine (2018). Comparable and at the same time complete data was collected at the beginning of 2016. Regional level adopted – territorial units of the second level of NUTS in the configuration from 2013: 22 regions of France (excluding 5 overseas units), 38 administrative districts of Germany and 16 Polish voivodships. In the case of Ukraine, 25 oblasts and a city of special status – Kyiv were considered as equivalents. The analysis omits the areas currently outside the reach of the Ukrainian authorities, i.e. the Autonomous Republic of Crimea, the city of special status Sevastopol and the uncontrolled parts of the Donetska and Luhanska oblasts. The data was aggregated at the first NACE level, i.e. the section according to the PKD nomenclature. The work grouped individual sections into 5 contractual groups defined as: agriculture, forestry and fishing (section A), industry and construction (sections B–F), traditional market services (G–I sections), producer and business services (sections J–N) and public and personal services (O–U sections). In this way, service activities are co-created by the last three classes whose content generally reflects the heterogeneous structure of the modern service sector. The assessment of the development of individual activity groups is made using three basic measures: percentage share in total employment in the region, percentage share in regional GVA and GVA per 1,000 employed persons.

The location of the services sector in the overall structure of the economies under study

According to data from the World Bank (2018) in the period from the beginning of the 90s of the 20th century, France shows the most advanced tertiarisation among the countries surveyed, where services accounted for 65.5% of total employment and 62.8% of GDP in 1991. Until 2017 these values increased by 17.1 and 13.3%, respectively. In Germany, the share of services in employment in 1991 was 55%, but by 2017 it increased by 29.9%, almost as much as the value observed in France. As for the structure of GDP, the role of services increased in the discussed period from 56.3 to 61.9%. The situation in the other two countries looks different. It was not until 1996 when Poland achieved a 50% share of the services sector in GDP, and in 1999 - in employment. Ukraine, in turn, defeated this conventional border in 2001 with regard to the employment structure and in 2008 as regards the GDP indicator. Both countries, however, are characterized by significantly higher dynamics, especially in terms of employment in Poland (medium-term growth rate at 1.5%) and production in Ukraine (2.2% annually). As a consequence, in 2017 the share of the services sector in total employment in both countries approached 60%. As regards GDP, in Poland at the end of the discussed period, the relevant ratio reached 58.3%, while in Ukraine it was 50.3%. However, it is worth noting that in 2013 it was 56.3%, and its reduction in the following years is related to Ukraine's loss of Crimea and Donbas areas.

A detailed picture of the structure of the analysed economies, including the division into five groups of activities mentioned in the introduction, is illustrated in Figure 1. It is not difficult to notice that the observed structural differences essentially reflect the location of the surveyed countries on the main European geo-economic vector, and the size of these discrepancies very well represent labour productivity indicators measured by the GVA amount in relation to the number of persons employed (Table 1).



1 – France, 2 – Germany, 3 – Poland, 4 – Ukraine; I – Agriculture, forestry and fishing, II – Industry and construction, III – Traditional market services, IV – Producer and business services, V – Public and personal services.

Figure 1. Structure of the economy of the surveyed countries by employment (on the left) and GVA (on the right), at the beginning of 2016 (%)

Source: own study based on Eurostat (2018); State Statistics Service of Ukraine (2018).

Table 1. Labour productivity in particular activity groups of the countries surveyed at the beginning of 2016 (EUR million/1,000 employees)

Country	Agriculture, forestry and fishing	Industry and construction	Traditional market services	Producer and business services	Public and personal services
France	46.5	81.5	56.1	116.5	51.3
Germany	27.2	79.1	43.6	97.8	45.2
Poland	5.0	27.8	26.4	40.2	17.3
Ukraine*	3.4	5.5	3.6	9.3	2.6

* Calculated in accordance with the annual average exchange rate of the hryvnia to the euro, which in 2015 was UAH 2422,87 for 100 euros.

Source: own study based on Eurostat (2018); State Statistics Service of Ukraine (2018).

Apart from the detailed analysis of each of the separated classes, one should pay attention to the unique position of the group of producer and business services. Despite the lowest employment rates (compared to two other service sectors), this type of services plays the most important role in creating the structure of GVA in France and Germany, contributing about 1/3 to the total GVA. As regards Poland and Ukraine, this group of services provides about 20% of the total value of final goods and services, giving way to leading positions in the industrial sector and traditional market services. At the same time, in each of the surveyed countries, the highest labor productivity rates are associated with producer and business services, although their values in the case of Poland and especially Ukraine indicate a huge distance to Western countries.

Regional differentiation of the development of the services sector

While the data at the level of entire countries allow to build their fairly clear hierarchies with regard to the level of tertiarisation of the economy, the image at the regional level is more complex. In the aggregate list, the highest development rates of service activities are mainly related to the French and, to a lesser extent, German regions. In turn, the lowest indicators are mainly characteristic for the Ukrainian regions and, in part, also for the Polish regions. The indicated regularity is also reflected in the mean values calculated separately for each of the analysed countries (Table 2). However, in this case, it seems more important to draw attention to interregional differences within individual countries that are visible in the coefficient of variation. Each time, the position of Ukraine stands out in a special way, where the coefficient is an order of magnitude higher than in other countries. In the case of the efficiency index, it assumes a value of 59.9%, which corresponds to almost six times higher value of a given index in Kyiv in relation to its size in the Chernivetska oblast.

It is easy to notice the leading positions of the capital regions of particular countries, in which the maximum values of the analysed indicators are recorded consistently (with the exception of the Germany). The importance of these regions is highlighted in particular by their share in the domestic GVA volumes generated in services. In the case of Kyiv, it is a value of 34%, while in the second largest Dnipropetrovsk oblast it is only 7.5%. The situation is similar in France, where the capital region of Île-de-France provides 33.6% of the total value of services, ahead of the second one, the region of Rhône-Alpes by 24,4 percentage points, and in Poland, where the share of Mazowieckie voivodeship is 25.5% is 2.3 times higher than the index of the second Silesian voivodeship. The situation is different in Germany, where Berlin with the value of 5% occupies only the 6th position in the country, giving way to Stuttgart, Köln, Darmstadt, Düsseldorf and Oberbayern. The share of each of these regions ranges from 5.2 to 8%.

Table 2. Basic descriptive statistics of the development of the services sector in the surveyed countries at the beginning of 2016 in the regional cross-section

Country	Mean	SD	CV	Max	Min	Max/Min
Share in employment, %						
France	77.1	3.8	5.0	Île de France (88.1)	Franche-Comté (72.3)	1.2
Germany	72.9	6.0	8.2	Berlin (88.1)	Niederbayern (63.2)	1.4
Poland	57.0	4.4	7.7	Mazowieckie (66.1)	Świętokrzyskie (49.3)	1.3
Ukraine	60.9	7.5	12.4	Kyiv (87.8)	Luhanska (53.0)	1.7
Share in GVA, %						
France	74.6	5.0	6.7	Île de France (86.8)	Franche-Comté (67.9)	1.3
Germany	67.6	6.9	10.3	Berlin (84.5)	Stuttgart (55.5)	1.5
Poland	60.9	4.4	7.3	Mazowieckie (71.6)	Lubuskie (55.2)	1.3
Ukraine	53.4	11.2	20.9	Kyiv (88.2)	Poltavska (32.7)	2.7
GVA per number of employees, million EUR/1,000 people						
France	63.1	7.3	11.5	Île de France (94.3)	Champagne-Ardenne (58.8)	1.6
Germany	56.2	7.0	12.4	Hamburg (76.6)	Chemnitz (46.5)	1.6
Poland	23.5	4.8	20.5	Mazowieckie (33.5)	Lubelskie (17.2)	2.0
Ukraine*	3.2	1.9	59.9	Kyiv (12.0)	Chernivetska (2.0)	6.0

* Calculated in accordance with the annual average exchange rate of the hryvnia to the euro.

Source: own study based on Eurostat (2018); State Statistics Service of Ukraine (2018).

Considering the structure of the services sector divided into three groups (traditional market services, producer and business services as well as public and personal services), it is necessary to state slightly different patterns of the general layout of these groups in individual countries (Table 3). In the case of France and Germany, in almost

Table 3. Selected descriptive statistics of the development of particular groups of service activities in the surveyed countries at the beginning of 2016 in the regional cross-section

Country	Traditional market services			Producer and business services			Public and personal services		
	mean	SD	CV	mean	SD	CV	mean	SD	CV
Share in employment, %									
France	28.3	1.5	5.2	23.1	4.1	18.0	48.6	4.0	8.3
Germany	31.5	2.3	7.3	25.2	4.7	18.6	43.3	3.7	8.5
Poland	39.6	2.2	5.7	18.4	4.7	25.5	42.0	3.7	8.8
Ukraine	46.6	3.4	7.4	11.8	5.3	45.1	41.6	5.0	12.0
Share in GVA, %									
France	22.8	2.0	8.8	38.3	5.4	14.2	38.9	5.1	13.0
Germany	23.3	2.7	11.6	41.8	5.4	13.0	34.9	5.4	15.4
Poland	40.8	2.5	6.1	28.4	5.7	20.0	30.8	4.5	14.6
Ukraine	38.3	6.9	17.9	27.6	4.8	17.5	34.1	7.9	23.1
GVA per number of employees, million EUR/1,000 people									
France	50.8	6.5	12.8	105.2	10.3	9.8	50.1	3.0	6.0
Germany	41.8	7.5	18.0	94.3	13.5	14.4	44.6	2.2	5.0
Poland	24.3	5.4	22.2	36.7	6.8	18.5	16.9	2.4	13.9
Ukraine	2.8	2.4	86.2	7.4	2.1	27.9	2.4	0.7	27.8

Source: own study based on Eurostat (2018); State Statistics Service of Ukraine (2018).

all regions, the largest share in terms of employment is occupied by public and personal services, while the lowest values are related to producer and business services. As far as GVA is concerned, in both countries' regions are found a leading position of public and personal services (in both cases these are mainly north-eastern regions), as well as producer and business (west and south of both countries), while the lowest values consistently are associated with traditional market services. The situation is different in Poland, where the regions with the leading position of public and personal services (eastern and western voivodships) predominate in terms of employment, but the whole central line – from the Pomorskie voivodeship to Śląskie and Małopolskie voivodeships – is characterized by the advantage of traditional market services. The last ones become a dominant group when the GVA indicator is taken as the basis. When it comes to Ukraine, the role of traditional market services is the most important in terms of employment and GVA in the vast majority of regions. In both countries, Poland and especially Ukraine, almost all regions have the weakest positions of producer and business services. However, they are characterized by the highest values in all regions of the countries surveyed in terms of labour productivity indicators.

Producer and business services on a regional basis

As already mentioned, services related to the servicing of production processes and provided mainly to entrepreneurs are increasingly becoming a key factor for socio-economic development and regional competitiveness. This means that despite very large differences between the countries surveyed in the values of the analysed indicators, it is necessary to assume the existence of certain universal (typical for all considered countries) spatial regularities in the development of a given group of services. In order to capture them, the relevant indicators have been converted into indexes by referring values from each region to the average in a given country. The obtained values were used to group regions, assigning them first to two different classes designated as type A (when at least 2 of the 3 indexes were above the average for a given country) and type B (if at least 2 of the 3 indexes were below the average in country). Subsequently, in each case, sub-types 1 and 2 were separated, taking as a criterion the size of one standard deviation (Figure 2).

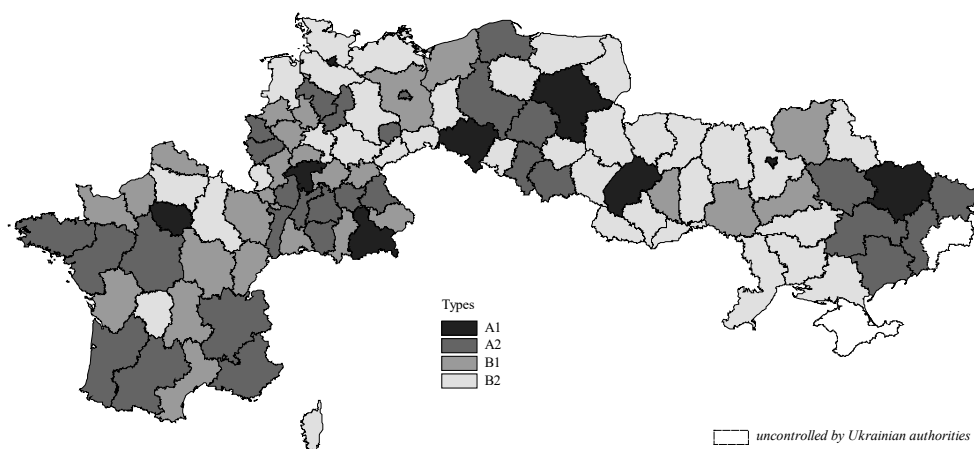


Figure 2. Grouping of regions of the studied countries according to the level of development of producer and business services

Source: own study based on Eurostat (2018); State Statistics Service of Ukraine (2018).

Regions belonging to type A1 are units with a high level of development of producer and business services in each of the countries discussed. They should be considered as specific growth poles, characterized by a strong competitive position and the most dynamic development pace. It is these regions that stand out in terms of the level of modernization of the economy, the innovation potential and the multiple and intense interregional and international links, while at the same time creating appropriate developmental patterns, transferred successively to other units of the country. In three cases, these are the capital regions (Île de France in France, the Mazowieckie voivodeship in Poland and Kyiv in Ukraine), which strongly dominate the space of their countries, providing 34.5–44.9% of the value of relevant services. The Dolnośląskie voivodeship in Poland and the Lvivska and Kharkivska oblasts in Ukraine should be regarded as small (auxiliary) poles, which have a chance to develop fully only with time. What concerns Germany, then here should be talked about the multipolar model, because all three centres (Oberbayern, Darmstadt and Hamburg) are characterized by comparable indicators of development of the discussed group of services.

A2 and B1 type regions characterized by the development of producer and business services at a level close to the average in a given country are quite numerous represented, not rarely creating larger continuous areas. Usually, these are regions that are fairly well developed in terms of industry (especially those classified as A2). It can therefore be assumed that the presence of a potential consumer turned out to be one of the most important factors stimulating the development of relevant services here. This does not mean, of course, that the creation of many enterprises could not be related to the availability of good infrastructure for running a business. Finally, the last, type B2, associated with the lowest level of development of producer and business services and occurring particularly in Ukraine, is represented mainly by the poorest in socio-economic, mostly agrarian regions. Although in other countries there are less areas of this type, they are quite typical and most often referred to as problematic: eastern regions of Poland (the so-called Poland B), the greater part of the territory of the former GDR in Germany or the least populated Corsica and Limousin in France.

Conclusions

The conducted research has shown that the process of tertiarisation now affects all analysed countries and has a significant impact on economic processes taking place in their regional units. However, the level of advancement of this process is very diverse and manifests itself in two basic dimensions. The first of these is the country's location on the main European geo-economic vector. Accordingly, the French and German regions are characterized by significantly higher development rates and a more modern structure of the services sector in comparison with the Polish and especially Ukrainian regions.

The second dimension is related to the character and experience of individual regions within each country separately. Urbanized regions with a more diversified structure of the economy, in particular well-developed industrial processing, turn out to be much better prepared to adopt modern service activities. Thanks to the development of producer and business services, they distance themselves from other regions, especially those of an agricultural nature. In this way regional disparities increase, which is particularly evident in the example of Ukraine, where, unlike EU countries, there are no such extensive programs aimed at increasing regional economic and social cohesion.

One should also emphasize the perspective role of prosperous regions in terms of the development of services, especially producer and business. By taking the role of growth poles, they will promote the spread of positive development impulses to neighbouring regions, thus contributing to the overall civilization progress of the country.

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Cite this article as: Kavetsky, I. (2018). Regional differentiation of the service sector development in selected European countries. *European Journal of Service Management*, 4 (28/2), 193–200. DOI: 10.18276/ejsm.2018.28/2-24.

SELECTED METHODOLOGICAL ASPECTS OF MULTIDIMENSIONAL ANALYSES OF REGIONAL SPACE

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION C19, O18, R59

KEYWORDS spatial economy, methodology, statistical analysis

ABSTRACT The substantial research potential of already existing procedures, their development and proposing of new alternatives, as well as practical usability of taxonomic methods result in practically infinite possibilities in terms of their application in multidimensional analyses of regional space. They may play a significant part in the description, assessment and forecasting of development of individual regions. Having the knowledge, skills and competences, nowadays researchers are able to take advantage of guidance available in literature of the subject and the improving computer software. Nevertheless, due to lack of versatile solutions, every study has to be approached individually, making well thought-out decisions, often arbitrarily. The aim of this paper is to systematize certain methodological dilemma with regard to multidimensional analyses of regional space. The scientific discussion conducted makes it possible to answer questions of who and what is the subject of research of this type and to determine the characteristics of the most frequently undertaken research tasks.

Introduction

Most categories in economy are characterized by spatial diversification, and to make the right socio-economic decisions, it is necessary to get familiar with this phenomenon. Quantitative methods turn out to be of great assistance in this regard. They are widely used in empirical research today, including regional research projects, and their usability is unquestionable. They are widely used in socio-economic analyses and diagnoses, making the

description and assessment of the way that variables tend to change in time and space substantially more accurate. Therefore, apart from theoretical considerations, which are of great importance, it is recommendable to master the skill of effective use of statistical tools and techniques, which broaden the scope of scientific speculations, allowing for a complex and objective analysis of economic phenomena. These may be simple, describable using a single variable, or complex, requiring at least two – and usually more – variables. The methodology of analysis of simple phenomena is well developed today; multi-dimensional analysis, which is much more complex, and thus more difficult and less developed, has nevertheless been subject to extensive research in the last several decades. The present study puts emphasis on methodological aspects of analyses of this type, associated with determination of the subject of research, quantification of the research field and the specific characteristics of the basic research tasks.

Determination of the subject of research

The basic unit in statistical research is an object. In multi-dimensional analyses of regional space, it is the region. The interdisciplinary nature of this concept, which has been studied by representatives of many research disciplines, and at the same time the differences stemming from characteristics of economy, regional economics and local government finances, as well as economic geography, spatial economy, sociology, ethnography and other fields lead to development of various approaches to the idea. Etymologically, the term comes from the Latin word *regio, regionis*, which can be translated as 'space', or, more precisely, a direction that delineates a certain area, and as a result of general acceptance for this definition, the word "region" is today used in many countries and languages. In economic literature, the term pertains to certain polarized socio-economic and political-administrative fragments of space, which in terms of their territory fall below the national, but above the local level (Cooke, Leydesdorff, 2006, p. 6). In the vocabulary of the European union, the space of member states has been divided, using the statistical criteria, into the so-called NUTS, distinguishing five individual levels. In Poland, NUTS 1 is equivalent to a macro region, NUTS 2 – to a province, NUTS 3 refers to subregions, NUTS 4 – to districts and cities with district rights, while NUTS 5 pertains to commune; at the same time, the former three levels are referred to as being regional, and the latter two – as being local. The basic regional level, which serves as a basis for the EU regional policy, is nevertheless the second degree domestic administrative unit (NUTS 2) (Korenik, 1999, p. 53; Strahl, 2005, p. 18; Paradysz, 2012, p. 191), which is why in Poland a region is most often perceived as equivalent to a province.

Quantification of the research area

Spatial economy, innovativeness of regions, socio-economic development, competitiveness of regions, regional development – these are just a few of terms that are common today, although they have not been clearly defined, but interpreted implicitly and understood intuitively. Multidimensional phenomena of this kind are complex characteristics, for which a far-reaching consensus with regard to their meaning is assumed. Due to lack of precision and ambiguity of meaning of such terms, despite many attempts made to define them precisely, in everyday practice they function as conventional expressions, lacking, however, any clearly specified measurement methods. The basic problem is selection of specific diagnostic characteristics that would allow for quantification of the research area. Abstractive concepts and general identifiers of the described multidimensional categories require specification that would consist first of identification and then of use of a carefully selected set of measures, and there are no widely accepted, universal solutions in this regard. The complex nature of socio-economic phenomena that emerge in

regional space requires application of various measures, which should reflect all of the key characteristics of the phenomenon being analysed; an additional problem here is posed by difficulties due to lack or limited availability of specific statistical data. There is a generally acceptable notion of the information potential in this regard, which undoubtedly limits the complex description and assessment of regional space. Appropriate measurement requires a careful selection of the set of specific indicators, which should take into account the spatial and temporal scope, as well as the objective of analyses or diagnoses undertaken, and this issue has not been solved unambiguously so far; in empirical research on the subject, the sets of measures applied constitute a compromise between substantive premises and information capabilities and usually result from an arbitrary approach of the research team (Strahl, 2006, pp. 26–32). In other words, a long tradition of compromise between using the already gathered and available statistical data and indicators, which would be perfect for achievement of objective of a specific research project leads to a situation, in which in sets of identifiers for benchmark analyses, the sets of measures are selected according to the principle of the “best possible” choice (Graversen, Siune, 2008, p. 3). S. Wydmus has also underlined that in research of this type, we deal with a number of simplifications and generalizations, which stem from far-reaching synthesis of the multidimensional issues, mostly in the territorial dimension, as application of the same list of diagnostic characteristics applicable to different fields means that we assume that every country or region analysed is characterized by the same specific nature of development or strategy of decisions made despite the differences in their conditions (Wydmus, 1984, pp. 38–39). One should therefore understand that the final results of multidimensional benchmark analyses are determined mainly – apart from the statistical methods discussed further – by the list of variables to be applied in the research project. In many empirical research projects dedicated to the issue, the set of diagnostic variables is limited to a short analysis of characteristics based on substantive premises, or the mode of selection of these characteristics is left without much debate. Apart from substantive analysis of these characteristics, it seems reasonable at least to take into account the postulate of discrimination of features by applying the variability coefficient to elimination of quasi-constant variables. As the subsequent step, it is possible to apply a specific algorithm of formal procedures for formal and statistical selection with regard to the choice of variables proposed. Methods and techniques used at this stage have been widely described in literature, including such recommendable positions in this regard as the works of Z. Hellwig (1981), K. Jajuga (1993), M. Walesiak and E. Gatnar (2004), W. Pluta (1986), T. Grabiński, S. Wydmus and A. Zelas (1982, 1989), E. Nowak (1984, 1990), J. Pocięcha, B. Podolec, A. Sokołowski and K. Zając (1988), as well as A. Malina (2004). One has to realize, however, that there is no simple answer to the question whether in selection of the final variables we should apply the criterion of variability or correlation, or perhaps introduce diversified weights, expressing the relative importance of variables, or apply other procedures, allowing, for instance, for grouping of characteristics or selection of their representatives. Potential weighing of features constitutes a separate problem and yet another methodological dilemma. In literature, there have been certain proposals in this regard (Grabiński, 1992, pp. 34–35), and it is also possible to seek expert opinions. Nevertheless, the issue has not been clearly resolved and no generally acceptable procedure has been developed. Therefore, in practice, most researchers attach the same importance to each feature, applying equal weights (Sokołowski, 1985, p. 48).

It should therefore be underlined that every case has to be assessed individually. Using various techniques and tools for selection of the initial variables, we may obtain different sets of characteristics of the objects being analysed. This is why strictly substantive selection is so important in searching for the ultimate list of diagnostic variables. In-depth recognition of the phenomenon being analysed, as well as familiarity with the achievements

made so far, own reflections and expert opinions, common sense or even experience in research of this type, combined with intuition, are of utmost importance.

The specific nature of basic research tasks

As the aim of regional research is usually description and assessment of sets of object, the main two research tasks, presented in many research papers, are assumed to consist of grouping and linear ordering. The former allows for placing the statistical data in order, and it is limited to dividing the set of objects into groups of units that are similar in terms of the features applied to describe the phenomenon being examined. The second research task – linear ordering – can be brought down to putting the objects being analysed in order according to a specific criterion, which makes it possible to assign them a certain hierarchy. For the purpose of valuation of the objects being compared, an appropriate synthetic measure is applied (Zeliaś, 1991, p. 76; Czyżycki, 2018, p. 207). The substantial research potential of the already developed procedures, their development or proposing new ones creates practically unlimited possibilities of applications, particularly in regional research. In a classical taxonomic approach, multidimensional observations of the diagnostic variables applied in the objects examined allow for spatial analysis from a static (cross-cutting) perspective. Introduction of the additional dimension of time in dynamic research, that is, on the basis of multidimensional observations coming from various points or periods in time allows us to examine a complex issue of this kind from the perspective of the so-called data cube. This has been indicated, among others, by K. Jajuga (1987, pp. 14–16), M. Walesiak (1993, pp. 30–31) and J. Hozer (1987, p. 14). In terms of geometry, this figure can be imagined as a cross-sectional/temporal multidimensional series in a three-dimensional coordinate system, in which individual axes present dimensions of objects, variables and time units, respectively. Space created by sets of:

- objects $Y = \{y_1, y_2, \dots, y_n\}$,
- characteristics $X = \{x_1, x_2, \dots, x_k\}$,
- time units (moments or periods) $T = \{t_1, t_2, \dots, t_N\}$,

and their multi-aspect analysis, enabled by the data cube, results in an enormous field of applicability of the multi-dimensional statistical analysis methods. Taxonomic issues can then be of simple nature (including the already mentioned classical issue of taxonomy, or grouping of multi-characteristics objects in a time unit), complex (combining two simple problems, allowing for analysis of e.g. time-objects or time-characteristics) or complex (encompassing a total examination of objects, characteristics and time units, taking into account the so-called time-characteristic-objects) (Sokołowski, 1982, pp. 65–71). Thus, a three-dimensional data cube can be used for an examination of:

- a) an overall approach – encompassing the entire data cube for n objects described using k variables in T time units;
- b) partial approaches – from the perspective of: object-variable, where n objects are considered from the perspective of k variables in a single given time unit; from the perspective of: time-variable, where the study is focused on a single object with regard to k variables over T time units; from the perspective of: object-time, where n objects are described in T periods from the perspective of a single specific variable (this is an issue of single-dimensional analysis, not applicable to complex phenomena).

Nevertheless, it is necessary to realize that there is no single answer to the question, which procedure is right for a specific empirical research project. Therefore, to be able to use specific taxonomic methods to group and

place in order a linear set of objects, the researcher must have the appropriate knowledge and skill in this regard. In classification and linear hierarchy of sets of objects, despite numerous methodological guidelines in specialist literature, which has grown very rich, at least some of the decision-making problems have not been clearly solved and require a well thought out, responsible decision, made arbitrarily by the research leader.

Conclusions

The multitude of theoretical research papers, as well as empirical works, indicates clearly the practical usability of multidimensional analyses of regional space. As a result of application of computer software, which is available nowadays, it is relatively easy to use the appropriate statistical method, provided that the researcher is methodically and substantively familiar with the phenomenon being described. A conscious researcher must make well-thought-out decisions and know the level of significance of results obtained when using specific tools. In this article, by pointing out to the selected methodological aspects, the authors have put in order and partially solved the emerging dilemmas with regard to definition of the object of research, quantification of the research area and the specific nature of the research tasks undertaken. While certain problems have been explained, others have been merely indicated and they may serve as a starting point for scientific debate. Undoubtedly, research in this area should be continued.

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Cite this article as: Klóska, R. (2018). Selected methodological aspects of multidimensional analyses of regional space. *European Journal of Service Management*, 4 (28/2), 201–206. DOI: 10.18276/ejsm.2018.28/2-25.

FINANCING OF MUNICIPAL INVESTMENT WITHIN SUSTAINABLE DEVELOPMENT FRAMEWORK

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION F42, F63, H41, H87

KEYWORDS public finance, self-government unit, sustainable development

ABSTRACT

The current policies of the territorial self-government ought to take into consideration challenges resulting from constantly changing global development processes. Adoption of modern assumptions and their consequent implementation is a pre-condition for development of the territorial self-government at the local level. It also gives ground for assumptions that implementation of the objectives set at the national or the EU levels will be successful. There is also a chance that the realization of sustainable development objectives will be getting more acceptance from the society. The concept of the sustainable development, comprising the natural environment and its resources, economic cooperation, and reinforcing social ties, is the best way to make use of the development potential. The aim of the paper is to stress the importance of development planning at the local level and to assess possibilities for communal investment in the context of sustainable development implementation. The objective of the paper is also to assess opportunities of capital raising for investment in local communities, which has a large impact on the living standard of the population. The analysis includes the scope and main directions of the self-governmental investment. The time frame covers the 2010–2016 period. The empiric material has been supplied by The Bank for Local Data of the Central Statistical Office (the “GUS”) and from analyses made by the Ministry of Finance.

Sustainable development — from world to territorial approach

In 1987, the Bruntland Commission published its report: “Our Common Future”, in an effort to link the issues of economic development and environmental stability. In doing so, this report provided the oft – cited definition of sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations General Assembly, 1987, p. 43). Albeit somewhat

vague, this concept of sustainable development aims to maintain economic advancement and progress while protecting the long-term value of the environment; it “provides a framework for the integration of environment policies and development strategies” (United Nations General Assembly, 1987).

At the EU level, an important role in the implementation of sustainable development is played by the Strategy for Sustainable Development of the European Union, approved in May 2001 by the European Council in Gothenburg, and then renewed in June 2006 (Council of the European Union, 2006). It specifies the desired directions of social, economic and environmental changes in the long term, as well as how to achieve them.

Sustainable development occurs one of the most important challenges of the modern world, perceived also as a key trend of global environmental policy and socio-economic development (Famielec, 2009, pp. 39–41; European Union, 2013, p. 30).

The broad definition, proposed by the Brundtland Commission, does not limit the scope of sustainability. The explanation does, however, touch on the importance of intergenerational equity. This concept of conserving resources for future generations is one of the major features that distinguish sustainable development policy from traditional environmental policy, which also seeks to internalize the externalities of environmental degradation. The overall goal of sustainable development (SD) is the long-term stability of the economy and environment; this is only achievable through the integration and acknowledgement of economic, environmental, and social concerns throughout the decision making process.

The key principle of sustainable development underlying all others is the integration of environmental, social, and economic concerns into all aspects of decision making. All other principles in the SD framework have integrated decision making at their core (Dernbach, 2003; Stoddart, 2011). It is this deeply fixed concept of integration that distinguishes sustainability from other forms of policy.

The overarching objective of sustainable development is to integrate economic, social and environmental policies at the local, regional and global levels (Ministerstwo Środowiska, 1999, pp. 15–17; Fiedor, 2013, pp. 10–11; Ghosh, Goswami, 2014). Implementation of sustainable development is related to a fundamental change in how to proceed, taking into account the integrated interdisciplinary approach (Urbaniec, Halavach, 2008; Borys, 2011, pp. 75–81).

All the 17 Sustainable Development Goals (SDGs) are very comprehensive in their scope and cover all policy domains that are critical for sustainable growth and development. They are also strongly interconnected (meaning that progress in one area generates positive spillovers in other domains) and require both coherence in policy design and implementation, and multi-stakeholder engagement to reach standards in a shared responsibilities across multiple actors. The implementation of SDGs should therefore be considered in a systemic way and rely on a whole-of-society approach for citizens to fully reap expected benefits.

Cities and regions have a crucial role to play in SDGs achievements although the 2030 Agenda was not designed specifically *for* or *by* them. Indeed, most underlying policies and investments are a shared responsibility across levels of government and it is estimated that 65% of the 169 targets underlying the 17 SDGs will not be reached without proper engagement of and coordination with local and regional governments (UN..., 2016). For example, subnational governments were responsible for 59.3% of total public investment in 2015 throughout the OECD area and for almost 40% worldwide; most of such investments related to infrastructure for basic services over which cities and/or regions have core competencies and which are sometimes the subject of dedicated SDGs

(e.g. education, health, social infrastructure, drinking water, sanitation, solid waste management, transports, and housing).

This is why there is the need to support interested cities and regions in “localising” the SDGs, meaning tailoring them to place-based contexts, understanding how they translate in their territorial specificities and realities, measuring distance from national average and peer cities or regions, and providing tailored guidance to mainstream the SDG lens into territorial planning, strategy setting and policy making. It is expected that the outcomes of the project can help cities and regions “(re)think” their approach to sustainability and well-being at the scale that matters the most.

A territorial approach to SDGs can also support the allocation and targeting of resources (fiscal, human, technical/infrastructure, etc.) to the most vulnerable groups and/or lagging regions. It can help improve the participation of local and regional authorities, as well as of grassroots communities for greater accountability and outcomes in the achievement of SDGs (OECD, 2017).

Specifics of municipal investment and its importance for stimulating local development

Municipal investments are one of the most important elements of the local development, which influence local competitiveness, improve communal and social services and enhance the local standard of living. Realization of municipal investment results in an increase of municipal property, lifting of the service level (in both, qualitative and quantitative aspects), as well as it creates favorable conditions for new business and residential locations. Regardless a variety of interpretations, the major goal of the local community investment remains to be gradual improvement of living standards of the local population and meeting the public needs (Sadowska, 2017, p. 139; Sadowska, Starosta-Grala, Ankudo-Jankowska, 2017, p. 41–51). Local community investments become this way an instrument of influencing the local socio-economic development and securing the proper treatment of the natural environment.

The common feature of all self-governmental investments is a necessity to engage some capital, usually for a relatively long period, which brings about uncertainty and financial risk for the ventures undertaken. Municipal investment is perceived as ; technical instruments for stimulating sustainable development (“integrated order”). Additionally, the realization of the goals has impact on the overall improvement of the natural environment (“ecological order”) and on the standard of living of the population (“social order”), and at the same time on economic development of the community (“economic order”) (Szaja, 2011, pp. 100–107).

Decisions made by local authorities about implementation of numerous investments are vital for the evolving position of the self-government – from the traditional administrative role, up to the the modern creative subject in its area of activity. For self-government authorities that are responsible for the local development, the investment is the most eligible way for capital allocation because of obvious future benefits, i.a.: in creation of new jobs. Municipal investment does not only benefit the investing entity, but it has positive influence on the neighbouring communities, as well as on the whole regions. The above results in bringing various measurable benefits, such as inflow of new technologies, reduced unemployment, benefits of scale, more effective allocation of resources, etc.

Assessment of financial capabilities for investment in local communities in the context of sustainable development

Sustainable development and the local community level is conditioned by external factors, regional, national and the European Union policies, as well as by internal factors (natural, economic and human resources and effectiveness of their application). Authorities of the three above mentioned administration levels should aim at maintaining the well balanced and sustainable development for the present generation, having also in mind creation of similar opportunities for future generations (Korenik, 2011, p. 74–75). One of the main assumptions for sustainable local development is improvement of living standards in a particular area, achieved with the application of various tools and actions by local authorities which are able to maintain the necessary proportions within economic, social and environmental dimensions.

Development opportunities of local communities depend largely on investment, especially in infrastructure which has a direct impact on the living standards, improvement of natural environment as well as on conditions for investment. Underinvestment in the socio-economic infrastructure can be a major hindrance for development. Moreover, effective development policies are conditioned by availability of financial resources, so present day self-governments meet the challenge of fundraising for realization of investment projects which will determine their further development. Limited financing can make a considerable obstacle for implementation of the sustainable development concept at the local level.

One of the basic factors influencing current and investment decision is the revenue per capita which mirrors the development potential of the individual entity. Taking into consideration particular types of local communities, there can be noticed a strong differentiation of the revenue potential according to character of the area, being either city or rural. Towns based on the county statute feature the highest total and per capita income rates (Table 1). On the other hand, rural communities and those of the mixed city/rural character) feature relatively low income potential.

Table 1. Total revenues and revenues per capita – according to the community type in 2010 and in 2016 (PLN)

Type of income	City borough	Towns based on county statute	Mixed character borough (rural/city)	Rural borough
2010				
Total income <i>per capita</i>	2,654.4	4,264.6	2,733.3	2,922.2
Own income <i>per capita</i>	1,560.5	2,713.3	1,270.9	1,048.1
2016				
Total income <i>per capita</i>	3,803.0	5,899.9	3,896.0	4,058.8
Own income <i>per capita</i>	2,098.7	3,636.4	1,779.5	1,532.7

Source: own compilation based on the Central Statistical Office (2018).

Revenue potential of the Polish local communities shows strong regional differentiation. The weakest revenue potential appeared in the local communities of Opolskie region, where the local community revenue in 2016 accounted for only 83% of the national average. The richest were the local communities of Mazowieckie region, where the

average per capita income (PLN 5,700) accounted for 124% of the national average (PLN 3,823). Own income of local communities shows even larger disproportions according to the region. The lowest own income appeared in the communities of Podkarpackie region (64% of the national average). The highest financial independence featured the local communities of Mazowieckie region – PLN 3,460, which made 146 of the national average. High own revenue potential characterized the communities of Dolnośląskie (Lower Silesia) and Zachodniopomorskie (Western Pomerania) regions.

Table 2. Per capita income in all regions compared to the national average in 2010 and 2016 (%)

Regions (voivodship)	Total per capita income		Own per capita income
	2010	2016	2010
Polska	100.0	100.0	100.0
Dolnośląskie	103.2	100.2	119.7
Kujawsko-Pomorskie	93.8	97.3	87.2
Lubelskie	88.0	88.6	60.6
Lubuskie	91.6	91.7	81.4
Łódzkie	92.6	97.4	93.2
Małopolskie	99.3	97.3	86.3
Mazowieckie	122.7	124.3	150.4
Opolskie	87.1	83.4	82.5
Podkarpackie	95.1	87.5	62.6
Podlaskie	97.4	94.0	76.1
Pomorskie	107.9	107.4	113.3
Śląskie	100.1	98.0	112.5
Świętokrzyskie	97.3	87.2	72.3
Warmińsko-Mazurskie	94.1	94.6	76.6
Wielkopolskie	91.8	95.9	95.6
Zachodniopomorskie	93.7	102.1	97.4

Local communities together with towns with country statute

Source: own compilation based on the Central Statistical Office (2018).

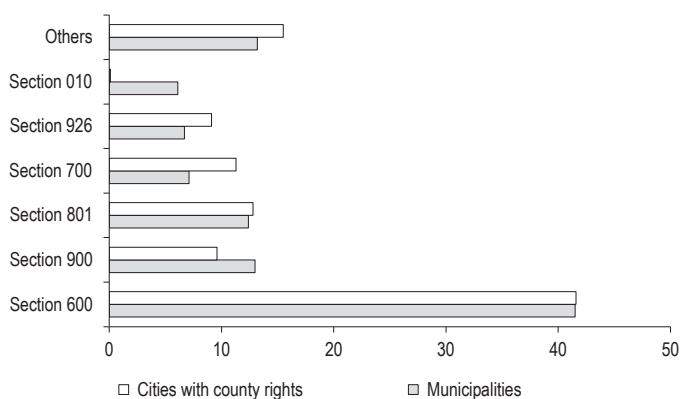
Operational surplus is a particularly important category when assessing financial capacity for investment made by local communities. The surplus mirrors the scope of investment and the cost, but also the commune's investment potential and credit rating. The capability to invest differed according to geographic location, with Eastern regions having below average capabilities, (see Table 3). The administrative units with the lowest ration included the communities of Warmińsko-Mazurskie, Lubelskie and Świętokrzyskie. It needs to be noted that in the period analysed (2010–2016), the size of the operational surplus mirrored the level of the local community investment. The correlation was noticeable at the both, regional and local community levels. The drop of investment by the local communities was particularly visible in 2016.

Table 3. Operational result and investment expenditure in regions in 2010 and 2016 (%)

Region (voivodship)	Operational surplus in relation to total income			Investment expenditure in relation to total expenditure	
	2010	2013	2016	2010	2013
Polska	5.7	8.0	9.4	23.4	16.8
Dolnośląskie	3.7	8.3	8.5	24.3	16.4
Kujawsko-Pomorskie	5.8	8.2	9.6	21.8	18.4
Lubelskie	3.4	7.0	7.8	22.9	18.3
Lubuskie	2.4	6.7	8.9	26.5	11.7
Łódzkie	5.8	7.7	9.3	22.0	18.4
Małopolskie	6.3	8.5	8.5	21.2	14.9
Mazowieckie	6.2	8.4	10.0	22.5	15.9
Opolskie	4.0	7.4	7.6	22.2	13.6
Podkarpackie	4.5	6.9	8.9	23.8	18.0
Podlaskie	5.7	8.4	10.5	29.9	18.6
Pomorskie	7.4	7.5	10.1	25.3	19.6
Śląskie	7.4	7.5	9.1	21.6	18.8
Świętokrzyskie	4.4	8.2	8.5	26.7	16.5
Warmińsko-Mazurskie	2.8	6.4	8.6	26.4	14.5
Wielkopolskie	7.2	9.5	11.7	23.9	15.1
Zachodniopomorskie	5.8	7.8	9.5	22.4	16.8

Local communities together with towns with country statute.

Source: own compilation based on the Central Statistical Office (2018).



Section 600 – Transportation and Communications, Section 801 – Education, Section 900 – Utilities and Environment Protection, Section 700 – Housing, Section 926 – Physical Education, Section 010 – Agriculture.

Figure 1. Structure of investment expenditure of local communities and towns with county statute in some chosen sections in 2016 (%)

Source: own compilation based on: GUS (2017), appendix B3, tables: 5 and 15.

Most resources were applied by communes and towns with county statute into development of transport infrastructure – 41.5% of all investment expenditure, 13% of the expenditure covered the needs connected with utilities and natural environment protection. Investments on education and housing were also ranked high among all items. All the above priorities make important fields for investment and support the local economic activity, at the same time upgrading the living standards of the population and the chances for sustainable development.

Conclusions

Conditions for a sustainable local development can be assessed basing on capability of financing the development activity of local communities. Important factors which make limitations for the sustainable development include inadequate and territorially diversified revenues of local communities, and also their own low income potential. The drop in the value of local community investment in realization is particularly worrisome. The main directions of the self-governmental investment include major assumptions for the sustainable development of the local communities. They are, nonetheless, determined by the local socio-economic needs and on the other hand, by financial capability of the entities in question.

It needs to be indicated that the investment activity of local communities based on the assumptions for sustainable development should follow well planned actions of local authorities. Taking investment activities concentrated on achieving realistic goals can bring more benefit than chaotic, ad hoc actions. Concentration of actions and resources on well selected areas should contribute into reaching cohesive goals in the areas of economy, social development and ecology, thus implementing the concept of the sustainable development.

Conditions for the development in Poland are regulated by international agreements which outline the way for implementation of sustainable development. Besides, the model for such development is more and more accommodated into regional and local strategies. Local communities implement incrementally these strategies into their investment activities. It is expected that the above trends will be continued in the oncoming years.

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Cite this article as: Kogut-Jaworska, M., Jachowicz, A., Zawora, J. (2018). Financing of municipal investment within sustainable development framework. *European Journal of Service Management*, 4 (28/2), 207–214. DOI: 10.18276/ejsm.2018.28/2-26.

THE DEVELOPMENT OF THE POWER GRID IN THE ASPECT OF LOCAL ZONING PLANS

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION O13, O14, O18, R11

KEYWORDS MPZP, KSE, electrical power, OSD

ABSTRACT The development of the power grid is a necessity for satisfying the needs of recipients resulting from economic growth, technological progress and improvement of the living standards of electricity consumers. Distribution system operators implement development plans taking into account the existing local zoning plans (MPZP). The purpose of the publication is to indicate the dependence of the power grid development by the OSD on the developed zoning plans for a given area. The article consists of three basic parts preceded by the introduction and completed with conclusions. The first part of the article presents the principles of spatial policy in Poland. The second part presents an overview of the National Distribution System with particular reference to the Distribution System Operators as the entity responsible for the distribution of electricity. The third part is an attempt to illustrate the dependence of the development of the power grid on the planned development of the area expressed in the Zoning Plan (MPZP). The whole is summarized by conclusions.

Introduction

The plans for the development of the power grid take into account the current and forecasted increase in electricity demand and security of supply, taking into account the most important information resulting directly from the provisions of local zoning plans or directions of the municipality development defined in the study of conditions and directions for spatial development.

Local zoning plan

Spatial policy is an important part of development policy, and its goal is the best and most optimal spatial management. Spatial planning regulations constitute the foundation of investment activities, that is they are decisive for the feasibility of projects and play an important role in the development of modern infrastructure (Polskie Koleje Państwowe SA, 2018).

Spatial planning formulates the principles of land development and enables shaping space in accordance with the needs of residents in a rational, sustainable manner, consistent with the existing local conditions, while maintaining environmental, cultural and landscape values (Budplan sp. z o.o., 2017). Therefore, spatial policy is a translation of the vision of the development of a given area into the language of specific actions, causing the desired changes in the spatial structure in a given territory (Markowski, 1999, p. 168). In order to determine the spatial policy of the commune, including the local spatial development rules, the commune council adopts a resolution on joining the stage of conditions and directions of the spatial development of the commune. A commune head, mayor or city president draws up a stage containing a text and graphic part (a few selected graphic signs are presented in Table 1), taking into account the principles of spatial development of the country, setting development strategy and voivodship development plan, framework study of conditions and directions for spatial development of the metropolitan union and development strategy of the commune, if the municipality has such a study (Ustawa..., 2003).

Table 1. Selected graphic signs used in the drawings of the local zoning plan

Single-family housing	MN	Light brown
Service buildings	U	Red
Agricultural areas	R	Yellow
Forests	ZL	Bottle green
Greenery areas decorated	ZP	Green
Water areas	WS	Light blue
Public roads	KD	White
Areas of internal roads	KDW	Light gray
Electrical Power	E	
Water supply	W	Slate
Sewers	K	

Source: Rozporządzenie Ministra Infrastruktury... (2003).

The shaping of spatial policy in Poland is implemented at several levels: national, voivodship, powiat and commune, in which documents or plans emerging at the lower level take into account provisions created at a higher level, it means superior one. For inhabitants, the most important level is the communal level, on which local zoning plans are created. The local zoning plan (MPZP) is a document built on the basis of a study of the conditions and directions of the spatial development of the commune, that is the study of conditions is a preparation preceding the preparation of a local plan MPZP (the provisions of the LSDP may not differ from the provisions of the study). The local zoning plan is a document aimed at maintaining the spatial and landscape order, as well as indicating the places of development of the commune, city or district of the city.

One of the most important criteria to be considered in the development of the local zoning plan is to maximize the economic use of the city area, while taking into account the limitations resulting from applicable laws, including environmental and cultural values (Markowski, 1999, p. 168).

The basic information about the local zoning plan drawn up for the commune, city or district of the city are mainly determined by:

- the use of areas and lines delimiting areas with different purposes or different development principles,
- principles of protection and shaping of spatial order,
- principles of environmental protection, nature protection and landscape shaping,
- principles of protection of cultural heritage and monuments, including cultural landscapes, and contemporary cultural goods,
- requirements resulting from the needs of shaping public spaces,
- principles of shaping buildings and indicators of land development, maximum and minimum building intensity as an indicator of total building area in relation to the area of a building plot,
- minimum percentage of biologically active area in relation to the area of a building plot,
- maximum building height,
- the minimum number of parking spaces, including places for parking vehicles provided with a parking card and the manner of their implementation,
- building lines and dimensions of objects,
- boundaries and ways of developing areas or objects subject to protection: mining areas, areas of special flood threat, landslide masses, priority landscapes defined in the landscape audit and voivodeship spatial development plans,
- detailed rules and conditions for merging and dividing real estate covered by the local plan,
- special conditions for the development of land and restrictions in their use, including the prohibition of development,
- the manner and date of temporary management, arrangement and use of land,
- principles of modernization, development and construction of communication systems and technical infrastructure (Miejscowy..., 2017).

The construction of communication systems and technical infrastructure devices means the construction of a road and the construction of underground or ground or water or water, sewage, heating, electric, gas and telecommunications equipment (Ustawa z dnia 21 sierpnia 1997..., 1997).

Electricity distribution system in Poland

The basic issues related to the generation, transmission and distribution of electricity on a national basis are related to the concept of the National Power System (KSE). Detailed conditions for the operation of the power system in Poland are set out in the Regulation of the Minister of Economy (Rozporządzenie Ministra Gospodarki..., 2007).

The national power system is a multi-layer network structure with different levels of rated voltage and diversified construction (Nowak, 2017). In places acting as nodes (power stations) connecting networks with different levels of rated voltages, located are transformers. These nodes often include generation units that supply the electricity system with electricity. The block diagram of the power system is shown in Figure 1.

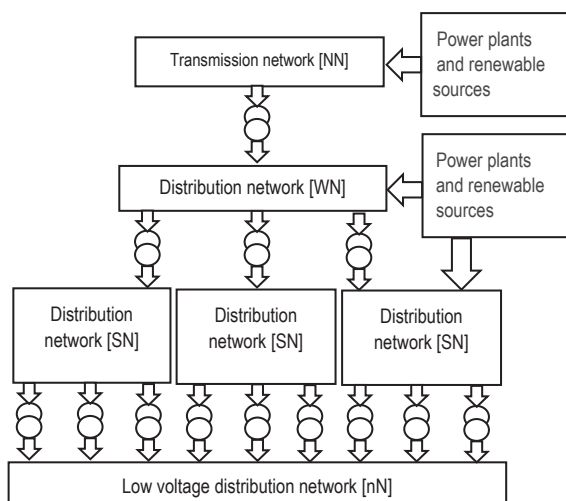


Figure 1. Block diagram of the power system.

Source: own study – developed on the basis of Nowak, Szpyra, Tarko (2017).

The distribution network is a special element of the KSE. Distribution networks are the main link in the power system, whose primary task is to supply electricity that is the basis for the functioning of large enterprises and municipal consumers in large urban agglomerations and villages. The entities responsible for distribution networks are distribution system operators (OSD) dealing with the distribution of electricity, supervision of the proper



Figure 2. Area of activity of the main OSD in Poland

Source: cire.pl (2018).

functioning of the system, as well as current and long-term control of the safety of this system. Operators of the distribution system are obliged by the Energy Law Act (Ustawa z dnia 10 kwietnia 1997..., 2017), which also includes the definition of OSD in the energy sector. Figure 2 shows the five largest distribution system operators in Poland, while Table 2 presents the data for each of these operators.

Table 2. Own study – basic data on the five largest OSD in Poland

	Number distributed energy (MWh)	Number of connections	Number of clients connected to the network	Length of electric power lines (km)	Number of transformer stations	Number of transformers
ENEA OPERATOR	19,258,698	840,053	2,552,699	104,230	37,823	37,561
ENERGA OPERATOR	22,108,918	972,804	3,010,730	163,480	60,552	61,332
PGE DYSTRYBUCJA	35,313,022	2,972,660	5,350,667	287,992	93,488	94,281
Innogy STOEN OPERATOR	7,489,394	98,246	1,015,829	15,203	6,559	6,647
TAURON DYSTRYBUCJA	49,062,591	2,008,075	5,532,681	185,157	59,563	58,611

Source: Raport Polskiego Towarzystwa... (2018).

Despite the diverse characteristics of the OSD presented, all these entities meet the legal requirements and have the ability to effectively manage their area, in an economically effective manner and ensuring the safety of network users, which is subject to direct supervision by the President of the Energy Regulatory Office (Drożdż, 2018, pp. 291–300).

The number, parameters and status of network assets of individual OSD have a decisive impact not only on the security of the power system, but also on the number and length of interruptions in electricity supply and the possibility of connecting new customers and electricity generators to the electricity grid. The tendency of the increase in receiving and generation power installed in power grids requires the modernization and evolution of existing power facilities, as well as the construction of new power facilities and new strategic sections of power lines for increasing the quality of distribution services by OSD.

Possibilities for the development of the power grid

With the intensification of the use of devices powered by electricity caused by economic growth, the development of large cities and the increase in the standard of living of individual consumers, there is a need to plan and implement network development in the near and longer term. It is also important for the OSD to ensure the security of the system's operation through appropriate network development, including the expansion of the distribution network, increasing the transmission capacity of this network and enabling the multilateral supply of consumers in the event of a network failure. In the implementation of all types of undertakings, it is also important to estimate the demand for electricity and the planned development of the connected generation sources in the scope of the planned generation of generation capacity (Drożdż, 2018, pp. 291–300). The development of the power grid should be implemented on the basis of the development plans prepared by the OSD in accordance with the provisions of the Energy Law. According to art. 16 sec. 1 of this Act, energy enterprises dealing with transmission or distribution of electricity prepare a network development plan in their area of operation, taking into account current

and future electricity demand, taking into account the provisions of the zoning plan in the discussed area or the directions of the municipality development specified in the study of conditions and directions of spatial development.

Existing power devices are plotted on zoning plans, while new elements of the power grid and connections should be located in places where the Local Zoning Plan or the study of conditions and directions of spatial development allow it. Increasingly, it turns out that these documents clearly prohibit the location of overhead power lines, and allow the construction of underground cable lines, which is primarily aimed at optimizing the development of the area, and the construction of power cable lines will allow the OSD to shorten the interruptions in electricity supply and reduce costs of reconstruction of power infrastructure after the occurrence of weather anomalies, to which the network located above the ground is the most exposed.

Locations of electrical power equipment marked on the graphic works with the symbol "E", to ensure the continuity of electricity supply and to ensure the appropriate quality parameters of electricity, should be located near public or internal roads and in the vicinity of areas foreseen in the MPZP for the construction of industrial or service facilities, and in the central parts of clusters of plots designated for housing development.

Conclusions

Optimal space management, according to the needs of residents, is the basis for the possibility of implementing projects and developing modern infrastructure. The key role here is played by distribution system operators who, through their development plans, locate new power infrastructure, taking into account the current and future electricity demand, primarily in accordance with zoning plans or a study of conditions and directions for spatial development. All of these activities are aimed primarily at preserving Poland's environmental, cultural and landscape values.

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Cite this article as: Kopiczko, M. (2018). The development of the power grid in the aspect of local zoning plans. *European Journal of Service Management*, 4 (28/2), 215–221. DOI: 10.18276/ejasm.2018.28/2-27.

SOCIAL RESPONSIBILITY OF ENTERPRISES TOWARDS EMPLOYEES. THEORETICAL AND PRACTICAL ASPECTS

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RECEIVED
ACCEPTED

10 December 2018
28 December 2018

JEL
CLASSIFICATION

A13, M12, M14

KEYWORDS

Corporate Social Responsibility, employees, relations with employees

ABSTRACT

The article presents theoretical and practical considerations related to the implementation of Corporate Social Responsibility (CSR) in the area of relations with employees. Its purpose is to analyse basic principles, guidelines and standards of this concept with regard to employees and also to attempt to evaluate this type of activity in Polish reality. For the purpose of this objective, the modern sense of social responsibility of enterprises is presented first. Subsequently, selected documents that determine normative guidelines for this concept have been considered among which those that mention employee-related aspects have been distinguished. The last part of the article contains results of research conducted in enterprises that provide accommodation services in Zachodniopomorskie province, this research concerns their involvement in CSR activities with respect to employees. A summary of theoretical assumptions and practical functioning of the enterprises surveyed enabled finding divergence and indicating the scope of possible action.

Introduction

The concept of social responsibility of business, which is also referred to as Corporate Social Responsibility (CSR), is a term with enormous significance relating to activities taken by enterprises in various fields. This article focuses on one of the aspects of CSR, which refers to employees. The purpose of this article is an analysis of basic principles, guidelines and standards of this concept with respect to employees, and to attempt to evaluate this

kind of activity in the Polish reality. For the purpose of this objective, the modern sense of social responsibility of enterprises is presented first. Then, selected documents that determine normative guidelines for this concept are considered among which those that mention employee-related aspects have been distinguished. The last part of the article contains results of the survey conducted in enterprises that provide accommodation services in Zachodniopomorskie province, these surveys concern their involvement in CSR activities with respect to employees.

Modern determination of social responsibility of business

Although the concept of social responsibility of business (enterprises), also referred to as *Corporate Social Responsibility* (CSR), is rooted in the virtues of trust and charity work (Mazur-Wierzbicka, 2012, p. 12), it is not currently limited only to philanthropy. It is constantly evolving and has gained a broad meaning in organisational management strategy. Reasons that reinforce these transformations are, among others, social, economic and environmental issues, and especially all issues of social inequality and poverty, profound and dynamic globalisation process, and the condition of the natural environment. It should also be noted that this concept directly corresponds with a significant and widely-accepted idea of sustainability that derives from a sense of concern about the right of future generations to develop.¹

In subject literature, the concept of corporate social responsibility is variously defined. Some of these definitions stress a wide sense of functioning of enterprises, which goes beyond economic profitability, thus beyond the responsibility towards only the owners or shareholders. In this case, the significance of functioning of each organisation in a determined environment and the influence of its decisions and behaviour on all entities that deal with it are indicated (Reyes, 2005, pp. 15–16). When defining CSR, at least two of its dimensions are distinguished: internal and external. In the former, according to G. Bartkowiak (2011, p. 25), safety in the workplace, human resources management, resource management and influence of business activity on environment are significant. In turn, the external dimension contains: influence on local communities, relations with business associates and respect for the human rights. The conventional classifications of particular CSR aspects probably provide order, but primarily, they consider the influence of an organisation on a large group of entities treated as stakeholders. Thus, there are many definitions of CSR, which stress the significance of different groups of stakeholders. According to these definitions, the corporate social responsibility is based on voluntary consideration of the interest of any stakeholder organization (Klimek, 2011, p. 270; Szczepańska, 2011, p. 177). The stakeholder groups are most often determined as employees, customers, contractors, local communities and the natural environment. Therefore, a socially-responsible enterprise, when making a decision and conducting economic activities, considers the interests of various groups of entities. It becomes responsible for them in a moral sense and it considers their well-being. In practice, this means creating and maintaining proper relations with them. Proper communication, understanding and adequacy of solutions are therefore necessary. According to B. Rok (2013, p. 97), multi-dimensional activity towards various groups of stakeholders focuses on four levels of participation: informing, consulting, making joint decisions and performing joint activities. Indeed, to reach a level of common and mutual relations, it is extremely important to first acquire, process and share information and then to express the will to communicate and accept one another. These objectives are so multidimensional that performance of the modern CSR concept leans towards integration with corporate management strategy or it becomes its superior determinant.

¹ To learn more Kwarcińska (2016), pp. 95–103.

As it is shown, conscious and voluntary actions that consider the involvement of particular stakeholders constitute the core of many fields of corporate responsibility. One of the most significant of them is responsibility for employees, the aspects of which are emphasised in the basic guidelines of social responsibility.

Normative principles of corporate social responsibility in the area of relations with employees

The basic guidelines of the CSR concept considered in the international discourse, debates and initiatives function as formalised normative provisions.² They constitute certain directions for conduct. They consider numerous aspects of universal responsibility of various organisations, including their responsibility with respect to employees. Among them, the most important are: *OECD Guidelines for Multinational Enterprises*, provisions of Global Compact ISO 26000 Standard, SA 8000 Standard and also AA1000SES Standard. Each of the above-mentioned documents contains provisions related to the issues of employees, whether direct or indirect. Thus, they contain all general requirements or outline particular requirements, or they provide particular actions regarding the assumption of responsibility for employees.

OECD guidelines refer to issues related to employees in a few areas such as: information transparency, human rights, employment, and professional relationships (OECD Guidelines..., 2013; Makuch, 2011, pp. 10–14). The first one is related to the fact that enterprises should disclose data regarding their activity. Clearly, such a general statement may be applied to the employees, since they should be the first to know about any activity of an enterprise, in which they are employed. The second area, human rights, indicates the necessity to conduct activities with a sense of respect for human rights and to search for ways to prevent or alleviate adverse results of breaches of these rights. Another area concerning employment and professional relationships corresponds directly with relations with employees. Here, provisions indicate freedom to associate, a right to negotiate collective agreements, abolishment of child labour, elimination any forms of forced or compulsory work and abolishment of any discriminatory practices in the area of employment or professional activity. These guidelines clarify the image of an enterprise that assumes responsibility for its employees.

Also, the fulfillment of Global Compact principles corresponds with consideration of widely-understood adequate relations with employees. These principles, similarly to OECD guidelines, are related to both supporting and protecting human rights and freedom of association and the necessity to eliminate any form of compulsory work and to take action to abolish of child labour (Kietliński, Reyes, Oleksyn, 2005, pp. 152–153). Although these indications for management, which are of a strong normative nature, constitute a set of directions of operation desired by societies and the economic world, they do not force business entities to strictly follow them. It should be stressed each time that the entrepreneurs may voluntary follow these principles by assuming an obligation of responsibility for various stakeholders, including employees.

Apart from the above-mentioned provisions concerning general principles of conducting the business activity in a responsible manner, also with respect to employees under the CSR concept, other provisions, developed for more practical application by enterprises may also be indicated. Those that should be mentioned are the ISO 26000 Standard mentioned above, which concerns social responsibility (*Guidance on social responsibility*). It is a set of practical guidelines regarding employee-related issues. Activities within the scope of these guidelines include (ISO 26000..., 2014):

² To learn more Kwarcińska (2016), pp. 95–103.

- a) human rights, among which the most important are the following issues: due diligence, situations of threat to human rights, avoidance of participation, consideration of complaints, discrimination and sensitive groups, citizen's, personal and political rights, economic laws, fundamental principles and rights at work;
- b) work practice, where employment and employment relationship, work conditions and social security, social dialogue, work health and safety, human development and training in the workplace are important.

It should be noted that with a high level of detail, the ISO 26000 Standard remains universal. Thereby, not only enterprises may be its addressees, but also a wide group of organisations that wish to voluntarily assume a moral obligation in the form of responsibility.

Another documents developed for practical application of CSR principles by enterprises, also with respect to employees, are: SA8000 Standard – Social Responsibility and AA1000SES Standard – Stakeholder Involvement Standard. The former refers to employee-related aspects with consideration of requirements of social responsibility of enterprises with respect to, i.a. (Norma SA8000): child labour, compulsory or mandatory work, health and safety, freedom of association and the right of collective bargaining, discrimination, work discipline, working hours, and compensation. The latter, AA1000SES Standard, constitutes guidelines that are important from the point of view of formal aspects of creating solid relations of organisations with various groups of stakeholders, certainly including employees, and also those who cannot speak for themselves, such as: the natural environment or future generations. According to AA1000SES Standard, the process of involving the stakeholders consists of four stages of conduct with respect of them (Standard AA1000SES):

1. Planning, where the most important are: profiles and classification of stakeholders, determination of level and methods of involvement, determination and notification about transparency boundaries, development of the involvement plan, determination of indexes.
2. Preparation, including: resource mobilisation, creating new possibilities for development, identification and preparation for an involvement-related risk.
3. Implementation and in particular situations: encouraging the stakeholders to become involved, informing the stakeholders, involvement, documenting the involvement and its results, developing an action plan, presentation of results of involvement and the action plan.
4. Review and improvement including: involvement evaluation and monitoring, conclusions and improvement, summary of the action plan, involvement report.

As far as application of particular actions with respect to the stakeholders is concerned, both documents constitute incredibly helpful, ordered and transparent codes of conduct and improvement of their involvement. The fundamental value in all provisions is always a widely-understood responsibility and the principle of voluntariness.

Practical stage of relations with employees within the scope of implementation of CSR concept on the example of survey among the enterprises that provide accommodation services in Zachodniopomorskie province

The research on relations with employees was a part of the exploration of the level of involvement in pursuing the CSR concept, which was conducted on a randomly selected micro, small and medium companies that provide accommodation services in Zachodniopomorskie province, within the scope of an international project.³ In order

³ Empirical data presented in the article constitute only a part of research results that had an extensive analytical context that includes issues related to CSR and innovation and Polish-German integration. The research was conducted in 2016 under

to examine the involvement of employees, five statements were proposed, which determine basic activities based on CSR in relations with employees. The companies were to address these statements by determining the level of their implementation in a five-point scale of activity. The range of the scale included evaluation starting from determination that a given activity is not being conducted at all, through consulting that the activities proposed are performed marginally, partially or mostly, ending with confirmation of full involvement of the enterprise within a given scope. The results of this research are presented below in following pictures that indicate the percentage of responding entities.

The first statement referred to the existence of complex principles of conduct in the matter of restricting and preventing risks of loss of health of employees in the enterprise. According to the research, the results of which are presented in Figure 1, nearly half of the enterprises surveyed have developed such principles. Additionally, 12% of the enterprises surveyed indicated that these principles have been adopted for the most part. One fifth declared that these principles are not being implemented at all.

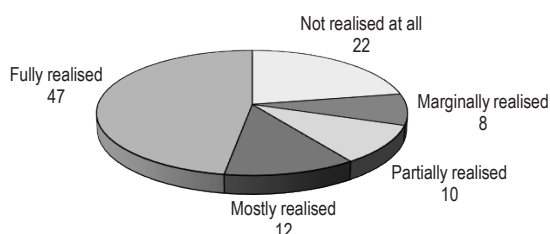


Figure 1. Our enterprise has developed complex principles of conduct to limit or prevent the risk of health loss of our employees (%)

Source: own work on the basis of: Bretyn (2016), pp. 61–89.

Then, a question was asked about the extent, to which the enterprise provides a possibility for further professional development, or when necessary, retraining, for all its employees. According to the results presented in Figure 2, only 16% of the enterprises surveyed present a full activity in this matter, and 34% of them do not provide its employees with any educational possibilities at all.

Another aspect concerned encouraging the employees to become involved in charity. According to these results presented in Figure 3, one quarter of the enterprises surveyed presented full involvement in this area, whereas nearly 40% of them do stimulate their employees in this field of activity.

Another statement referred to the system of managing complaints and suggestions, and ideas for change initiated by employees. According to analyses of indications of enterprises surveyed presented in Figure 4, nearly 40% of them declare that they possess such a system. At the same time it was found, that nearly 30% of the enterprises in this research group do not possess any such system at all.

a project supported by Polsko-Niemiecka Fundacja na Rzecz Nauki oraz Ministerstwo Nauki i Szkolnictwa Wyższego (Polish-German Foundation for Science and the Ministry of Higher Education) "Corporate Social Responsibility as a tool for innovation and integration of Polish and German micro, small and medium enterprises. Analysis. Recommendations". Results of this research were published in a monography: Wolska, Kwarcińska, Warszycki (2016).

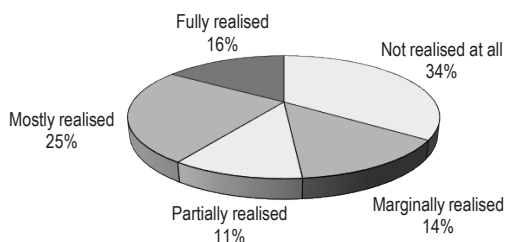


Figure 2. Our enterprise provides a possibility for further professional education, or when necessary, retraining for all its employees

Source: own work on the basis of: Bretyn (2016), pp. 61–89.

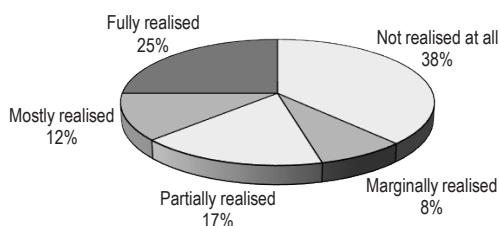


Figure 3. Our enterprise encourages our employees to become involved in charity

Source: own work on the basis of: Bretyn (2016), pp. 61–89.

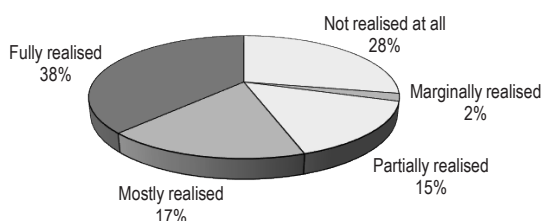


Figure 4. There is a system of managing complaints and suggestions, propositions of change by employees in our enterprise

Source: own work on the basis of: Bretyn (2016), pp. 61–89.

The last issue is related to involvement of enterprises in supporting their employees in keeping the balance between their private and professional life. The research results in this area presented in Figure 5 show that slightly over 30% of participating entities fully support their employees whereas 17% mostly support their employees on that matter. The results also showed that 27% of the participants surveyed do not conduct any such activity at all.

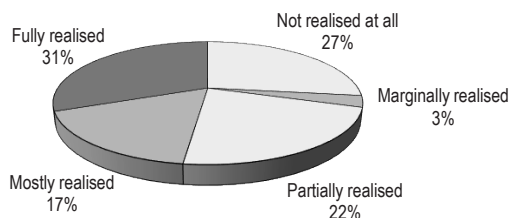


Figure 5. Our enterprise supports its employees in keeping the balance between private and professional life. (work-life-balance) e.g. through flexible working hours

Source: own work on the basis of: Bretyn (2016), pp. 61–89.

Conclusions

Modern development of the meaning of corporate social responsibility stresses its high value for functioning and development of each enterprise. Currently, building a competitive advantage and a solid organisation requires a widely-understood cooperation and the assumption of conscious responsibility. The boundaries of such moral obligation extend to and include respecting the interests of many stakeholders. This is indubitably a difficult task that often causes conflict. The employees occupy a very important position among these groups. It is the employees that create the basic development potential and cooperation with them should be based, above all, on understanding, honesty, trust and respect.

Ideological grounds for respect, support, and ensuring safety and protection of employees, which have already found their place in normative provisions, have not yet been fully reflected in the practical functioning of enterprises. The presented research results of the enterprises that provide accommodation services in Zachodniopomorskie province enabled, above all, the observation of a relatively average fulfillment of principles of corporate social responsibility in these enterprises within the scope of their involvement in relations with their employees. The justification for this statement is the fact that nearly half of the participating enterprises confirmed that they fully or mostly conduct activities regarding: developing complex operational plans in order to limit or prevent the risk of loss of health by employees, creating a system of managing complaints and suggestions, propositions of change by employees and supporting employees in keeping a balance between their private and professional life. At the same time, approximately 40% of enterprises involved in this research declared that they fully or mostly ensure possibilities for further professional education, or if necessary, for retraining of all employees and also encourage their employees to become involved in charity work.

It may be therefore be stated that there are flaws within the scope of the application of voluntary solutions in the practical functioning of enterprises, which include solutions stressing that these enterprises assume responsibility for their employees. As it seems, the main reason for this is, primarily, insufficient awareness of the benefits deriving from assuming these duties. Thus, all educational, promotional and stimulating activities are justified.

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Cite this article as: Kwarcińska, A. (2018). Social responsibility of enterprises towards employees. Theoretical and practical aspects. *European Journal of Service Management*, 4 (28/2), 223–230. DOI: [10.18276/ejsm.2018.28/2-28](https://doi.org/10.18276/ejsm.2018.28/2-28).

INNOVATING AND GROWING SERVICE-BASED ENTREPRENEURIAL BUSINESS – DEVELOPMENT MODEL BASED ON EUROPEAN AND ASIAN CASE STUDIES

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION L80, M13, O31

KEYWORDS service-based business, entrepreneurship, business development, innovation, business growth, qualitative research, case studies

ABSTRACT The main purpose of this paper is analysis of development patterns of service-based entrepreneurial businesses in line with their ability to innovate and grow. The qualitative analysis using process perspective is based on cased studies of the early stage companies from Poland, UK, Vietnam and Indonesia. The study, using systematic grounded theory approach was conducted in the years 2010–2018. The analysis reveals similar development patterns of service-based entrepreneurial businesses in all countries, thus enabling a formulation of 5-stages development model, which is highly knowledge intensive and allows service-based companies to propose radical innovations at the later stages. By providing insights into innovation generation and implementation by service-based entrepreneurial businesses, results of the study enrich the idea of how innovativeness of small service companies can be measured and supported.

Introduction

Service sector is usually regarded as less innovative than manufacturing industries. Data from different sources (e.g. OECD, Eurostat, GUS) collected systematically at local and international levels, provide an evidence that product innovations, and most of all disruptive innovations, are results of actions performed by manufacturing companies, which are actively involved in R & D processes and have capacity to implement new solutions to

the market. Service sectors in contrast deliver improvement innovations, usually marketing and organisational innovations, with no impact on markets or industry disruption (Łobacz, Niedzielski, 2012, pp. 41–52).

The rise of knowledge economy, however, changes this rule, by providing opportunities to design and implement radical innovations based on knowledge, which is independent on production capacities, and thus growth of knowledge-intensive entrepreneurial ventures (Sallos, Yoruk, Garcia-Perez, 2017), which are different from entrepreneurial ventures known before (Caloghirou, Protoherou, Tsakanikas, 2016). Vital part of knowledge intensive entrepreneurship is formed by knowledge intensive services, which are more and more present in economic systems, in both developed and developing countries (Miles, 2008; Malerba, McKelvey 2018). Since knowledge intensive entrepreneurship is regarded to be under the constant impact of knowledge, including the scientific knowledge sourced from academia (Bonaccorsi, Colombo, Guerini, Rossi-Lamastra, 2013; Łobacz, 2015), it holds the ability to generate more radical innovations. This is however not well documented in research results in the field.

The problem of documentation and evidence may be a result of poor understanding of dynamics of service business. It is pointed explicitly that the research on entrepreneurship has been recognized as static, with tendencies to label entrepreneurial ventures, entrepreneurial activities. As F. Welter, T. Baker, D.B. Aundretsch, W.B. Gartner (2016, p. 5) argue “We also typically fail to understand pathways through which ventures started from necessity might sometimes even innovate and grow.”

Therefore the main purpose of this paper is analysis of development patterns of service-based entrepreneurial businesses in line with their ability to innovate and grow. The qualitative analysis using process perspective is based on case studies of the early stage companies from Poland, UK, Vietnam and Indonesia. The study, using systematic grounded theory approach was conducted in the years 2010–2018.

Innovation in the entrepreneurial venturing process — theoretical background

Entrepreneurial venture is regarded as a subject which is taking entrepreneurial actions, in particular actions directed towards discovering and/ or creating economic opportunities, implementing ideas into the market, being constantly involved in making decisions, under uncertainty, regarding product design, use of resources and reward system, with the objective to create value (Wennekers, Thurik, 1999; Mazzarol, 2011, pp. 69–109; Henrekson, Stenkula, 2016).

The entrepreneurial spirit, as a feature of the entrepreneur, is reflected in the active undertaking of business ventures. From this perspective, entrepreneurial actions combine two fundamental elements: (1) searching for market opportunities and (2) configuration of resources which enables taking advantage of these market opportunities, which are basic sub-process, whenever entrepreneurial process is regarded (Łobacz, 2012).

But, to innovate and grow, entrepreneurs have to address additionally sub-process related to innovation development. In the process perspective innovation can be defined as a result of transformation of expertise and/ or technological knowledge into its economically useful forms (Arrow, 1962) being a response to perceived market opportunity and taking place in line with market requirements, what is coherent with approach applied in innovation process models (Mitchell, Singh, 1996; Jolly, 1997, pp. 1–30; Vohora, Wright, Lockett, 2004).

Since entrepreneurial activities are considered in relation to innovativeness, activities related exclusively to transformation of knowledge into its economically useful form can be defined and related to the entrepreneurial processes scheme. As the process should have an outcome defined at the end, the effects of actions related

to creating a product concept are to be also included in the model. Based on those assumptions the process of development of the entrepreneurial market offer has been described as consisting of three separate but strictly interconnected layers (1) activities aimed at creating a product concept associated with transformation of technological knowledge which result in innovation; (2) activities aimed at building a venture concept related to transformation of a market opportunity based on market knowledge which result in a market offer; (3) activities aimed at building organizational competencies related to transformation of resources by using business expertise which result in organizational competencies – as presented at Figure 1.

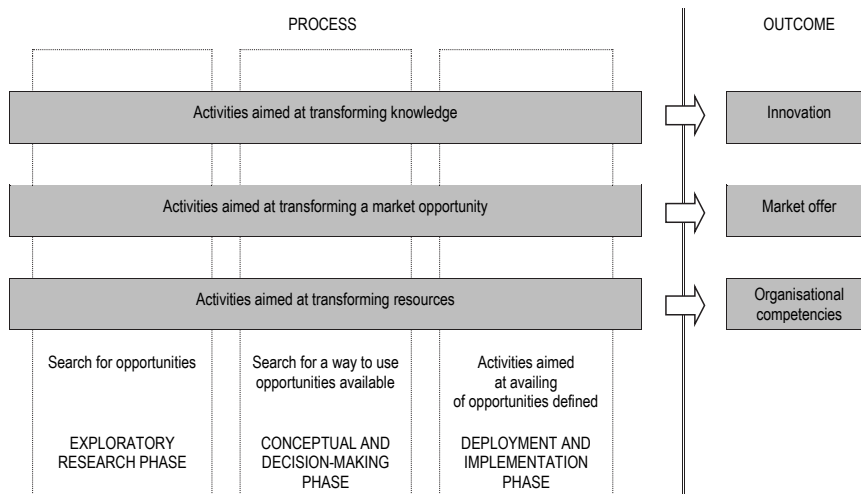


Figure 1. Layers of the process of innovation based entrepreneurial venturing

Source: based on Łobacz (2012).

Based on the presented model, an innovation based entrepreneurial venturing process has been described on the basis of three distinctive but strictly interconnected process layers, as presented on Figure 2.

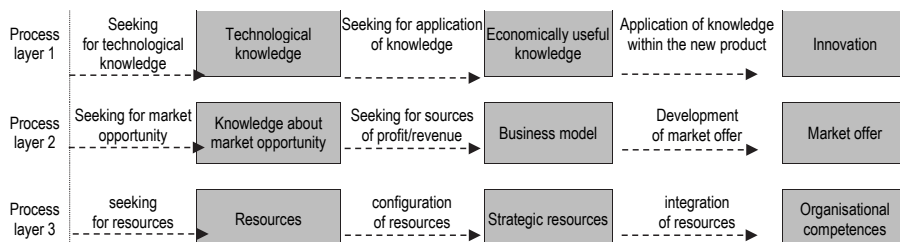


Figure 2. Three layers of an entrepreneurial innovation process model

Source: based on Łobacz (2012).

Process layer 1 assumes development of the product concept, including especially transformation of technological knowledge from basic knowledge to knowledge used within innovative product, employing capabilities related to seeking for technological knowledge, seeking for application of knowledge and application of knowledge within new products. Process layer 2 relates directly to the main entrepreneurial process element – development of the business concept. It assumes transformation of knowledge about market opportunity into the market offer based on competitive business model, employing capabilities related to seeking for market opportunity, seeking for sources of profit and development of market offer. Process layer 3 encompasses development of the organisational competencies, to include transformation of resources into organisational competences used to propose market offer, employing capabilities related to seeking for resources, configuration of resources and development of market offer.

The model has been designed in order to capture innovation as a growth facilitator of early stage business venture. It's feasibility has been proved in previous studies, to include studies on development of academic entrepreneurship (Łobacz, 2012) and studies of business advise support for small innovative firms (Łobacz, Głodek, 2015).

Method

The model of innovation based entrepreneurial venturing has been used to analyse development scheme of service-based business ventures. As the analysis is explorative in nature, the multiple case study methodology was used (Yin, 1989, pp. 20–42). This method has been recognised as a valuable approach to the study of small businesses (Chetty, 1996), since it offers a useful framework for analysing the real context, in particular, when the phenomenon is influenced by a number of factors determining each activity (Yin, 1989, pp. 20–42) and its nature is not very clear.

The process of empirical data collection took place using the individual in-depth interview technique. The formula of narrative interview was adopted, hence communication techniques were used in order to focus the discussions on the issues related to the subject of the research, at the same time assuming the greatest possible freedom of expression of the interlocutor.

The in-depth interviews were conducted directly with the owners of small firms. The entrepreneurs were asked about the development context of the company from the beginning of its foundation, milestones of company development and innovations commercialised on the market. The interviews were recorded on digital media, which enabled their repeat use at the stage of data analysis. The study, using systematic grounded theory approach, was conducted in the years 2010–2018 on a group of 104 firms located in Poland, UK, Vietnam and Indonesia.

Within the sampling process a purposeful approach was used, focused on possibly highest diversification of case studies but at the same time fulfilment of predefined features of firms. The following selection criteria were controlled: size of the firm, innovativeness, firms age, sector, gender of the entrepreneur, education of the entrepreneur, impact of external stakeholders on strategic decisions, location.

Development model of service-based entrepreneurial business

Determining characteristics of individual layers of innovation focused entrepreneurial process and its analysis over time allowed the identification of five stages in the development of service-based businesses from the time

of foundation the idea about the venture (not necessarily foundation of a company). Each stage was identified as related to launching successive products onto the market, products characterised by certain level of innovativeness.

The basis for stages recognition was the observation that the nature of the subsequent deployments, and thus the proposed market offer and knowledge used in their implementation, changes along with the development of capabilities and competencies of the company. This means that – in time – the approach to obtaining resources (including knowledge) and the method for their configuration also change within the venture. Thus, subsequent stages are related to higher RENTS, i.e. profit margins from selling particular offering. Taking this fact into consideration, the following stages of business development were distinguished:

- Stage 1: launching of a basic offer – which is related to hatching and initiating implementation of one's own vision of the venture; knowledge acquired through education and/or research and teaching work is commercialised; its transformation into a market product is a response to a market opportunity perceived through pursued interests and hobbies as well as being in the environment in which unmet needs are revealed, the business approach is usually typical, without any special features.
- Stage 2: improvement of the offer – occurs when entrepreneurs improve their offer, expand it, creating a portfolio of products (mainly service ones); these products are modified on the basis of improved knowledge and it is a customer-driven process as customers require solutions that meet their expectations; market opportunities are perceived through frequent contacts with customers and their communicated needs, on this basis a catalogue of products offered is created; the business approach remains typical, it is, however, more suited to customers' needs.
- Stage 3: building partnerships – occurs as a result of changes in philosophy of thinking about business; the offer takes the form of increasingly complex approach to issues related to needs that the company meets; it results from exploration of new possibilities (e.g.: the search for new technological knowledge) as well as increasingly better understanding of market needs which can be met better than they currently are; limited resources make partnership crucial; it enables easy and flexible access to resources, especially ensuring provision of competencies which the company lacks.
- Stage 4: standardisation – is based on an expanded partnership; internal knowledge and partners' knowledge is used to create unique products; out of the catalogue of offers those that are rated as the most effective are implemented; there is a tendency for their standardisation.
- Stage 5: intense development of innovation – the transition to this phase requires the involvement of the company in their own targeted R & D activities; the offer is prepared for the needs of broad markets, at least on a national scale, but mostly on an international one (sometimes over a slightly longer time horizon; a gradual entry to new markets); the key to success is access to substantial financial resources (the company's own or external ones) needed for marketing and sales, sometimes also R & D activities.

As it can be noted, each stage is associated with implementation of a new market offer, however, it is possible to implement several offers at the same stage. This also means that each stage can last for an unlimited amount of time, going through many iterations. The subsequent stages are associated with increasingly higher innovativeness (see Figure 3), along with the development of companies. It is therefore possible to commercialise increasingly advanced expertise/technological knowledge. The further the stage of development, the more the scale of innovativeness of products offered shifts from incremental towards radical one. Not only the idea but also

knowledge on which it is based is subject to evolution. This, among other things, allows the company to create more advanced products.

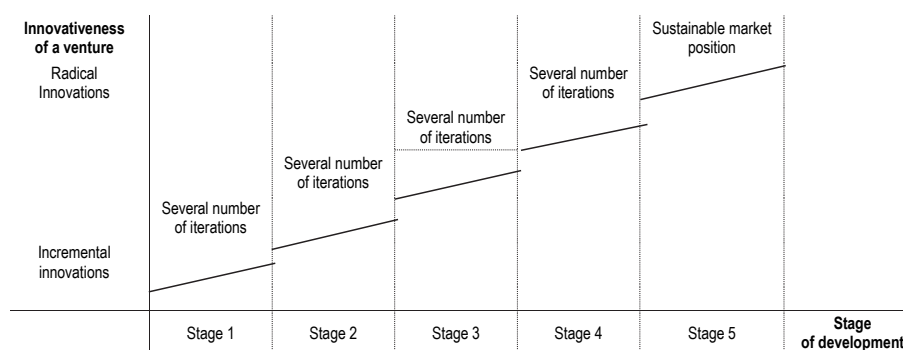


Figure 3. Iterations of the process in relation to innovativeness of a venture

Source: based on Łobacz (2012).

Conclusions

The model of development has been identified as describing service development in all economic systems, including especially economics poor in scientific knowledge. However new advanced expertise and scientific knowledge related to both product and business issues is crucial for the ability to develop new market offers, and thus innovate and grow. Furthermore the companies are able to grow even if the knowledge is not available in their direct environment. Likewise it was not relevant, whether the entrepreneurs had the expertise or technological knowledge within their internal resources. But it is important whether they can identify the possibility of applying this knowledge to take advantage of a market opportunity. The study confirmed thus results from S.A. Alvarez and L.W. Buzenitz (2011) that one of the essential skills of the entrepreneur is the ability to acquire specialised knowledge and skills of others, as well as to configure resources in such a manner as to be able to reap commercial benefits.

It was observed that, although possible stages of development are similar for all service companies, not all firms go through all the defined development process, and also the speed of development vary significantly. Generally three groups of service-based entrepreneurial ventures were defined: constant developers, moderate developers, and reluctant developers. These were distinguished based on four criterion defined. Constant developers are actively oriented towards improvement in an on-going manner and skip very fast from one stage to another. This is the case of entrepreneurs who (1) are willing to achieve higher rents in their business; (2) are actively and successfully looking for knowledge which will enable them to achieve those rents; (3) are mentally ready for development and (4) are willing to take risk permanently related to any process of development. Reluctant developers, in contrast, are happy with achieved development level (whatever development stage is that) and prefer implementing new offers replicating similar business models and strategies. This is the case of entrepreneurs who (1) are happy with rents achieved; (2) are not very open for new knowledge, don't know where to find it, or don't

know how to use this knowledge in business practice; (3) are not mentally ready for development and (4) are not willing to take risk permanently related to any process of development. Other firms have moderate development speed – therefore here they are called moderate developers. They usually need time for gaining appropriate in their context knowledge (different kinds) and change mindset in relation to potential rents, readiness for changes and taking risk. For both they need time to be allocated for development issues, as opposed to operational ones (i.e. related to current operations).

The most important finding from this study is identification of the model through which service-based ventures improve their innovativeness, so that they are able to propose to the market disruptive innovations and develop into dynamic big scale businesses. Therefore it is very relevant for knowledge intensive entrepreneurial ventures, but can be used as a roadmap also for less knowledge intensive services. The indicated stages determine the path which the company follows from the moment of defining a business idea to the creation of a mature business. The transition through the subsequent stages means the development of human capital involved in the creation of the venture, in particular in the area of use of specialized (expertise and/or technological) and business knowledge. It is thus noticeable that development of the company requires constant learning process.

Successive iterations within the process, whatever innovativeness is regarded, result in accumulation of resources (i.e. organizational competences) and capabilities (i.e. dynamic capabilities), which are needed to prosper effectively as the firm develops (Łobacz, 2012). When so defined, the presented model in relations to small innovative firm may be regarded as an entrepreneurial innovation cycle model, capturing the competences accumulation process in relation to firm's innovativeness as a stage-based process sensitive to market dynamics.

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Cite this article as: Łobacz, K. (2018). Innovating and growing service-based entrepreneurial business – development model based on European and Asian case studies. *European Journal of Service Management*, 4 (28/2), 231–238. DOI: 10.18276/ejsm.2018.28/2-29.

AN ASSESSMENT OF INNOVATIVE AND KNOWLEDGE-BASED SERVICES IN THE POLISH FOREIGN TRADE IN 2010–2017

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RECEIVED
ACCEPTED

10 December 2018
28 December 2018

JEL
CLASSIFICATION

F14, F40, O11, O30

KEYWORDS

foreign trade, services, innovative and knowledge-based services, economic development

ABSTRACT

The article discusses the Polish foreign trade in services. Its main focus is on innovative and knowledge-based services. Their exports and imports, as well as their trade balance for the years 2010–2017, are characterized. The aim of the paper is to identify and assess changes in the Polish foreign trade in innovative and knowledge-based services. The study is based on data published by the National Bank of Poland and the Central Statistical Office. For the purposes of this research, simple statistical methods, desk research and graphic methods were used. Between 2010 and 2017 the value of innovative and knowledge-based services in the Polish foreign trade increased significantly. The growth was recorded for: revenue from foreign sales – threefold, expenses for purchases from abroad – more than twofold, and the trade balance – almost sixfold. The results of this study proved that the structure of the major service components analyzed herein changed. IT services and services provided by professional became dominant. On the basis of selected indicators, it was found that the role of innovative and knowledge-based services is growing, which translates positively into the country's economic development.

Introduction

Foreign trade brings diverse benefits to the state, among them economic, which is reflected in the GDP. The development of this form of economic activity is a crucial developmental factor for many economies, including Poland. It should be stressed that services have been playing an increasingly significant role in foreign trade, and their growth rate increased significantly in the early 21st century.

Nowadays, innovation and knowledge-based services are considered to be the main drivers of economic growth. They are a key factor determining the development of modern economies, undoubtedly improving their effectiveness and strengthening their competitiveness. The opportunity to participate in the international trade in such services is another element contributing to the economy of the given country. Hence, any assessment of the significance of foreign trade for individual economies, in this Polish, calls for an analysis of its structure.

The article discusses the Polish foreign trade in services, with the main focus on innovative and knowledge-based services characterized in terms of their exports, imports and trade balance. The study covered the years 2010–2017, whereas the choice of the specific period was determined by the availability of homogeneous statistical data.

The aim of the research was to identify and assess changes in the Polish foreign trade in innovative and knowledge-based services. Also, an attempt was undertaken to assess the significance of such services for the development of Poland's economy. For the purposes of the research, the following hypothesis was formulated: Within the Polish foreign trade in services, the share of innovative and knowledge-based services is growing, which has a positive impact on the country's economic development. The main body of research material was compiled from factual data published by the National Bank of Poland (NBP) and the Central Statistical Office (GUS). Also, Polish and foreign literary sources related to the subject-matter of the research were used. The research methods applied were simple statistical methods (e.g. shares expressed in terms of percentage), desk research, description with elements of deduction, and graphic methods, i.e. tables and figures.

Literature review

Foreign trade in services is relatively rarely discussed in the source literature. Among the reasons for this are the problems with defining, classifying and “capturing the nature” of services. Consequently, the available public statistics related to this aspect of economy are quite poor. The developmental potential demonstrated by services was first noticed only as late as 1980s.

Clearly, services differ from other forms of economic activity (see Rathmell, 1986, p. 38). Some authors have attempted to explain and assess their international flows. However, the models developed by, for instance, M.V. Deardorff (1985), Melvin (1989) or J.J. Stibora and de A. Vaal (1995) have turned out to be unsatisfactory (Misala, 2005, p. 145). Consequently, no single, general and exhaustive theory of the international exchange of services has been developed by the end of the second decade of the 21st century. Nevertheless, as highlighted by van D. Welsum (2003, pp. 2–4), the source literature contains no contraindications, be it formal or empirical, to applying the known commodity trade theories to trading in services, provided that the distinctive features of services and the data shortages are taken into account.

The positive influence of foreign trade, including trade in services, on the economic development of countries is indisputable (Jones, Kierzkowski, 2018, pp. 233–253; Malkowska, Malkowski, 2018, pp. 111–122). Research also confirms that the significance of services in the process of shaping innovation is increasing (Ewangelista, Sirilli, 1998, pp. 207–215).

The Polish foreign trade in innovative and knowledge-based services between 2010 and 2017

According to NBP reports on the international trade in services, innovative and knowledge-based services fall into four groups, namely: 1) telecommunication, IT and information services; 2) research & development services; 3) services provided by professionals; 4) fees for intellectual property rights. The Polish foreign trade in innovative and knowledge-based services, between 2010 and 2017 was characterized by dynamic growth. The total value of exports of these services grew from PLN 18.9 in 2010 to PLN 57.2 in 2017 (see Figure 1). This means that revenue from foreign sales of these services increased by as much as 303%. As for the value of their imports, it increased from PLN 21.1 to PLN 47.1 within the same period, which was a 223% growth. In summary, as regards the services concerned in this paper the growth rate of imports was far lower than that of exports.

In the period concerned, except for 2013, the balance of trade in innovative and knowledge-based services demonstrated an upward trend, as it grew almost six times from PLN –2.3 bln to PLN 10.1 bln. It should be noted that each year between 2010 and 2014 the balance of trade was negative. Only in 2015, 2016 and 2017 was any trade surplus observed, which was mainly thanks to the contribution by IT services (see Figure 1). Therefore, this surplus should not be seen as relatively stable. What is important, however, is that the increase resulted mainly from revenue growing much faster than expenses.

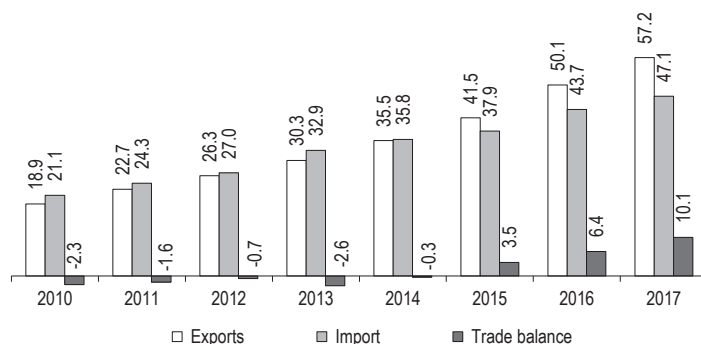


Figure 1. The exports, imports and balance of trade in innovative and knowledge-based services in Poland between 2010 and 2017 (PLN bln)

Source: the author's own study based on the National Bank of Poland (NBP, 2018).

Apart from the overall value of Polish exports and imports of innovative and knowledge-based services, what matters is the structure of these categories, as well (see Table 1). In the period in question, the highest value of exports was achieved by the so-called services provided by professionals, which totaled PLN 10.4 bln. Within this group, the largest share was enjoyed by marketing services, market surveys and public opinion polls (50.9%), followed by business consultancy and public relations services (23.1%). The next largest revenue for the Polish economy was brought by foreign sales of telecommunication, IT and information services (PLN 6.1 bln), where IT services accounted for as much as 68.9%. Between 2010 and 2017 the value of the exports of all the service components considered as innovative and knowledge-based services grew. However, taking into account the value of foreign sales, their place in the ranking stayed the same.

Table 1. Poland's foreign trade turnover by the main components of innovative and knowledge-based services in 2010 and 2017 (PLN bln)

Service	2010		2017	
	exports	imports	exports	imports
Telecommunication, IT and information services	6.1	6.6	24.0	13.7
including: – telecommunication	1.4	1.6	2.0	2.7
– IT	4.2	4.4	20.3	9.9
– information	0.4	0.6	1.7	1.1
Research & development services	1.7	0.5	5.1	1.1
Services provided by professionals	10.4	7.3	26.0	20.4
including: – legal	0.8	0.4	1.0	0.4
– accounting, auditing and tax consultancy	1.9	0.3	7.2	1.1
– business consultancy and public relations	2.4	5.1	9.3	14.0
– marketing, market surveys and public opinion polls	5.3	1.5	8.5	4.9
Fees for intellectual property rights	0.7	6.8	2.2	11.9

Source: the author's own study based on: the National Bank of Poland: NBP (2011); NBP (2018).

As for Polish imports of innovative and knowledge-based services, services provided by professionals brought the highest value both in the base year (PLN 7.3 bln) and the target year (PLN 20.4 bln). Out of the main four service components discussed here, the lowest value of expenses was demonstrated by R&D services in both these years, with PLN 0.1 bln in 2010 and PLN 1.1 bln in 2017.

Telecommunication, IT and information services achieved the highest growth in exports (397%), followed by fees for intellectual property rights (305%), R&D services (299%) and services provided by professionals (250%). Within the first of these components, the most spectacular growth (483%) was demonstrated by IT services. The main contributory elements of this growth were such IT services as consultancy and implementation, technical consultancy related to computer hardware and software, hardware and software installation, and computer and peripheral equipment maintenance and repair (NBP, 2014).

As for imports, the largest growth was in services provided by professionals (281%) and R & D services (230%), and the lowest growth was in fees for intellectual property rights (176%). For this specific group of services, not only its growth in exports but also in imports should be assessed as a positive factor. The reason for this approach is that importing services allows developing countries or less technologically advanced states to purchase innovative services, receive transfers of new technologies or use specialist knowledge gained from other countries. Occasionally, imports can be the only opportunity for the given country to have access to such services. Undoubtedly, this process can facilitate a positive economic development of the importer, in this case Poland.

An assessment of the significance of innovative and knowledge-based services for the Polish foreign trade and in the economic development of the country

One of the simpler indicators for assessing any type of services traded in internationally is the share of such services in total exports and imports. In 2017, innovative and knowledge-based services accounted for one fourth of Polish exports of services and one third of Polish imports of services. Their share in total exports grew by 8.8 percentage points (i.e. from 17.6 to 25.9%), and in total imports by 10.1 percentage points (i.e. from 22.5 to 32.6%).

Thus, the share of all four service components analyzed in this paper grew in 2017 as compared to 2010, and this upward trend was observed both in their exports and imports values. The largest increase in foreign sales was observed for the telecommunication, IT and information service component (from 5.7 to 10.9%), and in purchases made abroad for the component of services provided by professionals (from 7.8 to 14.1%) (see Table 2).

Table 2. The share of innovative and knowledge-based service components in the Polish foreign trade in services between 2010 and 2017 (%)

Service	2010		2017	
	exports	imports	exports	imports
Telecommunication, IT and information services	5.7	7.1	10.9	9.5
including: – telecommunication	1.3	1.7	0.9	1.9
– IT	4.0	4.8	9.2	6.8
– information	0.4	0.6	0.8	0.8
Research & development services	1.6	0.5	2.3	0.7
Services provided by professionals	9.7	7.8	11.8	14.1
including: – legal	0.7	0.5	0.5	0.3
– accounting, auditing and tax consultancy	1.8	0.3	3.3	0.7
– business consultancy and public relations	2.3	5.4	4.2	9.7
– marketing, market surveys and public opinion polls	4.9	1.6	3.8	3.4
Fees for intellectual property rights	0.7	7.2	1.0	8.2
Total	17.6	22.5	25.9	32.6

Source: the author's own study based on: NBP (2011); NBP (2018).

The ratio of exports and imports to the GDP is one of the basic measures used for assessing the significance of foreign trade for the given country's economy. In the studied period between 2010 and 2017, the rate of exports of innovative and knowledge-based services kept growing systematically – from 1.3 to 2.9%. Similarly, the share of imports in the Polish GDP kept increasing – from 1.3 to 2.4%. This means that, slowly, the Polish economy's openness to trading in these services kept increasing, and its competitiveness was improving. As seen above, the share of exports of services in the GDP grew faster than that of their imports, which should be assessed as a positive trend (see Figure 2).

In making an assessment of the significance of the exchange of services to the country's economy it is relevant to consider the value of exports and imports of innovative and knowledge-based services per capita. For Poland, the this ratio grew by 305 % for exports (i.e. from PLN 0.5 thousand in 2010 to PLN 1.5 thousand in 2017), and by 224% for imports (i.e. from PLN 0.6 thousand to PLN 1.2 thousand). Therefore, it can be assumed that the human potential was utilized with improved efficiency within the area analyzed herein. It must be remembered that the dynamic growth of the Polish foreign trade was mainly due to contribution from business entities. The number of Polish enterprises exclusively involved in exportation grew between 2010 and 2015 by 31%, to reach almost 41.3 thousand in 2015 (Poniewski, Skóra, 2018, p. 14). The number of enterprises with foreign capital participation increased, as well. The number of those involved in exportation grew from almost 9.5 thousand in 2010 to 11.2 thousand in 2016. Within the same period, the number of enterprises involved in importation increased, too – from over 10.6 thousand to more than 11.9 thousand (GUS, 2011; GUS, 2017). Both exports and imports were dominated in terms of value by companies with foreign capital participation. Normally, such companies find it much easier to access foreign

markets. They also import intermediate services and know-how. Trade surplus in services is observed both in the transactions carried out by enterprises with foreign capital participation and domestic enterprises. Still, the high positive balance of services was mostly the result of transactions carried out by enterprises with domestic capital (NBP, 2016).

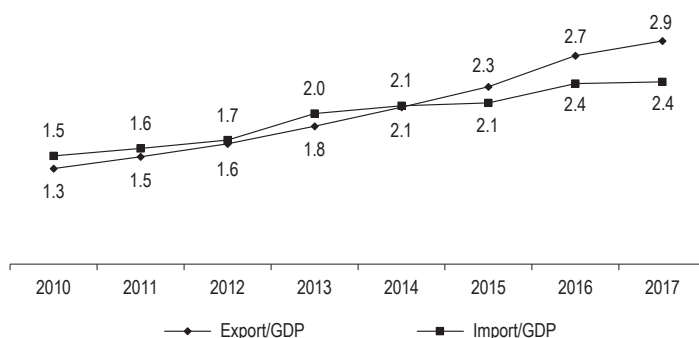


Figure 2. The ratio of the value of innovative and knowledge-based service exports to the Polish GDP (%) and the ratio of the value of innovative and knowledge-based service imports to the Polish GDP (%)

Source: the author's own study based on National Bank of Poland (NBP, 2011, 2018); Local Data Bank of the Central Statistical Office (GUS, 2010–2017).

According to the Central Statistical Office, between 2010 and 2012 innovative activity was demonstrated by 13.9% of Polish service providers, whereas between 2015 and 2017 this figure fell to 11.9%. This drop took place despite service providers having spent 11.7% more on innovation, corresponding to an increase from PLN 12 bln in 2011 to PLN 13.4 bln in 2017. This might have resulted from the fact that a mere intensification of spending on research and development is insufficient, as structural and institutional changes supporting the development of innovation-based entrepreneurship must be adopted, as well, which is in fact the hard part (Acemoglu, Robinson, 2012). Moreover, one should remember about the new approach to innovation and the observed convergence of the service and the production sectors (Niedzielski, Rychlik, 2007, pp. 177–185).

Conclusions

Between 2010 and 2017, the Polish foreign trade in innovative and knowledge-based services kept growing dynamically. Their exports and imports increased, and so did their balance of trade, which was positive since 2015. This research showed that the share of innovative and knowledge-based services in the Polish foreign trade is growing, which may be indicative of an increasing level of innovation of the Polish economy.

On the basis of an analysis of the Polish foreign trade in innovative and knowledge-based services, changes in its structure were revealed. Clearly, IT services and services provided by professionals began to be dominant. Thus, a slow transition from traditional services to more modern ones can be observed. However, the low – although growing – share of research and development services is unfavorable.

Between 2010 and 2017, the Polish economy's openness to trading in innovative and knowledge-based services with other countries was growing, as well. The selected indicators confirmed the increasing role of these

services in Poland's economy. Yet, the dropping innovativeness of Polish service providers is of concern, as it may have a limiting impact on their competitiveness. Removal of these barriers is a challenge that the SME sector and the Polish economic policy-makers must face.

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Cite this article as: Malkowska, A. (2018). An assessment of innovative and knowledge-based services in the Polish foreign trade in 2010–2017. *European Journal of Service Management*, 4 (28/2), 239–245. DOI: 10.18276/ejsm.2018.28/2-30.

THE BIGGEST SURFACE MINING DISASTER IN POLAND AND ITS ECONOMIC RESULTS

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION L72, L78

KEYWORDS Salt mine, mining disaster, economic results, catastrophes, Wapno

ABSTRACT The aim of the article is the biggest surface mining disaster in Poland and its economic results. The accident occurred in 1977 in Tadeusz Kosciuszko Salt Mine in Wapno (at present in Great Poland region). Up to the 90's of the XX century, the society hadn't been aware about the catastrophe. Nowadays, it is still almost unknown. Wapno has never regained its prosperity. The study object is the hold-up problem in managing the natural resources (salt) and the socio- economic results for Wapno, Greater Poland region and Poland as a whole. The study methods are based mainly on observation because the author of the article witnessed the incident, the case study and the analysis of bibliography sources.

Introduction

In the second half of the 1977, the biggest surface mining catastrophe took place in Wapno. It succeeded the predatory exploitation of a big quantity of salt dedicated mainly for export. In the night from 4 to 5 August, after the labor, in the Tadeusz Kosciuszko Salt Mine (Figure 1), water inrushed into salt excavations located at the third mine level. The catastrophe occurred in Gierek's decade. As it happened in the times of 'propaganda of success', the

details of the catastrophe were almost forgotten. The media of that time hardly spoke about it. It had been a taboo up to the 90's of the XX century. Today, it still remains unexplained. Wapno is a municipality in Great Poland region in Wągrowiec district. In the '50, '60 and '70 of the XX century, Wapno was founded as miners' housing estate counting 3,000 of inhabitants.



Figure 1. The Salt Mine in Wapno – August 1977

Source: Przesławski, Ryska, Wojciński (2011), p. 15.

The outline of Wapno gypsum and salt mining up to the Second World War

The most important minerals excavated at Wapno are gypsum and rock salt in form of diapir (salt domes) laying under gypsum (Muszyński, 1999a, p. 13). The formal mining activity started in Wapno in 1828 when Florian Wilkoński, the owner of the settlement begun the exploitation of gypsum deposits (lying just below the surface) by open-pit mining method (Muszyński, 1999b, p. 47).

According to the historical sources, the high quality gypsum from Wapno had already been used for the construction of many medieval buildings like Cathedrals in Gniezno and Poznan (Skoczylas, 2011, p. 78). In the XIX century, during the gypsum excavations, the traces of brine were discovered. At the beginning, around 200 tons of gypsum was mined per year and in 1850 there had been already about 5,000 tons (Łuczak, 1959, p. 115).

After the raw material excavations, it was transported to Nakło by Noteć where it was treated. In 1835, the gypsum mill equipped with steam machine was constructed inside the mine. The gypsum treatment was then possible on the spot. In 1887, the railway line was built up (currently no 281) connecting Wapno with Nakło and Gniezno.

The gypsum excavations were done at three levels, one on the surface and two underground. The mine was prospering before the World War I where 20,000–25,000 tons of gypsum were excavated per year.

In the next years, the production and investment works hadn't brought satisfactory profits and there was even a danger of bankruptcy. In 1929, The joint-stock Association sold the mine to Belgian Solvay company which was engaged in further works related to the mine shaft deepening. The works were interrupted by the increased water inrush and they were finally stopped in 1931. In 1933, they were so serious that Solvay was forced to close the mine (Boras, 1963, p. 63).

Paradoxically, the situation was favorable for Solvay as in that way it got rid of the concurrency as the company had already been in the possession of their own gypsum mines.

In 1869, in the territory of open-pit gypsum mine, while drilling a borehole, 2% brine was discovered 36 meters under the surface. Basing on that fact, Bolesław Moszczeński, the owner of Wapno obtained the permission to exploit /mining concession/the brine called Bolesław. In 1871, at the depth of 60 meters, the halite was drilled. The mining concession was obtained. It was called Moszczenno. In 1892, the German partnership Soolwerke bought the concession and executed new salt drill obtaining the third concession called Eintracht.

In 1907, two salt mines in Inowrocław were flooded. In the previous year, Solvay bought and renovated the Soda factory in Mątwy, close to Inowrocław. Because of the floods, Solvay was deprived of basic raw material (salt). That's the reason, it bought the halite mining concessions in Wapno and it started to elevate the mining buildings on its surface (Grabowski, 2013, pp. 141–142).

1911 was considered as the year of the foundation of the mine and the construction of the shaft Wapno. In 1912, after few months, the construction was interrupted at the depth of 100 meters because of the water inrush. There was a decision about constructing the second shaft 63 meters further. The final depth of the shaft Wapno II was 420 meters. It was opened in 1917. In total, 8278 tons of salt was excavated. The salt dome measuring 700 × 350 meters and almost 4 kilometers deep was exploited. In the times of the second Polish Republic, the mine belonged to Belgian company "Solvay Company in Poland". It was the time of its flourishing development. In the years 1928–1930, new salt processing factory (modern reinforced concrete salt mill) was constructed. The eight-story building is dominant, nowadays, in the Wapno landscape. In 1930, the mine had the highest number of salt excavated for the whole interwar period – 100,896 tons (Domichowski, Günther, Jankowski, 1963, p. 78).

The number of the mined salt was at that time managed by the Polish Salt Monopole which favored its own mines. That's the reason why the mine couldn't always reach the full production capacity. It was the time when the work was planned for three days per week (worldwide economic crisis 1929–1933). Despite the fact that the highest profits obtained from the Wapno salt sale was on salt monopoly side, the Solvay benefits were sufficient for investments in technical and social infrastructure like modern school complex that was constructed in 1935. In 1932, the steam winding engine of 450KM power was installed. In 1931, it was raised in the steelworks "Agreement" in Świętochłowice–Zgoda.

During the World War II, the mine was exploited on big scale. The Germans were aware about the good salt quality. The maximum of production capacity was reached. The electric switchboard was expanded. The external power supply and new electrical equipment were provided.

The Wapno Salt Mine Activity during 1945–1977

After the World War II, the company was nationalized and incorporated at first to salt monopoly and then to Chemical Mineral Mining Association in Cracow. The industry was restored. The salt mining was systematically reinforcing. In the years 1950–1965, the Wapno Salt Mine was the biggest salt producer in Poland. The Wapno salt

production constituted the half of the Polish halite production. In 1966, second mine shaft Wapno I was elevated. This fact like the renovation executed in the 60' influenced significantly the production increase which exceeded 400 000 tons per year in the years 1967–1975. The historical high score of 462 789 tons was reported in 1975. The high quality salt was exported around the world (in particular to Sweden, Finland, Norway, Great Britain, Denmark, Nigeria, Czecho-Slovakia and Hungary). In that way, the precious dollars were collected in the People's Poland times. The excavated salt was also distributed in Poland. The number of mine employees was raising up. In 1968, the employment level reached 700 people and it was the highest in the history (Lisiecki, 2007, p. 62).

Thanks to the Tadeusz Kosciuszko Salt Mine, Wapno started to quickly develop. In 1956, the settlement obtained rights of miners' urban housing estate. In 1977, it counted almost 3000 inhabitants. The Wapno mine financed the construction of residential areas, public buildings and it supported the cultural, sport and educative activities.

The mining failure in 1977 and its results

The tremendous danger in salt mines is the water inrush from beyond the salt deposit. From the very beginning of the Wapno mine activities, the water constituted a big issue for the shaft construction and exploitation (*Salt Mine...*, 2018). In September 1971, the mine shaft Wapno I was in danger but it was managed thanks to the rescue operations. From August 1972, at the mine level III, in the chamber no 36, the inrush of water (2 l per minute) was observed. In September 1976, the water reached 7 l per minute. The rescue operation was started in the mine and special rescue groups were called. On 3rd August 1977, the inrush of water was of 500 l per minute. The salt mining was completely suspended. In the night from 4 to 5 August, about 1 a.m., the inrush of water bumped up to 2,000 m³ per minute. The last miners left the mine and the uncontrolled flooding started. The inrush of water into the mine caused the biggest surface mining failure in Poland which has never been listed in the Polish mining history. On 5th August 1977, around 2.00 a.m, the water leaked from the surface reservoir, the remains of the ancient gypsum mine. It caused the ground ruptures. In result, many garages in Karol Świerczewski Street, in the proximity of ancient gypsum mine fell in (Figure 2).

The evacuation operations of the inhabitants from the Górnicza, Pocztowa, Dworcowa and Świerczewski Street was organized by the voivode of Pila. The mine office, the kindergarten, the post office the pharmacy and the medical center were also evacuated. The church was closed. In total, 321 people from 21 buildings quitted Wapno. The Gniezno–Nakło (on the river Noteć) railway transport on Damasławek–Kcynia line were interrupted. In the night from 15 to 16 August, the soil cracks and slipping in the area of the Ogrodowa Street took place. Another evacuation operations of 113 inhabitants from 7 buildings located in Ogrodowa and Stanisław Staszic Street were launched. In mid-August, the works of 6 meters long pipeline construction from the Czeszewski lake to Wapno was started. It served to further flooding of the salt mine and gypsum cap rock.

In the same time, the Minister of Chemical Industry created the Group to manage the issues related to the flooding of the underground excavations of the Tadeusz Kosciuszko Salt Mine in Wapno. The first miners left Wapno to seek jobs in Śląsk. On 1st and 15th September, two major groups of miners (around 150 people) found work in Salt Mine in Kłodawa (*Salt Mine...*, 2018). The last one took over the production processes of Wapno mine (part of the miners found shelter in Lubińsko–Głogowski copper district).



Figure 2. The garages in Karol Świerczewski Street, the 5th August 1977

Source: Przesławski, Ryska, Wojciński (2011), p. 53.

On 8th September, another soil movements happened. Around 11.00, in 26, Świerczewski Street (near a residential building) a sink-hole was created (with the diameter of 3.5 meters and the depth of 3 meters). It engulfed part of the street and a pavement with a tree (Figure 3). It caused the cracking of the water pipeline stretched along the street. The sink-hole was buried. In that area, 20 inhabitants from 2 buildings were evacuated. The same day, around 15.00, at the intersection of Pocztowa and Górnica Streets, another sink-hole was created (with the diameter of 1.5–2 meters and the depth of 1.8 meters). It was also buried. (Lisiecki, 2007, p. 112).



Figure 3. The sink-hole which engulfed part of the Świerczewski Street and a pavement with a tree

Source: Przesławski, Ryska, Wojciński (2011), p. 97.

The most enormous damages were reported on 28th September when another soil deformation took place causing one more sink-hole in the center of Wapno. It swept over the residential buildings and the northern part

of the railway station. The same day, around 8.30, close to the residential building in 9, Obrońcy Stalingradu Street, a sink-hole in form of a crater with the diameter of 32 meters and the depth of 20 meters was created. It swept over the front wall of a block of flats and it broke it (Figure 4).



Figure 4. Obrońcy Stalingradu Street 9, the 28th of October 1977

Source: Przesławski, Ryska, Wojciński (2011), p. 78.

The railway tracks going through Wapno were also demolished (Figure 5).



Figure 5. The railway tracks in Wapno

Source: Przesławski, Ryska, Wojciński (2011), p. 107.

The biggest evacuation operations took place. Another 900–1,000 people quitted Wapno. The next day, the police from the police school in Pila and the military forces were sent on the spot (Lisiecki, 2007, p. 113). The surface soil movements were also reported along the Obrońcy Stalingradu, Staszic and Ogrodowa Streets.

On 29th December, in the Świerczewski Street, the marks of surface soil movements were observed. The sink-hole in the Obrońcy Stalingradu street was extended. On 16th January 1978 the strong soil movements were spotted and they brought damages of few blocks of flats and the dairy situated at Stanisław Staszic Street. The Obrońcy Stalingradu Street and the deformed railway tracks declined. The soil cracks 1 meter wide and 1 kilometer long appeared. The cliffs with the depth of 3.5 meter were created. On 30th June 1978, the controlled flooding of the salt mine was terminated. In August, the Council of Ministers of People's Poland passed the law no 120/78 about the liquidation of the catastrophe effects in the Tadeusz Kosciuszko Salt Mine in Wapno. The liquidation was financed by the mine damages, land remediation and development funds.

As a result of the catastrophe, 42 buildings including 23 blocks of flats, houses and 19 other properties situated along the streets were demolished or damaged. It touched Obrońcy Stalingradu Street, Ogrodowa Street, Pocztowa Street, Mining Street and Karol Świerczewski Street (first four streets don't exist anymore). The railway tracks were destroyed. Wapno lost the half of its inhabitants (about 1,500 people). Fortunately, nobody was injured due to the disaster. The evacuated inhabitants obtained new houses and jobs mostly in the Piła voivodeship. The majority of inhabitants (about 900) found their new homes in Piła. The others were located in Wągrowiec, Złotów, Trzcianka, Czarnków, Wronki and Golańcz. Kłodawa (the ancient Konin voivodeship) and Szubin (Bydgoszcz voivodeship) were two towns outside the Piła voivodeship where the displaced people from Wapno were moved.

Among others, the first cause of the Wapno mine disaster is considered today the fracture of the optimum thickness of the salt protection shelf (it was counted as water danger) while exploiting the best quality salt at the third mine level. There are voices that if the salt hadn't been excavated at the third mine level, the mine would have never been flooded. The third level was the mine security border. It should be mentioned that during the World War II, the Germans knew about this fact and they had never decided to excavate salt from this mine level. The rock shooting also had bad influence on the strength of the rocks and on the lack of the coordination in exploitation of both gypsum and salt mine (Lisiecki, 2007, p. 119).



Figure 6. Currently, the Wapno mining disaster area is covered by a forest

Source: Przesławski, Ryska, Wojciński (2011), p. 132.

As indicated by the rest, as a result of the mining catastrophe, Wapno lost about half of its inhabitants. The data published in December 2018 testifies that there are 1,650 inhabitants in Wapno.

The financial losses resulting from the biggest surface mining catastrophe haven't still been counted.

Wapno has never regained its prosperity for 41 years elapsed from the catastrophe. Apart from the demolition of damaged blocks of flats and the forestation of the area, the complex revitalization of Wapno has never took place either. Today, in the mining disaster area that is the former housing estate, the *Obróńcy Stalingradu Ogródowa*, *Staszic* and *Świerczewski* streets doesn't exist anymore and the forest grows (Figure 6).

Nowadays, in the area of the former salt mine, few small active production service companies are active.

The Wapno mining catastrophe warns against resulting in hold-up problem in managing mineral sources. The equilibrated mineral excavation should be led. Its exploitation couldn't be done at any cost as to leave it for future generations.

Conclusions

After the first stage of the catastrophe (August and September 1977), a construction plan of a new housing estate outside the mining area was proposed. Because of the another rock bumps (October 1977, January 1978), the plans had never been realized, in spite of the land preparations and planned works. After the catastrophe, in the period 1978–1985, the production profile of the company changed for The *Tadeusz Kościuszko* Salt Mine and the Renovation Company (even if the salt excavations were stopped). The wagons used for Sulphur and bulk cement transport were maintained there. In the years, 1980–1981, the technical- economic plans of the Metal Industry in Wapno were elaborated. The investment should have been realized from central funds. Due to the political and economic situation at the beginning of the 80', it had never been done. There were various conceptions of land development of that ancient salt mine. The factory of rolling-element bearings in Poznań was getting ready to open there its branch. The "Pollena" Factory planned the production of toothpaste and cream tubes. A Swedish cosmetic company was even interested. The numerous propositions of adaptation of the company to other than a mining industry were issued of propaganda. From 1984, wagon bodies to transport chemical products were renovated there (Lisiecki, 2007, p. 122). In the years 1983–1984, the experimental-production installation of autoclaved gypsum was constructed in that area. In 1985, 2000 tons of alpha gypsum was produced and sold. The raw material came from the gypsum mine in Niwice in Lower Silesia. In Wapno, there were plans to exploit the high quality gypsum again. For security and financial reasons, the project was abandoned. In the years 1978–1991, the factory counted between 250 and 280 employees. In 1991, the company as national one was liquidated. In 1994, the first application to the Commercial Court in Pila was made for the company bankruptcy. It was dismissed. New owner of the company was wanted. The potential buyers were coming on the spot to see the plant but while they got to know that the mining damages could repeat in the future, they were giving up (Lisiecki, 2007, p. 124). The liquidator was systematically selling the assets of the company. With time, the liquidator was replaced by a bankruptcy trustee who distributed the remaining assets and the immobility. In December 1998, the Commercial Court in Pila, removed the company from company register. Nowadays, in the area of the ancient Wapno salt mine, few production service companies are prospering. Minor mining damages continued few times in Wapno. The most considerable one occurred in 2007 in the area of the ancient gypsum mine. The settlement is still the active zone and at risk of mining damages, particularly in the vicinity of the ancient salt mine and the ancient gypsum mine.

The best chance for Wapno development seems to be tourism based on the mining past, analogically to the one flourishing in the ancient mining centers as Wieliczka, Bochnia, Wałbrzych and Katowice.

The development of touristic services could bring about the rise of Wapno. One of the ideas is utilisation of two monuments of the former salt mine, which are steam mill and the building with steam winding engine in order to create the Wapno Salt Mine museum as well as the Polish gypsum and salt mining and salt grottos museum (memorial room). The educative touristic path in the disaster area that is, in the same time, the former housing estate area is to be created. There would be commemorative plaques with building images and their descriptions fixed along the inexistent streets. There are plans to raise European funds to make the project assumption work as part of bilateral Polish-German project.

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Cite this article as: Małachowski, K. (2018). The biggest surface mining disaster in Poland and its economic results. *European Journal of Service Management*, 4 (28/2), 247–255. DOI: 10.18276/ejsm.2018.28/2-31.

A STRATEGY TOWARDS DIVERSIFICATION OF OPERATIONS. THE CASE STUDY OF THE STEVEDORING ENTERPRISE

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RECEIVED
ACCEPTED

10 December 2018
28 December 2018

JEL
CLASSIFICATION

R40

KEYWORDS

seaports, stevedoring companies, development strategy

ABSTRACT

The main goal of the article is identification, analysis and assessment of justifiability as well as the efficiency of employing the strategy towards diversification in the operations performed by the storage and reloading companies in the Polish seaports (stevedoring enterprise). Therefore, a single case study method of the company Bulk Cargo-Port Szczecin, which is the biggest stevedoring company of the port of Szczecin, was used. In the past the company was primarily connected with handling bituminous coal exported from Poland, but nowadays it handles numerous cargoes in various reloading relations as well as provides commercial, distributional and logistic services. The objectives, which were recognised as the most important for the development of Bulk Cargo-Port Szczecin, are as follows: adaptation of the existing resources for the new, maximum depth of 12.5 m in the port of Szczecin, adaptation of the handling and storage services for the complex structure based on the type, direction and subject of maritime trade cargo, extension of the storage services and establishment of flexible services with regard to the different transport modes in servicing the port of Szczecin hinterland. The accomplishment of these objectives requires appropriate (in terms of time and subject-matter) investment actions to be conducted by Bulk Cargo-Port Szczecin, which are related to the development of the suprastructure, as well as actions of the Polish maritime management and the entity managing the Szczecin-Świnoujście port complex. Thanks to its strategy for diversifying cargo, directions and functions the stevedoring company has reached its established position in the market of port services in the South Baltic.

Introduction and literature review

The turbulent environment in which modern port enterprises in the operating sphere referred to as stevedoring company are forced to function results in the fact that it is necessary to choose development strategies which are suitable for their commercial activity. For years the operations of port enterprises worldwide have been determined by strong consolidation trends both in the sectorial and inter-sectorial arrangement (Midoro, Musso, Parola,

2005, pp. 89–106; Parola, Musso, 2007, pp. 259–278; Soppé, Parola, Frémont, 2009, pp. 10–20). In the case of enterprises conducting their commercial activities in the Polish seaports global changes were accompanied by the ones related to the transformation of the Polish economy (Pluciński, 2013, pp. 27–48; Adamowicz, 2012, pp. 206–216). In particular, changes which took place in the subjective, objective and directional structure of the Polish foreign trade are of key importance.

Nowadays, in the case of enterprises which provide technical services in the seaports the two opposing development strategies are used, i.e. the strategy towards specialisation (e.g. container and ferry terminals) and the strategy towards diversification (e.g. port entities handling cargoes from various groups and providing services which are complementary to handling and storage).

Bulk Cargo-Port Szczecin, which operates in the Basen Górniczy area of the port of Szczecin (general and bulk cargo area), employed the latter. The company recently underwent a difficult process of transformation resulting from changes in the cargo structure handled in the port of Szczecin. Before the economic transformation in Poland began, coal handling in export relations had been dominant in this area of the port of Szczecin. The beginning of the 90's brought about significant changes both in the directional structure of the cargoes handled (increased importance of importing) and the objective structure (increased diversification of the cargo structure handled). It is also worth stressing that because of its worst access to the sea (compared to all other seaports which are of primary importance to the Polish economy) the port of Szczecin has been systematically decreasing its share in the market of port services provided in the South Baltic (Pluciński, 2017, 259–271). These factors had a significant influence on the operations conducted by the analysed stevedoring company and determined the choice of its development strategy.

The issues with regard to strategic management in enterprises related to stevedoring companies in the Polish seaports are hardly ever taken up in the literature (see Grzelakowski, Matczak, 2006; Pluciński, 2013; Tubielewicz, 2004). Knowledge in this respect focuses mainly on the issues related to the development of seaports regarded as integrated economic bodies (e.g. Neider, 2013; Grzelakowski, Matczak, 2012; Grzelakowski, 2009, pp. 26–28; Christowa, Christowa-Dobrowolska, 2005; pp. 165–179, Szwankowski, 2000). It is, to a lesser extent, related to the circumstances and directions of development of stevedoring companies.

The subject of this research article is identification, analysis and assessment of justifiability as well as the efficiency of employing the strategy towards diversification in the operations performed by the stevedoring companies in the Polish seaports. Therefore, a case study of Bulk Cargo-Port Szczecin, the biggest stevedoring company of the port of Szczecin, was used.

Methodology

The research used a single case study method (Yin, 2017) widely used in the analysis of problems of descriptive character. This method is useful in particular in research, the subject of which is to find the answer to the question “how” and “why”. Following the principles of using this method, the following research questions have been formulated: why and how the analysed stevedoring company implements a strategy towards diversification of operations? Are the actions taken effective?

The subject of the undertaken research is the activities of the stevedoring company focused on the implementation of the diversification strategy. The subject of the research is the biggest stevedoring company in the port of Szczecin – Bulk Cargo-Port Szczecin, which conducts its operations in the bulk and general cargo area

of the port of Szczecin. The selection of the research subject was dictated by its high share in the total volume of cargo handling in the port of Szczecin and the various scope of activity, both in terms of the structure and directions of the cargoes handled as well as operations performed for cargo. The analysis of these criteria for the examined company is presented in the Table 1.

Table 1. The share of the analysed stevedoring company in total cargo volume handled by the EU 28 seaports, seaports of the southern Baltic Sea and the port of Szczecin (%)

The share in cargo volume handled in EU28 seaports	The share in cargo volume handled in Baltic seaports	The share in cargo volume handled in the port of Szczecin
0.1	3	50–60

Source: own work based on Pluciński (2017), p. 264.

The analysed stevedoring company has undergone a functional changes since the commencement of transformation of the Polish economy (the turn of the 1980s and 1990s): from the dominance of coal handled in export and of other bulk cargoes, to development of transshipment of general cargo and the diversification of bulk cargo handling – in terms of subject (different loads) and directional (different directions – export/import/transit).

In addition to the primary transshipment and short-term storage service, additional services related to increasing the added value of handled cargo (including dividing, combining, sorting, unitizing, etc.) play an increasingly important role in port operations of the analysed stevedoring company.

In order to apply the single case study method, a number of data collection and analysis techniques and tools were used, including primarily own observations, direct interviews and reports from the studied stevedoring company.

Research results

Determinants of the development of port enterprises in the South Baltic

Enterprises which provide port services operate in the highly competitive environment. Their operations are influenced by competitive entities which run their businesses in a particular port as well as entities of a similar profile, which function in other seaports, providing services to the same supply base. Globally, competitors with port enterprises include road and rail carriers providing shipping services which are alternative to sea transport. Therefore, a development strategy for this type of business entity should be started with identification and analysis of the most important determinants which influence its operations and development.

The most important determinants of the development of analysed stevedoring company include:

1. Established dominance of maritime transport in providing services to the world trade whose volume increased from 2.5 billion tonnes of cargo in 1970 to approximately 10 billion tonnes in the middle of the second decade of the 21st century. In the quantitative terms, the biggest part in the maritime transport structure is played by liquid bulk cargoes such as crude oil or gas (29%) as well as dry bulk cargoes including grains, iron ore, coal, bauxite and phosphate (23%).
2. The decreasing role of maritime transport in the entirety of the Polish foreign trade (PFT) as a result of changes in the objective, subjective and directional structure of Poland's trade. In the middle of the

second decade of the 21st century both maritime export and maritime import share in the entirety of the PFT transport was at an approximate level of 21%. After the period of clear dominance of export at the end of the first decade of the 21st century import became predominant in the entirety of the Polish maritime trade turnover. Natural resources constitute a dominant cargo group both in Poland's maritime export and import.

3. The development of the world shipping fleet. From the beginning of the 80's in the 20th century the total deadweight of the world shipping fleet increased 2.5 – fold from 680 million DWT to 1.7 million DWT in 2015. Bulk carriers constitute the biggest group. The analysis of the sea ship construction market indicates that for the most part the newly constructed ships are bigger than their predecessors. The average age of the operational world fleet vessel (based on the number of vessels) is now 20 years, but it is nearly 10 years in terms of its deadweight. A continued increase in the size of ships, which are ready for use, is expected in the years to come.
4. Changes in the IMO and EU regulations aimed at reducing emissions generated by ships. It is also interesting to note that the European Commission's more and more rigorous approach to the issue of whether the development/redevelopment of the port infrastructure is within the range of public interest fulfilment and is not state aid or it is within the range of business activity.
5. Trends on the main cargo markets which are of interest to the analysed stevedoring company, including predictions about the continued increase in coal import with a simultaneous drop in export in the seaports; a gradual drop of metal ores import to Poland and export of steel products, primarily because of the unique EU policy related to the environmental protection; good prospects for handling soya pellets, and a gradual increase in exporting agricultural products by the Polish seaports in the future; a slight increase in reloading services related to the group of 'other bulk' as a result of anticipated growth in two industrial sectors, i.e. chemical products and construction; a gradual increase in handling cellulose as a result of anticipated growth of import from South America, and a drop in paper reloading services.
6. Investment actions included in the most important strategies for the development of the transport system in Poland related to the improvement of properties of the infrastructure which provides access to the port from the sea (deepening the Świnoujście–Szczecin waterway to a depth of 12.5 m) as well as from the mainland (completion of the express road S-3, revitalization of the railway C-E59, making the Oder Waterway navigable with class 3 minimally).
7. Trends related to the development of other port's economic functions, which are different to the transport function, observed in providing broader services than primary services of reloading, inter-port transport and short-term storage, including services related to the ever-growing demand for long-term storage and development of distribution and logistic services.
8. The most important provisions included in the strategies formulated at the higher levels of economic structures, including:
 - *The White Paper of 2011* (European Commission, 2011), which presents the directions of the EU transport policy development,
 - *The Program for the development of Polish seaports until 2020 (with prospects until 2030)* (Ministerstwo Transportu, Budownictwa i Gospodarki Morskiej, 2012), which is a framework for financing port projects in Poland within the existing and farther EU financial perspective,

- *The Development Strategy of Szczecin to 2025* (Urząd Miasta Szczecin, 2011), *The Development Strategy of the Szczecin and Świnoujście Ports until 2027* (Zarząd Morskich Portów Szczecin i Świnoujście SA, 2014); the key provisions in these documents are unambiguous in fostering the development of the operating activity in the port of Szczecin.

Description of the analysed stevedoring company

The analysed stevedoring company runs its business in the port of Szczecin, which is located in the South Baltic, with a status of one of the four seaports of key importance to the economy of Poland. This port, along with the port of Świnoujście, is managed by Szczecin and Świnoujście Seaports Authority SA (both self-government and state-owned company).

The subject of its business activity falls into the area of the so called active services of a seaport (Misztal, 2010, p. 87). Apart from the primary services related to direct and indirect reloading services (carried out in yards and warehouses) in both the sea-land/land-sea and land-land (wagon-barge) relationship, the company, at customers' request, also provides additional services including packing loose bulk cargo into bags or big bags, creating cargo units, mixing cargoes of different properties, retying bundles, sorting coal or other aggregates.

The primary area of business activities carried out by the analysed stevedoring company is the bulk cargo/general cargo area of the port of Szczecin. The company also has its foothold in the north port/industrial area of the port of Szczecin.

Before the system transformation took place, the operating activity in the bulk cargo/general cargo area of the port of Szczecin was performed in the Bulk Cargo Reloading Area of Szczecin-Świnoujście Seaport Authority (SSSA). Functionally, in that period of time its business activity was primarily focused on fulfilling its transport function, including, first of all, handling coal exported by sea. It was in relation to how tasks were set to the particular seaports in Poland at that time.

In the initial period of the Polish economy transformation three enterprises started their business activities on the land belonging to the analysed company. They include Cargo-Port, Coal-Port and Mas-Port. In 1994 they created one entity – stevedoring company Bulk Cargo-Port Szczecin [limited liability company]. This change aimed at creating a stronger economic body which would be less affected by trade fluctuations in the market of port services (Bernacki, Góra, Luks, 1994, pp. 26–122). This integration also allowed to utilize the human factor and tangible assets better. It also improved the position of the scattered entities in relation to financial institutions.

Business operations of the analysed stevedoring company can now be divided into three functional fields resulting from the operating companies which had previously run their businesses in this area (Table 2).

140 cargoes, which require diversified conditions for reloading and storage services, are handled at analysed stevedoring company. Due to wide variability of assortment and a considerable number of cargoes stored at one time in the insufficient storage area, the zones for handling general cargo, "black" bulk cargo (coal and ores) and "white" general cargo (fertilizers and raw materials used for their production) are not divided in a clear way. It has its negative influence on how reloading and storage services are organised.

The analysed stevedoring company provides reloading services at 10 quays (and one loading pier) with a total length of 3.3 km. They include the deepest quays in the port of Szczecin, containing the Katowickie, Chorzowskie, Gliwickie, Bytomskie and Górnśląskie Quays as well as the Pier.

Table 2. The areas of operation and business activity of Bulk Cargo-Port Szczecin

Areas of operation	Description of business activity
Mas-Port	The area for handling bulk cargo is in the Katowickie Peninsula. This area has a very versatile function. The storage areas are in the hinterland of the quays with maximum depths. Bulk cargoes stored in this area include mainly ores, coke and 'other bulk cargo'. In the north part there are fields for long-term storage. Warehouses designated mainly for storing cellulose, steel products and agricultural products predominate in the south part.
Coal-Port	The area for handling coal is in the hinterland of the Pier and Bytomskie and Wałbrzyskie Quays. The quays are adapted for handling cargo mostly in export relations. The Wałbrzyskie Quay provides a limited possibility for unloading coal.
Cargo-Port	In the area, which was originally designated for handling general cargo (mainly steel products and wood), loose, bagged and big-bagged cargoes as well as steel products and other general cargoes are stored. The last area used by the analysed stevedoring company for its operations is in the port/industrial area. Coke and coal are stored in the hinterland of the Huk Quay.

Source: own work based on Bulk Cargo-Port Szczecin (2016a).

On the land where the company operates there are 23 storage sites covering a total area of 178,000 square metres, including four unpaved sites covering an area of 40,000 square metres, which are used for long-term storage of bulk cargo. Ores and other bulk cargoes, i.e. coke, pitch, plaster and glaze are stored in bunkers. The analysed stevedoring company has 44 bunkers in total, including 9 roofed bunkers, covering a total area of 65,000 square metres. The company has 23 warehouses covering a total area of 38,500 square metres, designated for storing cellulose, steel products, pellets and fertilizers, as well as two warehouses covering a total area of 6,000 square metres, used for storing grains and feeds (Bulk Cargo-Port Szczecin, 2016a).

The suprastructure of the company consists of reloading devices and automated machines. The company has 23 dock cranes with a lifting capacity of 8 up to 45 tonnes. On the quays with a lower number of operations carried out self-propelled cranes are used. Additionally, the equipment includes: 44 forklifts, 10 tractor units for low loader trailers, 17 loaders (Bulk Cargo-Port Szczecin, 2016a). The buyout of the suprastructure leased from SSSA, concluded by the analysed stevedoring company in 2007, was an important stage in its development and influenced its relationships with the entity which is managing the port of Szczecin.

The analysed stevedoring company cooperates with a group of entities, which established their production facilities and distribution terminals in the general cargo/bulk cargo area of the port of Szczecin, and is their physical reloading operator. The economic relationships between SSSA and the analysed stevedoring company, which result from the Act on Seaports and Harbours, are based on relationships between the leaseholder and the lessor who owns the land as well as the port infrastructure. These relationships are regulated by the Lease Agreement of 15 September 1994 concluded for a non-fixed time. The company operates on 92.7 hectares of land under the lease.

Analysis and assessment of the company's strategy for diversifying its operations

The stevedoring company under study executes its strategy towards diversification. Examples of diversification actions carried out by the company in comparison with other reloading and storage enterprises in the Polish seaports are presented in Table 3.

Table 3. The range of business activity diversification in selected reloading and storage enterprises in the Polish seaports

Examples of reloading and storage enterprises	Bulk Cargo Port Szczecin	OT Port Świnoujście	Port Gdański Eksploatacja	Siark-Port	Bałtycki Terminal Drobnicowy
Development/modernization of the potential for cargoes traditionally handled by the company	x		x	x	x
Providing a possibility for handling cargoes, which were handled before, but in a new reloading relationship	x	x	x	x	
Creating services on offer for new cargoes which were not handled before	x	x	x	x	x
Creating services on offer for other entities located on the port land (physical reloading and storage services)	x	x	x	x	x
Creating additional services on offer (excluding the main reloading and storage service)	x		x		x

Source: Pluciński (2013), p. 134.

In the case of the analysed stevedoring company a very wide spectrum of diversification actions may be observed. This diversification may also be noticed both in the structure of cargoes handled and the range of port services provided. In the first case diversification of business is observed in the decreased significance of once the dominant cargo group 'coal'. Its share decreased from 60% of the entirety of reloading services (only export relations) to 40%. This cargo is now present in various forms as well as types of energy value, both in export, import and transit. On the port land coal is subject to various logistic services which increase its added value.

However, diversification of port services is observed in reloading services at dedicated distribution terminals (Table 4), in running a bonded warehouse and a temporary warehouse for storing and providing logistics and commercial services as well as dispatching and sorting services.

Table 4. Dedicated distribution terminals located on the land leased by the analysed stevedoring company

Name	Cargo	Quay	Relation	Annual average of reloading volume in thousands of tonnes
Coppers	tar	Wałbrzyskie	export	40
Nynas	bitumen	Parnica	import	150
Industrial Quimca del Nalon Polonia	tar	Parnica	export	80
Partek Nordkalk Polska	grinding plant (for calcareous stone)	Bytomskie, Wałbrzyskie	import	250
Yoman	aggregates	Katowickie	import	200
MetraCo	sulphuric acid	Półwysp Katowicki	export	200–300

Source: own work based on Bulk Cargo-Port Szczecin (2016a).

Examples of logistic and commercial services which were developed on the land leased by the analysed stevedoring company:

- packing loose bulk cargo into bags or big bags,
- mixing various kinds of a particular cargo,
- creating cargo units (palletising, loading and unloading containers, also with cargoes which, in the past, were regarded inappropriate for containerization),
- rearrangement of bundles, packages and straps,

- sorting, e.g. sorting aggregates into different fractions,
- grinding bulk cargo,
- tagging, wrapping goods in foil, mending transport packaging, etc.

The indicated diversification actions are an answer to the ever-changing expectations of customers who use port services.

The development strategy employed by the company improved its competitive position. In the bulk cargo handling segment the analysed stevedoring company is now the biggest reloading enterprise in Szczecin. The company reloads over 50% of cargo which goes through the port and is also a leader in handling cargoes from the groups 'coal' and 'ores' (shares of nearly 90%). The company's share is about 50% in handling cargoes from the group 'other bulk cargo'. Bulk-Cargo Port Szczecin is also a significant entity in handling general conventional cargo with its share at a level of 30%.

Business operations carried out by the analysed company have their strong influence on the immediate environment. 400 people are permanently employed at analysed stevedoring company. According to the company's statistics the next 400 people are employed by the entities cooperating on a regular basis with regard to reloading, transporting, renovations and repair of the equipment. The influence of an entity such as at analysed stevedoring company on the local environment may also be analysed from the perspective of tax transfers which are made into the local budget. For example, in 2013 that was roughly 2 million zlotys on account of taxes.

The directions of the development of analysed stevedoring company in the context of its strategy towards diversification

In the first half of 2016 the document entitled "A strategy towards development of Bulk Cargo-Port Szczecin until 2020 (with an outlook to 2030)" (Bulk Cargo-Port Szczecin, 2016b) was produced. The most important objectives of the development of the Company were defined in the document. They include:

1. Adaptation of the existing resources for the new maximum depth in the port of Szczecin, which results from deepening the Świnoujście–Szczecin waterway to a depth of 12.5 m.
2. Adaptation of the handling and storage services for the complex structure based on the type, direction and subject of trade cargo in maritime trade carried out by Poland and neighboring countries.
3. Extending storage services which are necessary for the dynamically developing distribution and logistics services.
4. Establishing a flexible range of services related to different transport modes in serving seaport hinterland.

Compared to the rest of the most important Polish seaports, access to the port of Szczecin from the sea is the worst. In the past, i.e. approximately 15 to 20 years ago, the port of Szczecin provided a possibility for handling a new, average size world fleet vessel, but now an average vessel, which has been constructed over the last five years, will be able to enter the port of Szczecin after its aquatorium is deepened to a depth of 12.5 m.

The economic transformation, which has been taking place in Poland and other countries in the region since the last decade of the 20th century, has had its influence on:

- the objective structure of cargoes in the maritime trade (decreased export of raw materials which are cheap in terms of their unit price, an increase in the number of articles which are highly processed),
- cementing commercial relationships with other 'old' EU countries and the so called 'shift in trade effect' as a result of it,

- change in the quantitative and ownership structure of this trade participants (decreased share of big state entities for the sake of small and medium private businesses).

These changes forced and are still forcing specific actions performed by the storage and reloading companies in the port of Szczecin whose target is to attract cargoes.

The changes, which are taking place in the world maritime transport, including seaports (Misztal, 1985, p. 44), are reflected in a much bigger (than it was in the past) demand for a storage space and areas designated for distribution and logistics services. As a result a big pressure for acquiring new areas for port activities is observed. In Szczecin the vacant port land is not evenly distributed among the most important port areas, forcing one to consider enlarging the port's management borders in the general and bulk cargo area.

Before the economic transformation in the Polish seaports began, rail transport had been dominant in providing services to the supply base. Road transport, whose share in providing services to the port of Szczecin's hinterland is growing rapidly, as well as the accomplished and scheduled projects related to making the Oder Waterway navigable, will have a big influence on operations of the analysed company in the future.

The fulfilment of the determined development objectives of analysed stevedoring company is closely correlated with actions scheduled by the entities which are responsible for improving access to the port of Szczecin from the sea and mainland, spatial development of this port as well as its infrastructure development (Table 5).

Table 5. External actions which are coincident with the development objectives of the analysed stevedoring company

Action	Detailed actions
Improvement of access to the port from the sea	deepening the waterway to a depth of 12.5 m along the length of 62.5 km as well as widening, building and modernising hydraulic structures and redeveloping navigational and VTS tagging objects
Improvement of access to the port from the hinterland	<ul style="list-style-type: none"> – modernisation of the E59 and C-E59 main railway lines, – making the Oder Waterway navigable, – continuation of road S3 construction (stopping at the Czech border)
Improvement of "last mile" access to the port	<ul style="list-style-type: none"> – improvement of rail access to the port of Szczecin; a complex redevelopment of the track system at the Szczecin Port Centralny station, – improvement of road access to the port of Szczecin
Improvement of port infrastructure	<ul style="list-style-type: none"> – improvement of access to the port of Szczecin in the Kaszubski Basin area; redevelopment of the main quays at the Katowicki Peninsula as a result of modernization of the Świnoujście–Szczecin waterway to a depth of 12.5 m, – construction of port infrastructure in the Górnośląski Basin in the port of Szczecin; the project involves construction of the Dolnośląski Quay as well as filling and paving the Notecki Basin area, – preparing the Bytomskie Quay to handle ships with a 11.15 m draught
Port space development	extending the management borders of the port of Szczecin with the land located on the other side of Gdańska Street, designated mainly for the development of the distribution and logistic function

Resources: own work.

Investment tasks to be taken on by the analysed Company result from the development objectives formulated by the analysed stevedoring company. They include investment tasks in two areas, i.e. investment in reloading equipment and investment in storage areas. In Table 6 these tasks are assigned to the primary development objectives of the analysed stevedoring company.

Table 6. The most important actions of the analysed stevedoring company aimed at accomplishing the goals of the company's development strategy

Goals	Development of the handling, transport and logistics potential	Development of the storage potential
Objective 1.	Projects related to the increasing the handling rate related to the new depths at the most important Company's quays, including the purchase of a Tukan crane with a lifting capacity of 50 tonnes for the Katowickie Quay, modernization of the two cranes at the Chorzowskie Quay, which will increase their lifting capacity from 16 tonnes to 25 tonnes, the purchase of new grabs, the purchase of a new loader to be operated in the holds.	Investments which allow to store bigger cargo batches at a time, including enlargement of the storage area at the Katowickie Quay and modernization of the bunkers in the hinterland of the Bytomskie Quay and Katowickie Quay.
Objective 2.	Projects which will adjust the reloading and manipulative suprastructure for the more complex cargo traffic, including: modernization of the coal terminal in order to restore its full import possibilities, the purchase of a new bulldozer, the purchase of new, self-propelled cranes for handling cargoes in from/to vessel relationships.	Projects related to the establishment of new warehouse spaces, tidying storage areas ('black' bulk cargoes separated from 'white' cargoes), conversion of the Wałbrzyskie Quay in order to handle and store 'white' bulk cargo and general cargo.
Objective 3.	Bearing in mind the Objective 3, investments related to the purchase of forklifts for reloading cellulose and other general cargoes are intended in the field of investments in the handling and manipulative suprastructure.	Investments in the storable potential related to the development of distribution and logistics services, including development of two warehouses for storing cellulose and other unitized cargoes at the Regalica Quay, adaptation of the warehouse (which was originally built for handling soya pellets) for storing cellulose, construction of a lime warehouse, leasing new port areas (after its borders are enlarged).
Objective 4.	Projects which take into account changes in providing transport services to the port from the hinterland, including construction of bunkers for loading lorries (increased handling rate in the vessel/lorry direct relationship) construction of weighing bunkers for proper feeding into lorries and wagons with no need to weigh them on the scales, the purchase of a self-propelled crane to be used on the scales and storage sites, the purchase of devices for shunting wagons on port sidings.	

Source: own work based on Bulk Cargo-Port Szczecin (2016b).

The synthetically presented actions to be justifiably taken by the analysed stevedoring company are an answer to the most important challenges this entity is now facing. For years the analysed stevedoring company has been preparing for such conditions, including changes in the Polish maritime trade (Objective 2), increase in the importance of the distribution and logistic function of the ports (Objective 3), or changes in the share of particular land transport sectors in providing services to the supply base (Objective 4), by taking appropriate investment and organisational actions.

The new and definitely the most important determinant of the company's development is deepening the Szczecin-Świnoujście waterway to a depth of 12.5 m by the Maritime Office in Szczecin. This project should be then continued within the framework of actions carried out by Szczecin and Świnoujście Seaports Authority SA by deepening the immediate access waters to the most important quays as well as their redevelopment. Therefore, obtaining new areas for the development of port operations will also be an important area of actions carried out by Szczecin and Świnoujście Seaports Authority SA.

In order to achieve realistic effects related to the new depth of the port of Szczecin's aquatorium as well as actions carried out by the Maritime Office in Szczecin and Świnoujście Seaports Authority SA investment actions of the analysed stevedoring company will be coordinated chronologically and substantively. By providing services

to bigger ships in the port of Szczecin the analysed company will be allowed to continue its strategy towards diversification of its business operations more effectively.

Conclusions

Changes which take place in the environment of stevedoring companies, both positive and negative, force these entities to choose and accomplish a suitable development strategy. The example of the stevedoring company analysed in the article indicates significant benefits derived from the fulfilment of the strategy towards diversification.

Thanks to its strategy for diversifying cargo, directions and functions the stevedoring company has reached its established position in the market of port services in the South Baltic. The company is also the most important entity which provides technical services in the bulk and general cargo area of the port of Szczecin. The strategy employed by the company is part of the existing and scheduled actions aimed at improving access to the port of Szczecin from the mainland as well as investments in the port infrastructure in Szczecin carried out by Szczecin and Świnoujście Seaports Authority SA.

The efficiency of diversification actions taken by the analysed stevedoring company, and, consequently, improvement of its competitiveness, will be significantly influenced by completing the project to deepen the Świnoujście to Szczecin waterway to a depth of 12.5 m (Maritime Office in Szczecin), deepening the immediate access waters to the most important quays as well as their redevelopment (Szczecin and Świnoujście Seaports Authority SA) and complementary investments in the handling and storage-related suprastructure (Bulk Cargo-Port Szczecin).

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Cite this article as: Mańkowska, M., Pluciński, M. (2018). A Strategy Towards Diversification of Operations. The Case Study of the Stevedoring Enterprise. *European Journal of Service Management*, 4 (28/2), 257–268. DOI: 10.18276/ejsm.2018.28/2-32.

PROBLEMS OF THE Odra NAVIGATION IN THE 1930s AND DURING WORLD WAR II

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION N44, N74, N94

KEYWORDS inland navigation, the Odra, the 1930s to 1945

ABSTRACT The Odra navigation faced several problems, such as the state of waterways, competition between river carriers and the railway and, during the war, maximum use of its shipping capabilities. The waterways were improved by river regulation and building reservoirs. Competition was limited in the early 1930s by creating small shipowners' unions (who usually also worked as skippers on their own boats) and regulating freight rates. Nazi authorities regulated navigation by creating obligatory professional associations. During the war the maximum use of inland shipping was done through tight control of tonnage, transferring some freights from the railway to the river transport and freezing freight rates. However, obsolete fleet, decreasing crew numbers and low freight rates caused the share of the Odra navigation in overall transport to fall.

Introduction

For economic and political reasons state authorities appreciated the significance of inland navigation as supplementary and to the railway and, at the same time, as its counterbalance. The railway was owned by the state and private railways were of little importance. Inland navigation, on the other hand, was mostly in private hands – small owners of one or two ships and several large companies.

The aim of the article is to use the Odra navigation as an example how the state government intervened in and controlled inland navigation in general during peacetime and during the war. The article shows it by analysing archival sources, statistics, reports of institutions, as well as the subject literature.

Waterways

The Weimar Constitution gave the Reich control over waterways. The main goal of the state was to support sea ports and frontier areas by building waterways and canals. Such was the aim of, for example, the Gliwice Canal opened in 1939 which replaced the old Kłodnicki Canal. It was supposed to be the first part of a canal connecting the Odra and Danube. Finishing, in 1938, the last part of the Midland Canal meant the creation of a waterway connecting the Rhein and Elbe, the Odra and the eastern part of the Reich (Schroiff, 1984, pp. 28–29, 173–174). The Canal allowed the coal from the west to gain advantage on the Berlin market. It was supposed to be compensated by finishing engineering and regulation works on the Odra (Grodek, 1948, p. 405). The conditions of navigation were improved after building water reservoirs in Otmuchów and Turawa in 1940/41 (Menzel, 1997, pp. 16–17). Although reservoir water supplies did not contribute to the increase of capacity use, there was an rise in the number of round journeys on the Wrocław–Berlin–Szczecin route (Menzel, 1997, p. 10). The central Odra was prepared for the barges of a capacity from 700–750 tons. By 1937, 66% of the central Odra waterway was rebuilt – from Wrocław-Rędzin to Lubusz (Menzel, 1997, p. 14). The Odra was linked with the waterways of the March by the Odra – Spree canal and the so-called Great Waterway between Szczecin and Berlin. The navigation time on this route was shortened by the Niederfinow boat lift, opened in 1934 (Grodek, 1948, pp. 398–399; Born, 1948, pp. 515–518). The Odra was connected with the Vistula via the Bydgoski Canal.

The Odra Fleet

Between 1933 and 1939 the tonnage of self-propelled boats increased twofold. The introduction of self-propelled barges allowed small shipowners to become more independent of towing companies and to gain more freedom in their operations. The number of towboats increased as well. The tonnage of engineless boats increased only by several percent. Only 11% of the boats were built between 1918 and 1937 (Menzel, 1997, p. 14).

Unstable political and economic situation caused fluctuations in employment. From 1935/1936 crew shortages occurred in the Odra shipping and the difficulties were growing from 1938. The reason for that was low pay, abandoning the profession, and military service (Menzel, 1997, p. 14).

Boat ownership was scattered among many owners – small owners (often also skippers) possessing from one to three vessels. In 1938 they owned 83% of the Odra ships and 77% of the whole tonnage. Within this group there were 1821 engineless barges, 67 self-propelled barges and 173 towboats. Small shipowners got together to oppose the large ones. Between 1934/1935 and 1938, four shipowners went out of business but five new appeared leaving seven shipowners in operation (Menzel, 1997, p. 15). The largest of them was Schlesische Dampfer- Compagnie – Berliner Lloyd AG registered in Hamburg. That shipowner owned or co-owned two ports on the Odra in Wrocław, one in Furstenberg on the Odra-Spree canal and Havelberg on the Havel (Zawadka, 1999, pp. 136–137).

Economic conditions for navigation

After the wartime decrease, the inland waterway shipments returned to their pre-war level and remained there. The share of the Odra region navigation decreased from 14.1% in 1913 to 9% in 1935 (Kunz, 1995, p. 49).

The majority of transported goods were fuels, ores and crude iron. About 75–80% of loads leaving Koźle and Malczyce, particularly coal, went to Berlin (Menzel, 1997, p. 11). The dominance of this cargo caused a significant imbalance in carriages on the Silesia – Berlin route (Groddek, 1948, pp. 400–401). Altogether, the transport volume on the Odra amounted to 8.7 million tons in 1938, which was, however, less than in 1928 when almost 9 million tons were carried (Menzel, 1997, p. 14).

Freight rates depended on the supply and demand for tonnage, navigation conditions, canal charges and towing rates. Waterway carriers, contrary to the railways, were able to benefit from the better flexibility of freight agreements. The trade policy of the state, carried out by means of railway fees, was balanced by the inland shipping freight rates (*Denkschrift...*, 1930, p. 67).

After the war, the railways of German states were taken over by the Reich. From December, 1920, a unified domestic cargo rate was introduced which decreased with distance. It was competitive towards inland navigation, as its aim was to keep the high-value loads for the railway (*Denkschrift...*, 1930, p. 56).

The Odra carriers competed not only with the railway but also with one another. The most important shipments were the return upriver transports of iron ore and pyrites. A significant fall in freight rates occurred – from 4.5 RM before the war to 3 RM per ton from Szczecin to Upper Silesia. The fall occurred despite the increase in the cost of labour and lockage (Groddek, 1948, pp. 400–401).

The freight rates decreased significantly during the crisis of 1929–1933. Assuming that they were 100 in 1929, they dropped to 58.1% in 1932. Profits of small shipowners fell by 60–70% while larger shipowners had long-term agreements with production plants with fixed rates. In 1929 railway fares were introduced which harmed the navigation developed quickly in the times of stability (*Geschichte...*, 1961, pp. 404–405).

State intervention

Excessive tonnage supply and the resulting fierce competition led small shipowners to the edge of bankruptcy. The Reich government thought it necessary to introduce regulations limiting competition. The regulation of 23 December 1931 allowed creating “small shipowners’ unions” on the March waterways and the Elbe. They got a power to establish minimum freight rates. In addition, a regulation of March 1932 set up “freight boards” in, among others, Berlin, Szczecin and Wrocław (Teubert, 1932, p. 865).

“The Act on Improving the Difficult Situation in Inland Navigation” of 1933 supplied legal basis for the actions already initiated. The Minister of Transport was authorized to equalize the load supply with shipping capacity supply. Those means depended on the conditions on particular waterways.

According to the act, every small shipowner (owning from 1 to 3 barges, a self-propelled boat or a towboat) had to belong to one of six unions, depending on their living place. One of them gathered the Odra shipowners. Special offices were set up which divided cargo and towboats among union members. Thus, they also took care of agreements with shipowners or shipowner groups concerning equal employment for their members. Skipper and shipowner unions were dissolved at the beginning of the war, because full employment was, at that time, ensured in inland navigation (Securius, Böning, 1943, pp. 11–13).

Because the abovementioned unions were able to enforce high freight rates, freight boards were established which were supposed to set minimum and maximum freight rates. Such boards included representatives of shipping, forwarders, loaders and navigation authorities. The boards operated in, among others, Berlin, Wrocław and Szczecin. They had a right to impose punishments for disregarding their regulations (*Geschichte...* 7, 1961, pp. 405–406). Apart from that, Hitler's government tried to stem the discontent of small shipowners by introducing regulations protecting shipowners from debt recovery, giving one-off subsidies for the maintenance of boats for the Elbe and March waterways, as well as forbidding the construction of new vessels (*Geschichte...* 8, 1961, p. 454).

The regulation on "the organic reconstruction of transport" from 1935 forced all employers and employees involved in inland shipping to belong to a professional association called *Reichsverkehrsgruppe Binnenschifffahrt*. The associations had its local branches and disobeying the orders of the group's head officer resulted in high monetary fines (Securius, Böning, 1943, p. 16; *Geschichte...* 8, 1961, p. 455).

Establishing the system of navigation management and supervision did not solve the problem of full fleet utilisation since one of its important elements was also an efficient operation of the railway. In 1938, for example, the management of goods wagons was poor. In Koźle barges waited for wagons with coal while in Szczecin there were too few barges. Constant intervention was, therefore, necessary (APG UWwD No. 2/613, 1938: 2).

Negative influence of the railway policy manifested itself not only through differential tariffs but also tariffs in relation to the Odra ports. In 1937, the situation deteriorated further as additional 5% burden on the railway rates contributed to the cost increase in railway transports to the Odra ports (APW AmW No. 43733, 1937).

Wartime regulations

When the war began, there was an effort to maximize the use of the existing means of transport, crews and loading facilities. The waterways management pledged to shorten lockage time and the Minister of Transport introduced new time norms for loading and unloading (APG UWwD 1939 No. 2/613: 3).

The limits on ship capacities were abolished and obligatory unions dissolved. They were no longer needed since the authorities exerted their influence through the aforementioned association. The government abolished also the pre-war limits on industry-serving navigation, as well as fare barriers which increased sharply past a given place on the Midland Canal and had been introduced to protect Silesian coal from the competition with western Germany on the Berlin market.

On 19th September 1939 a regulation was passed on "counteracting insufficiencies in transport". It took away some freights from the railways and transferred them to the waterways, for example iron ore from Szczecin to Upper Silesia and coal in the other direction. The railway had to facilitate the delivery of loads to the waterways. It also had to abolish exceptional fares thanks to which it competed with inland navigation. It was forbidden to supply goods wagons for cargo which could be carried by water. The coal for the railways was also supposed to be shipped by water if conditions allowed that. Apart from carrying pitprops and agricultural products, the general cargo also began to be forcefully directed onto the waterways. Regular general cargo lines were even established. It became prohibited to carry break bulk cargo or wagonloads between certain places situated on waterways (*Geschichte...* 9, 1961, pp. 524–525).

For the efficient management of navigation on Odra, Warta and Noteć special offices were established in 1940. They had their branches in Koźle-Port, Wrocław, Furstenberg, Kostrzyn and Szczecin. Their task was an appropriate division of boat tonnage. Those offices were supposed to collect information from large and small

shipowners about free tonnage and supply information about contracts and towing agreements. (APG UWwD 1940, No. 2/613: k. 109; Securius, Böning, 1943, pp. 14–16).

The regulation from October 1941 froze freight rates on the level from 1st September 1941 (Securius, Böning, 1943, p. 43). The tasks of freight boards were significantly enlarged. They set not only minimum and maximum rates but fees for all navigation services. They were also enabled to set unified rules of affreightment and towing in their area. The boards' decisions had to be unconditionally respected and they could impose fines on the disobedient. The freight commission in Wrocław had under its jurisdiction the Odra up to Kostrzyn, as well as the Warta and Noteć. The commission in Szczecin supervised the Odra from Kostrzyn downriver together with the Szczecin Lagoon (Securius, Böning, 1943, pp. 13–14).

During the war, efforts were made to speed up shipping. According to the Ministry of Transport regulation of 3rd December 1940 the time needed for loading, unloading and shipping was supposed to be maximally shortened. That length was to be determined by local "waterways offices" taking into account local conditions. The offices in Szczecin and Wrocław determined time length for loose cargo loaded with chutes or mechanically: up to 100 tons – 1 day, up to 200 tons – 2 days, 400 tons – 4 days etc. Loading and unloading was not supposed to be interrupted on Sundays and during public holidays (Securius, Böning, 1943, pp. 32–33).

In October 1941, due to insufficiencies of the railways in the area of the Berlin directorate, the loads which up till then had been expedited from the Berlin cargo station began to be sent with express river transports to major ports on the Odra and Warta. The exception was made for general cargo, express wagonloads, live animals, perishable goods and military and service loads. Similar regulations concerned other railway directorates where suitable waterways existed (*Geschichte...* 9, 1961, p. 526).

The efforts to increase freight on inland waterways were faced with the same obstacles as in the pre-war period. The freight rates were low. In September, 1939 their height was 63% of the 1928 level. In 1940 they were raised from 2.9 RM per ton to 3.75 per ton and in 1941 to 4.30 RM per ton which was still lower than the rates in 1928 – 4.60 RM per ton (APW RW No. 15845: 13).

In the view of the Odra freight commission chairman the freight rates were supposed to be stable in the economic and transport sense and ensure appropriate supply of tonnage both at the time and in the future. The condition was not fulfilled for the Odra and hence the tonnage problems. In September 1942 a company in Hamburg complained about the lack of barges connected with low navigation profitability. Coal recipients and cement plants were prepared for the waterway freight rate increase from 2.50 to 3 RM which would still be cheaper than sea transport through Szczecin which increased the price by about 4 RM per ton. Higher profitability of transport was supposed to speed up barge turnover (APW RW No.15845, 1943: 19).

Freights during wartime

In 1941 the freight operation on inland waterways connected with cargo transport in Germany increased generally by 20% in comparison to the previous year. This included a 68% rise in iron ore transport, 32% in building materials and 21% in timber. For coal, the rise amounted to 20% and it constituted almost a third of the waterway cargo. However, in 1942 there occurred for the first time a crisis in transport and difficulties in the deliveries of cargo for industry and individual consumers (*Geschichte...* 9, 1961, pp. 528–531).

Despite constant demand for vessels that had lasted for years and the improvements on the central Odra waterway, in 1939 the number of transshipments fell in Koźle, Wrocław, Malczyce and, to a lesser extent, in Głogów.

In the years 1938–1941 Koźle noted a fall of transshipments from 3.8 million tons to 3 million, Wrocław from 0.7 to 0.6 million, Malczyce from 0.7 to 0.4 million tons (Menzel, 1997, p. 17).

In the years 1939–1941 the inland navigation did not take over as much cargo transport as planned. The turnover of the Szczecin Port, in and out shipments by inland waterways and railways were 9.8 million tons in 1939, 8.8 million tons in 1940 and 10.7 million tons in 1941 (Włodarczyk, 1990, p. 25). The share of the inland navigation in this turnover decreased from 38% in 1939 to 29.6% in 1941. The railway was able to react faster to the demand for transport than the inland navigation. Moreover, there were not enough crews, especially skippers, due to conscription to Wehrmacht. There were also fewer upriver loads. For instance, in 1940 7.7 thousand boats came to Koźle, 5.1 thousand of which were empty. At the same time, in Malczyce, the share of the empty ones amounted to 33.2% (Menzel, 1997, p. 18).

At the beginning of 1943 the chairman of the Freight Department in Wrocław explained that the reasons for the worsening state of the Odra navigation were the falling freight rates, lack of funds for fleet replacements and low water levels. The problems had pre-war roots. A crisis regulation of 1932 introduced a ban on building new vessels, made the building of the new dependent on scrapping the old and imposed limits on boat capacities. This hampered the development of the Odra fleet. At that time the state was building new motorways, producing more and more cars and the railway invested in new rolling stock. Although the abovementioned regulation was abolished in 1938, quota were set on shipbuilding materials. Hence the average age of Odra vessels was 36 years. Moreover, the Odra shipyards were technically and organizationally obsolete (APW RW, No. 15845, 1943: 1, 2).

From the end of 1943 the potential of railway transport was decreasing. On the other hand, the demand for river transport grew. That increase meant that crew shortages and fleet wear became more acute. In September–October 1944 the Odra fleet consisted of 356 towboats, 51 of which had to undergo renovation, 153 engine barges, 14 of which needed renovation, 8 engineless tankers and 6 engine tankers – 2 for renovation (Menzel, 1997, pp. 18–20).

The turnover of all ports in Wrocław and Malczyce were still on the level of 1.4 tons in 1938 and then decreased systematically to 1.3 million tons in 1939, 1 million in 1940 and 616 thousand in 1943. From January to April 1944 the turnover was just 144 thousand tons. (APW WS PŚI No. 1607: 1, 7–8.) It must be noted that railway transport in the Wrocław directorate carried 29 million tons in 1940, 27.9 and 27.7 million tons in 1941 and 42 and increased to 30 million in 1943 (Scharf, 1981, p. 271.)

Due to the destruction of land transport facilities by air-raids, the waterway transport was in heavier use. The Upper Silesia coal mining increased in significance and in November of 1944 it constituted a half of all German coal extraction. In July 1944, 107 thousand tons of coal were sent from Koźle. 215–240 barges were used carrying on average 450–500 tons, which meant 7–8 barges a day. In September 1944, the coal transport from Koźle grew to 126 thousand tons and in November – 274 thousand (out of 400 thousand planned.) In the second decade of December 1944 the monthly plan was 133 thousand of which 92 thousand was achieved and in the third decade – 8 thousand tons (Menzel, 1997, pp. 19–20).

Conclusions

During the economic depression of the first half of the 1930s the state decided to intervene and create separate unions of small and large shipowners which were supposed to ensure their full employment. The government established boards which set minimum and maximum freight rates. The aim was to prevent competition which

destroyed the owners of one or two boats. Inland navigation was supposed to counterbalance dominant position of the railways, especially in bulk cargo transport. Nazi authorities controlled the navigation by creating obligatory professional associations. After the war began, in order to use the waterway potential to the full and lighten the railway's load, a strict tonnage control was exercised. Some loads were being transferred from railways to waterways and freight rates were frozen. Obsolete equipment, falling crew numbers and low freight rates caused a fall in the volume and share of the Odra navigation in the whole of the German transport.

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Cite this article as: Mielcarek, A. (2018). Problems of the Odra navigation in the 1930s and during World War II. *European Journal of Service Management*, 4 (28/2), 269–275. DOI: 10.18276/ejsm.2018.28/2-33.

OUTSOURCING OF LOGISTIC SERVICES IN THE CLOTHING INDUSTRY

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION L20, L91, M20

KEYWORDS logistics services, garment industry, outsourcing, logistics services, transport, warehousing

ABSTRACT The issue of the paper concerns the range of outsourcing of logistic services in the clothing companies. The paper presents the results of research carried out in Polish companies. The range of outsourcing is influenced by place of a company in a supply chain (a production or a distribution company) and specificity of manufactured goods (clothes on hangers or folded, mass or individualized product). In some cases, companies only outsource transport services, in others also storing (in whole or in part), supply and e-commers service.

Introduction

The aim of the paper is to present the scope of outsourcing in Polish clothing companies and factors affecting this scope. The authors presented the results of own research concerned both production and logistic processes in clothing companies. The research was carried out using the direct methods – interviews and observations.

As part of the research, from August 2017 to November 2018, one of the authors visited 16 Polish clothing industry companies.¹ These were enterprises of various sizes – both the largest Polish clothing company LPP SA and very small, such as Keia – operating on a local and specialized market segment. These companies were also diversified in the scope of their business. Part of these companies only design and sell products in their own showrooms, and outsource production to other companies. The other part of firms either produce garments according to their own designs, like for example Unikat or on order and according to projects of other companies, like it is in case of the so-called processing companies.

In the studied companies differed with the type of production – in most cases it is mass production but there are also companies with highly individualized production, e.g. Macaroni Tomato company. Other companies cooperating with the garment industry were also studied, which produce knitwear, deal with specialized production services, e.g. embroidery, as well as a logistics operator providing services dedicated to clothing companies (Spedimex company).

Transport and Logistics services market in Poland

In the market of logistic services in Poland, which is relatively young but already developed (Płaczek, 2017; Płaczek, 2012), there are tendencies towards specialization and close, integrated cooperation with customers.

The leading industries using services of logistic operators include consumer electronics and household appliances, household chemicals and cosmetics, and Automotive Subsequently – branch office, pharmaceutical, textile, sports and footwear industries. Specialization plays a very important role and not only on the market of logistic services (Walewski, 2009, p. 35). Specialization strategies are also applied by companies providing traditional transport and forwarding services both by larger and smaller service providers. Many years of research and contacts with the transport and logistics industry in Poland, lead the authors to the conclusion that specialization is a very important factor of the economic efficiency of logistics processes and of the service quality.

However with a very high degree of specialization, the tendency to outsource logistics function may decrease.

Logistics challenges in the clothing industry

The clothing industry has its own specificity – short product life cycles, high volatility and low predictability of demand, a wide range of clothes combined with a variety of colors, sizes or models, long production cycles (Marufuzzaman, Ahsan, Xing, 2009; Battistoni, Colladon, Mercorelli, 2013; Nenni, Giustiniano, Pirolo, 2013; Vedel, Ellegaard, 2013). Difficulties in predicting demand force companies to improve supply chain flexibility (De Carlo, Tucci, Borgia, 2013; Rayman, Burns, Nelson, 2011).

According to the opinion of experts, companies face not four but six seasons of clothing sales, which is associated with shorter product life cycles (Hoch, 2017). The market is evolving towards the so-called “fast fashion” (Kołata, 2018) and growing importance of the e-commerce channel, which enforces increasing flexibility in responding to customer orders. And yet still big companies order production in the low-cost countries, what makes it difficult to react quickly to the changes of consumer demand.

¹ Research conducted as part of the research project: “Modern methods of managing production and logistics processes and their impact on competitiveness on the example of the clothing industry” at the Faculty of Finance and Banking of the WSB University in Poznań.

An additional challenge is the cooperation with large retail chains that expect from suppliers frequent deliveries in strictly defined quantities and in precisely planned time windows, often at night. A specific problem, especially in e-commerce, is also the return management.

The role of modern technologies (e.g. automated processes in warehouses and distribution centers) will be growing (Kunert, 2018; Żurek, 2018).

The specificity also relates to a product itself because clothes require proper conditions in the distribution process. For example, too low temperature can damage the fibers. Carrying some clothes, such as suits in the folded state, causes them to crumple and creates the need for ironing before selling, for this reason companies storage and transport of clothes on hangers.

Logistics operators offer specialized services for their customers from the garment industry – including quality control, cataloging of articles, sending samples for photo studios, labeling, preparing sets, ironing and refreshing clothes, sewing, foiling, hanging on hangers, fixing price tags, RFID markers, security tags (Haber, 2017).

The use of solutions dedicated to the clothing industry may result in lower efficiency of equipment – e.g. in distribution centers of logistics operators. Storing and transporting clothes with other goods creates the risk of dusting, moisture or taking on foreign smells (Haber, 2017). According to the opinion of some logistics managers, such a risk also occurs in the transport of goods in containers by sea.

The strategy of ordering production in low-cost countries can also create a need for specific services. For example Logistics operator FIEGE (Fiege Far East), as a part of their services, can collect goods from the sewing factories, e.g. in Bangladesh and control quality of clothes on site.

Summing up, serving the clothing industry by logistics and transport service providers requires a logistics system adapted to the specificity of this industry. However, the question arises here, what should be the scope of the logistics services and what are the factors that affect it.

Clothing processing companies

Clothing processing companies sew clothes ordered by other companies, according to the project of their customers and usually from the materials delivered to them. Companies of various sizes were studied, employing from several to several dozen employees.

None of the surveyed companies in this group are responsible for transport – it is a customer, which orders sewing, chooses a carrier and organizes transport. From the point of view of sewing companies, it is important that finished products are picked up as soon as possible – these companies usually have relatively small storage space, so they have no place to store products for longer. In their warehouses also materials for fulfilling current orders are stored. In general, production takes place immediately after the materials are delivered. For relatively longer time materials like for example threads or packaging are stored.

Companies producing according to their own projects

This group of companies produce clothes according to their own projects and under their own brand. The sale takes place either in outside stores or in own showrooms. These companies choose suppliers themselves and order necessary materials, accessories and packaging. However, a way of performing warehouse and transport processes depends on a scale of operations and on whether a company produces typical or individualized goods. Individualized production is usually performed on a small scale.

The example of a company of a middle size, which produces typical products according to their own projects and under their own brand is Unikat company. It produces underwear for stock and keep a big amount of it in its own warehouse, located close to a sewing factory. This company also store materials for production. The sales of clothes take place in outer showrooms, to which Unikat organizes transport performed by a few transport companies.

Another company Keia, which is a small producer of medical and protective clothes, is an example of a company that produces customized garment for a specific order. The company has very small inventories, because it orders materials in required quantity for a specific order and after sewing, the goods are immediately delivered to customers, such as hospitals, while individual customers pick up the goods at a showroom.

Outsourcing of logistics processes in this group concerns only transport.

Companies dealing with design, distribution and sale of clothes

These companies design products, order production to domestic or very often foreign sewing factories, and then they sell products under their own brand, usually in their own showrooms. In this way, the largest Polish clothing companies operate, but not only. For example small, but thriving Macaroni Tomato company outsources production and designs and sells exclusive suits under its own brand, in its own showroom in Warsaw. Companies from this group focus on what is the most profitable in the clothing industry. They outsource sewing, because it gives lower income. Logistics processes are also outsourced, but to a different extent, which will be shown on the example of the two tycoons in the clothing industry – LPP SA and Vistula Group SA.

LPP SA

LPP SA, owner of the Reserved, Cropp, House, Mohito and Sinsay brands, has about 1,700 showrooms in Poland and twenty other countries, mainly European ones. All production is transferred to subcontractors located mainly in Far East, especially in Bangladesh. In the recent years part of the production is coming back to Poland. Logistic processes are only partially outsourced – mainly transport processes.

Clothes produced on behalf of LPP SA in Far East are transported by sea in containers to the port of Gdańsk, and from there to the own Logistics Center in Pruszcz Gdański. It is a modern facility with an area of 70,000 m², in a large part automated (stacker cranes, automatic conveyors, sorters), what ensures high processes efficiency. In addition to the Logistics Center, there is another own warehouse under construction. In this Center most of finished of products are stored, except for elegant garments sold from hangers as ironed clothes.

In cases where the priority is short delivery time from a producer, LPP also uses air transport – in this way, about 10% of goods from Far East are transported. Apart from this, also garments sewn in Poland and Turkey are delivered by road transport to the Logistic Center.

Deliveries of goods from the Logistics Center in Pruszcz Gdański to showrooms are performed by express couriers with the use of road transport. LPP cooperates with four carriers in Poland and four in international transport. Deliveries to each store take place according to a schedule, at night. The transport reaches the showrooms in a timely manner – LPP is the most important customer of these carriers, so the logistics service of LPP is treated as a priority. To the showrooms in the Near East goods are transported by planes.

In a slightly different way the logistics service for garments transported and stored on hangers is organized – like part of the “Reserved” brand lady collection. The logistics service for this group of goods is outsourced to a logistics operator Spedimex. The company offers full service – picks products, transports them to its warehouse in

Stryków near Łódź, where the goods are ironed and refreshed. Then, Spedimex delivers ironed clothes to individual showrooms on hangers so that the clothes could be ready for sale without ironing.

As for the e-commers LPP partially outsources this service to Arwato company. This company stores LPP products for online sales in its warehouse. Arwato serves online sales of Reserved, Mohito and Sinsey brands, while LPP deals with the sales of other brands by internet.

Vistula Group SA

Logistics processes at Vistula company is organized in a slightly different way. It is divided into two groups – the distribution of hanging clothes (suits, jackets, coats, trousers, tuxedos) and folded clothing (shirts).

The production of hanging clothing is entirely outsourced to Polish sewing companies. Vistula outsource transport and storage services of finished clothes, cooperating with the logistics operator Spedimex. Apart from this Vistula has two own warehouses for keeping materials for production.

Because the production facilities have small storage areas, sewn clothes have to be quickly picked up. Spedimex must be informed about it 2 days in advance. Hanging clothes are transported from production plants to the Spedimex warehouse in Stryków on hangers, because transporting this group of clothes in the folded state would not only cause its deterioration, but also additional costs associated with subsequent ironing would have to be incurred. One vehicle with a load capacity of approx. 90m³ can transport from 2,000 up to 4,000 pieces of hanging clothes, which depends on an assortment – for example coats take up more space than pants, because they can be transported only in two levels, while the pants in three. Spedimex generally transports goods from various sewing factories by one transport. Clothes are stored in the warehouse of Spedimex in Stryków, where a part of the storage space is reserved for Vistula. Vistula pays a fixed rate for the reserved space, regardless of how many clothes are stored. Storage is often long-term, because a lot of clothes are sewn in advance. Then, according to the demand, the goods are delivered to individual showrooms. Deliveries are carried out 6 times a week, at night.

Apart from Spedimex Vistula cooperates also with several small transport companies for transporting small amount of garment, e.g. between showrooms in Warsaw. As for the e-commers, Spedimex deals with dispatch of clothes to customers. In case of returns, these clothes are delivered to sewing factories, where their quality is checked, clothes are washed if needed, ironed and folded.

Conclusions

The research showed three main factors influencing the scope of outsourcing of logistic services of clothing companies and types of these services outsourced:

- position of a company in a supply chain, e.g. a production or distribution company,
- type of production - mass or individualized,
- type of a product produced (clothing on hangers or in folded condition).

Production processing companies do not deal with transport, they store goods in short-term in their own small warehouses located near production, and usually buy only accessories and in some cases packaging by themselves.

Companies producing according to their own designs and under their own brand outsource transport, but they deal with the organization of supply and storage. In these companies, a level of stocks depends on whether production is customized for a specific order or it is typical “Make To Stock” Production.

The companies, which design and distribute their products outsource transport. The storage is outsourced either entirely, as in the case of Vistula, or only partly (e.g. only products on hangers), as in the case of LPP SA.

In all of the surveyed clothing companies, the transport functions were outsourced, regardless a size of the company, its place in a supply chain and a type of clothes. The only difference is that the contractors of the processing companies are responsible for transport, while companies that sew according to their own designs order themselves transport services.

Storing is outsourced mainly in cases requiring specialized equipment and know-how, as is in the case of transport of clothes on hangers.

Generally it can be concluded that in the clothing industry, as in many other branches of the economy, there is also a tendency to outsource transport and logistics services and to increase the degree of specialization of logistics service providers. More and more logistics operators offer highly specialized and dedicated services for the clothing industry.

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Cite this article as: Milewski, D., Milewska, B. (2018). Outsourcing of logistic services in the clothing industry. *European Journal of Service Management*, 4 (28/2), 277–282. DOI: 10.18276/ejsm.2018.28/2-34.

SUSTAINABLE TOURISM IN THE ACTIVITIES OF CITY AUTHORITIES. POLAND – CASE STUDY

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RECEIVED
ACCEPTED

10 December 2018
28 December 2018

JEL
CLASSIFICATION

H79, M31, M38, Q01, Z32

KEYWORDS

sustainable development, tourism, cities, self-government, survey

ABSTRACT

Sustainable development is a priority challenge for the contemporary world, just like sustainable tourism. The purpose of this article is to present the activities of self-governments' administration which support sustainable tourism development in selected Polish cities. The hypothesis was formulated that the attitude of city authorities in Poland towards sustainable tourism development is not homogenous. The purpose of the article was achieved by subject literature review. The empirical part of the work consists of the primary research carried out in 2017 and 2018 among the units of local governments' administration in Poland. Relevant statistical analyses of primary data were carried out by means of non-parametric tests. The results of the analyses allowed proving the hypothesis. It is concluded that the cities do not conduct homogenous sustainable tourism policy. However, the more significant sustainable tourism becomes in the strategies of cities development, the more developed the activities in this area become.

Introduction

Sustainable development, i.e. the economy which makes use of the resources in more environmentally-friendly and more competitive way is the priority challenge for the contemporary world. Considering the concept of sustainable development it is pertinent to mention that in the second half of the 19th century philosophy called scientism was born. Its roots may be sought in Cartesian philosophy, according to which intellectual trends are

based on the axiom presuming the certainty of scientific knowledge. The main rule of scientism was sole and full trust in the science. The idea was to use the science in practice as means of modifying and altering the world for the benefit of mankind. Increasing the standard of living used to be treated as superior value (more: Stacewicz, 1993). Initially, this philosophy was driving the economy, and was the source of development and expansion of western civilization. However, in short time the effects of development processes, which were devastating for i.al. natural environment, cumulated.

A very important document reporting on the condition and threats for nature worldwide was the 1969 report of Secretary-General of the UN, U Thant entitled *The problems of human world*. It initiated the debate on ecodevelopment. The term ecodevelopment first appeared in 1972 in the documents of Stockholm Conference on "Human environment." It was indicated that natural resources are being depleted, therefore unlimited economic growth cannot be guaranteed. It has become necessary to find the ways of preventing the processes of depletion of non-renewable natural resources, pollution of natural environment, fast growing demographic rate, aggravating split between the prosperity of well-developed countries and the rest of population suffering hunger and malnutrition, and the general volatility of ecosystem, not to mention its degradation in some cases (Płachciak, 2011, p. 231).

Growing ecological, demographic, social and economic problems worldwide contributed to the process of moving away from the Cartesian thought (the concept based on the economic growth) to the philosophy of Aristotle, propagating the holistic recognition of the world, and based on the assumption that the whole is more than the sum of its parts (Kowalczyk, 2010, p. 126). At the end of the 1980s. the use of term ecodevelopment in the subject literature was in decline, giving way to the term sustainable development. The hitherto considerations show that sustainable development means the capability of material development in order to maintain long-term existence of human population on the Earth, while ensuring effective use of natural resources, development that is harmless to the environment and human condition, thus giving the same opportunities to the contemporary and future generations (Rossa, 2008, p. 44). The following should be indicated as paradigms of sustainable development (Pezzey, Toman, 2002, pp. 165–232):

- sustainable development is a type of socio-economic development (performed by a human in favor of another human, that seeks environmental and socio-economic egalitarianism),
- sustainable development is a process integrating all and any activity of a human brought to three dimensions: economic, social and environmental, and less frequently expanded to spatial and institutional (political) dimensions,
- sustainable development means desired living environment and sensible society which implements the concept of intra- and intergenerational order.

In the light of the above considerations, it does not seem surprising that sustainable tourism is the same kind of challenge, i.e. one that does not only aim at minimizing the negative impact of its activities on natural environment and local culture, but also strives for generating profits and increasing employment in local communities. Sustainable tourism development is of particular importance in terms of local problems relating to natural resources of local ecosystems. Among the entities responsible for this kind of undertakings one can find i.al. local governments' administration. Frequently, they work out strategies and take actions which both directly and indirectly support sustainable tourism development, engaging different groups of stakeholders.

The purpose of this article is to present the activities of self-governments' administration (particularly of municipalities) which support sustainable tourism development in Poland. This purpose allowed formulating

the following hypothesis: the attitude of city authorities in Poland towards sustainable tourism development is not homogenous. In connection with the above, three auxiliary hypotheses were identified, indicated in the methodological part.

The purpose of the article was achieved by the subject literature review. The empirical part of the work consists of the primary research carried out in 2017 and 2018 among selected cities in Poland. Relevant statistical analyses on primary data were carried out on the basis of non-parametric tests.

The remainder of this paper has been organized as follows: first, the analysis of the literature on sustainable development and sustainable tourism, next the presentation of selected undertakings performed by local authorities all over the world and in Poland in the area of sustainable tourism. Finally, the significant differences in activities supporting sustainable tourism development in Polish cities have been researched.

Literature Review

From sustainable development to sustainable tourism

As mentioned above sustainable development is a term which is not clearly defined and has been evolving. For example, in 1987 R. Goodland and G. Ledec defined it as: "... a pattern of social and economic transformations (i.e. 'development') which optimizes the economic and other societal benefits available in the present, without jeopardizing the likely potential for similar benefits in the future" (Goodland, Ledec, 1987, pp. 36–37). In 2000 M. Diesendorf stated that "Sustainable development comprises types of economic and social development which protect and enhance the natural environment and social equity" (Diesendorf, 2000, pp. 19–37). On the other hand, in 2007 P. Dasgupta published his definition according to which "sustainable development" is an economic programme along which average well-being of present and future generations, taken together, does not decline over time" (Dasgupta, 2007, p. 3). As the term became popular, a lot of countries decided to apply the concept on different levels of management (mainly on the level of local government) using it as the basis of actions undertaken by them. In 1992 in Rio de Janeiro during the Earth Summit a Declaration (Agenda 21) was signed. The Agenda defined sustainable development in a set of rules amended by numerous indications that constitute a set of recommendations on protection and shaping human life in order to sustain this development. A part of these rules were adopted by "Poland 2025 – Long-term strategy for sustainable development." (*Strategia...*, 1999). Sustainable development is one of the three priorities of Europe 2020 strategy. Its superior goal is sustainable improvement of the citizens' life. The diversity of factors and determinants of self-governments' development contribute to the fact that the specificity of each municipality/city and their functional relations must be considered (Parysek, 2015, pp. 27–53).

A broad range of understanding of the topic prompted the attempt to measure it. The European Union has repeatedly monitored SD on the lowest level of aggregation of administration units (municipalities). In Poland the construction of sustainable development indicators is mainly in the hands of T. Borys, who developed the first set at the end of 1990s, and the following – ten years later (Borys, 2010). The sets of the following indicators had the most significant impact on the range of Polish research into the construction of the indicator (Borys, 2002):

- Common European Sustainable Development Indicators,
- Urban Audit Indicators,
- Environmental pressure for EU indicators,
- HABITAT Indicators – Agenda,
- Sets of indicators used at local level in EU Member States.

The indicator module of sustainable development is also developed within the System of Self-governments' Analyses. "It is a system of monitoring local public services carried out at the local level (basically cities). Sustainable development indicators are grouped according to the rule of integrated governance in accordance with so-called three-tier governance model: environmental and spatial, economic, and social (including institutional)" (more Stanny, Czarnecki, 2011). These will be covered by research presented in the further part of this article. The focus on them results from the fact that tourism is included in their set (see Table 1).

Table 1. Areas included in the three governances distinguished in the System of Self-governments' Analyses

No.	Social governance	Economic governance	Environmental and spatial governance
1.	Demography	Municipality's finances	Making planning green
2.	Education	Entrepreneurship	Nature and landscape protection
3.	Social welfare	Structure of economic entities	Protection and sustainable development of forests
4.	Health	Level and structure of employment	Soil protection and waste management
5.	Public security	Residential construction	Protection of the resources of mines
6.	Housing	Tourism	Water protection
7.	Culture, sport and recreation (lifestyle)	Agriculture	Atmospheric protection
8.	Social participation	Technical infrastructure	Acoustic climate protection
9.	Activity on job market	The use of materials and raw materials	Renewable Energy
10.	Institutional and political governance	Availability of goods and services	Biological, chemical, electromagnetic security and industrial failure effects prevention

Source: Borys (2008).

The assumptions of sustainable development found the reflection in tourism quicker than in other areas of life. What is observed in tourism is both the cause and direct consequences of implementing the concept. The cause is observed because "tourism destroys tourism" – tourism is one of the essential causes of excessive exploitation of non-renewable natural resources, and the consequences – because the areas where tourist attractions had been given protection in accordance with the ecological concept became attractive for the visitors (Jedlińska, 2004, p. 42). The value of sustainable tourism is stressed by the fact that the year 2017 was an International Year of Sustainable Tourism for Development. This aims at supporting the change in policies, business practices and consumer behavior in building a more sustainable tourism sector.

The system of tourism reception covers the processes connected with the pursuit to achieve the objectives of sustainable development and creating a tourism product striving to meet the needs of tourists (Niezgoda, 2006, p. 80). As the elements of shaping the model of tourism compliant with the rules of ecodevelopment the following are listed (Jedlińska, 2004, p. 42): 1) pro-ecological tourism infrastructure and "mild" forms of leisure; 2) economical management of resources; 3) environmentally-friendly ecological economy; 4) green marketing; 5) pro-ecological waste management; 6) restoration of primary features of areas and the use of natural building materials; 7) environmentally-friendly farming and forestry; 8) the network of roads compliant with local character and traditions; 9) landscape shaped in compliance with the local character and traditions; 10) ensuring necessary living space for animals, plants, biotopes.

Sustainable tourism is treated in the subject literature as "tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment

and host communities” (Aall, 2014, p. 2570). The WTO-OMT defines sustainable tourism as follows: “Sustainable tourism development meets the needs of present tourists and host regions while protecting and enhancing opportunities for the future. It is envisaged as leading to management of all resources in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems” (Cernat, Gourdon, 2012; Scutariu, Nastase, Popescu, 2017, p. 1). As a result it is stated that sustainable tourism is not another form of tourism but specific way of managing tourism, which is supposed to render tourism compliant with the needs and natural resources of the protected area, needs of the local people, and also needs of tourists and tourism sector (Risteski, Kocovski, Arnaudov, 2012). Therefore, what drives sustainable tourism is the achievement of balance and harmony between the three main dimensions: ecological, social and economic, i.e. between the needs and expectations of tourists, local communities and those of natural environment.

The objectives of sustainable tourism are and have to be achieved in the society – economy – environment system, whose internal entities are: inhabitants, enterprises, organizations, external investors, and finally – the tourists themselves. In the field of tourist traffic reception what should be kept is the “balance of the power of triangle” composed of three entities: tourists, hosts of tourist reception area and tourism enterprises. The operation of different entities co-participating in the system of tourism reception requires the use of management procedures and the capability to integrate the operations in order to achieve the objectives of various entities (Niezgoda, 2006).

The inhabitants and both local and self-government authorities act in the capacity of hosts of a given tourism region. High social awareness and participation of local communities in building the state and civil society affect working out a coherent policy and strategy compliant with the concept of sustainable development which takes into account common interests and needs.

Positive attitude of the inhabitants is essential for shaping the tourism offer of a given region, since the community is the element of a given place’s attractiveness owing to the tradition, local folklore and cultural identity. It is important to remember, however, that inhabitants as one of the entities of the system of tourism reception need to have the feeling of fulfilment of their own needs. The inhabitants are thus perceived both as the co-creators of the tourism product and the buyers of the area product. The place, therefore, should be assessed not only in terms of the needs of tourists, but also in terms of inhabitants leisure, spending retirement time, settling and place to learn or work (Kotler, Heider, Rein, 1993).

The next essential entity – the power of triangle – are the entrepreneurs. Two aspects are of key importance for them: investment and profitability (Jędrzejczyk, 1995, pp. 35–41). Natural resources are the element of tourist interest. However, without the relevant infrastructure the needs of tourists will not be met. The task of different type economic activities is to use these resources with the aim of making the area more attractive for tourists, but in a sustainable way, i.e. in line with the remaining powers of triangle: tourists themselves and local community (Niezgoda, 2006). In this case both the economic aspect of the activity and sustainable development aspect are of key importance. In market conditions development should be planned with reference to competition. “Adopting the concept of sustainable development requires respecting the objectives connected with maintaining the status quo of the natural environment and social welfare in the pursuit of economic objectives, including enhancement of region competitiveness” (Niezgoda, 2006, p. 83).

The third power of triangle, as mentioned before, is a tourist. The documents of European Union read: “in striving to make tourism develop in a sustainable way, the citizens must become more aware tourists, i.e. tourists

who generally support sustainable tourism development, [...], seek and receive better information about sustainable tourism, are willing to make sensible decisions regarding shopping and travelling" (*Communication from...*, 2003, p. 20).

Implementing the concept of sustainable development resulted in the change in the attitude of tourists towards the place of leisure. One may even find the set of "principles of ethics for tourists" referring to tourists per se and all other entities involved in the system of tourism reception. Tourism consumer begins to understand that actions consciously taken (or abandoned) are directly relevant to other spheres of economic and social life.

In the light of the above considerations it is clear that everyone should feel responsible for promoting the rules of sustainable development by taking relevant efforts in this respect, which also refers to city authorities. However, it must be stressed that sustainable development should be given a second thought and planned ahead; it should also include all entities functioning within a given territorial unit.

City and sustainable tourism development

The activities relating to sustainable tourism are only relevant provided that they are conducted in a holistic way, with the participation of the entities of all sectors and inhabitants, including tourists. Subject literature gives examples on implementation of the rules of sustainable tourism, e.g.: Green Globe – accreditation for tourism entities, Blue Flag campaign for the beaches of Slovenia – the program for increasing the awareness of environmental protection, projects conducted in the South Pacific, Mekong, Vietnam, on the coast of Great Britain, or the projects of city authorities in Whistler, Canada (Harris, Griffin, Williams, 2002). Unquestionably, the European and world leader in sustainable tourism is Norway, which is one of the first countries that has met the standards of sustainable development elaborated by UNWTO. The leaders of quality at the moment are four Norwegian regions: Vega, Trysil, Røros and Lærdal, which were granted certificates of the communes of sustainable development for tourism. It is pertinent to mention other examples in this respect, e.g. Croatia,¹ and China (Yanga, Ryanc, Zhangb, 2014) or Cuba (Laitamaki et al., 2016).

Similar initiatives have been also implemented in smaller spatial units, i.e. the cities. Sustainable development of the city is mainly associated with shaping certain relations but also seeking certain balance between particular aspects of this development (social, economic, ecological and spatial) than – as reported by Brundtland (Brundtland, 1987) – associated with sustainability of development (Mierzejewska, 2015, p. 6). Planning sustainable development of the municipality is performed by means of many different strategic planning documents, e.g. building development strategies, land use plans or granting permits for the use of natural resources and given locations. There are many different ways of sustaining the development of cities. One of them is taking advantage of tourism function. The European Commission makes it clear that tourism, as a branch of industry, relies mostly on small and medium enterprises, and boosts entrepreneurship to a greater degree than other sectors (Airey, 1997).

¹ Tourism in this country is perceived by its inhabitants in an ambivalent way, which is widely described by M. Popiel (2015), and increasingly negative impact of tourism on the environment has initiated intensive implementation of the rules of sustainable tourism. Appropriate model was designed by M. Krstinić-Nižić and D. Drpić (2013), based on the following priorities: creation of clusters for common management and sustainable tourism development; participation of the whole society in tourism life of a given region; reinforcement of local community and tourists empathy; growth of awareness of environmental protection; giving the inhabitants access to education via educational institutions; growth of recognition of the region as responsible and sustainable destination; setting the objective for the local community and reinforcement of their motivation; facilitating access to the funds for responsible and sustainable projects.

Tourism is the source of economic prosperity for many areas of economy. Creating a system of managing the space, which is ecologically determined and multifunctional is possible provided that tourism remains in correlation with other sectors of economy, e.g. farming, forestry, services and industry (Steinecke, 1999). This sector is one of the greatest generators of jobs in the world. Tourism development in the cities is also the opportunity to tap into the neglected or postindustrial areas. Appropriate management and planning compliant with the rules of sustainable development mean positive form of economic activity fostering activation and attractiveness of cities and fulfilling the following functions: integrational, stimulating, coordinating, promotional, controlling and educational (Mika, 2007; Bosacki, 2008).

It is pertinent to mention that one of the priorities of the European Union is sustainable development of high quality tourism sector (quality management in sustainable tourism). One can observe the appearance of phrases describing the new trends in tourism aiming at limiting negative effects in the environment such as: alternative tourism, responsible tourism, discreet tourism, green tourism, appropriate tourism, ecotourism, sustainable tourism, and in Germany and Austria – soft tourism (e.g. Cater, Lowman, 1994; Hannenberg, 1994; Krippendorf, Zimmer, Glauber, 1988; Lindberg, Hawkins, 1993; Whelan, 1991). Each of them promotes family tourism, smaller groups, higher awareness and education of tourists and integration with local communities. The example of applying sustainable tourism are “green events” (sustainable business events) (Smith-Christensen, 2009; *Sustainable events...*, 2012; Adler, Pališ, 2012). In the business events context, many conferences and conventions have also made great strides in terms of improving their environmental performance. S.M. Tinnish and S.M. Mangal (2012) cited the 2009 State of the Sustainable Meetings Industry report from Meeting Strategies, which found that over half of all professional meeting planners are focusing on sustainability in their event planning. K. Kotowski (2012) noted that two thirds of meeting planners consider a venue's green initiatives to be important when selecting a meeting venue (Mair, 2014). Sustainable development in terms of tourism development, particularly in the cities, means maintaining cultural identity, keeping certain uniqueness and local colors, which often determine the attractiveness of the place. Amongst the basic goals of tourism development in the cities in terms of sustainable development the following might be listed: improving the quality of life of the inhabitants, fostering local economy, improving the quality of urban space, revaluation of historical legacy and enrichment of the city image (Price, 1992). It is important that the available resources are well-managed and the cooperation between the local units is adequate in terms of respect for local communities and the participants of tourist traffic.

According to the most recent Arcadis Ranking of Polish Sustainable Cities (*Ranking polskich...*, 2017) carried out in 2017 and assessing 50 cities in three dimensions: social, environmental and economic the best result was achieved by Warsaw (the first place in social and economic dimensions, yet only 44th in environmental dimension); the runner-up was Toruń (14th in social dimension, 6th in economic, 8th in environmental), and the third place went to Wrocław (3rd in social dimension, 2nd in economic, and 37th in environmental). The leaders of the ranking were scored high in the area of economy (tourism included – see Table 1) and society. Unfortunately, their score in the area of environment was very low (which means that their activity may have negative impact on the natural environment and health and the quality of their inhabitants' living). The Ranking of Polish Sustainable Cities was based on the synthetic indicator based on a set of specific indicators attributed to one of the three areas of sustainable development. The source of the majority of data was the application named Sustainable Development Indicators – the local module and information from the Local Data Bank and BIP (Public Information Bulletin) are available on GUS (Central Statistical Office) website. The report states that Polish cities are not fully sustainable, and the

level of their development in this respect in particular areas significantly differs. What is important for sustainable development of the cities is not only larger budget, but also coherent and sustainable vision of development and determination in putting the vision into practice. It may be observed that high results (top ten) were obtained by the cities with the lowest GDP per capita, e.g. Lublin, Rzeszów, Olsztyn. Considering the subject of the article an important aspect analyzed in the ranking is concern for the environment (green urban space, clean air, developed sewage and wastewater system, waste management, biodiversity or low-emission public transport) closely related to the development of tourism in cities. In these terms Bielsko-Biała was ranked first, i.al. in the area of waste management – owing to the implementation of modern solutions of separate collection of waste. This city is one of the most significant tourism centers of the region, i.al. due to its location at the foot of Beskids, numerous tourist trails and the possibility to spend time in an active or passive way. It is noted in this region that local communities (both inhabitants and entrepreneurs) are engaged in environmental and climate issues (e.g. saving energy). An interesting solution in terms of environment is used in Łódź, Krakow and Gliwice, namely woonerfs (urban yards), pocket parks or flower meadows. Another positive example is implementation of Green Budget in the city. Lublin was the first to engage inhabitants in creating green zones.

In the light of the above considerations it may be stated that the awareness grows and the cities are increasingly interested in applying the rules of sustainable development in order to improve the inhabitants' quality of living and streamline many internal processes.

Methodology

The study conducted with the use of CAWI technique in 2017 and 2018 among the representatives of local authorities in Polish cities was possible thanks to the holistic approach to sustainable tourism reflected in the activities of the city authorities in Poland. The author's questionnaire was sent to different units of territorial self-government – Polish cities (selected mainly due to their presence in the ranking of Polish sustainable cities described above, and their tourist values – tourism strategies). Despite numerous reminders sent to the respondents the number of replies equalled 26%. This may seem poor, but in case of a questionnaire-based study on institutional entities it is enough for drawing conclusions. Moreover, this stands for a good reason to continue the study. After rejecting incorrectly filled in questionnaires 31 entities were qualified for further research, out of which 45.2% were those that represented big cities, i.e. of the population over 200,000 (S_1 , so-called experimental group), and 54.8% – small cities (S_2 , so-called control group). Analogical structure indicators were observed in relation to the respondents that included actions for sustainable tourism development (54.8% – S_1 group) in their strategies for tourism development, and those that failed to include such actions (45.2% – S_2 group). In the set of cities under study 67.7% proved that tourism industry existing on their territory is engaged in projects for sustainable tourism development (S_1 group), and 32.3% never declared such activity (S_2 group).

U Mann-Whitney (Anderson, Sweeney, Williams, 2011, p. 373) test was applied in order to find significant differences in terms of acting on the behalf of sustainable tourism in the cities under study (categorized according to their size, implemented strategy of development with elements of sustainable tourism and actions taken by their tourism industry to support sustainable tourism development). On the basis of obtained results, the following hypothes emerged for confirmation: The approach of municipal authorities in Poland towards sustainable tourism is not homogenous. Three research hypotheses were formulated:

H1A: The size of a city diversifies the type of sustainable tourism products that are launched.

H1B: The objectives of sustainable tourism development significantly differ depending on whether the city strategy of tourism development includes the initiatives which benefit sustainable tourism.

H1C: The engagement of tourism industry in sustainable tourism development differentiates the operations of city authorities supporting this kind of development.

Two statistical hypotheses were formulated: H_0 – the approach of municipal authorities to sustainable tourism is the same in S_1 group of cities as in S_2 group of cities, and H_1 – the approach of the authorities in both analyzed types of cities (S_1 and S_2) differs significantly.

Results and discussion

The results of the analyses compiled in Table 2 allow coming to the following conclusions:

- considering the approach to sustainable tourism including the type of products that are introduced in this kind of tourism, small and big cities in most cases do not differ (there was only one significant difference revealed);
- the largest number of significant differences relating to the approach to sustainable tourism were recorded as dependent on whether the cities include the actions for sustainable tourism in their strategies of tourism development or not.

Table 2. Significant differences in the approach to sustainable tourism revealed between the cities under study

Specification	S_1 (big cities) and S_2 (small cities)	S_1 (cities, where the strategy for tourism development includes the actions supporting sustainable tourism) and S_2 (cities, where the strategy supporting tourism development does not include such actions)	S_1 (cities, where tourism industry takes actions supporting sustainable tourism development) S_2 (cities, where tourism industry does not take actions supporting sustainable tourism development)
1	2	3	4
The city records the growth of tourist traffic	0.101185	0.496730	1.000000
Modern tourist visiting the city has changed when compared to the past	0.112233	0.698478	0.231721
The strategy for tourism/tourism marketing development in the city includes the actions for sustainable tourism development	0.513437	–	0.062606
Objectives of sustainable tourism development within tourism policy			
– promoting healthy lifestyle in harmony with nature	0.645322	0.000056	0.062606
– bringing people of different nationalities closer, including the promotion of openness and tolerance	0.271642	0.637552	0.635724
– tourism development which shall contribute to preserving natural resources and protection of traditional culture of local communities	0.645322	0.000920	0.270249
– engaging local people already while planning in tourism related actions in a way that tourism becomes their source of income	0.419436	0.001611	0.468305
– aiming at making production and service activities of tourism industry contribute to the reduction of waste	0.081869	0.001385	0.153643
– aiming at making production and service activities of tourism industry contribute to saving water and energy	0.150949	0.000250	0.046854

	1	2	3	4
– aiming at making production and service activities of tourism industry contribute to elimination of the use of substances that are hazardous for environment		0.412262	0.060248	0.156070
– aiming at making production and service activities of tourism industry contribute to motivating staff, customers and local communities to pro-ecological behavior		0.419436	0.017705	0.468305
– promotion of free exchange of services in tourism, according to the rules of sustainable development and respecting international environment protection laws		0.412262	0.060248	0.156070
– other objectives		0.827452	0.827452	0.163837
Actions taken for sustainable tourism development				
– EU projects		0.131399	0.003203	0.901678
– advertising campaigns		0.066996	0.066996	0.099099
– common initiatives		0.166514	0.024252	0.487669
– other		0.637552	0.036271	0.027719
Tourism industry in the city takes actions supporting sustainable tourism development		0.713249	0.062606	–
Monitoring of the sustainable tourism development indicators		0.876026	0.197038	0.392829
Actions supporting sustainable tourism development brought measurable effects		0.964516	0.003303	0.002439
Sustainable tourism products introduced in the city				
– greenways		0.396469	0.051418	0.171858
– sightseeing on a bicycle		0.041110	0.546213	0.174161
– ecological grocery products in tourism offer		0.311993	0.311993	0.153643
– other		0.337707	0.070631	0.267818
– none		0.399417	0.299678	0.167547

Statistically significant differences were marked in bold.

Source: own research.

What makes small and big cities significantly different in terms of the approach to sustainable tourism is sightseeing on bicycles seen as a product of this type of tourism (Figure 1). As the study shows this form of sightseeing is much more characteristic of big cities. In Poland one can use a very well-developed bike-sharing system, found in the biggest cities and agglomerations. Bicycles are rented for many reasons and purposes, including the visitors renting bikes for sightseeing.

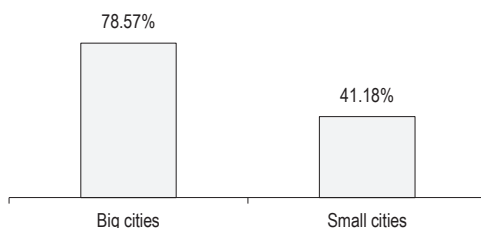


Figure 1. Visiting the city on a bicycle as a sustainable tourism product introduced in the cities under study

Source: own research.

Since the cities under study (S_1 and S_2) did not differ significantly in terms of introducing other than bicycle sightseeing products of sustainable tourism, the first of sub-hypotheses (H1A) failed to be empirically confirmed.

As was observed, considerably more significant differences in terms of the approach to sustainable tourism are dependent on the strategy for tourism development and the question whether it includes the actions for sustainable tourism development or not. These differences refer to both objectives of sustainable development and actions taken, which in fact should not be of any surprise. Considering the objectives, the highest percentage of indications refers to the following issues: promoting healthy lifestyle in harmony with the nature, tourism development which shall contribute to preservation of natural resources and protection of traditional culture of local communities (Figure 2).

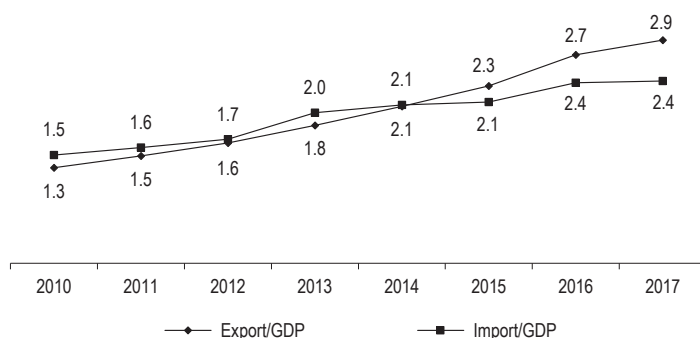


Figure 2. The objectives of sustainable tourism development recognized in the policies of cities under study in reference to their strategy development

Source: own research.

What is important is the fact that none of the studied entities whose strategy for tourism development did not include actions supporting sustainable tourism (45.2% of all respondents) declared a number of objectives which were revealed in the second group of respondents (S_1). It seems justified considering the lack of activity of municipal authorities in this respect in their strategy of development.

Analogically, much more initiatives recognized as EU projects or common initiatives, and other actions supporting sustainable tourism development are taken by those cities whose strategy of development includes elements of sustainable tourism (Figure 3). On the one hand, it is observed that EU projects are characteristic of both groups of respondents (pursuit of cities to obtain EU funds for particular initiatives). On the other hand, common initiatives (e.g. cross-border cooperation for development and promotion of the cities, partnership of the cities, urban campaigns, e.g. Poznań promotes sustainable transport, promotion of equestrian tourism and other) are prevalent in the cities where the strategy of tourism development includes the elements of sustainable tourism – i.e. over seven times higher percentage of indications as compared to the cities whose strategies of development do not include initiatives for sustainable tourism development.

Clearly, the presented results of the research show that as much as 65% of the cities where the strategy of tourism development includes the actions supporting sustainable tourism development record measurable effects of actions taken in support of sustainable tourism development (Figure 4). Among these effects the respondents indicated the following: more recreational green areas, reduction of car traffic in the city, more children-friendly zones, new areas

for walking, cycle paths, emergence of aware civil society striving for improving their surroundings, creation of new creative spaces, more domestic and foreign visitors, more waste segregation, development of neglected parts of the city, growth of interest in tourism products in the city, change in the awareness of the inhabitants, increase in the number of accommodation facilities, enhancement of the city image, improvement of cleanness, growth of income in the city, drop in unemployment and creation of new jobs, effective use of EU funds from regional programs.

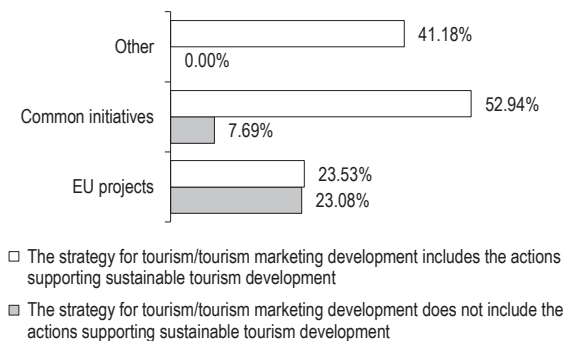


Figure 3. The objectives of sustainable tourism development of cities under study in reference to their development strategy

Source: own research.

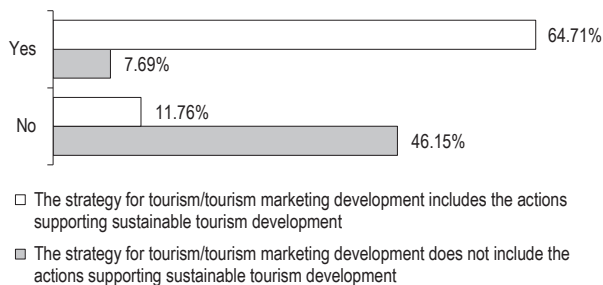


Figure 4. Measurable effects of actions supporting sustainable tourism development in the cities under study in reference to their development strategy

Source: own research.

The analysis of empirical data obtained from the study allowed noting that tourism industry and its engagement in sustainable tourism development is a factor significantly differentiating the objectives and actions of cities in this respect. Considering the above the following should be stated:

- in the cities where tourism industry takes actions that support sustainable tourism development, the objective that is frequently included in tourism policies is the pursuit of production and services that are provided in a water-efficient and energy-efficient forms (Table 3);

- engagement of tourism industry in sustainable tourism development leads to taking actions supporting sustainable tourism other than EU projects, advertising campaigns or common initiatives (Table 3); however, considering the fact that engagement of tourism industry in sustainable tourism development does not significantly determine actions such as EU project, advertising campaigns or common initiatives, the third sub-hypothesis (H1C) cannot be deemed confirmed;
- engagement of tourism industry in sustainable tourism development gives measurable effects in more than a half of the cities under study (see Table 3).

Table 3. Tourism industry activity in terms of sustainable tourism development vs. selected aspects of self-governments' activity for sustainable development and their consequences in the cities under research

Aspect	Tourism industry in terms of sustainable tourism (%)	
	active	inactive
The goal of sustainable tourism development in terms of tourism policy is striving for the production and services activity of tourism industry that are water and energy efficient	47.62	10.00
Undertaking actions by the city's self-government that support sustainable tourism development other than EU projects, marketing campaigns and common initiatives	38.10	0
Noticeable and measurable effects of the self-government's actions for sustainable tourism development	57.14	0

Source: own research.

Conclusions

Presented considerations entitle the authors to confirm the main hypohese. Polish cities do not conduct homogenous policies in terms of sustainable tourism. Considering the fact that each city is characteristic in its own way, they take actions that support sustainable tourism according to and matching their specificity. However, it may be observed that the more attention is paid to sustainable tourism in the strategy of development, the more developed these actions become.

The undertakings in the area of sustainable tourism presented in this paper may also be found reasonable in terms of the actions towards the inhabitants. Even if Polish cities, as was indicated, are not fully sustainable (considering all aspects of the phenomena), the actions relating to sustainable tourism are fully legitimate. It is worth considering the implementation of the idea of sustainable tourism in the cities because it seems a solution if the cities wish to overcome the negative effects of expansive development of tourism, e.g. cultural and environmental degradation, commercialization of space. This idea will definitely have impact on the quality of living of the local communities and on socio-economic activation of the cities. The research also shows that the cooperation between many entities is essential, as it may result in creating the opportunity to i.al. use the financial measures in a better way or creation of an educational lobbies to support environment.

Our research here, however, is not without its limitations. The considerations are based on limited number of respondents who, which must be stressed, were willing to participate in the study (the rest did not show interest in this respect); nonetheless a significant part of them were representatives of big cities. For this reason the Authors decided that presented results shall be treated to some extent as pilot study which shall become the basis for further research. As a result the Authors undertake to conduct further works in this respect hoping that more self-governments of the cities will participate (eventually reaching all the cities listed in the Ranking of Polish

Sustainable Cities, as well as other cities outside the ranking) and their goal will first of all be to show the changes in the subject under study, provided that the action of municipal authorities supporting sustainable tourism will be even more intensified, geared towards the tourist and even more measurable, which has already been established by the Authors as research hypotheses to be reviewed in further research in this respect.

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Cite this article as: Niemczyk, A., Seweryn, R., Smalec, A. (2018). Sustainable tourism in the activities of city authorities. Poland – case study. *European Journal of Service Management*, 4 (28/2), 283–297. DOI: 10.18276/ejsm.2018.28/2-35.

RISK RELATED TO THE IMPLEMENTATION OF INNOVATIVE PROCESSES BY ENTERPRISES IN THE SME SECTOR. ANALYSIS OF THE RELATIONSHIP BETWEEN THE QUANTITY OF IMPLEMENTED INNOVATIONS AND THE FINANCIAL RATE OF RETURN ACHIEVED

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION O30, O31

KEYWORDS innovation and innovativeness, risk in innovation, SME sector in Poland

ABSTRACT In modern global economy, the ability to create and implement innovations is a key factor in building the enterprise's competitiveness and increasing its value. Despite indisputable benefits resulting from the implementation of innovation, running innovative activity also generates significant risks and uncertainties associated primarily with the need to incur expenditures on the development and launching of innovation, as well as the inability to clearly determine whether the new product will gain positive market acceptance. The author put forward the following thesis: (H1): there is a positive relationship between innovation efficiency (the number of implemented/absorbed innovations) and the efficiency of innovative activities of enterprises in the SME sector, thus increasing experience in the implementation of innovation processes reduces the risks associated with implementing new solutions and increasing the efficiency of implemented innovation processes. The study used the exploratory-descriptive method, which consists in statistical aggregation of the obtained results in selected analytical cross-sections. Empirical data was obtained using an online questionnaire and study involved 361 companies registered throughout the country, actively operating during the study period.

Introduction as justification for choosing a research problem

In modern global economy, the ability to create and implement innovations is a key factor in building the enterprise's competitiveness and increasing its value. This applies equally to all enterprises operating on the market, both large international corporations and enterprises belonging to the SME sector. Innovations are very often associated with the implementation of advanced, breakthrough solutions on a global scale, usually associated

with technologies and production. Meanwhile, the innovative activity is diversified – from product and technological innovations to new solutions in the field of organization and marketing, or finally new social solutions. The scale of changes obtained as a result of innovation implementations is also very different – there are breakthrough innovations, i.e. new global solutions concerning entire sectors and branches of the economy but there are also small incremental solutions affecting only the enterprise itself. Due to such a wide impact of innovation, despite the obvious limitations resulting from the specificity of enterprises in the SME sector (e.g.: limited financial and personnel resources allowing for the implementation of innovative activities), these are the small and medium-sized enterprises that are increasingly inclined to conduct innovative activities.

Despite indisputable benefits resulting from the implementation of innovation, running innovative activity also generates significant risks and uncertainties associated primarily with the need to incur expenditures on the development and launching of innovation, as well as the inability to clearly determine whether the new product will gain positive market acceptance. In this situation, it is significant to determine whether conducting innovative activity by enterprises in the SME is profitable.

There is a broad discussion in literature on the essence and significance of risk in innovative activities (Piśniak, 2017; Skowron, 2013). Attempts are also made to identify and manage risk factors (Vargas-Hernandez, 2011, pp. 47–53; Keizer, Halman, 2007, pp. 32–35). Literature, however, does not mention studies describing the negative effects of risk implementation or the possibility of reducing the risk of running innovative activity. Attempts to assess the risk related to running innovative activity in the context of financial results achieved was made by T. Nawrocki (2016), who used comparative research to determine that innovative activity of enterprises involves a greater risk of negative changes in the size of financial ratios than in the case of enterprises with more traditional business profiles (Keizer, 2009, pp. 512–513).

The author of this publication attempted to answer the following question: does experience in conducting innovative activity, expressed by the number of successful implementations of innovations on the market reduce the risk of conducting innovative activities? The author believed that direct effects from the implementation of new products or services to the market was a sign of reducing the risk, which was determined by financial results obtained or acceptance of new products on the market. The author put forward the following thesis: (H1): there is a positive relationship between innovation efficiency (the number of implemented / absorbed innovations) and the efficiency of innovative activities of enterprises in the SME sector, thus increasing experience in the implementation of innovation processes reduces the risks associated with implementing new solutions and increasing the efficiency of implemented innovation processes.

Risk in innovative processes. Literature review and conceptual framework

Innovations through product, process and organizational transformations make it possible to introduce new, improved products to the market: both goods and services. In this sense, innovations are considered to be the main driving force of socio-economic development increasing competitiveness, as well as the source of entrepreneurship and creativity. Nowadays, innovations should be the basis for achieving the company's intended goals, because of the dynamics of changes in the economy. Technical and technological progress, as well as adaptation to changes in customer expectations forces the introduction of new solutions and products, which allows enterprises to strengthen their competitive advantage. Competition, both between companies and sectors, regions and countries, is considered to be the driving force of innovation.

It is widely accepted that innovation is a new solution that contributes to the improvement of the organization's functioning. The concept of innovation was introduced by Joseph A. Schumpeter (1960, p. 104), describing it as:

1. Introduction of new products into production or improvement of existing ones.
2. Introduction of new production methods or improvement of existing ones.
3. Applying new methods of production organization.
4. The use of new raw materials or semi-finished products.
5. Opening a new market.

Innovation can be considered from two perspectives, innovation as a process and as a result. The first of them most often concerns changes in processes, products, organization, and social life. The second one is referred to as changes in the sphere of production, as a result of which new products are created (Madyda, Dudzik-Lewicka, 2014, p. 134; Damanpour, 1987, p. 677). Innovation is also understood as "generating, accepting and implementing new ideas, processes, products or services" (Kanter, 1983, p. 20).

Nowadays, due to the name adopted by OECD experts and widespread in EU regulations, the definition of innovation in the Oslo textbook is commonly used. According to its methodology, innovation means implementing a new or significantly improved product or process, at least for the implementing unit and related to any of its areas of functioning. In the case of an enterprise, it may concern the product offered, a new marketing method, its creation process, a new organizational method in business practice, workplace organization or relations with the environment (*Oslo Manual...*, 2008, p. 48). The foregoing definition of innovation was accepted by the author as commonly used in this article.

Numerous scientific studies clearly point to a positive translation of innovative activity (innovativeness) of enterprises into their competitiveness, improvement of financial results or building in a positive image of a modern and dynamic enterprise. Despite the indicated positive aspects of innovative activity, in practice this activity is characterized by a high degree of risk resulting from the need to bear significant expenditures and uncertainty regarding the work effect (Świtalski, 2005, pp. 23–26; Pudło, 2012, pp. 83–87).

Risk considerations have been introduced into economic sciences and are undertaken in the area of various fields of science, including economics, behavioral sciences, legal sciences, psychology or statistics and probabilities. The wide spectrum of states that the concept of risk refers to makes it difficult to formulate a precise and clear definition. Risk considerations were introduced to economic sciences in the 18th century by English researcher R. Cantillon, who noticed the impact of risk on the level of income and business uncertainty (Cantillon, 1938). The first attempt to define the concept of risk was made in 1901 by A.H. Willett, stating that "risk is something objective, related to subjective uncertainty" (Willett, 1901, p. 504). Another definition was proposed in 1921 by F. Knight, who published in his doctoral dissertation entitled "*Risk, Uncertainty and Profit*" the concept of measurable and unmeasurable uncertainty, where the first was called a risk and the other an uncertainty in the strict sense (Knight, 1964). The definition, commonly referred to and accepted by economists as classical, was proposed by J.M. Keynes in the publication "*A Treatise on Probability*", recognizing that the risk relates to events that are known to be probable, and in addition can be quantified (Keynes, 1921, pp. 315–319).

Nowadays, in the domain of economic sciences and management sciences, the risk is usually defined as the danger of incurring a loss, the possibility of an unfavorable event or failure to achieve the intended purpose (often following the decision). The risk can also be identified with a situation in which not all variables are estimated or cannot be estimated on the basis of probability calculations – managers have the possibility to assess risk

(probability of occurrence of specific threats), and also its control, to some extent (Aven, Renn, 2009, p. 7; Janasz 2009, pp. 90–92).

The transfer, contemporary and widely accepted understanding of risk to the level of business practice, primarily exposes the possibility of incurring losses as a result of undertaking a specific action, which is extremely important from the point of view of management of decision-making processes, for example regarding investment activities or activities aimed at generating innovative solutions.

Krzysztof Janasz presented a precise analysis of selected theoretical aspects of risk and uncertainty in business operations. (Janasz, 2009), and M. Bochenek conducted a broad and exhaustive discussion on semantics related to the notion of risk and uncertainty in economic sciences (Bochenek, 2012).

As previously noted, the characteristic feature of innovative processes is the high degree of risk (Jonek-Kowalska, 2011, pp. 5–11). The specificity of managing innovative activity requires constant decisions that are rarely made in conditions of total certainty. In the context of innovative activity of enterprises, risk is of particular importance, as innovative undertakings, by their very nature to change reality, provoke risk (Jarus, 2011). It can be stated that the level of risk in an innovative undertaking is directly proportional to the scale and scope of innovation - the greater the scale of innovation, the greater the likelihood of failure.

The risk of innovation concerns primarily the decision to undertake the innovation process. This decision causes a number of subsequent threats related to individual stages of the innovation process.

The high degree of risk of innovation activity is caused by the need to incur significant financial and material outlays as well as involving the resources in the form of work. An extremely important factor from the point of view of managed risk is also the distribution of expenditures in time – a large part of research and development expenditures, design, prototype construction, testing, marketing research is incurred before the product is launched, i.e. before the period in which revenues from the sale of a new solution will be generated. Furthermore, in many cases, innovation processes do not reach the commercialization phase and new solutions are not introduced to the market, thus they do not generate revenue (profit) for an enterprise. high percentage of failures in implementing innovations is caused by uncertainty about the effects of work on new solutions and the risk of the market's lack of acceptance for the new solution. These risks may of course be organic, e.g. marketing research or market tests of proposed innovations.

Enterprises from the SME sector very rarely (almost never) have separate research and development departments, providing appropriate organization of individual stages of the innovation process. The development of new ideas is usually dealt with by individuals (or small teams) whose experience and viewer grows with successive ventures. In the context of the main research objective of this article, it should be noted that the risk related to the implementation of innovations can be significantly reduced due to the accumulation of knowledge and experience in the implementation of innovation processes and cooperation with specialized research units, other enterprises or knowledge transfer centers

Nevertheless, this means that the implemented innovation, which ended with effective commercialization, has been accepted by the market and has been put into practice or on the market, must ensure reimbursement of not only the costs of its production, but also the outlays incurred for other unsuccessful implementations (Szwajca, 2013, pp. 25–27; Keizeir, 2009).

In subject literature, various classifications of the risk sources of innovative activity may be encountered. Assuming the risk area criterion for A. Pomykalski (2001, p. 167), the following may be distinguished:

1. Micro level – the risk resulting from the company's activity, which consists of: organizational, marketing, production, financial risk, personnel management or profitability of the investment.
2. Intermediate level – market risk, which includes: economic situation in a given industry, level of competition, barriers to entry into the market, ways of acquiring new and maintaining existing clients.
3. Macro level – the risk that results from macroeconomic and global conditions: economic situation in a given country, global economy, volatility of exchange rates, tax regulations, customs regulations, etc., interest rate volatility, political conditions, global development, technology flow, etc.
4. The risk of operating on foreign markets, resulting from operating in a different environment: economic, legal, political, etc.

The above criteria refer to the risk of conducting innovative activity, it can be stated that in the case of implementing new solutions, enterprises are exposed to risk at each of these levels, although the most important risks for the SME sector are those belonging to the micro level and the intermediate level. This is due to the range of activity of enterprises in the SME sector (most often it is regional operations, less frequently activities on a national scale and rarely on an international scale) and the scale of implemented innovations determined by the degree of novelty of the proposed solution (most often they are innovations on the scale of the enterprise, less frequently market or industry, and very rare breakthrough innovations in the world). K. Janasz (2009, p. 91) proposed a different breakdown (aspect) of risk sources in economic activity:

- economic risk,
- financial risk,
- liquidity risk,
- currency risk,
- country risk,
- transfer risk,
- interest rate risk,
- risk of an event.

Analyzing the proposed sources of risk in the context of the practice of implementing innovative processes, it can be concluded that enterprises from the SME sector are primarily exposed to economic and financial risk (and consequently to the liquidity risk). It results from the previously mentioned fact that the implementation of virtually all innovative processes requires specific expenditure (financial and material) and the involvement of the company's resources (work). Enterprises from the SME sector during the implementation of innovative processes are exposed to currency risk, transfer risk or country risk to a lesser extent, which results from previously reported characteristics of enterprises operating in the SME sector.

Considering the sources of risk affecting undertaking of innovative activities, it should also be noted that there is a risk related to discontinuation of innovative activity – in conditions of high competition in most modern markets, enterprises that discontinue innovative activity risk the loss of competitiveness and consequently exclusion from the market.

Research method, sample and limitations

The main purpose of this publication is to try to answer the question: if in the case of enterprises from the SME sector, experience in the implementation of innovative processes reduces the risk of failure associated with

the implementation of new solutions. The author adopted the obtained direct implementation effects, i.e. percent share of profit from the sale of innovation of in total profit and the rate of return on innovation calculated for individual implementations (ROI2 ratio) as a factor confirming the reduction of risk. Thus, the author assumed that experience and knowledge acquired during subsequent implementations of innovative processes reduce the risk of failure and thus increase the direct effect.

The author puts forward the hypothesis: (H1): there is a positive relationship between innovation efficiency (the number of implemented/absorbed innovations) and the efficiency of innovative activities of enterprises in the SME sector, thus increasing experience in the implementation of innovation processes reduces the risks associated with implementing new solutions and increasing the efficiency of implemented innovation processes.

The study used the exploratory-descriptive method, which consists in statistical aggregation of the obtained results in selected analytical cross-sections. Empirical data was obtained using an online questionnaire containing 64 questions – an online survey carried out using the Audit Platform of the Faculty of Management and Economics of Services at the University of Szczecin.

In the first part of the survey, entrepreneurs filled out the company's certificate containing, among others:

- contact details,
- year of establishment,
- employment (allowing for qualification: micro, small, medium),
- a leading type of activity according to PKD (allowing for qualification: industrial/production activity, service activity),
- origin of capital (national/international),
- main area of activity,
- scope of activity.

In the second part of the survey, entrepreneurs introduced detailed data on innovative activity in the analysed period, i.e. among others on:

- number of successful and unsuccessful implementations of innovations,
- innovation trends (absorption/diffusion),
- type of innovation,
- total expenditure on innovative activity,
- total net revenues from innovative activities,
- market assessment of acceptance of implemented innovations,
- period of implementation of innovative activity,
- sources of innovation financing (use of EU funds or lack thereof).

Additional information obtained in the study were: expected rate of return from innovative activity or competences in the assessment of own effectiveness of innovative activity. The survey was conducted in the period 01.2018–09.2018.

The survey questionnaire was designed in such a way (selection of descriptive features and data measures) to use the OLAP method (OnLine Analytical Processing) in the data analysis, allowing multidimensional correlation of data. Based on the collected data, the author calculated and compared selected performance indicators of innovative processes (e.g. ROI2) for all surveyed enterprises - taking into account the assumption that the accumulated stream of profits/outlays for each of the surveyed enterprises was implemented (documented) for at

least one year. The obtained results were subjected to statistical descriptive analysis. According to the principle of logical induction, the obtained results were generalized and based on them the author verified the research hypothesis.

The study involved 361 companies registered throughout the country, actively operating during the study period. Assuming the universally recognized number of employees as a criterion of the size of enterprises, the number of microenterprises was 205 (57% of the sample), the number of small enterprises was 112 (31% of the sample) and the number of medium enterprises was 44 (12% of the sample). The structure of the research sample due to the size of employment is presented in Table 1.

Enterprises were selected for the size of the enterprise purposefully (according to the commonly accepted division taking into account the employment in the survey year, i.e. enterprises: micro, small, medium) and the leading type of activity consistent with the Polish Classification of Activities (Polish Classification of Activities, i.e.: industrial/manufacturing enterprises and service enterprises). Taking the leading type of activity as the criterion, the sample structure was as follows: manufacturing / industrial enterprises = 139 (39% of the trial), service enterprises = 222 (61% of the trial).

Table 1. Research sample structure

Type of company	Size of company			Total
	micro	small	average	
Production	70	54	15	139
Services	135	58	29	222
Total	205	112	44	361

Source: own elaboration based on research data.

The author is fully aware that the applied research sample is not representative, but the targeted selection of enterprises for research was to ensure the implementation of the survey on a sample similar to the statistical picture of SME sector in Poland (according to the sector image published by the Central Statistical Office).

Results and discussion

The key feature from the point of view of the research objective was the number of successful and unsuccessful innovations declared by respondents. As an innovative activity, the authors accept the implementation by the company (diffusion or absorption) of any innovation that meets the criteria of the Oslo Handbook (2005). Successful implementations of innovations showed those implementations for which entrepreneurs could show profit. Table 2 presents the number of innovation implementations for the trial under consideration, taking into account the size of the enterprise and the leading type of business.

The surveyed enterprises have implemented a total of 652 products or services that they considered to be innovations – by adopting the criterion of the impact of innovations described at the company level, at the local level, or at the national or international level described in the Oslo textbook. Micro enterprises implemented 362 innovations (56% of all implemented innovations), small enterprises implemented 192 innovations (29% of all implemented innovations), while medium enterprises implemented 98 innovations (15% of all implemented innovations). The median of implementations for the tested sample amounted to 2 implementations regardless of the

size group. The maximum number of innovation implementations demonstrated due to the size of the surveyed enterprises was as follows: 6 regardless of the size of the examined enterprise.

Table 2. Number of successful and unsuccessful implementations of innovations

Type of company	Number of successful innovation implementations	Number of failed innovation implementations
Micro	362	106
Production	122	39
Services	240	67
Small	192	54
Production	86	24
Services	106	30
Average	98	22
Production	33	3
Services	65	19
Total	652	182

Source: own elaboration based on research data.

The surveyed enterprises, which indicated the production activity as a leading type of activity, implemented 241 innovations (37% of all implemented innovations), while service enterprises implemented 411 innovations (63% of all implemented innovations). The maximum number of innovation implementations demonstrated due to the leading type of activity of the surveyed enterprises was as follows: manufacturing enterprises – 6 implementations, service enterprises – 6 implementations. Taking into account the leading type of business, the average and median of implementations, as before, amounted to 2 implementations for each group.

In order to verify the hypothesis (H1), the author conducted two analytical sections:

1. A summary of the average return on innovation calculated using the ROI2 ratio in relation to the number of implemented innovations. The list was made taking into account the division of enterprises due to the size of the surveyed enterprises, as well as the type of activity.
2. A statement of percent of the average profit obtained from the sale of innovation in relation to the profit of the examined enterprise in total with reference to the number of implemented innovations. The list was made taking into account the division of enterprises due to the size of the surveyed enterprises, as well as the type of activity.

Analysis of the obtained results leads to the conclusion that in this case it is difficult to clearly show the relationship between the number of implemented innovations and the obtained rate of return from innovation.

For micro enterprises declaring 1 implementation (113 surveyed enterprises), the average rate of return amounted to 9.35%, while for enterprises declaring 6 implementations (the maximum declared number of implementations, 2 surveyed enterprises) the rate was 18.00%. In this case, the difference is 8.65%, and the relative increase in the average rate of return was 92.61%.

For small enterprises declaring 1 implementation (60 surveyed enterprises), the average rate of return amounted to 11.15%, while for enterprises declaring 6 implementations (maximum declared number of implementations, 1 examined enterprise) the rate amounted to 26.00%. In this case, the difference was 14.85%, and the relative increase in the average rate of return was 133.18%.

For medium enterprises declaring 1 implementation (16 examined enterprises), the average rate of return was 14.88%, while for enterprises declaring 6 implementations (maximum declared number of implementations, 2 examined enterprises), this rate amounted to 29.50%. In this case, the difference is 14.63%, while the relative increase in the average rate of return amounted to 98.32%.

For the whole sample of enterprises declaring 1 implementation (189 surveyed enterprises), the average rate of return amounted to 10.39%, while for enterprises declaring 6 implementations (the maximum declared number of implementations, 5 surveyed enterprises) the rate was 24.2%. In this case the difference is 13.81%, while the relative increase in the average rate of return was 133.00%.

Table 3. The number of successful implementations of innovations in comparison with the obtained rate of return on innovation

Type of company	Number of innovation implementations						Total average
	1	2	3	4	5	6	
Micro	9.35	10.64	11.14	10.50	14.50	18.00	10.12
Production	9.15	11.05	9.17	18.75	27.00	17.00	10.59
Services	9.45	10.41	11.93	6.38	10.33	19.00	9.87
Small	11.15	11.27	9.11	9.33		26.00	10.94
Production	11.91	12.54	7.13	6.00			11.24
Services	10.29	10.29	10.70	11.00		26.00	10.66
Average	14.88	17.14	16.75	36.50	24.00	29.50	18.00
Production	19.20	25.00	21.00			42.00	23.13
Services	12.91	12.78	12.50	36.50	24.00	17.00	15.34
Average	10.39	11.77	11.32	13.35	17.67	24.20	11.33

Source: own elaboration based on research data.

Correlation between the number of implemented innovations and the obtained effects in the form of the average rate of return is particularly evident in the medium-sized enterprises surveyed, the smallest correlation was demonstrated for micro-enterprises. In the case of the type of business, a greater correlation between the number of innovation implementations and the achieved effects is visible for manufacturing enterprises. The cumulative results of the analysis are presented in Table 3 and Figure 1.

For micro enterprises declaring 1 implementation, the average percent share of the profit from the sale of innovations in the total profit was 8.91%, while for enterprises declaring 6 implementations, the rate was 19.00%. In this case, the difference is 10.09%, and the relative increase in the average rate of return was 113.21%.

For small enterprises declaring 1 implementation, the average percent share of profit from sales of innovations in total profit was 10.50%, while for enterprises declaring 6 implementations, the rate was 18.00%. In this case, the difference was 7.50%, and the relative increase in the average rate of return was 71.43%.

For medium enterprises declaring 1 implementation, the average percent share of the profit from the sale of innovations in the total profit was 12.94%, while for enterprises declaring 6 implementations, the rate was 24.50%. In this case, the difference is 11.56%, and the relative increase in the average rate of return was 89.37%.

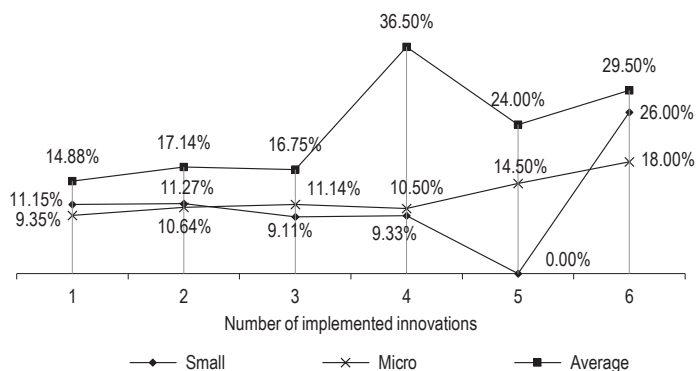


Figure 1. The number of successful implementations of innovations in comparison with the obtained rate of return on innovation

Source: own elaboration based on research data.

Correlation between the number of implemented innovations and the obtained results in the form of a share of profit from the sale of innovations in total profit is particularly visible in the medium-sized enterprises surveyed, the smallest correlation was demonstrated for micro-enterprises.

Table 4. Number of innovation implementations in the statement with the share of percent profit from the sale of innovations in total profit

Type of company	Number of innovation implementations						Total average
	1	2	3	4	5	6	
Micro	8.91	10.70	8.40	14.50	14.75	19.00	9.86
Production	8.74	14.42	8.90	4.50	8.00	17.00	10.16
Services	9.00	8.62	8.20	19.50	17.00	21.00	9.70
Small	10.50	8.39	11.17	18.00		18.00	10.31
Production	12.34	7.88	12.38	33.00			11.66
Services	8.39	8.79	10.20	10.50		18.00	9.06
Average	12.94	8.50	14.50	12.00	19.00	24.50	12.57
Production	20.60	12.00	13.75			26.00	16.27
Services	9.45	6.56	15.25	12.00	19.00	23.00	10.66
Average	9.76	9.67	10.50	14.82	16.17	21.00	10.33

Source: own elaboration based on research data.

For all examined enterprises declaring 1 implementation, the average percent share of the profit from sales of innovations in the total profit was 9.76%, while for enterprises declaring 6 implementations, the rate was 21.00%. In this case, the difference is 11.24%, and the relative increase in the average rate of return was 115.24%.

In the case of the type of business, a greater correlation between the number of innovation implementations and the achieved effects is visible for manufacturing enterprises. The cumulative results of the analysis are presented in Table 4.

Conclusions

The author's goal was to show the connection between experience in the implementation of innovative projects and the risk related to the effectiveness of implementing new solutions - in relation to Polish enterprises in the SME sector. The author assumes that, with the increase of experience and the knowledge created on its basis, enterprises reduce the risk related to the implementation of innovative processes and are able to implement more effective innovations on the market. In response to such a defined research problem, the author formulated a research hypothesis (H1): there is a positive relationship between innovation efficiency (the number of implemented/absorbed innovations) and the efficiency of innovative activities of enterprises in the SME sector, thus increasing experience in the implementation of innovation processes reduces the risks associated with implementing new solutions and increasing the efficiency of implemented innovation processes.

The obtained results of the statement of the number of implemented innovations with the obtained effects in the form of the average rate of return and the % share of profit from the sale of innovations in total profit, allow for a positive verification of the H1 hypothesis. Nevertheless, it should be emphasized that this conclusion may be debatable due to the type of distribution of declared implementations – 1 implementation was declared by 189 surveyed enterprises, and the greater number of innovation implementations declared a significantly smaller number of enterprises: 4 implementations – 17 enterprises, 5 implementations – 6 enterprises, respectively 6 deployments – 5 enterprises. This evidently left-sided distribution of the phenomenon may provoke discussions as to the comparability of results and full validity of inference. A methodical solution to the doubts would be to base the conclusion on a large research sample (preferably representative), but in the case of SME sector research, obtaining such tests in the case of individual tests is particularly difficult.

At this point it should be recalled that in accordance with the adopted research method, the obtained results constitute a statistical description of the studied phenomenon and compare the results obtained in accordance with the features of the surveyed enterprises. The purpose of the author's work was not to determine causal relationships between the established values of the effects of the innovative activity of the surveyed enterprises, and their specific characteristics resulting from the business activity or the characteristics of managing the innovation processes.

It seems that research on causal relationships should constitute the next stage of research on the risks associated with the implementation of innovative processes in the SME sector. The effect of such research could be to determine the specific characteristics of enterprises (both internally and externally), which reduce the risk of implementation of innovation processes and the identification of those features that are key determinants of innovation risk implemented by enterprises in the SME sector. Creating a description of such features will enable effective risk modelling in the area of innovative activity and thus increase the efficiency of these processes.

Another direction of research may be a comparative analysis of risk factors in the area of innovative activity identified for Polish enterprises of the SME sector with enterprises from other countries – especially countries that are leaders in innovation (e.g. the most innovative countries of the European Union). A comparative analysis in this area would enable the creation of a model of good practices in the area of risk management in innovative projects and thus the removal of barriers to conducting effective innovation activities by Polish enterprises in the SME sector.

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Cite this article as: Norek, T. (2018). Risk related to the implementation of innovative processes by enterprises in the SME sector. Analysis of the relationship between the quantity of implemented innovations and the financial rate of return achieved. *European Journal of Service Management*, 4 (28/2), 299–310. DOI: 10.18276/ejsm.2018.28/2-36.

CONSTRUCTION OF PROMOTIONAL MESSAGE OF A HIGHER SCHOOL IN THE CONTEXT OF CHANGES IN BEHAVIORS OF POTENTIAL STUDENTS

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION M30, M39

KEYWORDS promotion, university, generation Z

ABSTRACT

The task of university communication with a potential student is to provide information that will enable assessment of the available selection options and making a decision about studying at a given faculty and at a given university. Effective activities in the field of university communication with potential students require proper planning, also in terms of communication channels used. The starting point when choosing effective tools and communication channels is to learn the needs and expectations of the candidates for the studies. The aim of the article is to define communication channels in which young people undertaking studies seek information about the possibilities of studying and convincing arguments in order to increase the effectiveness of promotional messages from universities. The article base on results of own research. The on-line survey (CAWI) was conducted in September 2018 on a sample of 409 respondents in one of the economic faculties in the West Pomeranian Voivodeship (random sample).

Introduction

The development of the information society causes a change in many processes taking place in the economy, but also changes in consumer habits related to communication. The most important features of the information society include: the growing importance of information in all aspects of life, the widespread use of information technology, developed information and communication means, or extensive teleinformation infrastructure (Grzywińska-Rapca,

Lorek, Markowski, 2018, p. 24). The development of information and communication technologies radically changes the nature of the business and non-business environment, as well as non-profit organizations such as public higher education institutions. Progress in this area leads to significant changes and reappraisals in the economic, social and cultural dimension (Gamper, 2012, pp. 333–353). The process of information transmission uses various channels and media, which are carriers of advertising or other forms of promotion (Wiktor, 2013, p. 129). Rapid changes in the accessibility to technology facilitate the development of modern communication channels, changing the way of conducting communication with various interest groups in the organization's environment (Alwahaishi, Snášel, 2013, p. 61).

The effectiveness of communication is higher if the sender and recipient of the message use the same coding methods and use the same communication channels (Heath, 2013, p. 12). To improve the effectiveness of communication, the university should reach with its messages the future students. It is worth emphasizing that the purpose of marketing communication is not only the transmission of specific information to the market, but the shaping of needs and stimulation of demand (Wiktor, 2013, p. 22). The aim of public higher education promotional activities is therefore not only to inform about the pursued fields of study, but above all to convince a potential candidate that it is worth studying and choosing this higher education course. The aim of the article is to define communication channels in which young people undertaking studies seek information about the possibilities of studying and convincing them with arguments in order to increase the effectiveness of promotional messages from universities. The article is based on the analysis of available statistical data, literature on the subject and the results of own research.

Demographical changes

As A. Pabian rightly observes, every college operates in a given environment and depends on it. The most important component of the university's environment is its clients - students and business entities who commission employees to perform research. The university should strive for a large number of students and principals, thanks to which it will be able to fully use the scientific and research potential it has. The lack of effective communication with the market is harmful to universities (Pabian, 2002, p. 138). The university loses potential students and instead of developing and investing, it has to sell out assets and close down the faculties which have not enough candidates. Since 2006, the number of students in Poland has been systematically decreasing. In the academic year 2016/2017, 1348.8 thousand were educated in 390 higher education institutions of all types. In comparison, in 2005/2006, when the number of students reached the maximum, i.e. 1,953.8, that is over 605 thousand more people. In the period of 11 years, the number of students has decreased by 31%. The percentage of people deciding to take up higher education after lower secondary school is lower, and the number of people aged 18–24, i.e. the most important segment for the university, decreases (decrease by 31.0% compared to 2005) (GUS, 2017, pp. 25–26). In recent years, universities have begun to feel the effects of the demographic drop, which decreased the number of students in Poland (Figure 1). Forecasts show that the peak of this drop will take place in 2023.

Currently, there are about 130 state-owned universities in Poland and most of them suffer from the effects of the demographic decline. Many, also renowned universities, conduct additional recruitment also for full-time studies (*Do 2023...*, 2013). Public universities compete for full-time students with non-public institutions, but due to the decreasing number of people undertaking studies, competition between public universities is intensifying. In 2016/2017, there were 390 higher education institutions in Poland (including schools of the Ministry of National

Defense and internal affairs and administration). Out of these, 132 were public universities in which 1,034.2 thousand were educated (76.7% of all students). In this period, there were 258 non-public universities educating 314.7 thousand students (23.3% of all students). In comparison to the previous year, the number of non-public higher education institutions dropped, and the number of students dropped by 4.7%. In recent years, an increasing share of students studying at public universities has been observed, in which full time education was the dominant form – 78.7% (78.0% in 2015/2016). The opposite situation occurs in non-public higher education institutions in which part-time studies dominate. This form of education was used by 73.9% of students of these universities (75.7% in 2015/2016) (GUS, 2017, pp. 28–29).

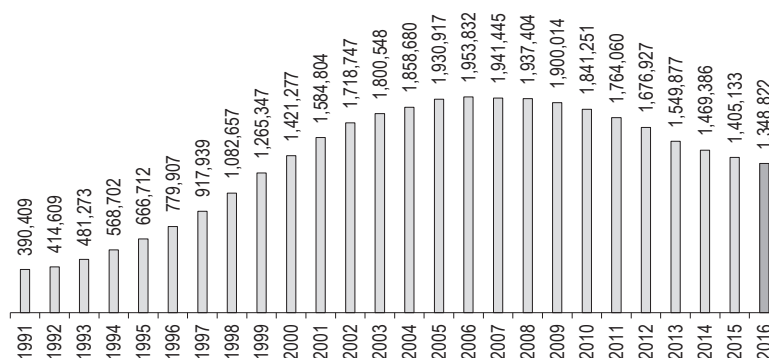


Figure 1. Number of students in Poland in the years 1991–2016

Source: GUS data, as of 31/11/2016.

In parallel with changes in the demographic environment, changes in the decision making model by potential students are observed. It was examined that the candidate's contact with the university is the last stage of decision making, and not the first contact, as was the case in the past. Secondary school students look primarily for information in the Internet. They search for faculties through search engines and visit websites of individual universities, where they will get acquainted with the offer of studies. They are, for the most part, present in social media, from where they also receive information about the possibilities of studying. They follow blogs and opinions of students from various universities, view the opinions of graduates, and watch lectures of professors from various universities on YouTube (Michalak, Mruk-Tomczak, 2018, p. 229). On this basis, they form an opinion about where to study and what faculties are valuable, whether they provide good prospects for work, and only in the final stage of decision-making, they appear inside the real walls of the university.

The research methodology and results

The aim of the study and the presented article is to identify places where young people undertaking full-time studies (as it is the dominant form of education at public universities) sought information about studying opportunities and getting to know their opinions on places where the university should be promoted. The on-line survey (CAWI) was conducted in September 2018 on a sample of 409 respondents in one of the economic faculties in the West

Pomeranian Voivodeship (random sample, selection of a layered sample, 85% of people submitting documents for 1 year for I and II degree studies at this faculty). The analysis carried out due to the purpose of the article was limited to the answers given by candidates who submitted documents for full-time studies. The study cannot be generalized to the entire population of students in Poland due to the lack of variation in the sample (in terms of location or university profile), but the results have been obtained on a significant sample and are also valuable due to their relevance. The most important area studied was the search for information about the possibilities of studying by young people. The answers obtained are shown in Figure 2.

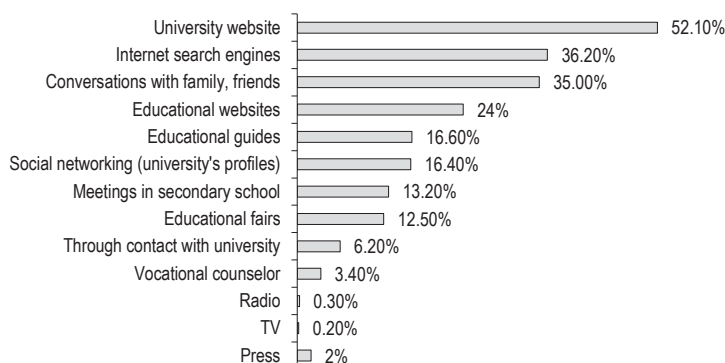


Figure 2. Places to search for information about the possibility of studying

Source: own study based on the results of the survey $n = 409$.

The main place for seeking information about the study offer is the websites of individual universities, which were indicated by 52.1% of respondents. In the second place are internet search engines in which potential candidates search for information using keywords (36.2%). In the third place, there are opinions of friends and family (35%). The importance of traditional paper educational guides was indicated by 16.4% of respondents, but their role is taken over by educational websites, which were reviewed by 24% of respondents. It is worth noting the importance of social networking profiles (16.6%). The next place to search for information is meetings organized in secondary schools (13.2%) and educational fair (12.5%). Direct contact with the university in order to obtain information was indicated only by 6.2% of respondents, which confirms the research results quoted earlier. Contact with a vocational counselor is not an accepted form of university selection (3.4%). Traditional media such as television, radio and newspapers are used by a small percentage of respondents.

Similar results were obtained by Antczak, Kłosiewicz examining student preferences in 2016: the Internet is a basic tool for obtaining information on the educational offer of higher education institutions (38% of indications). Secondly, knowledge on this subject comes from friends and family (27.2%). On the other hand, respondents mentioned about brochures much less frequently (15.2%) (Antczak, Kłosiewicz, 2017, p. 260). The research results confirm that current students and graduates are a very important source of knowledge about the offer of a high school. The success of a university is determined by its ability to meet the needs and requirements of students. Opinion based on one's own experience, not advertising messages is more reliable. Satisfied students giving good

testimony to the school in their environments, bring new clients (Pabian, 2002, p. 144; Antczak, Kłosiewicz, 2017, p. 267). Other studies indicate even greater importance of social media in communication with potential students. Half of the students surveyed considered the desirability of using Facebook as the most appropriate medium for presenting the university's offer on the Internet (44%) (Antczak, Kłosiewicz, 2017, p. 259). Also K. Dembczyński draws attention to the importance of the social networking site Facebook in communication with entities in the university's environment, especially with students and graduates of the school. He points out, however, that these messages should be of engaging, not only informative character (Dembczyński, 2017, p. 73).

In addition to building relationships in the virtual world, one cannot forget about the importance of direct contacts. Open lecture cycles, academic classes or meetings with students in secondary schools remain an important and effective way to communicate with university candidates. Own, individual experiences are specific catalysts in the decision-making process (Michalak, Mruk-Tomczyk, 2018, p. 230). Nowadays, the competence potential of employees is one of the key elements of gaining an advantage over competition (Domańska, Grzegorzczak, 2017, p. 25). It requires a skilful use of the social capital of the university by delegating to meetings in competent schools, but also employees able to build good interpersonal relations. Thanks to them, potential students, in direct contacts, can find out what atmosphere prevails at a given university, what faculties the university offers and what people work there. This form of communication is more reliable than advertising, better remembered and distinguishes the university due to direct contact and non-mass character.

Constructing the message

In the survey, potential students were asked about what should be emphasized in promotional messages. The question about this aspect was of the open type, thanks to which every subject could freely answer it. Answers have been grouped into six main areas (Figure 3), the order of which reflects their validity, i.e. the frequency of the response.

The prospect of a good job and a professional career after graduation
The presentation of opinions and profiles of graduates
Workshops, internships, trips
Diversity of faculties and level of education
Comfort and modern equipment
Atmosphere

Figure 3. The most important factors when choosing a course in the opinion of the young

Source: own study based on the results of the survey, n = 409.

For future students, the most often emphasized was the prospect of employment and career after graduation, that is, obtaining a good education enabling to take a well-paid job. The opinions of graduates were mentioned on the second place. For the respondents, it is also important that the studies do not have value only on paper, but that the graduate should have real knowledge of the subject. For this reason, studying for young people is also a period of gaining professional experience through internships and internships, as well as trips to other universities. Students are looking for study opportunities at faculties where various fields of study are implemented. For future students it is also important in what conditions they will study, i.e. comfort and modern equipment of the faculty. This factor can be included in the physical evidence in services on the basis of which potential consumers can form an opinion on the quality of services provided. Frequently appearing answers related also to the atmosphere of studying, i.e. friendly approach of lecturers or administration employees to students.

Very similar results appeared in the studies of high school students. The factors determining the choice of the field of study turned out to be the opportunity to find a better job after graduation and well-paid work, and only on the third place reputation and prestige of the university appeared (Michalak, Mruk-Tomczyk, 2018, p. 236). Generation Z, or the current generation of candidates for studies, in a larger scale than in the past, introduces rationalization in the decision-making processes (Ohme, 2017, p. 36). For this reason, values that are important for the recipients of communication should form the basis for formulating messages from the university (Michalak, Mruk-Tomczyk, 2018, p. 229). This generation Z is more and more interested in the image, and with a greater reserve accepts the need to read texts (Weinschenk, 2013, p. 45). That is why, in promotional messages, it is a good idea to use films or photos that draw the attention, and at the same time, they can expose the values important for potential candidates. For this purpose, one can use a message based on the profiles of graduates in a given area. For example, the possibility of constructing the message is indicated by J. Wiktor, describing it as a recommendation, by using in the advertising message the category of "personalities", both well-known people and "average" people, typical representatives of the target group (Wiktor, 2013, p. 189).

Conclusions

Changes observed in the socio-economic environment of the country and the dynamic development of modern technologies have a significant impact on the activities of universities, as well as changes in behavior and the decision-making model of candidates for studies (Michalak, Mruk-Tomczak, 2018, p. 227). According to the principles of marketing communication, the university should communicate with its environment through various communication channels and forms of promotion (especially public relations and advertising activities). This way of acting is called integrated marketing communication with the environment, thanks to which it is possible to achieve synergy (Pabian, 2002, p. 142; Wiktor, 2013, p. 82). In the age of information society, the media that young people like to use are changing and their activity is largely shifting to the Internet. This is crucial for a university that wants to reach them with information about its offer.

The author's research indicates the need for a multi-channel communication method of the university. Regarding the choice of the communication channel, one should take care of the modernity and attractiveness of the university's website as the most important place for obtaining information about fields of study. It is also worth investing in search engine advertisements (e.g. Google Ads), thanks to which information about the university and the offered trends will be in the first positions in the search engines. One should pay attention to the necessity of the presence of the university in social media and educational online portals, at the expense of presence in traditional

media. However, the direct channel is not without significance, either during open lectures organized in high schools, at stands during educational fairs or contact with the candidate coming in the last stage of decision making at the university. Regarding the method of shaping the message, one should take care of the rational nature of the message, emphasizing the prospects of work after graduation, especially by presenting the profiles of graduates of the faculty and the possibility of using practical workshops or internships during education. Adaptation of the communication channel and the way of constructing a promotional message to solutions applied by potential candidates for studies will enable the university to provide young people with the information in the right place and form.

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Cite this article as: Ostrowska, I. (2018). Construction of promotional message of a higher school in the context of changes in behaviors of potential students. *European Journal of Service Management*, 4 (28/2), 311–317. DOI: 10.18276/ejsm.2018.28/2-37.

A MARKET ENTRY CONCEPT FOR A COMMERCIAL BANK TO ENTER THE FINANCIAL MARKET IN POLAND

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION G21

KEYWORDS financial market, market entry, commercial bank

ABSTRACT The purpose of this paper is to develop a market entry concept for a new banking enterprise to enter the financial market in Poland. The research methods applied to attain this purpose included: reports and source data analysis, comparative analysis and SWOT analysis, inductive and deductive reasoning methods, a survey involving commercial bank customers in Poland, and a synthesis of the obtained results. This paper presents the research results as well as the outcome of the deliberations, being a concept for a new commercial bank to enter the financial market in Poland.

Introduction

The banking services market in Poland is specific and relatively new. In fact, it was not until 1989 that it started functioning as a result of Poland's transition to a market economy. The Polish banking market players include a number of banking and para banking enterprises, both foreign and national. One could think that this market has already been saturated and closed (Kotliński, 2018, p. 162), which means it would be very hard for any new

enterprise to make a viable market entry. However, the Polish market has been saturated only on the supply side, while there is still a growth potential in the demand (there is still a large number of adult Poles who do not have bank accounts). There is evidence (see the example of Alior Bank which obtains very good results on the financial market) indicating that adequately applied promotional tools combined with an interesting and innovative range of services can make it possible for a new bank to complete a successful market entry into the Polish market.

Research Methodology

The term “new bank” which is applied throughout this article may be construed as either of the two cases: a totally new bank starting its operations on the Polish market (e.g. Alior Bank) and an existing bank that enters the Polish market (e.g. Allianz Bank). In this article, attention is focused predominantly on the entirely new entities entering the financial market in Poland.

The research studies performed for the purposes of this paper were aimed at developing a market entry concept for a new banking enterprise to enter the Polish market. The research methods applied to attain this purpose included: reports and source data analysis, comparative analysis and SWOT analysis, inductive and deductive reasoning methods, a survey involving commercial bank customers in Poland, and a synthesis of the obtained results. The results of the research studies are presented both in the descriptive and tabulated forms.

The empirical data were obtained from a survey that was carried out from February to April 2015 and involved 622 customers of commercial banks operating in Poland, which was based on the electronic survey questionnaire (CAWI) and paper survey questionnaire (PAPI). The respondent group included 442 women (71.06%) and 189 men (28.94%). The vast majority (72.2%) of the respondents were bank customers aged from 18 to 34 years. The second biggest group comprised respondents aged from 35 to 49 years, and the least numerous group was composed of respondents aged 50+. In terms of education, the vast majority (70.58%) of the respondents had tertiary education, whereas 13.99% of the surveyed bank customers had secondary and post-secondary education, and 13.02% of the respondents declared they had attained incomplete tertiary education. The least numerous respondent groups included the bank customers with the occupational (1.77%) and primary (0.64%) education. The questionnaire comprised 15 survey questions and 3 demographics questions regarding age, gender, and education.

The environment of banks at the time of market entry

The analysis of the market entry process for new banks (for the purposes of this paper, the term “new bank” will cover any of the following banks: mBank, Alior Bank, Allianz Bank, IDEA Bank, T-Mobile Usługi Bankowe, Plus Bank and Orange Finanse) is a considerably difficult and complex task. One of the methods to tackle this analysis is listing the selected micro- and macroeconomic data which characterised the banking environment in the years when the particular banks entered the market. The data are presented in Table 1.

The following data were selected for the purposes of the analysis: number of commercial banks on the market, GDP (PLN m), productive population, Lombard rate, total unemployment rate. All the data refer to the particular market entry year. The number of commercial banks existing on the market corresponds to the number of potential competitors. The GDP value indicates the general status of the Polish economy. The number of people in the productive age group constitutes the approximate number of potential customers for the banking sector (the productive age has been defined as 18–59 years for women and 18–64 years for men). The analysis also takes into account the Lombard rate, as it affects the maximum level of loan rates in commercial banks (the fourfold of the

Lombard rate). From the point of view of any bank which is planning to enter a new financial market, the information on the Lombard rate level is important, as the lower the Lombard rate, the more customers will be interested in the banks' lending products, whereas higher levels of the Lombard rate, though generating more interest revenues for the bank, will result in fewer customers willing to avail themselves of the bank's lending products. The last indicator is the total unemployment rate which, similarly as in the case of GDP, provides information on the general status of the Polish economy.

Table 1. Selected micro- and macroeconomic data at the time of the banks' market entries

Bank name	Year of market entry	Number of commercial banks operating on the market in the year of market entry	GDP (PLN m) in the year of market entry	Size of productive population, aged 18–59/64 (% of total population) in the year of market entry	Lombard rate as at the end of the year of market entry	Total unemployment rate as at the end of the year of market entry
Alior Bank	2008	52	1,275,508	64.5	6.5	9.5
mBank	2000	73	779,554	60.8	23.0	15.1
T-Mobile Usługi Bankowe	2014	41	1,719,097	63.0	3.0	11.5
Plus Bank	2013	41	1,635,746	63.4	4.0	13.4
Allianz Bank Polska	2008	52	1,275,508	64.5	6.5	9.5
IDEA Bank	2010	49	1,416,585	64.4	5.0	12.4
Orange Finanse	2014	41	1,729,097	63.0	3.0	11.5

Source: own study based on the data provided by: GUS (2018), NBP (2018).

The analysis of the micro- and macroeconomic data contained in Table 1 makes it possible to define the most and the least convenient economic situation at the time of entering the market by the bank. The most convenient time for entering the Polish financial market by banks was found to be 2000, which was the year of the market entry by mBank, despite the very high level of interest rates, the highest unemployment level and the greatest number of potential competitors on the market across the analysed periods. The reason why the year 2000 was found to be the most opportune for a new bank to enter the Polish market was in particular the period of the considerable economic growth in many sectors. The years 2010, 2013 and 2014, in which the telecom banks (T-Mobile Usługi Bankowe, Plus Bank, Orange Finanse) and IDEA Bank entered the market, were found to be moderately opportune in terms of market entry conditions, predominantly due to the smallest number of commercial banks present on the market over the researched period, which translates into the potentially lowest market competition. Moreover, 2010, 2013 and 2014 were post-crisis years when the economic situation stabilised. Although the unemployment rate was still on a high level (above 13%), the high percentage of productive population, high GDP and low interest rates provided favourable conditions for new banks to enter the Polish financial market. The following two banks experienced the least opportune time for market entry: Alior Bank and Allianz Bank, which entered the market in 2008.

The years 2007-2008 are considered to have been the peak years of the global financial crisis which, among other things, led to losing customers' trust by banking institutions. The unfavourable factors for a new banking enterprise entering the market included the interest rates levels which were higher than in the subsequent years.

Due to the differences in the banks' operation periods, it is very difficult to compare their effectiveness; mBank has been operating on the Polish market for ca. 18 years, Alior Bank – for ca. 10 years, IDEA Bank – for ca. 8 years,

and the telecom banks have been around for 3 or 4 years. Nevertheless, an attempt was made to provide such a comparison between the banks that have been operating for some years: mBank, Alior Bank and IDEA Bank. Due to the very short operating time, the telecom banks were excluded from the comparison. Assuming that, for the purposes of this paper, the competitive advantage of the banks can be established on the basis of prestigious bank rankings, the following conclusions may be drawn:

- a) after 4 years of operation, mBank (formerly MultiBank) came in third in the “Newsweek’s Friendly Bank” ranking in the “Bank for Mr Smith” category (*Ranking przyjazny...*, 2005), after the same period of operation, Alior Bank reached the 5th place in the same ranking (*Ranking przyjazny...*, 2014), whereas IDEA Bank was outside the Top 20. It seems that comparing the places taken by the banks in the same ranking after the same period of operation should be the most reliable approach, however, due to the changing criteria in the rankings, it was possible to base the comparison only on the “Newsweek’s Friendly Bank” ranking;
- b) in the Top 50 Banks ranking of the *Bank Financial Monthly* held in 2014, in the assets and owner’s equity category, the banks in question ranked as follows: mBank came in 4th with its assets totalling PLN 104,282.8 million, Alior Bank took the 15th place with its total assets at the level of PLN 25,544.8 million, whereas IDEA Bank was outside the published list of 24 banks (*Ranking 50...*, 2014, p. 23). The competitive advantage for the purposes of this paper was measured by means of the volume of assets and owner’s equity, hence the very good result of mBank compared to the other banks included in this analysis. According to the research study carried out by T. Siudek, P. Snarski and B. Chodera (2013), the highest level of competitiveness was shown by Alior Bank, whereas mBank was ranked third.

The above mentioned data have shown that the time of market entry (i.e. favourable or unfavourable economic conditions) had an impact on attaining a competitive advantage by a bank. This correlation is particularly noticeable on the example of mBank.

New banks on the Polish financial market in the opinion of their clients

The particularly valuable data for the purposes of this paper come from the responses of the customers who had been using the services of the new banks – mBank, Alior Bank, T-Mobile Usługi Bankowe, Orange Finanse and Plus Bank. The most numerous group among the surveyed respondents (17.9%) were the customers of mBank which entered the Polish market in 2000. The second biggest group was represented by the customers of Alior Bank (7.6%) followed by T-Mobile Usługi Bankowe (1.8%). There were no responses from the customers of Orange Finanse or Plus Bank.

The analysed responses were provided by the new banks’ customers, 80% of whom had tertiary education. 67% of the respondents were female, and 33% of them were male. 59% of the new banks’ customers also declared using the services of other banks. This could mean that as soon as the new banks entered the market, the customers took a cautious approach to them. When they decided to start cooperation with the new banks, they did not close their accounts held with other banks, waiting to see how the new banks’ operations would be developing.

The bank service factors considered the most important by the customers included: the price of offered products and services (64.5%), the quality of offered products and services (ca. 45%), one-stop shopping (ca. 37%), promptness of customer service (33%) and availability of online services (11%).

When choosing a banking services provider, the new banks’ customers considered the following factors: the price of banking products and services (57.40%), the number of fee-free ATMs (42.60%), the opinion of friends and

relatives (ca. 35%) and online banking services (over 10%). The factors of lesser importance included: locations of bank branches, bank service quality or a wide range of products and services. Interestingly, the factors which were decisive for choosing a new bank did not totally coincide with the factors that the customers considered the most important in the bank service. Analysing the factors involved in choosing a new bank, it is possible to draw a conclusion that the new banks attracted their customers predominantly with the price (which means not only the price of banking products and services, but also the lack of ATM fees) and with online banking services (the customers indicated characteristics of a good online banking system, such as: intuitive operation, simplicity, clarity, possibility to conduct numerous transactions via the internet).

Nearly 95% of the new banks' customers were satisfied with the service provided by their bank, which was confirmed by the loyalty to the bank declared by them. The average declared level of the new banks customers' loyalty amounted to 8.28%. What is more, nearly 52% of the new banks' customers declared that they would continue to be the banks' customers, as they were satisfied with the bank service. Almost 18% of the respondents declared that they would not switch to another bank, as the banking services were comparable at all the banks, so they thought there was no reason to switch banks. However, almost 16% of the customers said they stayed with their bank only because they were reluctant to go through the formalities connected with switching to another bank. Despite the declared high loyalty level, as many as 58% of the respondents declared that they would be inclined to switch to another bank, if a new bank (significantly better than the others) came into the market. It would be enough for the respondents to decide to switch to another bank if the new bank offered lower costs. This opinion was provided by over 60% of the respondents. Also, for nearly 50% of the respondents a cost reduction would be the factor that would increase the level of loyalty to their banks.

Summing up, the price of banking products and services is the predominant factor considered by the customers when choosing a bank or switching to another.

The concept of a new bank market entry

As a result of the above considerations, an original concept of a new bank market entry was developed, accounting for the factors necessary for a new bank to complete a successful market entry into the Polish financial market. These factors include:

1. Meeting any formal requirements connected with running any banking operations in Poland.
2. Implementation of the market entry process at an opportune time for running bank operations.
3. Distinguishing from the competitors, which is connected with achieving a competitive advantage by the new bank. At the initial stage of the bank's operation, the competitive advantage may be connected to an innovative offer, new distribution channels or the capital value.
4. Running an effective advertising campaign to ensure the customers' awareness of the bank's existence. It is also extremely important to involve customers in the process of creating the new bank, so as to build up relationships with the customers and win their loyalty (for instance, see the campaign of Alior Bank called "Build a new bank with us").
5. Offering an added value to customers, an element which distinguishes the new bank from its competitors (e.g. a personal account manager for each client at Alior Bank).
6. Reaching out to those members of the society who do not use banking services (e.g. possibility to pay one's bills free of charge at Alior Bank's branches).

7. Offering more advantageous prices than the competitors. In the case of a market which has been saturated on the supply side, winning new customers is possible only by taking them over from the competitors or reaching out to the prospective customers who do not use banking services yet (which is a difficult task).

Analysis of costs and benefits of a new bank market entry

In order to see the big picture of the issues related to entering the market by a new bank, a synthetic analysis of costs and benefits was performed, taking into account various levels of the analysis: the State, the banking and financial sector, the new bank, business entities and local government units as well as individual customers (households). The synthetic approach to the issues of costs and benefits of entering the market by a new bank makes it possible to present the complexity of the process. The results of the analysis are presented in Table 2.

Table 2. Analysis of costs and benefits of entering the market by a new bank (synthetic, model-based approach)

Analysis level	Costs and threats	Benefits and opportunities
The State	<ul style="list-style-type: none"> – risk of excessive dispersion, – risk of failure of the new undertaking, generating costs for the economy (e.g. losing jobs) 	<ul style="list-style-type: none"> – positive impact on the national and regional economy, – new jobs
Banking (banking and financial) sector	<ul style="list-style-type: none"> – risk of bankruptcy – increased scale of competition 	<ul style="list-style-type: none"> – increased scale of competition, – sector growth, – technological and product innovations
New bank	<ul style="list-style-type: none"> – very high costs of market entry (including those connected with opening a network of branches, IT systems development), – demand for qualified staff (employee training also generates high costs) 	<ul style="list-style-type: none"> – opportunity to obtain considerable benefits following the financial market entry
Business entities, local government units	<ul style="list-style-type: none"> – uncertainty, – risk connected with choosing a new bank 	<ul style="list-style-type: none"> – new possibilities in terms of deposits, investments and loans, – innovative product offer
Individual customers (households)	<ul style="list-style-type: none"> – uncertainty, – risk connected with choosing a new bank, – lack of trust to the new bank, – lack of recommendations from relatives/friends 	<ul style="list-style-type: none"> – relatively cheap products and services of the new bank, – higher service quality, – innovative product offer

Source: own work.

Economic and social phenomena are usually much more complicated than they might seem. This also regards entering a banking & financial market which is relatively saturated (on the side of the supply, but not the demand). The short history of the market presence of Alior Bank amidst dozens of banks operating on the Polish banking and financial market deserves attention of analysts who deal with financial management, particularly in terms of success factors needed by a new entity entering a difficult market, such as the banking & financial market in Poland. As a “late follower”, Alior Bank became an interesting object for further analyses, e.g. to what extent a new entity with an innovative, intelligent strategy and tactics may become a point of reference and a model to follow by other, “old” entities.

Conclusions

The following conclusions were formulated in the course of attaining the assumed goals:

1. The Polish banking and financial market has been saturated on the supply side (there are many banking institutions operating on it), however, it has not been saturated in terms of the potential demand (the bank-using population accounts for 77% of all the Polish society). Therefore, there is still a growth potential for new banking institutions on the Polish banking and financial market, which could start cooperation with the 23% of the Polish citizens who do not use any banking services.
2. Though at first sight the idea might seem absurd, the global banking and financial crisis is a good point in time to establish and develop new financial institutions. This kind of undertaking may be relatively easy in view of the infrastructure existing on the market in combination with the availability of experienced financial professionals ready to take on new challenges inherent in starting a new bank. This situation is undoubtedly advantageous for any hesitant customers who keep looking for an appropriate bank and adequately tailored financial services. Moreover, the increased competitiveness of the financial offer on the continuously developing market will enhance the significance of the customer-focused policy implemented by the dominating financial institutions.
3. A successful market entry of a new bank is possible, provided that the bank meets a few very important conditions, including, but not limited to: building a relationship with customers from the very beginning, choosing a business model that distinguishes the bank from its competitors, offering an added value to customers.
4. The most vital factor which is decisive for customers making decisions on opening bank accounts and purchasing new financial products is the price. Banks should pay particular attention to their price policies, particularly in the context of the market perception.
5. The new banks attract customers predominantly with the price (not only the prices of banking products and services, but also the lack of ATM fees) and their online banking systems.
6. When the new banks entered the market, the customers took a cautious approach to them. Making a decision to start cooperation with the new banks, they did not close their accounts held with other banks, waiting to see how the new banks' operations would be developing.
7. In view of the saturation of the banking services market in Poland and the intense competition, winning new customers is an extremely important task for the banks. Taking over the customers from other banking institutions is possible in a situation when the bank is able to offer the potential customers something extra, which also helps reinforce the relationships with the existing customers. This may be successfully achieved via cooperation between banks and mobile phone operators.

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Cite this article as: Pettersen-Sobczyk, M. (2018). A market entry concept for a commercial bank to enter the financial market in Poland. *European Journal of Service Management*, 4 (28/2), 319–326. DOI: 10.18276/ejasm.2018.28/2-38.

STRUCTURE OF SERVICE SECTOR OF GEORGIA

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION L8, R1

KEYWORDS Georgia, GeoStat.Ge, services sector

ABSTRACT In recent years, interest in Georgia has been growing. The country belongs to the Eastern Neighborhood area. Polish and international organizations systematically announce competitions, based on sharing experience and knowledge in the field of institutional and local government administration, education, science, business; most of international aid supports Georgia in the transformation process and helps to adapt the local soft and hard infrastructure to the requirements of the free market. Researchers, universities and business entities often are in need to get up to databases giving a picture of this country and region. The purpose of this text is to present the structure of the current statistical information regularly collected by the Georgia's statistical office (Geostat) and available in the digitized space. This review paper provides general information about Georgia, including a historical feature with an emphasis on the experience of creating databases. Next, it presents the structure of statistical data collected by the GeoStat.Ge, discussing in detail the services sector. Through the reviewed data structures, it draws attention to several properties, that result from the specificity of the Georgian national economy.

Introduction

Georgia is a small country, inhabited by different nationalities and belonging to different religions, most of which are Georgian. It's area is 69.700 sq.km and the population – 3,729.6 thousand persons (by January 1,

2018).¹ Britannica describes Georgia as a country of Transcaucasia located at the eastern end of the Black Sea on the southern flanks of the main crest of the Greater Caucasus Mountains. It is bounded on the north and northeast by Russia, on the east and southeast by Azerbaijan, on the south by Armenia and Turkey, and on the west by the Black Sea. Georgia includes three ethnic enclaves: Abkhazia, Ajaria and South Ossetia. The capital of Georgia is Tbilisi.

The roots of the Georgian people extend deep in history; their cultural and urban heritage is equally ancient and rich. In Hellenistic times here was the area of Greek colonization, and later there was the province of the Roman Empire. This means that all institutions inseparably associated with Greek *polis* were represented in Hellenistic cities in Georgia (Pirveli, 2002). During the medieval period a powerful Georgian kingdom existed, reaching its height between the 10th and 13th centuries. According to the historical chronicles collection of statistical data started in here just in 13th century. In the years of 1254–1258 Khan Arghun of Mongolia conducted the census of the population of Georgia and inventory of their assets (Chkhikvishvili, 1982, p. 72). Since 1689 chiefs of military-territorial units began conducting the population censuses in their regions once per seven years (Dzidziguri, Abashidze, Aleqsidze, 1985). The surviving books of XVII–XVIII cc. contain the data obtained from these censuses. After a long passé of Turkish and Persian domination, country was annexed by the Russian Empire in the 19th century. On November 15, 1918 a temporary Bureau of Statistics was set up at the Ministry of Agriculture (Atanelishvili, 1994, p. 159). The functions of the Bureau included developing the materials for conducting an agricultural inventory, was recording the land bank and determining the norms for its distribution (Atanelishvili, 1994, p. 169). On July 25, 1919 under the Law adopted by the Constituent Assembly, the Central Statistical Committee of the Republic was set up at the Ministry of Agriculture. The Committee was tasked to manage all the statistical works of state significance. An independent Georgian state existed from 1918 to 1921, when it was incorporated into the Soviet Union. After the Soviet occupation, on April 3, 1921 the Revolutionary Committee issued the Decree on Establishing the Central Statistics Division of Soviet Republic of Georgia and on July 4, 1921 the first charter for the state statistical bodies of Georgia was published (News Archive, 2017). The seventy-year Sovietization ended in 1989, when the country declared sovereignty on November 19, 1989. It was the beginning of economic blockade and, in the same time, of profound changes aimed at building free market structures on the site of a centrally controlled economy. The period of economic blockage was reflected in the full disappearance of energy, water supply, heating, electricity, industry, services and jobs, giving the inhabitants basic living conditions (Strachota, 2007; Sadlocha, 2017). In addition, civil wars began, which did not favor changes in the political system and the economy (Dąbrowski, 2004).

The number of Georgian population in the 1990–2018 period is characterized by decreasing trend. This is about the data released by Geostat, according to which the number of population reduced from 5,424,400 in 1990 to 3,729,600 in 2018. During this period there was declined both, urban and rural areas residents. Residents of Tbilisi in 2018 (1,158,677 people), in comparison to 1989 (1,263,489 people), decreased by about 100,000 people, while in regions the decline exceeded 1,088,000 people. In the same period increased urbanization rate percent from 53.8 percent to 58.3 percent. According to experts, the main reason for population reducing is increased mortality, birth rate and migration abroad (Shavishvili, Kavelashvili, 2018). Probably, the reason for the increased urbanization rate is not the urbanization but the depopulation of the village and the intensification of internal migrations from the countryside to the cities. The distribution of the population to urban centers in recent years, as the rural population

¹ As a result of the seizure of Abkhazia and South Ossetia by Russia, Georgia controls de facto 57,250 sq.km of its area.

has decreased by about 1/4 since the beginning of the 21st century. More than half the population lives in cities. Further, a considerable portion of the population, that is defined as rural, is in fact engaged in the urban economy of nearby cities (more than 1/3 de facto live in Tbilisi). Enterprises for primary processing of agricultural products have been constructed in the villages, while ore-processing plants and light industry also are increasing in number. Table 1 shows investment in fixed assets in enterprises of trade, repair of vehicles, personal and household goods by regions. The best turnover (not Tbilisi) is in the region Adjara, Imereti and Samegrelo, where light industry is developed. The number of rural inhabitants remains there as high as it is because of the wide distribution of labor-intensive branches of the economy such as the tea and subtropical crop plantations.

Table 1. Investment in fixed assets in enterprises of trade, repair of vehicles, personal and household goods by regions

	Georgia	of which										
Year		Tbilisi	Adjara	Guria	Imereti	Kakheti	Mtskheta-Mtianeti	Racha-Lechkhumi and Kvemo Svaneti	Samegrelo-Zemo Svaneti	Samtskhe-Javakheti	Kvemo Kartli	Shida Kartli
	mln GEL											
2006	146.0	124.8	5.5	0.3	2.2	2.0	3.6	0.0	4.7	0.3	1.4	1.2
2007	202.7	178.5	8.2	–	6.5	0.4	–	–	6.3	0.3	1.6	0.9
2008	241.5	222.3	5.3	0.3	4.2	1.5	0.0	0.0	4.9	0.3	2.1	0.6
2009	260.4	247.6	2.2	0.1	3.6	2.2	0.0	0.0	1.3	0.8	1.2	1.4
2010	501.9	489.3	3.9	0.1	2.4	0.8	0.3	0.0	1.3	1.1	1.3	1.4
2011	273.9	251.8	10.4	0.1	3.5	1.4	0.0	–	1.0	2.3	1.7	1.6
2012	234.8	192.3	14.1	0.1	6.1	0.7	7.0	0.0	1.0	5.4	5.2	3.0
2013	453.6	388.8	25.6	0.3	5.4	9.6	2.0	0.0	5.1	2.0	2.8	11.9
2014	425.5	371.3	17.5	1.1	8.3	6.0	1.3	0.0	6.5	2.0	8.4	3.0
2015	595.6	541.7	27.1	0.5	6.2	3.0	0.7	–	2.0	1.0	8.8	4.7
2016	417.6	348.6	23.5	0.7	10.0	8.4	1.8	0.2	8.4	3.3	8.5	4.3
2017	634.2	560.3	43.1	0.3	12.9	2.1	1.4	0.0	1.0	1.2	9.4	2.5

Source: GeoStat.Ge (2019e).

The great achievement of the transformation period is the fact, that the vast majority of jobs are produced in the non-state sector; even some branches of the national economy are fully located only on the private sector (e.g. hotel industry, etc.). Figure 1 shows the number of population and employment by institutional sectors (state and non-state sector). More than half of the population remains unemployed, however, the group of registered unemployed is small. The majority of employees are people working in the private sector (mostly self-employment). The lion's share of employees are over 35; however, there are some sections that have been fully rejuvenated and employ people under 35 (e.g. government administration).

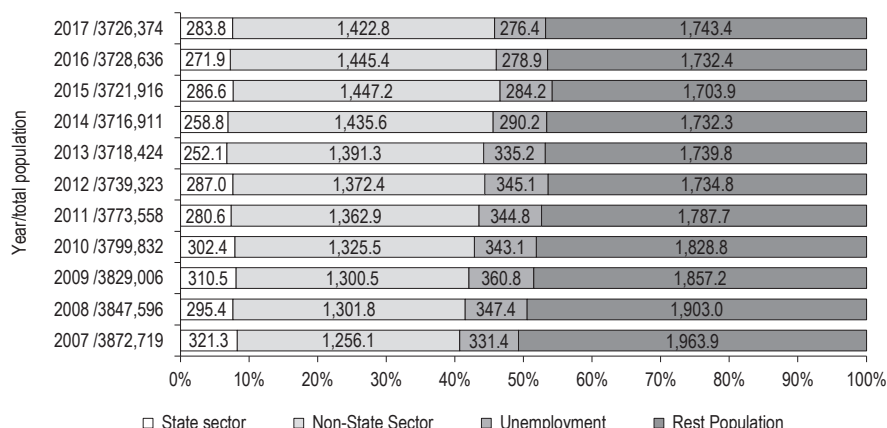


Figure 1. Number of population and employment by institutional sectors (data by January 1. Elaboration based on GeoStat.Ge) (in thousands)

Source: Integrated Household Survey (2016); Labour Force Survey (2017).

GeoStat.Ge transforming activity

After collapse of the Soviet Union, the need to make fundamental changes to all the tools and methods arose along with the need to identify different, alternative sources for obtaining the data. It became important to develop and introduce the indicators characteristic for a market economy. Since 11 December 2009 the Law of Georgia on Official Statistics provides a legal basis for its functioning; all statistical activities are carried out by an independent body of National Statistics Office of Georgia. Table 2 shows the most important legislative changes that have made the structural transformation of the current statistical office, that for 70 years was a typical Soviet office.

Table 2. Chronology of key legislative changes structuralizing the statistical office of Georgia After collapse of the Soviet Union in 1990s

Date	Key legislative changes and international projects
1991–1995	According to the Law of Georgia, dd 27 February 1991, on the Structure and the Rules of Operations of the Executive Power, the statistical activities in the country were carried out by the Social and Economic Information Committee established at the Supreme Council of Georgia.
1995	By the Decision of the Cabinet of Ministers, dd 3 April 1995, was established the State Fund of Statistics Development in order to support and further develop the facilities for carrying out statistical works.
1995–1997	The State Department of Social and Economic Information carried out the statistical works according to the Law of Georgia, dd 8 December 1995, on the Structure and the Rules of Operations of the Executive Power.
1996–1997	At the Ordinance of the President of Georgia, from April 1996 to October 1997 the state temporary commission was set up in order to further develop the state statistics. High officials representing the Ministry of Economics of Georgia, State Department of Social and Economic Information, National Bank of Georgia, Ministry of Finance of Georgia and the State Chancellery served on the Commission.
1997–2004	The State Department of Statistics of Georgia used to carry out the statistical activities.
1998–2009	The Law on Statistics, adopted in 1997, was applied.
2004–2009	The Department of Statistics was merged with the Ministry of Economic Development of Georgia; all the statistical activities were carried out as a subordinated body of the Ministry of Economic Development of Georgia.

Source: based on: GeoStat (2019a).

GeoStat.Ge carries out its functions taking into account the international methodology and standards (Methodology, 2019). Georgian statistical office bases its methodology on the methodology provided by the European Communities, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations and World Bank (System of National Accounts 2008, 2009). They have been implemented mostly through 22 international projects; they are described in table 3 by duration, project title and financing organization (Table 3).

Table 3. Chronology of international projects structuralizing the statistical office of Georgia

Duration	International projects (Donor organization)
1 V 2011–1 V 2014	Cooperation project between National Statistics of Georgia (Geostat) and Statistics Sweden (Donor: Sida. Statistics Sweden).
10 I 2006–31 XII 2013	Data collection and analyses project (under USDA Caucasus agricultural development initiative) (Donor: USDA – United States Department of Agriculture).
1 I 2011–1 VII 2013	Bilateral cooperation project between Statistics Netherlands and National Statistics Office of Georgia (Donor: The government of the Netherlands).
1 I 2011–1 VII 2013	Bilateral Cooperation Project between Armenia and Georgia within the framework of International Global Comparisons Program by 2011 indicators (Donor: The World Bank).
VII 2014–XII 2014	Support the development of the Georgian System of Statistics in the field of regional accounts. Transfer of knowledge required to carry out calculations of selected macroeconomic categories by regions (Donor: Ministry of Foreign Affairs of the Republic of Poland).
1 IX 2012–3 VI 2013	Implementation of the Accelerated Data Program (ADP) in Georgia (Donor: OECD).
15 XI 2013–17 XI 2017	Global research on Child labor Measurement and Policy Development (MAP) (Donor: The United States Department of Labor).
1 I 2011–31 XII 2017	Support to improved data collection and analysis on population issues for integration of population. (Donor: Government of Sweden (through Sida – Statistics Sweden), UNFPA).
24 IV 2017–30 X 2017	Energy consumption in households survey. (Donor: Energy Community Secretariat of Czech Republic)
2014–2015	Support the development of the Georgian System of Statistics in the field of regional statistics (Implementing agency: Central Statistical Office of Poland).
2 I 2015–31 XII 2015	Support for the development of Georgian System of Statistics in the field of environment statistics (Implementing agency: Central Statistical Office of Poland).
1 X 2013–30 IX 2017	Georgian Agricultural Policy Initiative (Donor: USDA – United States Department of Agriculture).
1 III 2013–1 III 2016	European Neighbourhood Programme for Agriculture and Rural Development (ENPARD Georgia. Implementing agency: FAO).
1 V 2015–30 VI 2018	Cooperation project between National Statistics Office of Georgia (Geostat) and Statistics Sweden (Donor: Sida. Statistics Sweden).
5 I 2009–present	National Accounts Statistics Mission (Donor: IMF).
1 III 2017–31 III 2018	National Survey on Violence Against women in Georgia (Donor: UN Women).
27 VII 2015–18 III 2018	Statistical Capacity Development for Social Inclusion and Gender Equality (Donor: ADB).
10 I 2017–30 IX 2018	Data collection and analyses project (under USDA Caucasus agricultural development initiative) (Donor: USDA – United States Department of Agriculture).
1 I 2017–31 III 2019	Multiple Indicator Cluster Survey – 2018 Georgia MICS (Donor: UNICEF).
6 II 2017–31 III 2019	Provision of Statistical Services for Purchasing Power Parities (PPP) for Georgia and Ukraine (Donor: Eurostat (via ICON institute).
2016–2020	ENI SEIS II EAST – Implementation of the Principles and Practices of the Shared Environmental Information System (SEIS) in the Eastern Partnership Countries Funded by European Neighbourhood Instrument (ENI) and Implemented by the European Environment Agency.

Source: based on: GeoStat (2019b, c).

Organizational structure and main areas of statistical data

The head of the statistical office is the Executive Director. The organizational structure consists of two Deputy Executive Director, Board, Advisory Board and 11 departments organized in three sectors, divided into 34 branches. They are:

- I. Executive Director, together with the Deputies, Board and Advisory Board manage:
 1. Department of Strategic Planning, Coordination and Communication (with five branches),
 2. Information Technology Department (with two branches),
 3. International Audit Department.
- II. One of the Deputy Executive Director supervises the work of the:
 4. Social Statistics Department (with three branches),
 5. Price Statistics Departments (with two branches),
 6. National Accounts Department (with two branches),
 7. External Trade and Foreign Investments Statistics Department (with two branches).
- III. Another Deputy Executive Director conducts:
 8. Population Census and Demographic Statistics Department,
 9. Agricultural and Environmental Statistics Department (with two branches),
 10. Business Statistics Department (with five branches),
 11. Regional Offices (with eleven branches).

Collected and compiled by 11 departments (34 branches) statistical information is published in the form of 23 blocks, called Main Statistics (Table 4).

Table 4. Structure of Main Statistics GeoStat.Ge

Main Statistics	Statistical information
1	2
GDP and Other Indicators of National Accounts	Gross Domestic Product (GDP). Supply and use tables. Gross National Income (GNI). GDP Calculation Methodology. Publications (Quarterly). Publications (Annual)
Price Indices	Consumer Price Index (Inflation). Producer and Import Price Indices. Inflation Calculation Methodology. Publications (Monthly)
External Trade	Georgian exports by countries. Georgian exports by country groups. Georgian exports by commodity groups (HS 4 digit level). Georgian exports by commodity groups (HS 6 digit level). Export of major commodity groups. Georgian Exports by BEC (Broad Economic Categories). Georgian Exports by SITC section. Exports of Georgia by mode of transport. Exports of Georgia by kind of economic activities (NACE Rev.2). Exports of Georgia by size of the Trader's subject. Georgian Imports by countries. Georgian imports by country groups. Georgian imports by commodity groups (HS 4 digit level). Georgian imports by commodity groups (HS 6 digit level). Import of major commodity groups. Georgian imports by BEC (Broad Economic Categories). Georgian imports by SITC section. Imports of Georgia by mode of transport. Imports of Georgia by kind of economic activities (NACE Rev.2). Imports of Georgia by size of the Trader's subject. Exports and imports of Georgia by months
Foreign Direct Investments	Foreign Direct Investments by Countries. Foreign Direct Investments by Economic Sectors. Foreign Direct Investments by Information Sources. Foreign Direct Investments by Regions. Foreign Direct Investments in Georgia by Components. Foreign Direct Investments in Georgia for 1996–2018. Foreign Direct Investments Position (Integrated format). For more details see the web site of National Bank
Employment and Wages	Employment and Unemployment. Labour Force Statistics. Wages. Publications (Annual)
Population	Population. Birth. Deaths. Natural Increase. Migration. Marriages. Divorces. Summary vital statistics, January-June 2018 (Preliminary Data). Annual Publications

1	2
Standard of Living, Subsistence Minimum	Subsistence Minimum. Subsistence Minimum Calculation Methodology for Working Age Male. Incomes of Household. Expenditures of Household. Poverty Indicators. Publications (Annual)
Justice Statistics	Criminal Justice Statistics. Administrative Violations
Healthcare and Social Protection	Healthcare. Social protection
Education and Culture	Education. Culture
Business Statistics	Turnover. Production value. Number of persons employed. Number of employees. Average monthly remuneration of employed persons. Value added. Intermediate consumption. Personnel costs. Total purchases of goods and services. Purchases of goods and services for resale. Investment in fixed assets. Methodology for Calculation of Key Indicators of Business Statistics
Business Register	By kind of economic activity. By ownership type. By legal status. By regions Business demography indicators
Agriculture, Environment and Food Security	Agriculture. Food Security. Environment Publications (Annual)
Industry, Construction and Energy Statistics	Industry. Construction. Energy Statistics
Service Statistics	Trade. Hotels and Restaurants. Transport. Other Service Statistics. Activities of Economic Agents Engaged in Organization of Markets (2017)
Government Finance Statistics	General Government budget. Central Government budget. For more details see the web site of Ministry of Finance
Monetary Statistics	Money supply by aggregates. Structure of Domestic credits. Deposits. Exchange rates. Pawnshop survey results. For more details see the web site of National Bank
IMF SDDS	International Monetary Data. Advance Release Calendar. National Summary Data Page. IMF Dissemination Standards Bulletin Board (DSBB)
Gender Statistics	Women and men in Georgia, 2017, 2015, 2013, 2011
Regional Statistics	Regional Statistics. Population. Economic Activity. Business Sector. Industry. Construction. Service Areas. Standard of Living. Health Care and Social Protection. Education. Culture. Infrastructure. Agriculture. Environment. Foreign Direct Investments. Gross Domestic Product
Tourism Statistics	Domestic Tourism. Inbound Tourism
Information and Communication Technology (ICT) and Innovations	Information and Communication Technologies Innovation Activity of Enterprises (2013–2015, aggregated) Innovation Activity of Enterprises

Source: GeoStat (2019d).

On the office's website (www.geostat.ge) also other information is available in applications like: Database, Publications, Products, Methodology, Meta-Data. (Other icons – About Us, Calendar, Links, Service and fees – are of organizational nature). For example: under the icon *Publications* are issued:

- Quarterly Bulletin (from 4Q-2015 – present),
- Gross Domestic Product of Georgia (from 2016 – present),
- Foreign Direct Investments (from 4Q-2016 – present),
- Small and Medium Business in Georgia (2009),
- Agriculture of Georgia (from 2012 – present),
- Producer Price Index in Georgia (2018).

Transformation and fundamental restructuring of the Economy and of the Geostat (the institution, which documents the condition, resources, values and potential of the whole state and its regions) is continued and is in the process. But one can already notice, that National Economy, once dominated by the state sector, explicitly changes its structure and strongly arrives examples of self-employment (Figure 1).

Structure of Service statistics

Under the service statistics are treated: Trade, Hotels and Restaurants, Transport, Other Service Statistics, Activities of Economic Agents Engaged in Organization of Markets. They are all described according to a common formula. In few cases, the formula is a supplement in the form appropriate for a given form of information.

Table 5. Data structure of the site Service Statistics

Service statistics	Table of Contents	Each entry in the Table of Contents is described by:	Download statistics for each entry
1	2	3	4
Trade	<ul style="list-style-type: none"> – trade, repair of vehicles, personal & household goods by classification of economic activity NACE rev.1.1, – wholesale and retail trade, repair of motor vehicles and motorcycles by classification of economic activity NACE rev.2 	<ul style="list-style-type: none"> – turnover, – production value, – number of persons employed, – number of employees, – average monthly remuneration of employed persons, – value added, – intermediate consumption, – personnel costs, – total purchases of goods and services, – purchases of goods and services for resale, – investment in fixed assets 	<ul style="list-style-type: none"> – by size of enterprises according to the old methodology, – by size of enterprises according to the new methodology, – by kind of economic activity, – by ownership type, – by organizational legal forms, – by regions
hotels and Restaurants	<ul style="list-style-type: none"> – hotels and restaurants by classification of economic activity NACE rev.1.1, – accommodation and Food Service Activities by classification of economic activity NACE rev.2 	as above	as above
	– information on hotels and Hotel Type Enterprises)	unnecessary cell	<ul style="list-style-type: none"> – number of visitors in hotels and hotel type enterprises by country and purpose of arrival in 2017, – main indicators of hotels and hotel type enterprises (2017)
Transport	<ul style="list-style-type: none"> – transportation and communication by classification of economic activity NACE rev.1.1, – transportation and storage by classification of economic activity NACE rev.2 	<ul style="list-style-type: none"> – turnover, – production value, – number of persons employed, – number of employees, – average monthly remuneration of employed persons, – value added, – intermediate consumption, – personnel costs, – total purchases of goods and services, – purchases of goods and services for resale, – investment in fixed assets 	<ul style="list-style-type: none"> – by size of enterprises according to the old methodology, – by size of enterprises according to the new methodology, – by kind of economic activity, – by ownership type, – by organizational legal forms, – by regions

1	2	3	4
Other Service Statistics	– other Service Statistics Section by classification of economic activities NACE rev 1.1	– real estate, renting and business activity, – community, social and personal service activities, – education, – health and social work	– remark (text description)
	– other Service Statistics Section by classification of economic activities NACE rev.2)	– real estate activities, – professional, scientific and technical activities, – administrative and support service activities, – education, – human health and social work activities, – information and communication, – arts, entertainment and recreation, – other service activities	as above
Activities of Economic Agents Engaged in Organization of Markets	unnecessary cell	unnecessary cell	– number of markets and fairs by organizational legal forms in Georgia, – number of markets and fairs by ownership type in Georgia, – number of markets and fairs by type in Georgia, – number of markets and fairs on days of trade, – average annual number of employed persons, – financial indices of markets and fairs, – number of market-place and sellers on the markets and fairs). They are all described according to a common formula. In some cases, the pattern is complement in the form relevant to the forms of information

Source: http://geostat.ge/index.php?action=page&p_id=299&lang=eng.

Conclusions

For Georgia November 19, 1989 was end of the seventy-year Sovietization and the beginning of economic blockade and, in the same time, of fundamental changes aimed at building free market structures on the site of a centrally controlled economy. Paradoxically, the most painful for Georgian society reality, turned out to be the simplest way to overcome the Soviet economy. The author has in mind the economic blockade imposed by Moscow as a punishment for the exodus from the Soviet Union. Full disappearance of workplaces in industry and lack of energy, water supply, heating, electricity, services and jobs started a long dark era and reduced the number of inhabitants by half; but also collapse of economy initiated the process, when employment and activity in the private sector dominates the public.

Still ongoing political transformation is supported by the international society and international organizations from Sweden, Norway, USA, Poland, Czech Republic, England, Netherlands (see Table 3). Information available on the website of Geostat is very different from the Soviet office, but many things still have to be fixed. The best evidence of the progress of changes, availability and quality of service is the fact that Georgia is recognized as a leader

of liberal economic reforms in the South Caucasus region. The regulatory system offers favorable conditions for running a business, which is confirmed annually by high quotations in Doing Business ranking (9th place in the Doing business 2018 report). "Georgia is the only lower-middle-income one on the list [tab.6]. To date, no low-income economy has reached the top 20 group. [...] Having few bureaucratic hurdles, robust legal institutions and laws and regulations that are based on international good practices is what matters most for a good performance in the ease of doing business ranking. [...] Georgia, with a ranking of 9, has implemented the highest number of business regulation reforms since the launch of Doing Business in 2003 – a total of 47." (Doing business, 2018, p. 3).

Table 6. Ease of doing business ranking

DB 2018 Rank	Economy	DFT score	DFT change
1	New Zealand	86.55	-0.18
2	Singapore	84.57	+0.04
3	Denmark	84.06	-0.01
4	Korea, Rep	83.92	0.00
5	Hong Kong SAR, China	83.44	+0.29
6	United States	82.54	-0.01
7	United Kingdom	82.22	-0.12
8	Norway	82.16	-0.25
9	Georgia	82.04	+2.12
10	Sweden	81.27	+0.03
[...]	[...]	[...]	[...]
190	Somalia	19.98	-0.31

Source: Doing business (2018), p. 4.

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Cite this article as: Pirveli, M. (2018). Structure of service sector of Georgia. *European Journal of Service Management*, 4 (28/2), 327–337. DOI: 10.18276/ejsm.2018.28/2-39.

CHALLENGES FACED BY THE REGIONAL FINANCIAL INSTITUTIONS ENGAGED IN ENTERPRISE FINANCING

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION G21, G23, H70, L26

KEYWORDS financial instruments, loans funds, guarantee funds, regional development funds, micro, small and medium enterprises

ABSTRACT Micro-, small- and medium-sized enterprises encounter many barriers to their activity, one of the major ones being the limited access to capital and its sources. A significant role in overcoming the obstacles connected with inadequate access to capital is played by the special funds established by the state as well as regional and local authorities. Poland can boast a relatively well developed system of institutions whose fundamental purpose is financing of business activity. These first and foremost include banks and various kinds of funds, such as loan funds and loan guarantee funds. The regional market and the financial system creates numerous processes. In the theory of economics there are many concepts and views regarding the impact of the financial system on economic growth. Most of them indicate that development of the financial system stimulates economic growth. The mission of regional development should involve any and all local (regional) financial institutions, including those that are not banks, such as loan funds and loan guarantee funds. Another element of the regional financial markets are regional development funds (RDF) that may become the local managers and stimulators of regional development, in its broad sense and in a long-time perspective.

Introduction

Regional financial market players, particularly the micro-, small- and medium-sized enterprises, encounter many barriers in running their business activity. Apart from any administrative obstacles and those connected with know-how, the most frequent problems are related to the limited access to capital. This issue is to be mitigated by the institutional infrastructure which in a broad sense includes public authorities, colleges and universities,

institutions and organisations aimed at supporting development of enterprises (among others, regional development agencies, business incubators, knowledge transfer centres, technological parks) as well as financial institutions on both national and regional level.

Enterprises from the SME sector may use the services of not only global banks, but also local financial institutions such as cooperative banks, loan funds, credit guarantee funds. Recently, new entities began to mark their presence on the Polish markets, referred to as regional development funds. In many regions they are to play the role of initiators of new solutions in the area of supporting regional entrepreneurship development.

The aim of this article to present the regional financial infrastructure in the process of financing the activity and development of enterprises, as well as to specify the role and position of loan funds, credit guarantee funds and regional development funds, and also to attempt at specifying the challenges faced by those institutions in the future.

The role and significance of the regional financial infrastructure

Micro-, small- and medium-sized enterprises encounter many barriers to their activity, one of the major ones being the limited access to capital and its sources (Pytkowska, Koryński, 2018, p. 1). A significant role in overcoming the obstacles connected with inadequate access to capital is played by the special funds established by the state (Mikołajczyk, 2007, p. 102) as well as regional and local authorities (Flejterski, Pluskota, Szymczak, 2005, pp. 77–80). At the same time, the institutions are perceived as the ones that have an impact on the local development. According to Alińska, the institutions having an impact on the local development also include local governments, local communities represented by households, institutions and organisations responsible for implementation, handling and settlement of the EU programmes and funds, as well as banks and other financial institutions (Alińska, 2008, p. 87). The latter institutions, being in direct contact with the other market players, play an active part in many business processes taking place in the local environment, in particular by starting cooperation with micro-, small and medium enterprises. Very often the cooperation is relation-based, which gives it a sustainable advantage over the global entities where cooperation is procedure-based, very frequently involving a central decision making organ.

The barriers connected with a possibility of obtaining external funding for both current activities and, perhaps predominantly, for development of enterprises, result from phenomena such as e.g. moral hazard and information asymmetry, and some authors also include transaction costs as another factor (Ashta, 2007, p. 77). The phenomena are often referred to as credit market imperfections, i.e. barriers in the flow of capital to the ones who need it the most (Pluskota, 2013, pp. 37–38).

Poland can boast a relatively well developed system of institutions whose fundamental purpose is financing of business activity. These first and foremost include banks and various kinds of funds, such as loan funds and credit guarantee funds (Bartkowiak, 2009, pp. 109–121). Even though they have their own equity, in periods of economic slowdown they significantly adjust their strategies, tightening their requirements and limiting access to loans, credits and guarantees, and reducing the capital entry. However, it should be noted that the capital resources are limited, and the conditions for obtaining them are relatively restrictive even in the periods of increased economic activity. The latter factor is mainly related to the capital cost amount and the level of required loan security. Difficulties with accessing external sources of financing are experienced mainly by newly founded companies without a credit history or substantial assets, which often have innovative but also risky ideas for business.

One of the ways to decrease the aforementioned barriers is making use of the funds that are transferred to Poland within the framework of the EU common budget, where the forms of utilising the funds are significantly diversified. With regard to the companies from the SME sector, the funds may take the form of subsidies or be repayable. The latter approach has been the preferable one over the recent years, as it makes the support more effective, enables using diversified financial instruments, creates a financial resource that is reusable via the revolving mechanism, and makes it possible to multiply the value of the support as a result of engaging private funds. Moreover, in the light of sustainable development and the contemporary role of banks being local financial institutions, we should focus on greater involvement of these institutions in implementation of ideas to support entrepreneurs in the area of banking.

The regional market and the financial system creates numerous processes. According to A. Alińska, in the theory of economics there are many concepts and views regarding the impact of the financial system on economic growth (Alińska, 2008, p. 124). Most of them indicate that development of the financial system stimulates economic growth. The mission of regional development should involve any and all local (regional) financial institutions, including those that are not banks, such as loan funds and credit guarantee funds. As research studies have shown, there is a positive correlation between development of the financial system and economic growth. Development of the financial system, also in the regional context, understood as increasing the availability of financial services, makes it possible to effectively fight the financial exclusion and to have a positive effect on the regional development (Beck, Demirguc-Kunt, Levine, p. 1, 29; Beck, Demirguc-Kunt, Martinez Peria, p. 398). In particular, this regards development of a business model which will significantly support the economic growth of the region, and will be favourably perceived by the local community in view of effective fulfilment of their needs and creating a potential for growth (Kulińska-Sadłocha, Szambelańczyk, p. 172).

Activity of loan funds

The origins of loan funds in Poland date back to the onset of the market economy, when privately-owned enterprises began to encounter problems with financing their business. The first institutions of this type featured a very simple structure and had one goal: to offer loans to enterprises and physical persons starting their business activity, which/who did not meet the criteria set by banks. The history of the institutions dates back to the activity of the microfinance institutions whose main goal was to support people in need of external financing.

A loan fund is understood as an institution other than a bank, whose activity concentrates on providing access to external sources of capital by means of granting loans (Bartkowiak, Flejterski, Pluskota, 2006, pp. 64–65). The main idea of loan funds is to offer loans to businesses and physical persons which/who are beginning their business activity and which/who do not meet the banks' requirements regarding documented credit history, acceptable security or higher-than-average risk level (Bartkowiak, 2009, p. 109). They also fulfil the educational function by preparing people to the role of a bank customer, they provide an alternative to bank services and, more and more often, their supplementation. From the onset of the 1990s, loan funds have been supporting the development of Polish enterprises and establishing a nation-wide network of institutions providing external financing to micro-, small and medium enterprises (SME). At the end of 2017, in Poland there were 80 loan funds which in aggregate had at their disposal nearly PLN 2.5 bn of loan capital (in the last year this amount decreased by 13.14%). In the past, the funds were beneficiaries of the first programmes aimed at supporting entrepreneurship in Poland, as

a result of which they were able to obtain enduring subsidies financed with EU funds. Currently, loan funds continue to participate in the distribution of EU funding as part of various initiatives, where the funds are repayable.

Many a time, loan funds are the only possibility of financing a business idea. In 2017, they granted 5,096 loans totalling over PLN 500 m. At that time, the average value of one loan amounted to nearly PLN 115 k. Although these institutions are active all over the country, in some regions their network is more developed compared to others (Table 1).

Table 1. Distribution and activity of loan funds in the particular regions in 2017

Voivodeship	Number of Funds*	Number of loans	Value of loans	Share in percent of total loans	The average loan value (PLN)
Dolnośląskie	3	116	11,272,400	1.93	97,175.86
Kujawsko-Pomorskie	6	231	14,453,417	2.47	62,568.90
Lubelskie	4	550	47,447,613	8.11	86,268.39
Lubuskie	3	111	14,567,833	2.49	131,241.74
Łódzkie	7	132	29,206,649	4.99	221,262.49
Małopolskie	6	446	47,246,140	8.07	105,933.05
Mazowieckie	9	350	32,663,592	5.58	93,324.55
Opolskie	2	185	35,011,357	5.98	189,250.58
Podkarpackie	5	431	27,089,282	4.63	62,852.16
Podlaskie	7	175	28,054,000	4.79	160,308.57
Pomorskie	7	847	72,237,650	12.34	85,286.48
Śląskie	6	154	20,185,472	3.45	131,074.50
Świętokrzyskie	6	192	33,192,741	5.67	172,878.86
Warmińsko-Mazurskie	9	488	68,005,998	11.62	139,356.55
Wielkopolskie	8	347	43,448,799	7.42	125,212.68
Zachodniopomorskie	7	341	61,237,764	10.46	179,582.89
Total	95	5,096	585,320,711	100.00	114,858.85

* The number of funds granting loans in a given province together with branches.

Source: *Fundusze pożyczkowe...*(2017), p. 19.

Loan funds, which fulfil the role of institutions financing the financial gap, predominantly finance the smallest enterprises, both in terms of quantity and value (Table 2). This coincides with their mission and role in the local communities. The predominant share of microenterprises in the group of loan funds customers has not changed from the beginning of their existence. Firstly, this is a proof they respond to the needs of microenterprises, and secondly it proves the importance of this institution. Otherwise the enterprises which had not been approved by any bank would have been forced to abandon their development plans or limit their operations. Therefore, it may be stated that loan funds have worked out a stable and significant position in local and regional financial markets as well as recognition among entrepreneurs.

The analysis of the purposes of the loans granted by the loan funds provides even further evidence of their role and importance for regional development. In terms of both quantity and value, the predominant share of the loans were used for financing investments that provided a long-standing pro-growth impulse (Table 3).

Table 2. The type of loan funds clients

Specification	Quantity (number of enterprises)	Quantity structure (%)	Value (PLN)	Value structure (%)
Micro	4,539	89.07	446,041,749.49	76.20
Small	452	8.87	107,765,497.75	18.41
Medium	61	1.20	24,668,700.00	4.21
Others (eg. public institutions [*])	44	0.86	6,844,764.00	1.17
Total	5,096	100.00	585,320,711.24	100.00

^{*} Including social economy institutions, e.g. foundations, associations, cooperatives.

Source: *Fundusze pożyczkowe...* (2017), p. 28.

Table 3. Loans granted in 2017, broken down by their intended purposes

Specification	Quantity (number of loans)	Quantity structure (%)	Value (PLN)	Value structure (%)
Working capital loan	1,696	13	105,284,908.68	18
Investment capital loan	3,445	68	401,219,552.33	69
Investment and working capital loan [*]	955	19	78,816,250.21	13
Total	5,096	100	585,320,711.22	100

^{*} Investments account for over 50% of the loans value.

Source: *Fundusze pożyczkowe...*(2017), p. 31.

Loan funds have always participated in implementation of various EU initiatives and programmes, playing the roles of a capital recipient or a distributor of funds to micro-, small and medium enterprises. Recently they have been actively participating in implementation of financial instruments provided by the EU. A good example can be the JEREMIE initiative and fulfilling the role of financial intermediaries in the current perspective for the years 2014–2020. The role they play is fundamental for supporting the development of enterprises in many regions. When commercial banks do not show interest in financing some smaller enterprises burdened with risk, the role of the capital provider is taken over by loan funds. However, the problem that considerably limits the operation scale of those institutions is the capital that is currently required for each tender proceeding organised by funds of funds (FOFs) in particular regions. If the problem remains unsolved, the institutions will have to significantly limit their activities regarding implementation of financial instruments and handing over the funds to final beneficiaries. Tender proceedings require that each participant should have a documented equity contribution necessary for completing the operation. The funds also run active portfolios under the previous perspective (JEREMIE), which require engaging their own capital.

Currently loan funds (similarly as loan guarantee funds) are dependent on EU funding, implementing the regional Operational Programmes. This, however, requires an appropriate amount of equity contribution. Moreover, supporting enterprises by means of repayable financial instruments required prior engagement of own funding being an equity contribution for the purposes of contests held at that time by the Trust Fund Manager.

Table 4. Activity of loan funds in West Pomerania region in 2015–2017

Specification	Value of loan capital at the end (1,000 PLN)			Value of disbursed loans (1,000 PLN)			Number of disbursed loans			The average value disbursed loan (1,000 PLN)		
	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017
Polska Fundacja Przedsiębiorczości	308,029	284,292	275,340	112,527	72,427	70,511	890	646	712	126	112	99
Szczeciński Fundusz Pożyczkowy	46,250	59,750	55,212.5	11,147	4,970	21,489	34	8	11	327	621	1,900
Fundacja Centrum Innowacji i Przedsiębiorczości w Koszalinie	32,619	–	27,175.2	15,091	–	3,357.5	92	–	24	164	–	140
Koszalińska Agencja Rozwoju Regionalnego	14,392	17,076	17,872	8,098	4,785	4,364.4	102	54	35	101	88	125

Source: own elaboration based on reports in 2015–2017 *Fundusze pożyczkowe...* (2017), pp. 68–79.

There are 7 loan funds operating in the West Pomerania region, and 4 of them have their headquarters there, including the largest institution of this kind in Poland – Polska Fundacja Przedsiębiorczości (Polish Entrepreneurs Foundation, PEF), which supports enterprises also in other regions. The supraregional nature of the Foundation in a way manifests the trends and directions of development of such entities, as the capital capabilities such as intellectual capital make it possible to develop the activity and to diversify the products, which enables making use of products on the European level and playing a significant role on local financial markets. However, in the case of other loan funds operating in West Pomerania, the situation is different. The capital engagement in the implementation of the JEREMIE initiative led to limiting their activity in the years 2016–2017 (Table 4) even though they are currently taking part in tenders under the 2014–2020 perspective. As much as the situation of Szczeciński Fundusz Pożyczkowy (Szczecin Loan Fund) does not appear to be a reason for concern, as it has always granted fewer loans of greater values, the activity of the other two has decreased considerably over the past two years, which in view of the growing competition of other funds (mainly outside the region) might compromise their growth prospects.

Despite the capital constraints, the loan funds are the main if not sole entities that implement loan instruments under the current perspective. The terms of tenders that give priority to qualitative criteria require that financial intermediaries support their end beneficiaries not only fast, but effectively, engaging their own means (*Fundusze pożyczkowe...*, p. 59). In the near future the loan fund market will have to transform, the current terms of contests and the market conditions will change its structure. Any institutions that have granted only several loans within a year will have to face hard times, which may lead to reducing their number and constraining the possibilities of supporting the SME sector growth. A solution to this problem might be entering into consortium agreements by the funds and their joint participation in tenders. The sector should finally be approached with a comprehensive programme addressed at para-banking loan and loan guarantee institutions that would reinforce their operating capabilities e.g. in the form of special, dedicated products. This could be for example a financial facility for loan funds that take part in tender proceedings under old and new financial instruments increasing their operating capabilities. This kind of a repayable financial instrument will enhance the capital base for some time and will ensure continuity of support for the SME sector.

The activity of loan guarantee funds

Loan guarantee funds are institutions that facilitate access to external funding in the form of bank credits or loans to companies which are creditworthy, but do not have the loan security required by the financial institution (Bartkowiak, 2009, p. 109). The institutions constitute an integral part of local financial markets not only in Poland, but also in Europe: for example, AECM (*European Association of Guarantee Institutions*) integrates such entities coming from 28 member states of the European Union as well as from Bosnia and Herzegovina, Serbia, Russia and Turkey.

Loan guarantee funds take onto themselves part of the risk for the liabilities owed by the enterprise to the bank or another financing institution, making it possible to implement their investment projects and to run their business. According to the AECM terminology, such entities fall into four main categories (www.aecm.eu):

- Mutual Guarantee Societies,
- Private Guarantee Societies,
- Public guarantee institutions,
- Public-Private Partnership initiatives.

Mutual Guarantee Societies are private guarantee institutions with a cooperative or mutual statute, established by enterprises being the capital providers and beneficiaries of their activity. Private Guarantee Societies are founded as initiatives taken by e.g. chambers of commerce or crafts, business federations, banking organisations. The capital is provided by the private shareholders. Public Guarantee Institutions are set up by public authorities, in the form of independent entities that are entirely funded and managed by public shareholders. They are aimed at implementation of the support policy for the SME sector via guarantees or counter-guarantees (re-guarantees) to private Guarantee Societies. The fourth model for running the guarantee activity involves public-private partnerships, where the public shareholder usually holds a minority stake (AECM).

Guarantee institutions play a significant role not only in regional financial markets, but predominantly in relation to enterprises. They facilitate access to external sources of financing without decreasing the financial liability of the borrower, conduct a thorough and wide-ranging analysis of the risk, enrich the analysis with relational aspects and knowledge of the local markets, and ensure support via consulting and supervising in the area of financial management (Mikołajczyk, 2007, p. 107).

As at the end of 2017, there were 41 loan guarantee funds operating in Poland, two fewer than in the previous year (Table 5). The institutions had at their disposal the capital totalling slightly above PLN 1 bn, and active guarantees of under PLN 1.6 bn. Year 2017 was another one when the quantity and value of granted guarantees rose by 10% and 5%, respectively (Gajewski, Kubajek, Szczucki, 2018, pp. 6–9).

Table 5. Regional characteristics of loan guarantee funds in 2017

Voivodeship	Number of Funds	Guarantee capital (mln PLN)	Active guarantees (mln PLN)	Granted guarantees in 2017r.		Involvement of guarantee capital (%)
				number	value (mln PLN)	
1	2	3	4	5	6	7
Dolnośląskie	5	39.4	65.7	450	54.1	167
Kujawsko-Pomorskie	4	71.7	142.2	859	61.2	198
Lubelskie	3	80.5	52.9	336	46.9	66
Lubuskie	1	46.9	42.3	176	27.0	90
Małopolskie	3	91.9	127.7	201	59.3	139

1	2	3	4	5	6	7
Mazowieckie	2	75.7	68.6	167	25.3	91
Opolskie	1	16.6	13.9	157	12.9	84
Podkarpackie	2	9.9	15.2	58	2.6	153
Podlaskie	2	78.6	43.2	207	17.6	55
Pomorskie	2	49.3	107.7	427	67.7	219
Śląskie	2	52.5	61.9	964	82.1	118
Świętokrzyskie	2	39.0	24.6	77	13.8	63
Warmińsko-Mazurskie	4	77.9	77.9	465	44.6	100
Wielkopolskie	4	102.0	425.5	2,494	311.6	417
Zachodniopomorskie	4	174.2	322.0	1,148	173.1	185
Total	41	1,006.1	1,591.4	8,186	999.8	158

Source: Gajewski, Kubajek, Szczucki (2018), pp. 17–18.

As per their definition, loan guarantee funds constitute a supplementation of banking lending products, which means they support entrepreneurs in their relations with banks with regard to securing the transactions. In the past, guarantees dominated predominantly, and their value was growing. However, the changing realities in the loan guarantee and surety market distorted the rising trend. Over the past two years, there has been a noticeable decrease in the share of both quantity and value of loan guarantees in relation to banks (Table 6). This is a result of the competitive activities of the central programmes operated by state-run Bank Gospodarstwa Krajowego (BGK), such as De Minimis guarantee line, or the Intelligent Development Operational Programme (PO IR) and the programmes distributed on the European level, e.g. COSME¹ (Programme for the Competitiveness of Enterprises and small and medium-sized enterprises), Horizon 2020 or EaSI² (EU Programme for Employment and Social Innovation).

Table 6. Loan guarantees granted, broken down by financing institution, in 2015–2017

Specification	Quantity (number of guarantees)			Value of guarantees (mln PLN)			Average value of guarantee (mln PLN)		
	2015	2016	2017	2015	2016	2017	2015	2016	2017
Total	6,336	7,453	8,186	923.8	949.5	999.8	145.8	127.4	122.1
	including for								
Banks	3,939	3,548	3,033	761.2	712.3	653	193.2	200.8	215.2
Loan Funds	766	634	486	55.2	46.6	31	72.1	73.5	64.4
Other entities	1,631	3,271	4,667	107.3	190.6	316	65.8	58.3	67.7

Source: Gajewski, Kubajek, Szczucki (2018), p. 18.

Forced to search for new ways of running their activity, the loan guarantee funds began to engage actively in guaranteeing bid bonds which in terms of quantity now account for 50% of the funds' activities. Lease transaction guarantees and performance bonds take up considerably smaller shares, however, they are the evidence of the activity diversification and searching for new solutions. The distinct predominance of bid bonds in the loan guarantee

¹ Programme for the Competitiveness of Enterprises and SMEs 2014–2020.

² Programme for Employment and Social Innovation (EaSI) 2014–2020.

funds' portfolios on the one hand is a proof of their flexibility, but on the other hand raises some doubts with regard to the original assumptions of their existence. This is a sign of some kind of erosion of the role played by the funds in the area of securing debt transactions to complement lending products. As a result of the competition from the governmental programmes and the weak interest shown by commercial banks in further cooperation with many regional intermediaries, they have to look for new ways to run their business, in particular via smaller, local and regional funds. One of the options is diversification of the activity, mainly with regard to the product range, and close cooperation with loan funds and cooperative banks. Being local by nature, cooperative banks fully understand the specificity of guarantee entities and they should cooperate within groups, consortia, or on their own.

Table 7. Activity of loan guarantee funds in West Pomerania region in 2015–2017

Specification	Capital (1,000 PLN)			Guarantees granted					
	2015	2016	2017	2015		2016		2017	
				number	value (1,000 PLN)	number	value (1,000 PLN)	number	value (1,000. PLN)
Stargardzka Agencja Rozwoju Regionalnego	4,003	4,003	3,000	67	4,189	43	2,717	78	2,991
Agencja Rozwoju Metropolii Szczecińskiej	72,537	53,512	53,414	42	18,297	9	685	20	2,757
POLFUND Fundusz Poręczeń Kredytowych	84,728	85,477	86,356	792	129,702	770	145,694	661	127,436
Fundusz Pomerania	29,795	29,656	31,454	326	40,027	448	32,985	389	39,956

Source: Gajewski, Kubajek, Szczucki (2018), pp. 33–34.

Loan guarantee institutions show considerable activity in the West Pomerania region (Table 7). The biggest one in the region is POLFUND, a nationwide fund that is also actively involved in EU programmes. The other three entities, which are considerably smaller and whose activity is narrowed down to the territory of the region, have been affected by the popularity of the governmental programmes among commercial banks, and they have to look for new solutions.

Regional development funds

Another element of the regional financial markets and one of the elements of the Strategy for Sustainable Development are regional development funds (RDF) which pursuant to that document are to be established in each region. The purpose of regional development funds is to finance regional development activities using the financial resources repaid by the end beneficiaries of the previous perspective, which are to be reused in the form of repayable instruments (Strategia na rzecz..., 2017, pp. 207–208). Ten local self-governments have chosen two ways for running the activity. The first of them is establishing totally new institutions (7 regions), and the other stipulates running the activity within the framework of the existing regional development agencies (3 regions). Regional development funds, where the local self-governments are the sole or major shareholders, have been provided with capital coming from e.g. JEREEMIE and JESSICA initiatives in order to play the role of a stimulator and creator of repayable assistance in the regions. The entities should also skilfully distribute the funds so as not to compete with the financial instruments coming from the current perspective. Moreover, they may play a major role in constructing instruments that support not only enterprises, but also regional and local financial intermediaries,

in particular in the light of the already mentioned capital shortage affecting some of them. In the future, their role and significance may rise, as they may also become integrators of lending and guarantee activities in the regions. In some regions it is planned to use them as the basis for establishing regional banks of development, following the example of their German counterparts.

Establishing the regional development funds will change the structure of regional financial markets. On the one hand, they may become institutions that manage the regional funds deriving from the Regional Operational Programmes, and on the other hand play the role of intermediaries that promote the regional development and intervene, if necessary, when there is a need to mitigate irregularities of the financial market.

Conclusions

Summing up, loan funds provide numerous benefits not only to enterprises, but also local communities, where their activity is promoted thanks to loans. Currently the funds' operation faces challenges in the form of shortage of capitals that are necessary for participating in subsequent tender proceedings. The problem may be solved in many complementary ways. The first of them is sustainable capital injections by the owners of the entities. The second way is providing support on the central level, in the form of programmes that enable increasing the capital value, which could be the task of e.g. the Polish Development Fund (PFR). The optimum solution would be sustainable capital injections into the funds, however, preferential loans would also in way help mitigate the problem for some time. The third solution covers the special regional financial products dedicated to intermediaries for the purposes of a capital injection. The financial resources may be derived from the revolved financial instruments of the JEREMIE initiative. The capitals used in the 2007–2013 perspective of the JEREMIE initiative have been repaid and now they are at the disposal of the voivodeship governors, and they may be reused to support enterprises. Such an innovative approach is already practised in some regions, in particular where regional development funds have been established. Regional development funds are currently managing the resources that were once used under the JEREMIE and JESSICA initiatives, and now the means will serve to help enterprises yet another time. Some of the financial resources may be used to create repayable financial instruments intended for preferential support of loan funds.

Loan guarantee funds also face immense challenges, as they are losing the unequal fight with the centrally run programmes. Looking for their niche, the funds are forced to find new forms of activity, both in terms of institutional cooperation and product diversification. In order to survive, the funds will be looking for new products or create new solutions for supporting SMEs.

Due to the capitals coming from the Regional Operational Programmes, European financial institutions and centrally run organisations, the regional structure of financial market is subject to change. The transformations may also affect both loan and loan guarantee funds, and also have an influence on increasing the importance of regional development funds that may become the local managers and stimulators of regional development, in its broad sense and in a long-time perspective.

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Cite this article as: Pluskota, P. (2018). Challenges faced by the regional financial institutions engaged in enterprise financing. *European Journal of Service Management*, 4 (28/2), 339–349. DOI: 10.18276/ejsm.2018.28/2-40.

THE DEVELOPMENT OF RIVER CRUISING TOURISM AS A POTENTIALLY POSITIVE RESULT OF THE DEVELOPMENT OF INLAND WATERWAYS IN POLAND

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION O18, P48, R10, Z32

KEYWORDS river cruising, tourism, regional economics, inland waterway infrastructure

ABSTRACT The development of waterways obviously means an increase in the transport accessibility of areas within their reach. It provides an opportunity to reduce congestion on roads and railways and leads to low-emission transport. The improvement of shipping parameters also seems to be an opportunity to attract to Poland large-scale tourism services related to river cruises. The aim of the article is to try to indicate the potential of tourist trips on river cruisers in the context of the presented waterway development plans. Demonstrating them should be an additional argument for the development of this mode of transport.

Introduction

The article attempts to show the potential role of river tourism with the use of river cruisers in the context of the planned development of waterways in Poland. This issue is often omitted in the discussion on the development of inland waterway transport infrastructure. The main issues addressed are the accessibility for freight transport, especially mass and containerized transport, as well as issues related to environmental protection. Attention is also

focused primarily on the energy efficiency of water transport in relation to the unit of goods, but also on the impact of the development of waterways on the environment. The spatial scope of this article is Poland with references to other countries, mainly German, connected by the European system of inland waterways. Most sources, as well as observations, whether statistical inference refers to the period after 2010, references to literature date back to 2002. Conclusions from the article may be important for local governments and entrepreneurs, who want to be ready to take advantage of new opportunities that will bring investment in waterways.

River cruising and the potential impact of this service in Poland

While discussing potential services – in this case, tourism – which may appear on the Polish market in connection with the development of water infrastructure, it seems appropriate to approximate the problem of river cruising itself and determine the potential area of its operation. As defined by Mańkowska and Mańkowski, “River Cruise (German Flusskreuzfahrten) is a form of water tourism conducted onboard luxury river cruise ships (river cruisers) along inland waterways, comprising both short cruises on small distances, as well as multi-day trips on longer routes and including visiting attractive places and tourist spots. This form of spending free time is for tourists an optimal combination of recreational and sightseeing values as cruises take place along the route of regions and towns attractive in terms of landscape and history” (Mańkowska, Mańkowski, 2011, p. 165).

The “European agreement on main inland waterways of international importance” (AGN) adopted by the authorities of the Republic of Poland can be considered as the key to determining the area. In Poland, there are 238 communes situated on the waterways included in the AGN contract. They are located in the area of eleven voivodships: Dolnośląskie, Kujawsko-Pomorskie, Lubelskie, Lubuskie, Mazowieckie, Opolskie, Podlasie, Pomorskie, Śląskie, Wielkopolskie and Zachodniopomorskie. The number of communes in the different voivodships covered by the survey varies from 4 to 43, as shown in Table 1.

Table 1. Communes covered by the study with division into voivodships

Item	Voivodship	Number of communes
1.	Dolnośląskie	23
2.	Kujawsko-Pomorskie	34
3.	Lubelskie	6
4.	Lubuskie	29
5.	Mazowieckie	43
6.	Opolskie	19
7.	Podlaskie	4
8.	Pomorskie	22
9.	Śląskie	8
10.	Warmińsko-Mazurskie	5
11.	Wielkopolskie	13
12.	Zachodniopomorskie	13

Source: own study on base of data provided by KZGW and Państwowe Gospodarstwo Wodne Wody Polskie.

In total, around 6.9 million people live in all communes located over the waterways covered by the AGN contract. This constitutes over 17 per cent of the population of Poland (GUS, 2017). These communes include Warsaw,

Wrocław, Gdańsk, Szczecin, Bydgoszcz and Toruń. This is the situation when only communes located directly on waterways are taken into account. On the other hand, it seems more appropriate to include in the considerations on tourist importance also those communes which are located in the area of the influence of waterways. In the case of tourist cruises, the area of influence could be determined by the time that is needed to get to a given place, e.g. a tourist attraction, from an existing or potential port. It is difficult to clearly define the boundary of this area of influence. A precise definition of this area is difficult; however, the range that may be covered in two or, in extreme cases, three hours by coach, i.e. no more than about 200 km from the port, will be adopted for the purposes of the article. Such an approach is also represented by entrepreneurs in this industry, as the ship rarely stands at the wharf for more than a day. This means that optional excursions are available for the participants of the cruise, lasting along with commuting up to about 10 hours. The assumption of such parameters allows for the assumption that tourist attractions from the majority of Poland can be an incentive for tourists. The regions that seem to be outside the area of waterways impact in this tourist aspect include the part of the Świętokrzyskie Voivodship, the southern part of the Lubelskie Voivodship, the eastern and southern parts of the Małopolskie Voivodship, the northern part of the Podlaskie Voivodship, the eastern part of the Warmińsko-Mazurskie Voivodship and the Podkarpackie Voivodship. At the same time, it is necessary to be aware that for the development of river cruise tourism, the prevailing attractions should be located along the cruise routes and in the port cities themselves, and those available with the use of a coach can only be complementary as optional excursions available for the cruise participants. The aim of the article is not to point out attractions and products available to potential tourists; suffice is to understand that there are many of them and how much potential they represent for the development of this type of tourism. Examples include: Gdańsk with the Artus Court, the Crane Gate, the Teutonic Castle in Malbork, Warsaw with the Royal Castle and the Old Town, Toruń with the Planetarium or the Gingerbread Museum, Wrocław with the Centennial Hall, Panorama Raławicka and Ostrow Tumski, or last but not least Szczecin with the Chrobry Embankment at the foot of which river cruisers moor. The quoted examples seem to fulfil the assumptions about the places attracting tourists, proposed by Mulec and Wise in the context of attracting tourists to the Vojvodina region in Serbia "To become a successful and competitive tourism destination, all destinations must strategically promote specific location endowments that distinguish one place from another. In this regard, tourism experts, tour operators, and travel agents, in addition to independent travellers, acquire knowledge and awareness" (Mulec, Wise, 2012).

Linear infrastructure and the size of the river cruisers market in Germany and Poland

The offering of attractions in the form of one-day or several-hour trips is possible with moderate development of waterways, as it is possible to create a vessel adapted to the requirements of a given route. That is why there are successful white fleet operators in Poland in larger riverside cities. Sometimes also water trams complement public transport, such as in Warsaw or Bydgoszcz. Another example is the several-hour connections offered between the communes located on the Odra River, such as Głogów, Bytom Odrzański, Cigacice, Ślubice, Kostrzyn upon Oder or Nowa Sól, and even the German side of Frankfurt on the Oder River.

On the other hand, multi-day cruises, usually on a circular route, are conducted with ships of similar parameters and thus require an appropriate stable minimum standard – the waterway class. It should, of course, also mean the stability of these parameters, especially in the period that can be regarded in this case as the tourist season. The period from the beginning of April to the end of September is in Europe considered a season in this industry;

sometimes its wider perception is taken into account – from mid-March to mid-October. An exemplary comparison of vessels that perform transport in a circular formula, i.e. river cruisers, is included in Table 2.

Table 2. Parameters of selected cruisers sailing on European waterways

Vessel's name	Length (m)	Width (m)	Draft (m)	Number of passengers
MS Johannes Brahms	81.95	9.50	1.30	80
A-Rosa Aqua	135.00	11.40	1.70	202
MS River Explorer	125.50	11.40	1.50	168
MS Frederic Chopin	83.00	9.50	1.10	80
MS Mona Lisa	82.00	10.00	0.90	100
MS Sans Souci	82.00	9.50	1.30	81
MS Victor Hugo	82.00	9.50	No data	96
MT Sonata	135.00	11.4	No data	186

Source: own study on the basis of: www.vesselfinder.com; www.hansatouristik.de/ms-johannesbrahms.html; <https://www.croisieurope.travel/en/boats/european-river-cruise-ships>; <https://www.nicko-cruises.de/en/fleet/ship>; <https://www.riverscanner.com/ship-a-rosa-aqua>; <http://www.ms-sanssouci.de/ueberuns/dasschiff/index.html>.

From the data presented in the table, it can be assumed that for the development of cruising water tourism, and especially for attracting cruise operators from other countries, a class IV waterway should be provided, however, often occurring passenger ships usually have much lower requirements for waterway parameters under in terms of the draft (0.9 m–1.3 m) than the maximum length or clearance under the bridges.

Due to the condition of waterways in Poland, currently on the routes of operators of tourist river cruisers such as Phoenix, Nicko Cruises Schiffsreisen GmbH, Plantours Kreuzfahrten or Croisi Europe, which is shown in Figure 1, out of Polish cities, Szczecin and Wrocław are on the list of their destinations. Except that, Wrocław only in March, i.e. at the beginning of the season, due to the higher water level during this period, which facilitates safe navigation. The occurrence of the Oder's cities in this list results from the availability of high-class waterways in the vicinity of Szczecin as well as the communication of the Oder Waterway with the German network of waterways, including the Oder – Havel canal.

Table 3. River cruisers and passengers on ships arriving in Szczecin in 2011-2016

Years	The number of callings at a port by river cruisers	Number of passengers
2011	89	6,230
2012	84	5,880
2013	90	6,300
2014	100	7,000
2015	107	7,490
2016	102	7,140

Source: own study based on data of Wizyty... (2018) and data of Żegluga Szczecińska Turystyka i Wydarzenia sp. z o. o.

It should be noted that currently there is a boat lift on this canal, whose parameters limit the movement of vessels of over 83 meters in length. However, during the creation of this article, another lift is being built that will

allow vessels of up to 114 m to be moved (Wasser- und Schifffahrtsverwaltung..., 2010). According to data provided by the Szczecin and Świnoujście Seaports Authority SA (ZMPŚiŚ), as presented in Table 3, the number of river cruisers calling at the most popular in this respect city in Poland - Szczecin, amounts to 107 vessels per year, and the number of passengers can reach almost 7.5 thousand.

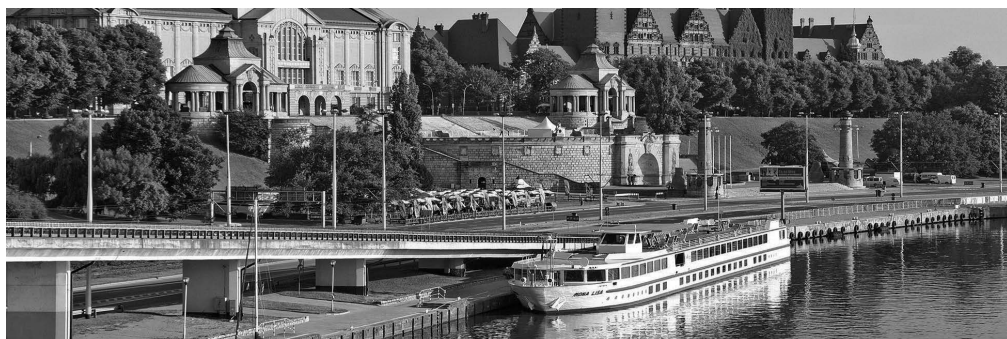


Figure 1. River cruiser MS Mona Lisa in Szczecin

Source: MS Mona Lisa (2018).

It seems appropriate to analyze the popularity of recreation in a country with a similar climate as in Poland and an extensive network of waterways. Germany is a good example. The size of the market serviced by German operators is shown in Table 4. It should be noted, however, that not all cruises run exclusively on the territory of that country, sometimes they only begin and/or end there. Cruises of this type usually last about 7 days, and their cost for the participant is on average around 1,000 Euro. It should be emphasized that the number of passengers in recent years has been stable.

Table 4. River excursions market in Germany in 2012–2016

Years	2012	2013	2014	2015	2016
Turnover in millions of Euros	455	417	396	435	449
Number of passengers	436,628	406,614	415,858	423,635	435,586

Source: Fakten und zahlen zum deutschen Reisemarkt, for years: 2012, 2013, 2014, 2015 and 2016 after Deutschen Reise Verbands...(2018) – Berlin for years: 2012, 2013, 2014, 2015, and 2016.

In 2017, Poland was visited by 18.7 million tourists (Ministerstwo Sportu i Turystyki, 2018). Thus, the emergence of a new branch that could potentially attract several hundred thousand visitors more seems significant. Especially that in recent years, the number of people using this form of tourism in Poland does not exceed even 10,000 per year, and as indicated in table 4 in Germany it is over 40 times more.

Possibilities of tourism development using river cruisers in Poland

The arguments for the attractiveness of Poland for this type of tourism are many. The more important ones include:

- natural values of rivers and riversides in Poland (often covered by the Birds and Habitats Directives),
- the majority of the most popular and largest cities (tourist attractions) lie on the waterways covered by the AGN,¹
- increase in the wealth of the society,
- proximity to countries with rich societies interested in this form of recreation,
- searching for new destinations by tourists – the effect of novelty in the first decade of this branch in Poland,
- relatively low prices of services.

Problems in the development of this branch include:

- lack of experienced staff,
- lack of domestic carriers specializing in this type of tourism,
- a long-term infrastructure development process,
- seasonality,
- habits related to the type of recreation,
- ignorance of the product.

However, the benefits that the development of this service brings to the communes chosen by the operators of river cruisers as destinations are essential. At the same time, it should be pointed out, as if extrapolating K. Woś thought about Szczecin, that it is necessary for the communes to improve the city's accessibility from inland waters and build an appropriate technical base as well as provide appropriate service facilities for passenger transport (Woś, 2005, p. 217). Without such actions, it is impossible to convince operators to visit a given commune. When talking about service facilities, the author is convinced that the attractions, monuments, museums and a cultural offer should be especially taken into consideration, but also the availability of guides and their command of languages (German, English, French, Spanish and Swedish). The availability of coach transport services and a rich gastronomic base are also important.

The benefits of the regular appearance of cruisers include:

- a) income of owners/operators of wharfs;
- b) increased demand for guide services;
- c) increased demand for coach transport for optional trips;
- d) increased recognition of a given place in the world;
- e) revenues of local entrepreneurs, especially in such industries as:
 - gastronomy,
 - the sale of souvenirs,
 - currency exchange – exchange offices;
- f) new workplaces;

¹ The exceptions are Kraków and Łódź. In the case of Krakow, the construction of the Silesian Canal may include it in the waterway network and may be a supplement to the Oder route, e.g. as the next stop after Wrocław.

- g) increase in revenue of local government units and the state treasury in connection with income taxes on the PIT, CIT or VAT and excise duty;
- h) accommodation facilities (if the place is the starting or ending port).

Conclusions

The above-mentioned arguments, as well as the potential benefits of tourism development based on the so-called river cruisers, allow for an assumption that the development of this branch of tourism can be a further development impulse for Poland and should be taken into account in all analyzes of potential benefits related to investments in inland waterway transport infrastructure. At the same time, attention should be paid to the fact that in Germany many operators are active in this sector, and there is a considerable interest in this type of tourism. Combining this with the historical conditions of the cities located on the Oder, it can be concluded that the fastest and priority development of this waterway, already communicated with the European waterway system, seems to have a significant development potential and can be very popular. The waterways of western Poland are also the easiest to reach for the inhabitants of Scandinavia, which can also make them attractive.

The observation of a well-functioning over 40 times larger market of river cruisers in Germany provides a supposition that the assumption will be favourably received also in Poland. These conclusions are still valid even considering the differences both in area and population as well as wealth. In addition, Germany has numerous transport links with other European inland waterways, in particular with the Danube and the rivers of the Netherlands. Despite this, it can be assumed with a high degree of probability that there are considerable opportunities to develop this form of recreation and its popularity in Poland, of course, assuming the preceding development of inland waterway transport infrastructure in the country. A particularly important condition is the improvement of the parameters of waterways and passenger infrastructure on quays in representative city points.

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Cite this article as: Pomianowski, A. (2018). The development of river cruising tourism as a potentially positive result of the development of inland waterways in Poland. *European Journal of Service Management*, 4 (28/2), 351–358. DOI: 10.18276/ejsm.2018.28/2-41.

PUBLIC BICYCLE SYSTEM – ANALYSIS OF SELECTED PRACTICES ON THE EXAMPLE OF POLAND

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION L91, Q56

KEYWORDS public bicycle system, urban transport, sustainable mobility

ABSTRACT The purpose of this article is to analyze selected urban bicycle systems in Poland. This is a solution that has been successful in Western and Southern Europe, while in Central and Eastern European countries, it is still underestimated. On in recent years, public bicycle systems have started to appear too in the cities of this part of the continent. The article defines the public bicycle system and the self-service city bike rentals, which are significant, have been characterized an element of the development of sustainable mobility. The best examples were summarized practices in the implementation of bicycle urban systems in Poland.

Introduction

Luud started the first attempt to create a city bike rental Schimmelpennink in 1965 in Amsterdam. An initiative called *White Bicycle Plan* ended in failure because bikes set in town for free use has been stolen. It was only after 42 years in 2007 in France for cycling city systems have been successful – 750 bicycle stations have been opened there with a total of 10,000 vehicles (*Rower miejski...*, 2018). In the era of constant processes of globalization and

urbanization, the bike urban as an individual means of transport satisfies the transport needs of the agglomeration urban areas and can be an effective solution to the problem of last mile. Due to the excessive number of individual vehicles in the city, street jams are created during peak transport times, known as congestion (Wyszomirski, 2008, p. 23). A city bike can be a way to eliminate this phenomenon. Due to dense buildings in city centers, the bicycle can be a means of transport enabling direct displacement between main points, i.e. banks, shops, offices, etc.

The advantage of these connections is also reducing the average travel distances. Urban transport cycling contributes to improving the quality of life in the city, reduces noise emissions and pollution, reduces the need for space for road infrastructure and reduces the risk of accidents. Cyclists reach low speeds in urban space, thanks to which the bike can be treated as a means of transport used for revitalization public space and improving security (Kłos-Adamkiewicz, Załoga, 2017, pp. 83–87). The aim of the article is to analyze selected ones cycling urban systems in Poland, as the upward trend is noticeable in the field of cities deciding to implement bicycle urban systems by drawing from the experience of European cities such as Copenhagen, Barcelona and London. These cities are an example of the best practices in the implementation of self-service rental companies city bikes.

General characteristics of self-service city bike rentals

The Public Bike System is “a fleet-based bicycle mobility scheme public bicycle with technical and ICT facilities, offering free or low-cost bicycle communication for residents of a given area (cities, agglomerations) and people visiting” (*Studium koncepcyjne...*, 2016). operators operating in the cities concerned, they locate bicycle stations in public places, such as campuses, housing estates, metro stations, business districts, stops bus, tram or integrated transfer centers (Jia, Liu, Liu, 2018).

Nowadays bike rental services are divided into two types: the model with docking station and a model that allows sharing bikes without a docking station. After first, they use various rental and return technologies. First these models have docking stations for bicycles equipped with terminals (Ricci, 2015). Residents of cities wanting to use a city bike functioning on docking stations are obliged to register in the Internet system service operator. After accepting the Regulations and usually a small payment on The Personal Lender's Account (depending on the city) can be logged in Operator's website. To rent a bike, approach the terminal at the station, run go and follow the instructions appearing on the monitor (*Jak to...*, 2018). Users must rent bikes docked from the dock near their place exit and return the bicycles to the docking station near the destination.

The model without docking stations is based on the application with which you can locate stations in the city and check the availability of bicycles on each of them. To rent a bike, download a dedicated application for an electronic device, and then top up your account with an activation fee. The application also allows you to open bicycle lock. After finishing the ride, the lock must be closed manually (*Rybnik...*, 2018). Users can rent bikes without a docking station anywhere and return them also to the selected location by blocking lock. The model without docking stations functions is, for example, in Rybnik.

Differences between docking and codeless bike sharing lead to different challenges and there are differences in their regulation. Until recently, bicycle systems urban areas without docking stations were described in the literature of the subject in a minor degree.

Ranking of city bicycle systems in Poland in 2018

A comprehensive ranking of urban bike systems carried out by specialists from *dadelo.pl* and took over 25 key, most important cities in Poland. The following parameters were considered in the study:

- the number of stations and bicycles,
- the number of people registered in the system,
- prices and number of loans.

In addition, the analysis was subjected to the length of seasons in which they operate self-service rentals in selected cities and additional amenities, i.e. type of bicycle (*Ranking systemów...*, 2018). The article presents the classification of the 10 cities that have obtained the best results in individual categories. Figure 1 shows the classification results overall.



Figure 1. General classification of city bike systems in 2018

Source: own study based on: *Ranking systemów...* (2018).

The winner of the general classification is the Warsaw Veturilo system, whose advantages are above all: a dense network of stations, affordable prices and a relatively long season loans. In addition, there are additional facilities related to the capital of Poland with the type of rented bike: tandem, electric bicycle, family bike, bicycle children. Moreover, in Warsaw at the end of 2017, the first system in Poland appeared city bikes without parking stations – Acro Bike (*ACRO Bike...*, 2017).

The next analyzed parameter was the number of city residents falling for one bike.

The winner of this classification was Konstancin Jeziorna, where one bike falls on one bike 286 inhabitants. Krakow is placed in the 10th place, where one bike rides up 510 people. This means that the further the city is in the ranking, the number of bikes in these cities is adequately low to the number of inhabitants.

The third parameter analyzed was the number of stations per km². The ranking was placed cities from the highest to the smallest density per km². In the first place was located in Warsaw with a result of 0.71 stations/1 km² (*Ranking systemów...*, 2018).

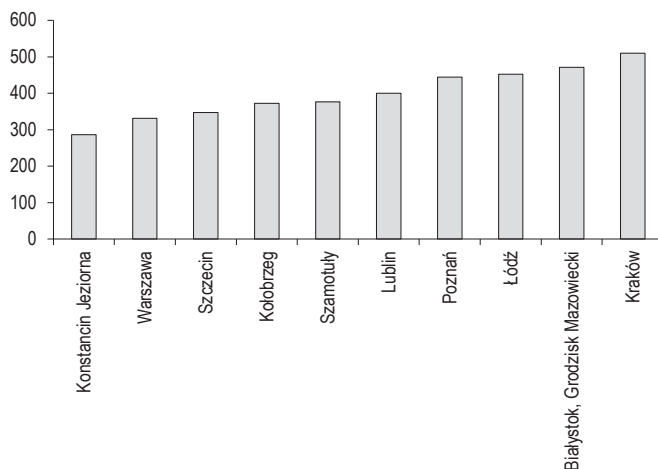


Figure 2. The number of city residents per one bicycle

Source: own study based on: *Ranking systemów...* (2018).

Another aspect is the price for the trip. Usually the first 20 minutes Bike rental is free. The worst in this ranking is Kraków, where it is the first 20 minutes you have to pay as much as PLN 3.20 (*Ranking systemów...*, 2018). The next analyzed indicator was the percentage of the city's population saved in the system to the general public. The summary is shown in Figure 3.

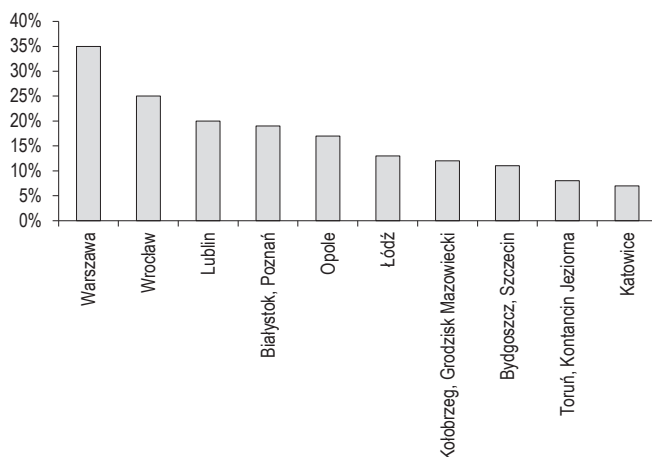


Figure 3. Percentage of population of cities registered in the system to the general population

Source: own study based on: *Ranking systemów...* (2018).

Figure 3 shows that 35% of the population of Warsaw is registered in the system. Such a result may be related to the proximity of numerous higher education institutions and the possibility of unreliable development. It can be assumed that the more the city ranked further, the bandwidth in cities, it is preserved at the appropriate level, and the phenomenon of congestion occurs extremely rare. The result is that the residents pay less attention to environmental aspects, and take advantage of resources against sustainable mobility individual motorization. An important indicator is the average number of loans per person in the system. The existing situation is presented in Figure 4.

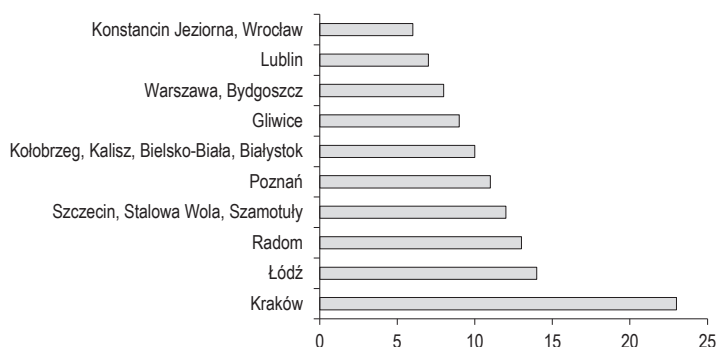


Figure 4 The average number of bike rentals per one person

Source: own study based on: *Ranking systemów...* (2018).

It is surprising that Krakow topped the list, at which prices One-time rental bikes are relatively expensive compared to other cities. The attractive subscription fee system may have a significant impact on the result in this category. People with a pass more often and more often use the city bike system than Occasional travelers.

In reference to the parameter, which is the length of the season, the clear leader is also Kraków, where you can rent bikes from January to December (*Krakowianie...*, 2018) The Ostrów is an attractive city in this ranking, in which the season lasts from October to November (*Ostrów...*, 2017).

The above analysis allows to draw the conclusion that the number of urban systems cycling in Poland is increasing. This is particularly important in terms of the implementation of the concept a new culture of mobility. Development is one of the tools for implementing this concept bicycle infrastructure in the city, with an emphasis on cycling highways. In addition, modeling on the best examples of practices in the implementation of bicycle systems urban cycling can be further promoted by bicycle trips through introducing additions/ bonuses for striving for sustainable mobility through access to bicycle work.

Conclusions

To the premises for the development of bicycle transport, and what is behind it following the implementation of bicycle urban systems can be included low terrain of bicycle transport, high capacity of existing infrastructure cycling and the positive impact of bicycles on the natural environment. Mostly the external transport costs are

offset, which directly translates into the state public health and improving the condition of transport infrastructure. The advantage of implementation cycling public systems is an attempt to encourage residents to change their behavior communication and increase in bicycle mobility.

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Cite this article as: Puzio, E. (2018). Public bicycle system - analysis of selected practices on the example of Poland. *European Journal of Service Management*, 4 (28/2), 359–364. DOI: 10.18276/ejsm.2018.28/2-42.

REGIONAL MODEL OF DISPERSED ENERGY OF THE WEST POMERANIAN REGION

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION Q42, Q56

KEYWORDS renewable energy sources, lexographic method, distributed generation

ABSTRACT The presented article attempts to identify and analyze the conditions for running a regional energy policy, with particular emphasis on renewable energy sources in a given area. The aim of the article is to build a mathematical model of dispersed energy, related to the regional development strategy, and to generate a development scenario taking into account the criteria of sustainable development, i.e. economic, ecological and social. A lexicographic method was used to obtain a compromise solution in the distributed energy model of multi-criteria methods. The research material in the article comes from many sources, both domestic and foreign, including empirical data from the Central Statistical Office, energy and fuel institutes, regional energy institutions.

Introduction

World energy policy has been changing dynamically for many years, and these changes can be seen both at the local and global level. The direction of change is most visible in the increased interest in renewable energy sources. Most consumers are unaware of the high environmental costs involved in generating energy. The solution to the problem may be the generation of energy from dispersed energy sources. Dependence on the distance and

collection of raw materials as well as the production of energy from local energy sources causes a significant, even by 50%, reduction of costs, while activating the population in the area of development of renewable raw materials. Distributed energy systems allow effective use of market mechanisms in power engineering (Strzelecki, Benysek, Dębicki, 2004).

This article is devoted to the construction of a regional model of distributed energy in the West Pomeranian Region.

Literature review

Technological progress, which occurred in recent years, caused the emergence of a new range of medium and low power generation units on the market, most often available in modular designs. These sources are easy to assemble and are characterized by short investment cycles, in addition, they work in a maintenance-free manner. These advantages make these devices in many countries perceived as an attractive alternative to large sources of electricity and heat. For energy sources with the ability to cooperate with existing power systems, the term "distributed generation" is used, while for autonomous sources working outside the system, sometimes the term "dispersed generation" is used (Mokrzycki, 2003).

In Poland, the generation of distributed energy is called "small (with rated power up to 50–150 MW) units or generation facilities, connected directly to distribution networks or located in the electricity grid of the recipient, not subject to central development planning and power management, often producing electricity from energy renewable or unconventional.

The reason for the development of dispersed sources is the liberalization of the energy market, which leads to increased competition. The reduction of conventional raw materials has forced energy companies to look for new sources of income.

In recent years, the importance of security of supply and related efforts to diversify energy sources have increased. The market for renewable energy technologies has made enormous progress, contributing to the development of dispersed sources. The increasing environmental protection requirements as well as the rising costs of production and transmission of energy from centralized sources contribute to the development of dispersed sources. Lack of interregional connections, preventing free flow of electricity between areas and difficulties in the construction of new transmission networks, also contribute to the development of OZE (Skoczkowski, Baran, 2014).

Methods

In the construction of a regional model of distributed energy in the of the West Pomeranian Region, attention should be paid to the problem of choosing a decision and planning energy production. Each decision sometimes has very far-reaching consequences, and its consequences are often very complex. In the case of choosing the optimal variant in the energy production planning in the region, the choice must be multi-faceted, taking into account various problems. When assessing energy production options, one can not rely only on the financial analysis of an investment, and one should also take into account very important issues such as: environmental aspects (ecological costs, loss of soil fertility), agroenergetic aspects, technological aspects, organizational aspects or social aspects.

The decision about choosing the variant of the project implementation in energy production planning in the West Pomeranian Region also requires examining the options in terms of their positive and negative impact. Positive aspects include benefits and opportunities, while the negative elements include costs and risks. The problem with

the assessment of these aspects is often the difficulty of expressing them in numerical terms. For example, some of the benefits are qualitative, at least environmental or risk elements (Sobczyk, Wota, Krężolek, 2011).

The research material is taken from many sources, both domestic and foreign, among others empirical data from the Central Statistical Office, scientific institutes of energy and fuels, regional energy institutions.

The following research methods were used in the article:

1. Analysis of the literature on the subject, allowing to achieve cognitive and research goals.
2. Multicriteria methods of the region's energy efficiency optimization model with the use of several objective functions:
 - minimization of energy production costs,
 - maximizing the level of production of alternative energy sources,
 - minimizing the adverse impact of primary energy production on the natural environment (soil fertility),
 - minimization of greenhouse gas emissions in the region.

A lexicographic method was used to obtain a compromise solution from the group of multi-criteria methods.

The lexicographic method requires establishing the hierarchy of criteria validity, and then the variants are set in order to maximize the values of these criteria in sequence. This method allows obtaining a ranking in a short time, even without the help of a computer, but requires the assumption of criteria priority (Kasprzak, 1992, p. 143).

The dispersed energy market in the West Pomeranian Region shapes the new model of the competitive market, opens the possibility of access to the energy market, especially new entities, forcing the operation of electricity prices at market conditions.

The fundamental technical requirement of renewable and unconventional energy sources connected to the power system in the West Pomeranian Region is to provide the appropriate energy quality, power reliability, the possibility of forecasting production and load, and cooperation with security automation (Strzelecki, Kukluk, 2000, pp. 379–384). Table 1 presents the advantages and disadvantages of using dispersed electricity in the West Pomeranian Region.

Table 1. Advantages and disadvantages of using dispersed electricity in the West Pomeranian Region

Criterion	Benefits	Disadvantages
1	2	3
Decentralization of production	<ul style="list-style-type: none"> – locating sources near recipients can increase their awareness of energy use, environmental impact, – limiting possible consequences for the large unit failure system, – creation of many autonomous entities 	<ul style="list-style-type: none"> – the unit operating costs of generation can be higher than for large power plants, – short-circuit power levels may increase near small sources
Energy losses	<ul style="list-style-type: none"> – minimization of transmission and distribution losses when the sources are located close enough to the recipients 	<ul style="list-style-type: none"> – in the case of large dispersed generation units deprived of nearby customers, the losses may be higher than for centralized generation
Transmission and distribution costs	<ul style="list-style-type: none"> – lowering the costs of network progress, – minimization of actual network restrictions 	<ul style="list-style-type: none"> – scattered sources can create a demand for reactive power, negatively affecting the voltage levels in the network, – the exodus of sources in the network may hinder its control and increase the costs of automation
Impact on the environment	<ul style="list-style-type: none"> – benefits resulting from the use of renewable sources, combined generation of electricity and heat, low-emission fuels (natural gas) 	<ul style="list-style-type: none"> – incorporating a large number of objects into the landscape can sometimes be more difficult than one large power plant

1	2	3
Scale effect	<ul style="list-style-type: none"> – benefits resulting from the mass production of generation units of distributed generation, – lowering unit investment expenditures improves the competitiveness of distributed generation 	– larger generation units of centralized generation tend to have higher efficiency
Extending the unit's power catalog	– good prospects of adapting to demand thanks to smaller differences between unit power	– marginal costs can be higher than for large system blocks
System services	– in individual events, the demand for system services may decrease due to the unloading of system components	– after the introduction of distributed generation, the demand for system services may increase, especially due to the need to reserve the power of these sources
Power reliability	– in the peripheral areas of the system, the security of the recipients' power supply may increase	– distributed generation can reduce the reliability of power supply in the local network

Source: Pasek (2005), pp. 5–6.

The process of popularizing distributed generation, the basic element of which is renewable energy sources and cogeneration systems, is of fundamental importance for the energy policy of the West Pomeranian Region. As a result of the emergence of energy groups, the problem of determining regional energy systems appeared. Each energy group is located in several region. Administrative coverage of provinces and energy groups does not coincide.

Distributed generation of electricity is an important component of sustainable development, bringing measurable economic, ecological and social effects to the region. The high failure rate of the power grid in the West Pomeranian Region is a premise for dispersed generation. The limitations of the development of distributed electricity in our region and country are affected by such barriers as:

- biased perception of dispersed energy in the legal system,
- lack of solutions supporting small and individual energy producers,
- bad development of electricity infrastructure, as to the needs of recipients and producers of distributed energy,
- maintaining regulation of retail prices of the electricity market for households,
- no decision on the construction of cross-border connections,
- lack of mechanisms supporting the reduction of energy intensity of the economy,
- unfavorable architecture of the wholesale market,
- defective operating principles of the retail energy market,
- low transparency of the wholesale electricity market,
- excessive State Treasury fiscalism,
- no subsidies for producers of the renewable energy market,
- lack of pro-effective and pro-innovation policy to support renewable energy,
- lack of a broader concept of the state's information policy in the field of renewable energy sources.

The support system in force in Poland, which is a form of the so-called color certificates is a mechanism conducive to the popularization of distributed generation.

Result

The potential of wind energy is primarily related to the spatial distribution of open areas. Such areas are predominantly agricultural land, which in the West Pomeranian Region is 954.2 thous. ha (GUS, 2017, pp. 27–28).

Based on the available data, it can be concluded that over 90% of the arable land in the West Pomeranian Region is suitable for technical use for the needs of wind energy (Michałowska-Knap, Wiśniewski, 2013, pp. 56–66).

For further estimates, it was assumed that the space demand in modern wind energy is 10 ha per 1 MW of installed capacity (according to EWEA).

In the model, the existence of NATURA 2000 protected areas is a significant spatial limitation for the development of wind energy. In addition, a further limitation has been added from densely populated areas, where investments for wind energy purposes can not be implemented or encounter significant impediments in practice.

In West Pomeranian Region, 12.8% of arable lands are attractive areas for wind energy.

It is estimated that the potential of wind energy in West Pomeranian Region, taking into account environmental restrictions, is 12,200 (MW). With the assumptions made, this would correspond to the production of 26,600 GWh per year.

In this scenario, it was assumed that 15% of agricultural land will be used for energy production from biomass, and the rest for commodity production. It was assumed that an average of 50,000 kWh can be obtained from ha of energy crops.

It is estimated that the West Pomeranian Region has a relatively high biomass potential, in the form of 7,156.5 GWh.

The main factors that shape the structure of agriculture in the West Pomeranian Region can include: a large area of farms, a favorable percentage of employees in agriculture and a focus on crop production. Due to the fact that organic fertilizers, such as manure and manure, are an important substrate for the production of agricultural biogas, it is also advisable to analyze the number of farm animals in the region. The dominant breeding animals are swine, cattle and poultry. According to CSO data, the number of cattle and pigs decreases, while the number of poultry increases.

The construction and operation of agricultural biogas plants can contribute to the improvement of this condition and inhibition of the downward trend. In spite of everything, it must be remembered that the construction of a biogas plant in a specific area must be confirmed in the form of biogas material. Therefore, animal husbandry near the installation should be compacted or run in large farms.

In addition to livestock production, the potential of biogas production is high in plants processing agricultural products, such as: sugar factories, distilleries, breweries, slaughterhouses or fruit and vegetable processing plants.

In West Pomeranian Region we are also dealing with a decreasing area of meadows and pastures. Assuming that 10% of this area will be used for energy purposes, we can get about 11.4 million m³ year biogas.

For the purposes of the biogas plant, cereals are also used, harvested in the appropriate phase and used as a supplementary substrate in the form of silage. The optimal vegetable substrate used in agricultural biogas plants is maize silage.

If we assume that for the cultivation of maize for energy purposes, 13.2 thousand can be allocated in the region. ha, we can assume that we will obtain 56.4 million m³ year biogas. By allocating sugar beet leaves to silage, you can get about 39.6 million m³ year biogas.

It is estimated that the potential of the In West Pomeranian Region on the basis of available resources, waste from the agro-food industry, organic fertilizers, grass from permanent grassland, sugar beet and maize leaves, makes it possible to obtain about 638.7 GWh of electricity from biogas.

The market potential of solar energy in the region has been estimated from the point of view of the recipients' needs and practical possibilities of satisfying them, not from the point of view of energy supply restrictions, the more so that the development of solar energy in decentralized systems is relatively least limited by environmental factors.

The total potential of solar energy in Poland is 19,341 TJ, or 5,372,5 GWh, with average solar exposure of around 1,100 kWh/m². In West Pomeranian Region, with an average of 1,000 kWh/m² of sunshine, it is 393.2 GWh of energy (Wiśniewski, 2011, pp. 46–47).

West Pomeranian Region due to ecological conditions and protected areas, has a small hydropower development potential of 14.3 GWh (Jasiulewicz, Janiszewska, 2017, pp. 91–102). Table 2 presents the energy potential of the West Pomeranian Region.

Table 2. Energy potential of the West Pomeranian Region

The type of renewable energy	The energy potential of the West Pomeranian Region GWh
Wind farms	26.6
Installations producing energy from biogas	638.7
Installations producing energy from biomass	7,156.5
Installations generating energy from solar energy	393.2
Hydroelectric power plants	14.3

Source: own study based on the model.

Depending on the technology of electricity production from renewable energy sources, power plants will produce a different amount of energy annually. This is due to the fact that especially power plants based on renewable energy sources rarely work with nominal power. Therefore, the model introduces a maximum power utilization factor to be able to compare individual technologies with each other. Table 3 shows the maximum power utilization rate.

Table 3. The maximum power utilization rate

	Coefficient of use maximum power (%)		
Theoretical maximum production for 1 MW of power plant	8.76	GWh	100.0
Photovoltaic power plant	0.97	GWh	11.1
Wind power plant good location	2.10	GWh	24.0
Biomass power plant	2.19	GWh	25.0
Hydroelectric power plant	2.70	GWh	30.8
Biogas power plant	3.35	GWh	38.3
Waste power station	2.75	GWh	31.5
Coal power station	6.90	GWh	78.8

Source: Szymański (2012).

The model assumes that the West Pomeranian natural and climatic conditions predispose to the production of energy from wind farms, as well as biomass from economically untapped grassland and forest production.

The model assumes that a large share in the production of electricity may be the agriculture of the region, which, apart from the basic function of food production for the population, will play the agroenergetic role.

It is assumed that energy crops should be competitive with commercial agricultural production and be an element of the market game.

The basic agrotechnical restrictions for particular groups of plants have also been adopted (max of the given crop in the structure of sowing and soil fertility) = in accordance with the principle of sustainable development.

It is also assumed that energy investments will be characterized by a high capital intensity and a long investment cycle, 5–10 years, as well as a long period of return of incurred investment outlays.

The assumptions of the model also assumed that there are wind farms, hydropower plants, biogas power plants at landfills, biomass production plants, including sawmills and electricity producing plants. Table 4 presents the solution of the regional model of distributed energy in the West Pomeranian Region.

Table 4. Solution of the regional model of distributed energy in the West Pomeranian Region

Types of energy	x ₁	x ₂	x ₃	x ₄	x ₅	x ₆	x ₇	x ₈	x ₉	x ₁₀	x ₁₁	x ₁₂	x ₁₃	x ₁₄	x ₁₅
Energy production	0	3,016.5	59.8	8.23	383.5	0	1,452.8	1,502.2	21.5	23.39	533.9	0	416.5	1,914.5	9,333.4
Energy raw materials	x ₁₆	x ₁₇	x ₁₈	x ₁₉	x ₂₀	x ₂₁	x ₂₂	x ₂₃	x ₂₄						
Crop size	0	0	0	0	0	0	0	0.059	0						

Source: own study based on the model.

In this scenario, we note that the total energy production in the West Pomeranian Region will be 9,333 GWh (i.e. we assume coverage of demand in the region), of which 3,016 GWh is energy production from co-firing, and 8 GWh is hydropower created in new hydropower plants. In solar installations, 383 GWh of energy can be generated. In the case of new wind power plants, as much as existing, there will be 2,955 GWh of energy generated. In both new and existing installations in the region, 638 GWh of energy will be produced in general for biogas. The remaining 2,331 GWh of energy will be generated in new and existing installations producing energy from biomass combustion. The average construction cost of one MW in this energy scenario will amount to PLN 9,333,509, and the loss of soil fertility in this scenario will amount to 0.059 t/ha.

Conclusions

1. The calculations of the original model confirm the possibility of building a regional model of dispersed energy, meeting the principles of sustainable development, increasing energy security and increasing energy efficiency and the full use of renewable energy.
2. The current state energy policy is not conducive to the creation of autonomous regional systems of dispersed energy, where the main decision-maker about the size and structure of the energy produced would be decided by the local government, not energy concerns and the Energy Regulatory Office.
3. Own research on the energy mix of the West Pomeranian Region indicate that it takes into account the specificity of the region to a small extent, where the main energy supplier is coal power. The only positive example is the development of wind energy. The constructed biomass power plant in Szczecin uses, to a small extent, local

energy resources, coming from wastelands and permanent herbaceous land. It should be emphasized that a large part of the biomass comes from imports.

4. The constructed mathematical model and its validation confirm that it can be a tool to simulate the region's energy policy. Economic calculations indicate the validity of the current energy mix in the region, where coal is the dominant part.

5. The simulation carried out indicates that: the region is self-sufficient in energy, it can produce surplus energy with large investment outlays.

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Cite this article as: Rabe, M. (2018). Regional model of dispersed energy of the West Pomeranian Region. *European Journal of Service Management*, 4 (28/2), 365–372. DOI: 10.18276/ejsm.2018.28/2-43.

THE IDEA OF IMPLEMENTATION OF THE METROPOLITAN BIKE SYSTEM ON THE EXAMPLE OF THE SZCZECIN METROPOLITAN AREA

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RECEIVED
ACCEPTED

10 December 2018
28 December 2018

JEL
CLASSIFICATION

O18, Q56, R41

KEYWORDS

transportation systems, bicycle system, sustainable development, regional development

ABSTRACT

The article discusses the idea and objectives of metropolitan areas and, in this context, the conditions for the implementation of the Metropolitan Bike System in the Szczecin Metropolitan Area. The considerations were based on the results of secondary research against the background of changes taking place in the environment of transport companies, which are also an opportunity to develop mobility in cities. The aim of the article is to indicate the reasons for the implementation of the Metropolitan Bike System in the Szczecin Metropolitan Area, on the basis of international and domestic experience. In order to achieve the goal, the desk research method was adopted, taking into account the available literature and the results of secondary research on the Metropolitan Bike System published by the authorities of the Szczecin Metropolitan Area, which open new opportunities for modelling mobility in cities and metropolitan areas. The territory of Poland was chosen as the research area, with particular emphasis put on the Szczecin Metropolitan Area.

Introduction

One of the basic assumptions of metropolitan areas is coherent interconnection between individual units of a given system. The factors having the greatest impact on this concept include (Kłos-Adamkiewicz, Załoga, 2017, p. 170):

- decrease in the share of public transport and increase in the use of passenger cars in urban areas,

- increase in the use of other means of transport, which are complementary to public transport services, such as city bikes.

City bikes, i.e. maintenance-free network systems of bicycle rental in cities, are more and more often included in the urban transport systems as an element of mobility modelling. The organization of bicycle transportation in cities, which mainly comes down to the creation of special traffic areas, as well as creation of the so-called “city bikes”, can be beneficial for both residents and tourists (Meyer, Sawińska, 2018, pp. 34–42).

In its initial phase, “The Szczecin Metropolitan Area (SMA), covering an area of 2,795 km², is not only developing, but also has a polycentric settlement structure, which is a good condition to achieve sustainable development and increase competitiveness in the European Union” (*Koncepcja budowy...*, 2017). The Szczecin Metropolitan Area (SMA) consists of the following local government units: Dobra commune, Goleniów municipal commune, Gryfino municipal commune, Kobylanka commune, Kołbaskowo commune, Police commune, Stargard municipal commune, Stargard commune, Stepnica commune, Szczecin municipal commune, Stare Czarnewo commune, Świnoujście city, Nowe Warpno commune, and Police County. The communes of the Szczecin Metropolitan Area carry out various activities to promote and develop bicycle traffic, with their dynamics and detailed scope being diversified. Although these activities are most often associated with the development of the bikeway network, the system solutions for the entire Szczecin Metropolitan Area have still not been created. As part of individual planning documents, the development of the bicycle transportation network and related infrastructure, as well as elements of its promotion, were taken into account.

The aim of the article is to indicate the reasons for the implementation of the Metropolitan Bike System in the Szczecin Metropolitan Area, on the basis of international and domestic experience. In order to achieve the goal, the desk research method was adopted, taking into account the available literature and the results of secondary research on the Metropolitan Bike System published by the authorities of the Szczecin Metropolitan Area.

City bike in Poland

The bike is becoming an important element of public transport. The quality of city bike systems depends on, among others, the number of vehicles and stations where the bike can be rented and returned, and the location of said bike stations, which is the determinant of not only an effective system, but also a way to commute to work and schools, as well as a tool for managing urban mobility.

Although the beginning of bike sharing dates back to the mid-1960s (Amsterdam – “White Bicycles”), its growth started in the 21st century (Shaheen, Guzman, Zhang, 2010, pp. 159–167, after: Kos, Krawczyk, Tomanek, 2018, p. 29). These systems are developing very quickly all around the world – an increase from 320,000 rides to over 28 million (55 systems, 42 thousand bikes) was recorded in 2010–2016 in the U.S. (*Ranking...*, 2018). Today, there are over 140 bicycle rental systems in 165 countries around the world (Dębowska-Mróz, Lis, Szymanek, Zawisza, 2017, pp. 1173–1182). Bicycles, especially in Poland, seem to have a large growth potential in handling mobility. That is why city authorities are developing bicycle systems. Three basic directions of activities in this area include (Kos, Krawczyk, Tomanek, 2018, p. 29):

- development of bike paths and bikeways,
- development of bicycle sharing systems (bike sharing),
- promoting bike sustainable mobility.

The development of bike paths has become a fact in most Polish cities (Krysiuk, Brdulak, Banak, 2015, pp. 881–886). New cycling routes with different parameters are designated and various solutions facilitating cycling are implemented, e.g. cyclists can use both one-way routes and pavement roads (up to 10 km/h). At the same time, the share of bicycles in mobility in Poland is still low – 3.1%. The share is the highest in the 16–19 age group (4.90%), whereas in the group of 20–25 years, it amounts to only 2.9% (Jacyna, Wasik, Gołębiowski, 2016, pp. 5–11). Daily use of bicycles in Poland is lower than in Western European countries (e.g. Germany – 19%) (Debyser, 2014).

As far as Poland is concerned, the first system appeared in 2008 in Kraków. Nevertheless, the largest system is Veturilo (351 stations, 5.2 thousand bicycles), which is managed by 5 operators in Warszawa. It is worth noting that Polish systems are generally seasonal. Moreover, an increasing trend is apparent, which concerns especially university cities (*Ranking...*, 2018). Tasks related to the operation of the city bike system in Poland are carried out by three major operators, with the oldest being BikeU (in operation since 2014 in Poland), and the largest one Nextbike, serving residents in 13 cities and 2 communes (Dębowska-Mróż, Lis, Szymanek, Zawisza, 2017, pp. 1173–1182).

Since 2017, users of maintenance-free city bike systems in Poland have at their disposal more than 10.5 thousand bikes and almost 900 stations, whose operator is mainly Nextbike (over 80%) (Dębowska-Mróż, Lis, Szymanek, 2017, p. 1175). Warszawa dominates in City Bike Ranking 2018, (43 points, with the next being Lublin – 34 points, and Szczecin – 17 points), where the density of bicycle routes amounts to 1,035 m/km (in Szczecin 449 m/km²), the number of inhabitants per bike is 337 (in Szczecin 547), and the average density of bicycle stations is 0.69 stations/km² (in Szczecin 0.28) (*Rowerowy...*, 2018). For many users it is a “first and last mile” means of transport, i.e. transport to a public transfer node. Another important fact is that the first twenty minutes of riding a city bike are free. This factor is an important incentive for using them. Research shows that 85–90% of rides take place during the first twenty (free) minutes. Almost a million of Poles benefit from city bikes, with the number of rides being counted in millions (Dębowska-Mróż, Lis, Szymanek, 2017, pp. 1182–1183).

City bike in the Szczecin Metropolitan Area

Before the Szczecin City Bike was created, the analysis of the conditions for making such a decision was carried out concerning primarily infrastructure, territorial scope, potential demand (population and population density), as well as costs and benefits.

As part of the analysis of the existing infrastructure constituting the basis for creating the Metropolitan Bike System, it is necessary to distinguish the basic indicator, which is the length of bikeways. According to the information presented in the Local Data Bank of the Central Statistical Office, Szczecin has the largest number of bicycle routes (114.7 km, including approx. 100 km of separate roads for bicycles and nearly 15 km of lanes for bicycles designated on roadways). The length of the cycling infrastructure in Szczecin is constantly growing, which is the result of both activities carried out directly by the local government and the implementation of projects within the framework of the Szczecin participatory budget. Residents positively assess the implementation of this idea – in its first edition (in 2013), the Szczecin City Bike was the winning project and obtained financing at the level of over PLN 0.5 million. The remaining local government units of the SMA have definitely fewer bikeways. In Police, the second commune in the ranking, there are 39.9 km of bikeways. A considerable number of cycling infrastructure can also be found in Stargard (24.2 km) and Świnoujście (25.2 km). The territorial range of the city bike system in the SMA is determined by three basic parameters: the number of stations per km², the number of bicycles per

1,000 inhabitants and the number of docking places per the number of bicycles (*Koncepcja budowy...*, 2017, p. 23). These parameters determine the number and distribution of bicycle rental/return stations within the analysed area.

In the case of urban areas, the optimal density of bicycle stations is 10–16 stations per km². At the same time, when planning the territorial scope and size of the system, the number of bicycles should also be considered in terms of the number of people in the area where the metropolitan bike will operate. In the case of metropolitan bikes, the territorial scope and size of the system itself are much greater than in the case of city bikes, which implies the necessity of even more meticulous preparation of the business model of the investment, so as not to overestimate the financial and organizational capabilities of individual municipalities. The optimal number of bicycles per population is, depending on the degree of bicycle transport usage, 10–30 bicycles per 1,000 inhabitants of the area. Another important parameter is the indicator of docking places per number of bicycles in the system. It is recommended that the number of docking places per number of bicycles in a given system should be about 2–2.5. This reduces the expenses for transporting bikes in order to avoid overloading the station (*Koncepcja budowy...*, 2017).

In 2016, the SMA was inhabited by nearly 687,000 people. The largest population is recorded in Szczecin (405,000). An important factor in the demand for transport infrastructure, as well as its type, is the population density of a given area. The highest density of population has been recorded in Stargard (1,424 people per km²) and Szczecin (1,347 people per km²). In the case of these cities, transport solutions aimed at reducing car traffic and increasing the importance of public transport are necessary. The use of a city bike is a good way to reduce traffic and exhaust emission (*Koncepcja budowy...*, 2017).

The introduction and development of the municipal bike system in the SMA is also determined by the estimate of costs and benefits. Due to the lack of a similarly functioning system in Poland (metropolitan system), it is not possible to accurately estimate the costs related to the construction and operation of the Szczecin Metropolitan Bike. The estimated construction costs (categories) of the Szczecin Metropolitan Bike and its annual operating costs (categories) are presented in Tables 1–2.

The main benefits of creating the Szczecin Metropolitan Bike may include (*Koncepcja budowy...*, 2017):

- increasing the quality and diversity of the transport system as a factor activating the growth of bicycle traffic in the SMA,
- improving the accessibility to nodes and stations of public transport systems (including S-train),
- increasing the share of bicycle traffic in the travel structure – in the entirety of passenger traffic as an attractive means of transport,
- increasing the quality of life of residents of SMA by improving mobility,
- improving the natural environment and health of residents by reducing the level of exhaust emissions, traffic noise and vibrations.
- improving public health, increasing life expectancy and satisfaction with the quality of life by intensifying the daily physical activity of cyclists,
- encouraging residents to change travel behaviour by popularizing transportation by bike,
- increasing the availability of local workplaces and public places.

The Szczecin City Bike was launched on August 22, 2014 by BikeU and consisted of 32 base stations (*Koncepcja budowy...*, 2017).

Table 1. Estimated construction costs (categories) of the Szczecin Metropolitan Bike

Assets	Estimated unit cost (PLN)	Estimation basis
Bike station*	50,000	Analysis of public bicycle systems functioning in Poland (tender values) verified by current, average market prices
Warehouse space (m ²)**	800	Analysis of current market prices of warehouse space in Zachodniopomorskie Voivodeship
Service station	80,000	Analysis of public bicycle systems functioning in Poland (tender values)
Public bike	2,000	Analysis of public bicycle systems functioning in Poland (tender values)

* A bicycle station containing about 15 bike racks.

** Target: 3.5 m².

Source: *Koncepcja budowy...*, 2017, p. 119, the presented costs are gross prices.

Table 2. Estimated annual operating costs (categories) of the Szczecin Metropolitan Bike

Activity	Estimated unit cost (PLN/year)	Estimation basis
Maintenance of a bicycle station	6,000	Analysis of public bicycle systems functioning in Poland (tender values)
Relocation*	10,000	Analysis of public bicycle systems functioning in Poland (tender values)
Maintenance of a bicycle station	6,000	Analysis of public bicycle systems functioning in Poland (tender values)
Maintenance of warehouse space(m ²)	50	Analysis of public bicycle systems functioning in Poland (tender values)
Storage of a public bike	1,000	Analysis of public bicycle systems functioning in Poland (tender values)
Cost of spare parts	800	Analysis of current prices of bicycle parts (average market value)
Cost of bike service	200	Analysis of current prices of bicycle parts (average market value)
Other costs**	2,000	Analysis of public bicycle systems functioning in Poland (tender values)

* PLN 10,000 bicycle station/year (average value depending on the number of bikes and distances between stations).

** 2,000 bike/year (averaged such costs as PR, www, media, telephones, liability insurance, accounting, system operation, etc.).

Source: *Koncepcja budowy...* (2017), pp. 119–120, the presented costs are gross prices.

In 2016, Nextbike Polska won a tender for the expansion of the rental system. Additional stations were created – their total number reached 82, and thus Szczecin joined 13 other cities in Poland operating within the Nextbike network (Dybalski, 2016). The operator of the system is a municipal company called “Nieruchomości i Oplaty Lokalne”.

Conclusions

The conducted analysis of the conditions for the implementation of the Szczecin City Bike, concerning primarily infrastructure, territorial scope, costs and benefits, justify this investment. The first years of its operation also confirmed the relevance of the undertaking. The experience and premises for the implementation of similar systems in the world and Poland indicate that this is an indispensable element of modelling city mobility. Thousands of young people, for whom the city bike is the basic means of transport, live, study, work, and actively spend free time in the university city of Szczecin. For this group, the introduction of the Szczecin City Bike generates real benefits. These include: improving the accessibility to nodes and stations of public transport systems; increasing the share of cycling in the travel structure – in the entirety of passenger traffic as an attractive mode of transport; improving the quality of life (also other residents of SMA) by improving mobility; encouraging change in transport

behaviour, involving the popularization of cycling transportation; and increasing the availability of local workplaces, as well as education and public spaces.

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Cite this article as: Rosa, G., Sondej, T. (2018). The idea of implementation of the metropolitan bike system on the example of the Szczecin Metropolitan Area. *European Journal of Service Management*, 4 (28/2), 373–378. DOI: 10.18276/ejism.2018.28/2-44.

REGIONAL PUBLIC SERVICE MEDIA ORGANIZATION IN POLAND IN THE ERA OF MEDIA CONVERGENCE

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL CLASSIFICATION M12, M54, O33, P41

KEYWORDS media, media management, public service media in Poland, media convergence

ABSTRACT This paper presents the concept of a new regional public service media organization in Poland. Changes in social communication and in particular Internet and digital media dissemination resulted in progressing media convergence. It brings the necessity of change not only of devices for producing and receiving media content (information, music, movies), but also organizational changes in companies providing media services themselves. This is about the unification and universalism of communication, i.e. suitability to content 'utilization' in many formats (text, audio, photo, video), but also economic saving in content acquiring and monetization (getting revenues from media activity). New technologies entail changes in work organization and thus modifications in organizational structure. The paper presents the model organizational structure of new regional, public service media entities that considers media convergence and necessary modifications in journalistic work resulting from changes that occur.

Introduction

The current model of public service media operating in Poland was established by the Broadcasting Act as of 29 December 1992. Public radio and television broadcasting entities operate exclusively in a form of the sole-proprietor joint stock company of the State Treasury, hereinafter referred to as "the company". Public television is formed by the company "Telewizja Polska – Spółka Akcyjna", established for the purpose of producing and

transmitting national programme services I, II and TV Polonia as well as regional television programme services. Regional branches of the company "Telewizja Polska – Spółka Akcyjna" have their head offices located in: Białystok, Bydgoszcz, Gorzów Wielkopolski, Gdańsk, Katowice, Kielce, Kraków, Lublin, Łódź, Opole, Olsztyn, Poznań, Rzeszów, Szczecin, Warszawa, Wrocław. Public radio comprises of: 1) "Polskie Radio – Spółka Akcyjna" established to produce and transmit nationwide radio programme services and programme services for listeners abroad; 2) companies established to produce and transmit regional radio programme services, hereinafter referred to as „the regional radio companies” (Art. 26 of Ustawy...,1992).

The progressing process of media convergence and growing importance of Internet and social media in social communication require a new model of operation of public service media, tailored to new market challenges of a model of public media operation in Poland. The current concept of public media operation was created at the beginning of 1990s, before Internet and social media become commonly available in Poland. It resulted from the traditional media division into radio and television programme services. Today, a traditional operation of radio and television programme services does not translate into effectiveness of media activity. Effective production of interesting content and its broadcasting in all distribution channels – traditional, i.e. radio (FM) and television (DVB-T) and on Internet is more important. Thus it is essential that a new concept would assume regional media organization to achieve optimal management of produced content and to provide service to all recipients (listeners, viewers and Internet users). The goal of this article is to develop an original concept on how to organize the regional public media in Poland in the context of progressing media convergence. Following this new concept, a new type of media organization was developed. The center of interest of its operational activity concentrates on acquiring and dissemination of critical news and entertainment programmes and on combining in one entity (company) several media activities: Internet portal, social media and radio and television programme services.

Media convergence

Technological penetration in media, mainly due to global and commonly available Internet network results in the need of the new approach to work organization of media services providers. Not only universality of broadcast content, covering in the same time printed and audiovisual transmission is important, but also a requirement to implement modifications in the journalist's work. As A. Koroczyński noted (2012, p. 33) "media convergence entails deep technology transformation in the journalist's work, a profession of journalist itself. It even creates symbiotic forms of cooperation between various media services, new relations between media organizations and professional communicators". Therefore, not only new forms of organization of media work are needed, but it is also necessary to revise journalists' training programs so as they are able to use new opportunities of the aggregated social communication. "New technologies and wider range of distribution channels, through which recipients are reached, put high demands on graduates from journalistic majors" (Szynol, 2011, p. 49). At the same time, you must not forget that the final recipient (reader, listener, viewer, Internet user) is the subject of all processes involving content gathering and transmission. In this context, one must agree with Radek's statement (2012, p. 135) that "diffusion of transmission methods of various information, e.g. relying on wide use of Internet makes the process much easier and pleasant. The global network is a very convenient tool that allows reading the press, listen to the radio or watch television."

Media experts discuss also multitasking or multiskilling (having many skills by employees of media companies), a phenomena resulting from technological development of mass media. These concepts are related to the need of combining many skills and executing various tasks so far executed by individual experts, by one employee (Szynol, 2012–2013). The above phenomena make it necessary to correct (adjust) new challenges in terms of technology and organization in the existing public media system.

Assumptions of a new model of regional public media organization in Poland

The concept assumes liquidation of 17 regional radio programme service providers and 16 regional branches of Telewizja Polska, which has to be preceded by the amendment of the Broadcasting Act. They would be replaced by 16 limited liability companies under the name of Media Regionalne and the city where their head offices would be located. New companies would take-over necessary movables and immovable property from closed entities. They would not be obliged to take-over all the assets and former employees of organizations subject to liquidation. The remaining, but not taken over assets from the closed entities would be subject to sale according to liquidation procedure carried out in accordance with the provisions of the Code of Commercial Partnership and Companies. The employees dismissed would be entitled to all and any rights provided for in the Labor Code in such a case. The presidents of management boards of new companies – Media Regionalne, consisting of one person – would be appointed for a four-year term of office in open and public competitions organized by the National Broadcasting Council or another entity appointed by the legislator. The above operations would result in establishing the following entities:

- Media Regionalne Białystok Sp. z o.o. (short name: MR Białystok),
- Media Regionalne Bydgoszcz Sp. z o.o. (short name: MR Bydgoszcz),
- Media Regionalne Gdańsk Sp. z o.o. (short name: MR Gdańsk),
- Media Regionalne Katowice Sp. z o.o. (short name: MR Katowice),
- Media Regionalne Kraków Sp. z o.o. (short name: MR Kraków),
- Media Regionalne Kielce Sp. z o.o. (short name: MR Kielce),
- Media Regionalne Lublin Sp. z o.o. (short name: MR Lublin),
- Media Regionalne Łódź Sp. z o.o. (short name: MR Łódź),
- Media Regionalne Olsztyn Sp. z o.o. (short name: MR Olsztyn),
- Media Regionalne Opole Sp. z o.o. (short name: MR Opole),
- Media Regionalne Poznań Sp. z o.o. (short name: MR Poznań),
- Media Regionalne Rzeszów Sp. z o.o. (short name: MR Rzeszów),
- Media Regionalne Szczecin Sp. z o.o. (short name: MR Szczecin),
- Media Regionalne Warszawa Sp. z o.o. (short name: MR Warszawa),
- Media Regionalne Wrocław Sp. z o.o. (short name: MR Wrocław),
- Media Regionalne Zielona Góra Sp. z o.o. (short name: MR Zielona Góra).

A legal form of the limited liability company has been adopted in this concept, which is more appropriate for smaller than national organizations, like TVP SA and Polskie Radio SA. In addition, this form does not require establishing supervisory boards and exercising by the National Broadcasting Council or another entity appointed by the legislator control over a company or performing a function of the general assembly. Necessity to negotiate

the provisions of the new act with the European Union must also be considered, because these are new entities established after the Polish accession, thus any public financial support requires EU notification.

The newly established entities would be the publisher of the regional Internet portal and the broadcaster of the radio and television programme. New companies would take over some brands of former broadcasters and branches of TVP. For example “MR Białystok” would be the publisher of the regional Internet portal and the broadcaster of Radio Białystok and Telewizja Białystok (not TVP Białystok, not to duplicate the name of national broadcaster).

Organisation and management of Media Regionalne

According to the proposed concept, companies would operate independently of one another and would be independent from the supervising entity, with regard to programme content. They would take own managerial decisions with regard to: organization, investments, programme or personnel – depending on demands from citizens of a region and company, as an economic operator. For proper cost parametrization and organizational transparency, all Media Regionalne would operate in the identical organizational structure (Figure 1). It would be defined in the statute of the company and all Media Regionalne would have the same organizational chart, described in by-laws (approved by National Broadcasting Council or another entity appointed by the legislator).

Organizational chart presented in Figure 1 is modelled on M. Porter (1985) value chain, widely disseminated in the literature, dividing the company's activities into primary ones (programme-related – production and content broadcasting) and support ones (bookkeeping, HR, transport, guards etc.), as well as its modified version, so called value chain 2.0, proposed by Comtess and Huang (2008) and described by Mazurek (2012, pp. 56–58). Management of project teams has been applied there. It is based on BBC experience, where Internet and social media is the core of journalistic activity (Ah, 2013).

The company would be managed by the Management Board consisting of one person. The President of the Management Board would be a supervisor of all employees and would manage the the whole entity. All directors of basic (programme-related) activity: Editor-in-chief, Radio Programme Director, Television Programme Director and auxiliary (administrative) activity: Technical Director, Chief Accountant, Personnel Manager, Marketing Manager would report to him. The President of the Management Board would supervise the office of the Management Board (1 person – an assistant of the President of the Management Board) and would cooperate with a Legal Advisor based on a contract for provision of legal services concluded with an external legal office (outsourcing).

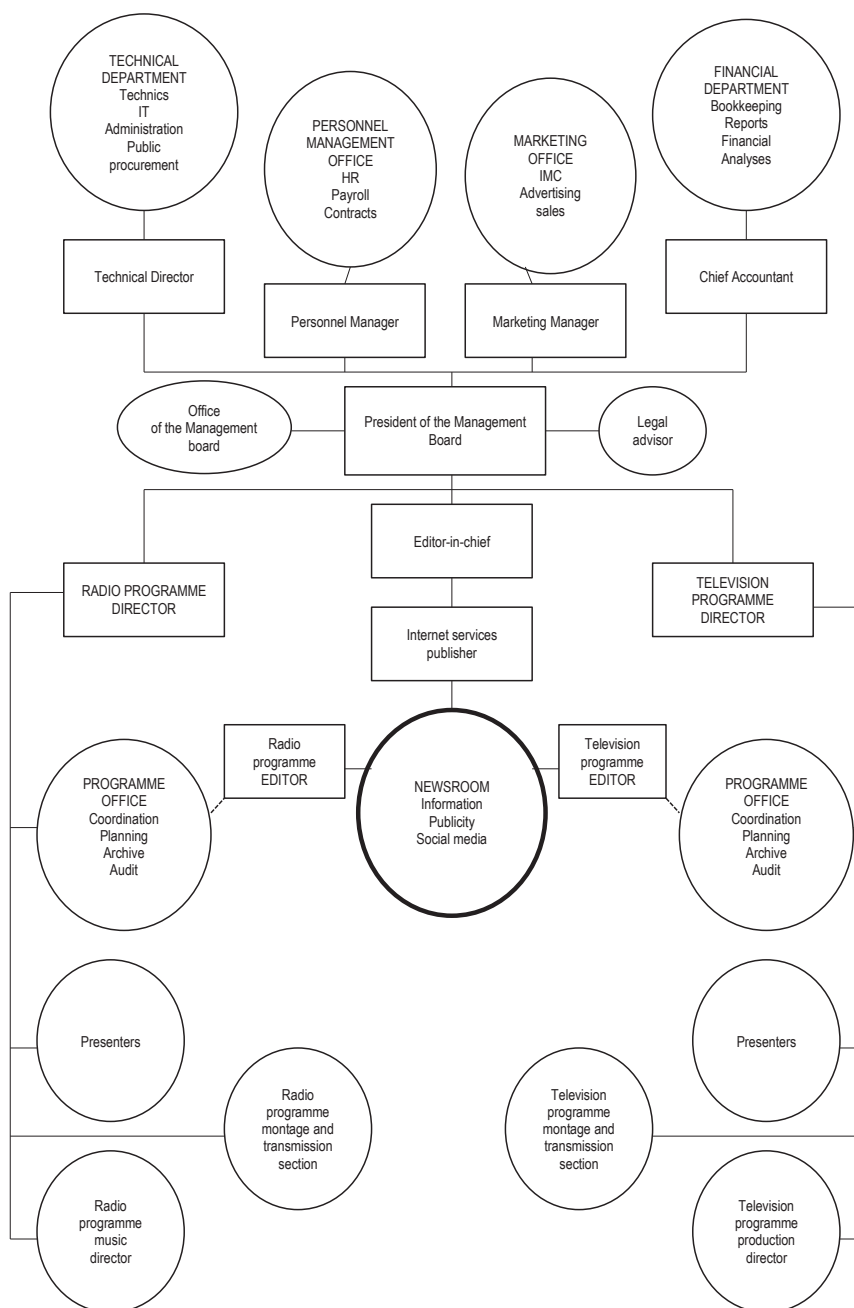


Figure 1. Media Regionalne organizational chart

Source: own elaboration.

Primary activity (programme-related)

Newsroom would be the core of the program activity. It would perform works for all company's information activities. Its employees would be responsible for the preparation of content, audio and video materials for all information services – the portal, social media and radio and television programmes. All reporters and publicists as well as all editors of information services of individual media (Internet portal, radio, television) would work there. The position of the website publisher would be subordinated to the Editor-in-chief. It would be rotational depending on the date of the website release and the availability of individual publishers. The concept assumes that the newsroom would also employ publicists who would participate in the work of the newsroom and prepare publications. The Editor-in-chief would be responsible for all information and the company's entire journalism. With regard to other programmes he would cooperate with Radio and Television Programme Directors. The Editor-in-Chief would also be the head of the newsroom and the publisher of the portal, one of editors would replace him, if required. Programme offices would coordinate the work of radio and television programme services for other programmes. According to the assumptions, every day the work of editorial office would start with a meeting in the newsroom, where there would be reporters, publicists, editors, Editor-in-Chief and a person from the Marketing Office responsible for the current promotion. Employment in the newsroom should not exceed 30 people. Some people should be employed in full-time, some as co-workers, depending on the company's needs and involvement in a programme. Journalists in the newsroom would be employed at the posts of: reporter, editor, publicist, and commentator. They would receive basic salary (slightly higher above the minimum salary level) and compensation (depending on the nature of performed tasks – some employees would be paid for making specific materials, some in a form of flat rate payment).

In addition to information services and journalistic programmes, the Radio Programme Director would be responsible for the entire radio programme, and the Television Programme Director for entire television program. They would supervise work of programme offices, which would arrange broadcasting lists and coordinate the entire programme. Programme offices would also make necessary purchases of programmes outside the company. They would be responsible for the execution of the declared number of mission programmes and compliance with the statutory restrictions on radio and television programmes – respectively. They would also care about archiving a programme and managing company's archival materials. Approximately 3 persons would be employed in each office. In addition to the programme offices, the Radio Programme Director would supervise the Presenters (about 10 people), the Radio Programme Music Director (1 person) and the Radio programme montage and transmission section (about 6 people). The Television Programme Director would also supervise the Presenters (about 5 people), the Television Programme Production Director (1 person) and the Television Programme montage and transmission section (about 12 people). Presenters, programme offices, and montage and transmission sections would not have managers; their role would be fulfilled by Programme Directors.

Support activity (administrative and technological)

The proposed concept assumes that with regard to the auxiliary activity the President of the Management Board will supervise the Technical Director, responsible for technical and technological functioning, as well as for the maintenance and purchase of all equipment for the company. His responsibilities will also include supervising the IT department and ensuring production, transmission and broadcasting of radio and television programmes as

well as providing access to the regional portal on Internet. The Technical Director will also be a superior to transport and real estate administration. His job will also include ensuring the protection and cleanliness of buildings, based on outsourcing. He will be the chairman of the contract award committee; he would be also responsible for administration of the company's investments. Approximately 10 people would be employed in the technical department. The Financial Department would be managed by the Chief Accountant. In this section, two more people would be employed (3 in total) – one involved in bookkeeping and the other preparing economic plans and financial reports. The Personnel Management Office would also report to the President of the Management Board. Two people would work in the office, i.e. the Personnel Manager and the Payroll specialist. Marketing Manager would be responsible for the Integrated Marketing Communication (IMC) and the sale of advertisements on the portal, on the radio and on television. He would report directly to the President of the Management Board. He would also be responsible for the technical implementation of current promotional campaigns of individual antennas and the portal, agreed as part of the promotion project team. In addition to the Marketing Manager, the team would consist of the Radio Programme Director, the Television Program Director and the employee of the creative promotion office. Two people would work in promotional activities in the marketing office, and about four people would be involved in sale of advertisements.

Nature of Media Regionalne programmes

Content on the portal, in the radio and television programmes should correspond to the expectations of the region's listeners and viewers. It should primarily provide local news, because this area has shortfalls, not filled by commercial stations. One should not forget about entertainment and the accompanying nature of regional media services. These companies should be leaders in the attractiveness of the programme and its professionalism as well as in audience rating and opinion-forming. The portal should not charge for the content presented. The radio programme should be broadcast 24 hours, with hourly information service between 6:00 and 23:00. Radio-played music should follow AC (Adult Contemporary)¹ format. The television programme should be created with focus on local news and journalism, broadcast for a minimum of 6 hours plus repetition. First, materials for radio and television programmes should be sent to the regional portal.

Proposal of algorithm on radio and television subscription distribution

Radio and television subscription or other fee for media services should have an explicit and transparent algorithm. Presented concept assumes the fee to comprise of five parts:

1. Coverage of depreciation costs.
2. Coverage of portal server fees, broadcast and radio and TV signal charges.
3. A fixed amount for all companies to cover the annual maintenance of the portal.
4. A fixed amount for all companies to cover production of one hour of radio programme.
5. A fixed amount for all companies to cover production of one hour of tv programme.

¹ AC – played-music format of the radio station, whose target group is mainly men and women aged 30–54. It consists of tracks from the 80's to contemporary hits, especially pop music.

Conclusions

Deep and rapid changes in the media services environment determine the need for change in their internal organization. Media convergence, a much faster process of obtaining and publishing journalistic materials, enforces the adjustment of the organizational structure of media services providers, including public ones, to new market requirements. The change of the organizational structure must occur not only in the sphere of acceleration of program broadcasting processes (content), but also take into account that currently it should be managed in various types of media services activity (video, audio, text) at the same time. Hence the idea presented in the study of combining traditional media services (regional radio and television) and adding the Internet portal into one entity, would provide the basis for organizing a modern entity that fully exploits the capabilities of all distribution channels.

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Cite this article as: Rudawski, A. (2018). Regional public service media organization in Poland in the era of media convergence. *European Journal of Service Management*, 4 (28/2), 379–386. DOI: 10.18276/ejsm.2018.28/2-45.

THE ROLE OF SERVICES BASED ON THE SHARING ECONOMY MODEL IN THE SMART CITY 3.0 CONCEPT

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION O14, O35

KEYWORDS social enterprise, social entrepreneurship, social innovation, service sector, technological adoption, technological choice

ABSTRACT This article was created in order to identify and highlight emerging new development opportunities for services based on new technologies and solutions falling into the category of WEB 2.0 and socialization of services through internet tools and social media. In the article will be presented the classification of these services and discussed their role in urban development, as well as in the implementation of the smart city concept. In text will be also outlined the problem facing the city authorities and legislators which are services in the shared economy. They are a problem because, due to their nature and the channels of market communication that they use, they are out of full administrative control. These services also compete with entrepreneurs operating in the service industry in traditional organizational structures. The aim of the article will be implemented through a review of literature and internet reports – due to the specificity of the subject, the most current source of information. In this review article, the content has been supplemented by the author's own observations.

Introduction

An introduction to the problems raised in the article requires theoretical support and definition issues. The first step is to explain what is Smart City's vision of the city. Another action attempts to explain the essence of the sharing economy. Smart cities and the sharing economy consist of various elements are complex concepts with fuzzy boundaries. Both concepts described in the article do not have commonly agreed definitions and are often defined

by a list of features, not by a comprehensive concise definition. This is due to the difficulty of describing the modern world, especially the relatively new socio-economic phenomenon. A smart city is a concept strictly related to cities, while the sharing economy has a wider range. However, its natural environment and incubation site is the city, the metropolis and creative and aware residents.

Smart City generations

There are a lot of definitions of smart city in literature, people interested in the subject will find studies classifying and systemizing definitions in many articles, for example in the article titled "Unified Definition of a Smart City" (Ramaprasad, Sánchez-Ortiz, Syn, 2017, pp. 13–14), or an article entitled "Smart cities: definitions, dimensions, and performance" (Albino, Berardi, Dangelico, 2018, pp. 3–21). In short, a city can be considered as "smart" when its investment in human and social capital and in communications infrastructure actively promote sustainable economic development and a high quality of life, including the wise management of natural resources through participatory government. The concepts of the smart city do not exclude the assumptions of other urban concepts (more Mierzejewska, 2015, pp. 8–10), it differs only in the greater involvement of technology in order to create cities described by other concepts. For this reason, it is a more operational concept. The increase in the popularity of this concept correlates with the emergence and popularization of LTE and 5G connectivity and mobile devices. Urban residents will democratically decide on the degree of use of technology in the city's life. Technology may raise some resistance, for example, by issues related to personal data and surveillance. Technology is becoming widespread and plays an increasingly important role in everyday life, culture and economy, replacing the "analogue world". A well-known figure for people interested in the topic of urban studies Boyd Cohen presented three generations of implementation of the smart city idea in cities (Cohen, 2015).

Smart Cities 1.0 (Technology Driven)

This generation is characterized by the fact that the ICT technologies companies encourage the adaptation of their technologies by city authorities in order to achieve greater efficiency in the management of urban organisms. However, cities are often not prepared to implement these technologies and to properly assess how these technologies can affect the quality of life of their citizens. This generation of smart city is heavily criticized for its leading role ICT corporations in the process of creating smart cities. Corporations that see only a fragmentarily complex system which is a city.

Smart Cities 2.0 (City Led)

The city authorities play an overriding role in the implementation of the vision of a smart city, focusing on technological innovations as tools to improve the quality of life of the inhabitants. Cities of the second generation of Smart Cities are characterized by a large number of urban programs and projects that serve the implementation of modern technologies in different areas of the city's life. The literature is presented an example of Barcelona, where there are about 100 city projects related to the smart city (Gavaldà, Ribera, 2012).

Smart Cities 3.0 (Citizen Co-Creation)

This is the latest generation of smart cities that has recently appeared. It is characterized by the fact that residents take a key role in the development of cities. In the Third Generation Smart Cities, residents start to co-

create their cities. Examples of such cities are: Vienna, Vancouver and also Colombian Medellín, which shows that such cities do not have to be located in highly developed countries. What is important, in Smart Cities 3.0 projects of social character, equality, social inclusion, cheap construction, etc. play a significant role. An appropriate place in this concept has the sharing economy (collaborative consumption). Table 1 presents the basic functional areas of intelligent solutions for cities. As we can see, they concern many spheres of the functioning of cities, from typically technical and engineering, that is, the sensor level in the roadway to the level of urban communities.

Table 1. Basic functional areas of Smart City considerations according to Vienna University of technology – characteristics and factors of a smart city

1. Smart Economy (Competitiveness) innovative spirit, entrepreneurship, economic image & trademarks, productivity, flexibility of labour market, international embeddedness, ability to transform
2. Smart Mobility (Transport and ICT) local accessibility, (inter-)national accessibility, availability of ict-infrastructure, sustainable, innovative and safe transport systems
3. Smart Environment (Natural resources) – attractivity of natural conditions, pollution volume, environmental protection, sustainable resource management
4. Smart People (Social and human capital) – level of qualification, affinity to lifelong learning, social and ethnic plurality, flexibility, creativity, cosmopolitanism/open-mindedness, participation in public life
5. Smart Living (Quality of life) – cultural facilities, health conditions, individual safety, housing quality, education facilities, touristic attractivity, social cohesion
6. Smart Governance (Participation) – participation in decision-making, public and social services, transparent governance, political strategies & perspectives

Source: *Smart cities Ranking...* (2007), pp. 11–12.

Remaining on the definitional issues and merits of the article, the explanation requires how are defined services based on internet communication platforms and mobile applications and social open supervision over the quality of these services. Well, these services fall into the category of sharing economy. Other names referring to this phenomenon found in the literature in English are: “collaborative consumption”, “collaborative economy”, “on-demand economy”, “peer-to-peer economy”, “zero-marginal cost economy”, “crowd-based capitalism” (Selloni, 2017, pp. 15–19).

Shared economy — understand the phenomenon

In 2010, Rachel Botsman and Roo Rogers published the first book on the sharing economy entitled “What’s Mine Is Yours – the rise of collaborative consumption” (Botsman, Rogers, 2010). The authors defined the sharing economy as a traditional sharing, bartering, lending, trading, renting, gifting, and swapping, redefined through technology and peer communities to be made by using technology and the existence of online communities. In the article from 2017 on “Putting the sharing economy into perspective” Koen Frenken and Juliet Schor defined the sharing economy as “consumers granting each other temporary access to under-utilized physical assets (“idle capacity”), possibly for money”. The authors identify three characteristic shared economy features. These are: interaction between consumers (C2C), temporary access and use of physical goods (Frenker, Schor, 2017, pp. 3–10). The sharing economy is not a completely new phenomenon. Traditionally, sharing has always been an alternative to a capitalistic, profit-oriented economy. Informal sharing and collaboration networks exist in different societies. The novelty of the present cooperation economy is based on the use of information technology as a channel for the exchange of market information and the implementation of the sharing process. Pablo Munoz and Boyd Cohen,

using the work of McLaren and Agyeman (2015) and Martin et al. (Martin, Upham, Budd, 2015) and Chasea (2015), define the economy of cooperation as: “a socio-economic system enabling an intermediated set of exchanges of goods and services between individuals and organizations which aim to increase efficiency and optimization of under-utilized resources in society”. According to this definition, the sharing economy and services that are implemented within its framework correspond to the paradigm of sustainable development. It is possible to re-use many goods, redistribute them, extend the life cycle of the product. The sharing economy and its organizational and distribution model give a chance to many people who, despite their competences, have a difficult start in traditional (service) business involving the regulations and supervision of the state. Sharing economy manages part of the activity of these people, which belonged to the gray zone. These are, for example, immigrants, students, pensioners, unemployed people. An essential issue in considering the sharing economy is the linking of sharing with commercial activities. The largest global corporations operating on the basis of platforms (online marketplaces) such as websites and applications are, for example, Airbnb and Uber. These are commercial enterprises, focused on profit. Despite this, they meet the criteria for belonging to shared economy. Rachel Botsman (2015) believes that shared economy is a concept often wrongly referred to business solutions based on effective matching of demand and supply, which, however, do not take into account either sharing or cooperation. Overuse the category of belonging to the sharing economy sector, the mobile application, the efficient algorithm and the payment system are not enough. Botsman proposes five conditions that companies must meet in order to be considered as belonging to the sharing economy.

1. The core business idea involves unlocking the value of unused or under-utilized assets (“idling capacity”) whether it’s for monetary or non-monetary benefits.
2. The company should have a clear values-driven mission and be built on meaningful principles including transparency, humanness, and authenticity that inform short and long-term strategic decisions.
3. The providers on the supply-side should be valued, respected, and empowered and the companies committed to making the lives of these providers economically and socially better.
4. The customers on the demand side of the platforms should benefit from the ability to get goods and services in more efficient ways that mean they pay for access instead of ownership.
5. The business should be built on distributed marketplaces or decentralized networks that create a sense of belonging, collective accountability and mutual benefit through the community they build.

At this point, it is worth refining the attempt to understand the essence of the sharing economy for the classification of services that fall within its scope. The Department of Economy and Statistics of the United States (U.S. Department..., 2016) has identified over 20 service areas in which the assumptions of the sharing economy are present. Lisa Gansky (2010) in the book entitled “The Mesh” has identified 25 categories of this type of service and over 9,700 network companies located in more than 1,630 cities in more than 130 countries. The most popular attempt to classify is the honeycomb of collaborative economy (sharing economy) created by Jeremiah Owyang. On its basis, was created a table presenting 16 categories and 44 subcategories – service functions supported by enterprises from the branch of sharing economy.

The problem is the attempt to regulate economic activity that is part of the broad framework of the sharing economy. Paradoxically, this area of the economy uses the digital communication platform to effectively use free resources in an innovative and creative way. On the other hand, the economy of cooperation creates new fields of conflict and competition for similar economic activities with a traditional way of organization and evolution on the market. For example, the service offered by the Uber platform involving the use of a private car to transport

Table 2. Categories and sub-services of shared economy services

Category	Sub-category
Analytics and reputation	Driver services Identity and reputation Renter services
Corporations & organizations	Employee services Platforms Supply chain
Food	Food delivery Shared food Shared food prep
Goods	Loaner products Maker movement Pre-owned goods
Health	Peer to peer Care services
Learning	Book sharing Instructor-Led Peer-to-peer
Logistics	Local delivery Shipping Storage
Mobility services	Ride hailing Bicycles Parking Support Valet services
Money	Crowdfunding Cryptocurrencies Money lending
Municipal	City Sponsored Bikes Platforms
Services	Business Personal
Space	Personal space Work space
Utilities	Energy Telecommunications
Vehicle sharing	Loaner boats Loaner vehicles
Wellness & beauty	Beauty Wellness
Worker support	Insurance Renter services Resources

Source: adapted from Owyang (2014); Ganapatia, Reddickb (2018).

of people through the use of reservations via smartphones causes protests by taxi drivers and taxi corporations. The conflict takes place in the field of the ethos of the profession and the costs of taxi operations and price competition. In many places around the world, governments and courts have intervened in similar disputes limiting or barring economic activity in the model of sharing economy. An example of this is the draft act on road transport in Poland. This problem is also visible in the case of urban space, city centers and attractive locations are successively filled with premises in the offer of Airbnb and similar companies, affecting local real-estate markets and displacing residents from the attractive tourist areas of cities. At the same time, traditional hotel and hospitality activity faces the challenge of competition – often untaxed. An example is the Airbnb corporation, whose capitalization is catching up with the Hilton and Marriott hotel chains. Establishing sharing economy and the differences between market exchange and sharing in a pure ideological form assume the marginal importance of commercial business solutions and profit-making in this type of business. Shared economy is, however, subject to a market game, and the value of companies initially starting as a start-up, e.g. Uber or Airbnb is growing. In the last decade, the value of entities operating in the area of cooperation economics grew exponentially. The PricewaterhouseCoopers in the report

“The sharing economy” (PWC, 2015) estimates that from USD 15 billion in 2014, the value of these entities will increase to USD 335 billion in 2025. Thus, we are dealing with a dynamically developing phenomenon on a global scale. There are many statistics confirming the above claims about the rapid increase in market share and the value of assets of enterprises associated with sharing collaborative economy. An example is the chart – Figure 1 presenting the increase in the number of guests using Airbnb services in London. Similar charts about the almost exponential growth are published by other cities from around the world.

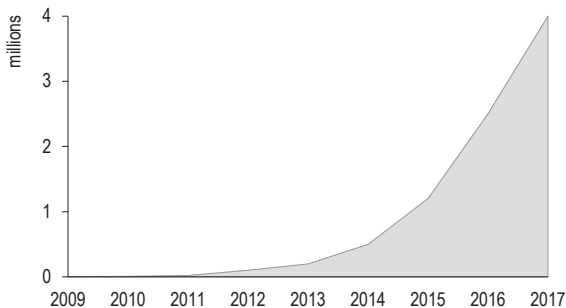


Figure 1. Cumulative guest arrivals at Airbnb listings in London area

Source: Airbnb (2017).

The role Sharing Economy in the implementation of the Smart City concept

Returning to the concept of the smart city presented above, the postulate contained in the description of the Smart City 3.0 generation becomes true. The postulate concerning social inclusion, in this case in economic activity, indirectly strengthening social interactions and more efficient use of resources and goods. Sharing economy contributes to equalizing opportunities, giving access to unused resources at a fraction of the cost to those who cannot or not wants to buy new products and a chance for additional income for those who already have such unused resources (things, space, capital, equipment, free time). The sharing economy is seen as an instrument in dealing with problems such as over-consumption and income inequality. The sharing-based business has evolved from simple loan initiatives to complex platforms and networks connecting individuals and enterprises to collaborate and collectively use existing or new labor, land and capital resources. The genesis of this economic phenomenon is a combination of several factors, in the literature it is indicated that it was the global economic crisis of 2008, the emergence of high-speed internet, change of the generation of network communication on WEB 2.0 (social media), increased interest in environmental and sustainable development issues and to a certain extent the renaissance of thinking in terms of community in cities. The sharing economy due to its special features is combined with the concept of Smart City. Thanks to the creation of a friendly environment for the development and diffusion of enterprises sharing economy, cities can achieve the goals of a Smart City. Cities are a natural sharing environment, a social territorial system (Chojnicki, 1989). Internet platforms work best in the local community and short distances. The complementarity of smart cities and the sharing economy depends on the attitude of city

authorities to innovation. It should also be noted that sharing can also indirectly contribute to the city's economic success. Appropriate policy towards bottom-up phenomena and activities in the area of shared economy brings benefits to residents, but may limit potential tax inflows if this activity was undertaken in a traditional way. An element that can be shared in the future is the production of renewable energy. City residents as prosumers producing energy for themselves and reselling it to dispersed energy networks. Crowdfunding is a strong growing area of activity – a way to finance projects, initiatives and start-ups, and help when it is necessary. For the smart cities, there are goals to reduce resource consumption, savings, social inclusion, equalizing opportunities, and stimulating entrepreneurship. Smart cities are not a static concept. This concept will also be remodeled, because we are not able to determine the path of technological progress and social implications that it will cause. Jeremiah Owyang made an attempt at such a slightly futuristic look. In the five-digit concept of the digital world of Jeremiah Owyang (2018), the sharing economy occupies the third position. The era of the Internet is the exchange of information in a one-sided way, in the 90s, it was called the dot-com era, which was ended by a deep economic crisis. The next era is social media and WEB 2.0, in which the users became the creators themselves, and marketers got tools to directly reach to customers. We are currently experiencing the third era – the development of the sharing economy, people have been given the opportunity to get what they need from themselves. The next era according to this author will be the era of the autonomous world. Currently, these technical solutions are in the testing phase. The third era may threaten some of the economic activities of the cooperation economy, because social support and sharing will be replaced by autonomous solutions, e.g. autonomous cars, artificial intelligence support for business and advisory services. The fifth era is the era of modern prosperity, in which the bodies and minds of people and their surroundings will be supported by advanced technology. Owyang thoughts, if they prove to be true in their part regarding the future, will mainly concern cities because we are observing globally upward trend in the number of their inhabitants.

Conclusions

The sharing economy and related services have a significant share in building cities in line with the smart city concept, in which technology is only a tool supporting the implementation of human needs, including the needs of the higher positions of Maslow pyramid. One might risk the thesis that in some way social services and activities will be substitutable and competitive for strictly technical solutions. One can imagine that instead of the sensor in the urban space, for example, the inhabitants themselves will be informed about the threat of smog, through a special application with geolocation (this is already happening in Poland). Modern technologies, ICT infrastructure and its services as well as communication platforms are complementary products for cooperation economics. The scope of cooperation economy will depend on traditional human resources and social capital in the city. This capital is stimulated by social media and economic activity related to the sharing economy.

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Cite this article as: Rudewicz, J. (2018). The role of services based on the sharing economy model in the Smart City 3.0 concept. *European Journal of Service Management*, 4 (28/2), 387–394. DOI: 10.18276/ejsm.2018.28/2-46.

EDUCATIONAL SERVICES IN THE SUBURBAN ZONE OF SZCZECIN (POLAND)

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION H75, I21, R53

KEYWORDS services, educational services, suburban zone, Szczecin

ABSTRACT The main objective of the study was to analyze the diversification of the potential of educational services of communes (NUTS 5) belonging to the suburban area of Szczecin, at all levels of general education (International Standard Classification of Education, ISCED 1, 2 and 3) in the 2016/2017 school year – primary, junior high school, and high schools. The research covered 19 communes forming the internal and external ring surrounding Szczecin. For this purpose, following measures of the potential of educational services were used: the number of schools, school classes, pupils and teachers' posts, as well as educational indicators, i.e. the number of pupils per school, the number of classes per school, and the number of full-time teacher's position per school. In order to determine the demand for educational services, a gross enrollment rate was applied to individual communes. The final result of the research is a synthetic map of the potential of educational services for the communes of the suburban zone of Szczecin.

Introduction

The system of general education in Poland is subject of constant changes. On 1 September 1999, a school reform was introduced, which transformed the two-stage system of education into a three-stage system that had been in force since 1968. The existing 8-year primary school (ISCED 1, 2) and secondary schools – high school (ISCED 3A), technical school (ISCED 3B), basic vocational school (ISCED 3C), replaced by a 6-year primary school

(ISCED 1), 3-year junior high school (ISCED 2) and high schools (ISCED 3A, 3B, 3C). Learning at the levels ISCED 1 and 2 was obligatory. The main assumption of the reform was to popularize and raise the level of secondary education. After graduating from middle school (ISCED 2), students could continue their education by choosing one of the upper secondary school types (ISCED 3): 3-year general high school (ISCED 3A), 4-year technical high school (ISCED 3B) 2- or 3-year school professional qualifications (ISCED 3C). Along with the reform, a system of external examinations was introduced at all levels of education. Despite the initial social opposition, from the perspective of 18 years of the duration of the reform, it can be said that in the majority it met the expectations set in it. It seems that the only serious mistake was the marginalization of vocational education (ISCED 3C). The presented analysis was carried out for ISCED level 1, 2 and 3 level schools without subdivision into subtypes A, B and C.

Starting from the 2017/2018 school year, the implementation of a new education reform has begun, which consists in gradual liquidation of junior high schools, restoration of 8-year primary schools (ISCED 1, 2), 4-year general secondary schools (ISCED 3A) and 5-year technical secondary schools (ISCED 3B), and transformation of basic vocational schools (ISCED 3C) into trade schools I (3-year) and II (2-year).

The uncontrolled development of the suburban zone of large cities (urban sprawl), including Szczecin, is a serious economic and social problem. The significant dynamics of social, economic and spatial changes in these areas is directly related to the desire to live in single-family houses with a garden or escape from the hustle and bustle and pollution of a large city. As a result, the suburban areas of Szczecin populate at a high rate (Rydzewski, 2005a, pp. 69–80; Rydzewski, 2005b, 52–60; Rydzewski, Smutek, 2016, pp. 153–165). Only in the commune of Dobra, the population in the years 2000–2017 increased almost three times (from 8620 to 22511 inhabitants), both as a result of migration from Szczecin and high birth rate.

In most of these areas, apart from areas designated for housing, they are not prepared for servicing such a dynamically developing population. This applies, among others education, which must provide places in schools for the increasing number of school-age children. Occurrence of a fairly poor educational offer in suburban areas forces many parents to bring their children to schools located in Szczecin and other communes, which causes daily shuttle migration. This leads to an increase in the intensity of individual transport, and thus larger traffic jams, deterioration of the environment, longer travel times, and consequently negatively affect family life.

Area and method of research

Delimitation of the suburban zone of Szczecin

The concept of a suburban area is not unequivocal and is defined differently, which leads to the use of various criteria in its delimitation (Marcinowicz, 2000, pp. 291–309, Rydzewski, 2005a, pp. 52–60; Rydzewski, 2005b, pp. 69–80, Konecka-Szydłowska, 2006, pp. 143–156). The number of papers on delimitation of suburban zones of big cities in Poland is also limited, which concerns in particular Szczecin. T. Rydzewski (2005a, p. 52) defines “the suburban zone is an area surrounding and showing close functional connections with the main urban center”. In this study, communes bordering with Szczecin (inner ring) and communes bordering the inner ring (outer ring) were considered as suburban zone. The so designated suburban zone of Szczecin consists of: 3 urban-rural communes (Goleniów, Gryfino, Police) and 4 rural communes (Dobra, Kobylanka, Kołbaskowo, Stare Czarnowo) – inner ring and 1 urban commune (Stargard), 3 urban-rural (Maszewo, Nowe Warpno, Pyrzyce) and 8 rural communes (Banie, Bielice, Osina, Przybiernów, Stargard, Stepnica, Warnice, Widuchowa) – outer ring. In total, 19 communes were analyzed (Figure 1).



Figure 1. The communes of the suburban zone of Szczecin

Source: own study.

Measure of the potential of educational services

The study applied a measure of the number of schools, school classes, pupils and teachers' posts at ISCED levels 1, 2 and 3. The study covered the school year 2016/2017, the last before the introduction of the new education reform. The source of data was the publication of the Statistical Office in Szczecin (*Województwo zachodniopomorskie...*, 2017) and the Local Data Bank (2018) of the Central Statistical Office in Warsaw. For practical reasons, the number of all teachers working at particular levels of education (full-time and part-time employees) has been converted into full-time, i.e. 18 teaching hours per week.

Educational indicators

Using the abovementioned measures, selected educational indicators were calculated (Herczyński, 2012, pp. 31–37). The number of pupils was related to the number of schools, the number of classes and the number of full-time teacher's position per school. In addition, to determine the level of satisfaction of the demand for educational services, a gross enrollment rate was calculated for individual communes, which determines the ratio of the number of all learners at a given level in a given area to the entire population of people in the age nominally assigned to this level of education living in this area.

A synthetic measure of the potential of educational services

In order to evaluate the potential of educational services in the suburban area of Szczecin in the 2016/2017 school year at all levels of general education (ISCED 1, 2, 3), the obtained indicators were divided into 3 groups, giving them a point value based on their statistical differentiation (better – 3 points, average – 2 points, worse – 1 point). The sums of points are a synthetic measure. It was presented on the map, where four classes were distinguished: the highest, high, average and the lowest potential of educational services.

Results

Primary schools (ISCED 1)

In the area of Szczecin's suburban area, in the school year 2016/2017 there were 86 elementary schools, with 978 school classes, in which 17,899 pupils was learning. Teachers were employed in schools, for whom almost 1,300 positions were prepared. The largest number of schools were characterized by the following communes: Police (13), Goleniów (12) and Stargard (11), whose share in the suburban area was almost 42%. Among rural communes, the largest number of primary schools was located in the following: Dobra, Kołbaskowo and Stargard (5 schools per each). The largest number of school classes (203), and thus also pupils (4,137), occurred in the city of Stargard, which in the case of school branches accounted for over 1/5 and pupils – almost 1/4 of the value of these measures in the scale of the entire suburban area. Also in the case of teachers' posts, the largest number of them were characterized by the Stargard urban commune. Among rural communes, the largest values of the number of school classes and pupils as well as full-time teacher's position were characterized by the following: Dobra and Kołbaskowo, located in the inner ring of the suburban zone of Szczecin. In both cases, such high values of these three measures are largely the result of the construction of new school facilities in Mierzyn and Przeclaw. The lowest rates were mainly found in schools from sparsely populated rural communes (Bielice, Osina, and Stare Czarnowo) and the commune Nowe Warpno, for whom the close proximity of Szczecin and Police is a competition.

In the school year 2017/218, in the suburban area of Szczecin, the only commune where there was less than 100 pupils per one school was Nowe Warpno, and namely 63.0. This was mainly due to the small population living in the commune area, and hence a small number of children aged 7–12. In addition, for the area of the Nowe Warpno commune, the gross enrollment ratio was one of the lowest in the zone (65.6%), as most children use school facilities outside the commune in Police and Szczecin. In addition, the Nowe Warpno commune was characterized by the lowest value of other indicators: the number of pupils per class (12.6) and the full-time teacher's position (10.0). Statistically, the largest primary schools were located in the municipality of Stargard, where there were more than 376 pupils per one school, considering the typical urban character of the commune. Among the rural communes, the highest value of this indicator was characterized by the Dobra commune (less than 277 pupils per school). Both communes had the most numerous classes, in which the number of pupils per class exceeded 20 persons as the only ones in the analyzed area. In addition, in the commune of Dobra for one full-time teacher's position there was the largest number of pupils in the whole suburban area (16.4). Although in the Dobra commune there were as many as 5 primary schools, they were significantly overcrowded, and it must be remembered that every third child aged 7–12 was transported to school facilities, as evidenced by the very low gross enrollment rate (62.8%). The lowest was recorded in the Stargard rural commune, in which almost 2/5 of children attended primary

schools in the city of Stargard and the nearby village commune Warnice, where the aforementioned coefficient reached the highest values, respectively 105.1% and 107.9%.

Junior high schools (ISCED 2)

In the Szczecin suburban area, in the school year 2016/2017, there were 46 junior high school institutions with 380 classes, attended by 7,625 pupils. Teachers were responsible for their education, for whom less than 630 positions were prepared. Only in urban-rural communes: Police (the largest number of junior high schools – 9), Goleniów, Gryfino and Pyrzyce and the Stargard urban commune, the number of junior high schools was greater than 1. In total, in all five communes there were almost 72% of all schools of this type. The only commune in which no junior high school was functioning was the Stargard rural commune. Analyzing the number of pupils, it can be seen that their largest population attended Stargard junior high schools, and the smallest to junior high schools in the following communes: Nowe Warpno (only 19 pupils) and Dobra (53 pupils). In the case of the Dobra commune, this may be a bit of a surprise, but taking into account the fact that the only municipal junior high school is located in Dołuje, which lives around 5% of the commune's population, parents prefer to bring their children to Szczecin. The largest number of junior high school full-time teacher's positions appeared in Stargard, and the smallest in the Nowe Warpno commune.

The Nowe Warpno commune, as in the case of primary education, was characterized by the lowest indicators of the potential of junior high schools. In Nowe Warpno junior high schools, only 19 pupils studied on three levels of education, which made an average of 6.3 pupils per class. In addition, there was only 4.5 pupils per one full-time teacher position. The majority of rural communes in the analyzed area were characterized by quite low values of these indicators (the exception was the Kołbaskowo commune). At the other extreme is the urban commune of Stargard, where the junior high schools with the largest number of pupils (284.6) and the largest school classes (22.5 pupils) were statistically located. The lowest comfort of work was provided by junior high school teachers in the Kobylanka commune, where there were 13–14 pupils per one full-time teacher. For the pupils, the most attractive the junior high schools were located in cities that in many cases provide a high level of education. The gross enrollment rate above 100% was held by the municipalities: Stargard (118.3%) and urban-rural Police (104.8%) and Pyrzyce (101.2%). The high gross enrollment rate for junior high schools located in the Stargard rural commune is largely the result of the lack of a junior high schools school in the area of the Stargard rural commune. The proximity of Szczecin and the location of the junior high schools in Dołuje was the cause of a very low gross enrollment rate for the Dobra commune. Only a little over 6% of the population of junior high school children living in the municipalities studied at junior high school.

High schools (ISCED 3)

In the case of high schools, we are dealing with young people, usually between 16 and 18 years old, which is why in this type of school, the location of this type of school does not matter, but most of all its teaching profile and reputation is of such importance. High schools in the suburban area of Szczecin were located only in larger towns constituting the capitals of urban-rural communes, and poviats (NUTS 4), i.e. Pyrzyce, Police, Gryfino or Goleniów, and in the Stargard urban commune, a capital of poviats as well. This last city is seen as the most important center of high school education in the analyzed suburban area. In Stargard there were 17 high schools of all types

(46% of all classes in the suburban area), in which there were 142 school classes (48% of all school classes for this level of schools in the suburban area). Nearly 3,800 pupils attended Stargard high schools (51% of the suburban area), over whom teachers were responsible for education, for whom almost 230 full-time teachers' positions were prepared (53% of all positions for high schools in the suburban area).

High school facilities in the suburban area of Szczecin were located only in urban (Stargard) and urban-rural communes (Goleniów, Gryfino, Police and Pyrzyce). The largest schools were in the Goleniów commune (over 347 pupils per school), while the smallest schools were in the municipality of Pyrzyce (less than 123 pupils per school). In all high schools, the classes had over 20 pupils, reaching extreme values in the Stargard urban community (26.6 pupils in the classroom) and the Pyrzyce municipality (21.8 pupils in the classroom). Although the commune of Pyrzyce was characterized by the least numerous classes, there were the highest number of pupils per one full-time teacher's position (20.3). In the remaining areas, the number of pupils per full-time teacher's position was significantly lower and ranged from 15.4 to 17.5.

Conclusions

A synthetic visual presentation of the potential of educational services in the suburban areas of Szczecin is shown in Figure 2. On the basis of this, it should be stated that the greatest potential of educational services is characterized by the Stargard municipality and the municipal-rural communes: Police and Goleniów. The poorest educational level is offered by municipalities located mainly in poorly urbanized areas – rural communes: Banie, and Kobylanka, rural commune Nowe Warpno and rural commune Stargard, in which due to the relatively underdeveloped educational offer, pupils mostly use school facilities located in nearby big cities – Szczecin,

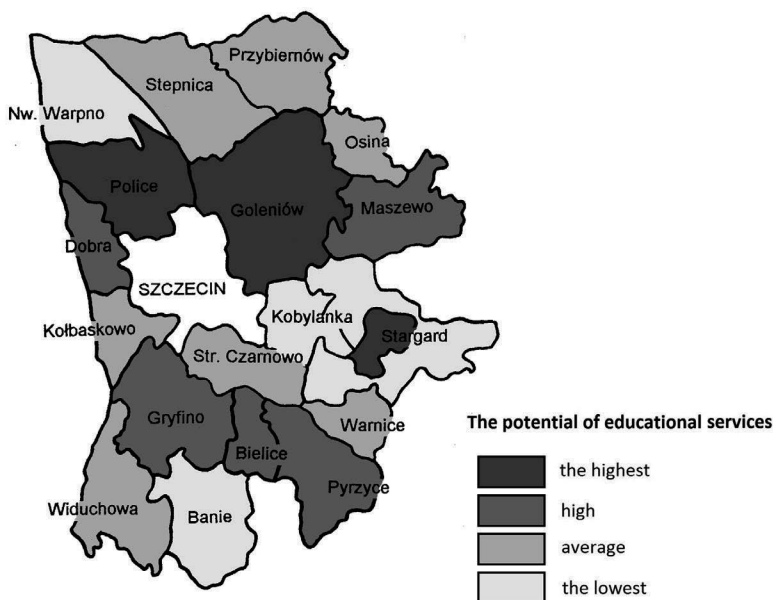


Figure 2. Potential of educational services for the communes of the suburban area of Szczecin in the 2017/2018 school year

Source: own study.

Stargard, Police, Goleniów, Gryfino or Pyrzyce. It should also be noted that the development of the suburban area of Szczecin in the educational sphere, to a large extent, does not keep up with the constantly increasing population of this area. It turns out, however, that neither the intensity of urbanization, nor the urban-rural nature nor the distance from a large or a large city clearly influence the level of universal educational services at the local level, but rather the administrative function of poviats' capital.

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Cite this article as: Rydzewski, T. (2018). Educational services in the suburban zone of Szczecin (Poland). *European Journal of Service Management*, 4 (28/2), 395–401. DOI: 10.18276/ejsm.2018.28/2-47.

NEW TRENDS IN SHAPING TOURISM PRODUCTS IN SPATIAL UNITS ON THE EXAMPLE OF SZCZECIN

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION L83, R11, Z33, Z38

KEYWORDS experience marketing, marketing in tourism, city, tourism product, storytelling

ABSTRACT The purpose of the article was to show new trends in the marketing of tourism products for cities. The article assumes that apart from typical tourist products addressed to a wide audience, new products are created in cities, based on the use of the idea of experience marketing, storytelling. These products have a unique character and are conducive to the diversification of the city's recreational offer, both for tourists and residents. The theoretical part of the article is based on a review of literature. It presents the essence of the tourist product of cities and new trends in the marketing of tourism products. In the empirical part based on the method of observation and personal interview, selected initiatives undertaken in Szczecin were presented, based on the use of the concept of experience marketing.

Introduction

Urban space is an important area for shaping tourism products. Based on endogenous potential (natural and cultural values, infrastructure and human resources), various types of tourism products have been and still are being created, and, when combined, create a comprehensive tourism product of cities. Increasing competition that concerns both travel companies and spatial units, as well as difficulties in creating a tourism product unique for the

city, make it necessary to observe changes in tourism consumption, as well as among other entities operating on the tourism market. Not only the behaviour of consumers on the market, but also the needs and expectations of tourists are changing. This necessitates changes in marketing activities undertaken by travel companies, organizations or local government units.

The article assumes that apart from the flagship tourism products of cities, which are addressed to a great number of recipients, there can be distinguished new products created in cities, which are not only a response to today's tourists' needs and new trends in marketing, but also an alternative to traditional products. These products are often created on the initiative of residents and enthusiasts, and are then changed into commercial products. More and more often, these products are perceived by city authorities as brand products that can constitute an important element of tourism promotion of the city, as well as an element of shaping the identity of residents. Although intended for tourists, they are also attractive for residents.

The article aims at indicating new trends in shaping tourism products of the area. Therefore, it is divided into three parts. The first part refers to theoretical issues related to the tourism product of cities, whereas the second part indicates new trends in the marketing of tourism products. The third part presents selected initiatives undertaken in Szczecin, based on the use of the concept of experience marketing.

Urban space and tourism product — theoretical considerations

The literature on the subject more and more often discusses the issues concerning the tourism product with regard to local government units. This is mainly due to the growing importance of the use of endogenous potential (especially values) in shaping urban space that is friendly and useful for both residents and tourists.

As indicated by S. Liszewski (2014, p. 38), the determinant of urban space is its organization, non-agricultural economic function, legal status and "urban community", i.e. organizational, functional and social characteristics. The urban space includes, among others, free time space, i.e. one in which all activities related to the development of free time take place, and excludes the so-called "home" space understood as a place of permanent residence (a specific address) (Włodarczyk, 2011, p. 15). These can be activities undertaken either by tourists or residents. Moreover, free time space may comprise occasional activities (e.g. visiting the museum, walking along the tourist trail) or routine behaviours (e.g. going to the cinema, restaurant, swimming pool). This area is divided into recreational and tourism spaces, with this division being justified, among others, by marketing reasons. This may also be related to activities carried out within the territorial marketing of cities, in situations when it becomes important to identify and meet the needs of many groups of stakeholders (residents, tourists, entrepreneurs, students or investors). In the case of recreational and tourism space, these needs are often similar or identical, and their satisfaction brings benefits to many recipients.

As indicated by B. Włodarczyk, important elements of the tourism space of the city are the natural and cultural heritage, infrastructure, and the man who not only uses this space, but also organizes and manages it (Włodarczyk, 2011, p. 17). Elements of the tourism space are the basis for creating the tourism product of the city, which is in line with the definition of a tourism product proposed by D. Buhalis. This author interprets the tourist reception area as a tourism product, which consists of individual tourist services and public goods such as natural and anthropogenic values as well as the socio-cultural environment of the area (Orfin-Tomaszewska, 2016, pp. 65–66).

Tourism product of an area is characterized by a set of features that are characteristics only for it. One of them is the spatial feature, which is the resultant of the geographical environment and heritage (historical and cultural)

of a given area, and which is closely related to the use of the product in a specific place. In addition to the spatial character of the tourism product of an area, its characteristic features are complexity and multiproduction. Mutual complementation of product elements proves its complementarity and the possibility of achieving synergy, thanks to the integration of activities of many entities creating the tourism product of an area (Orfin-Tomaszewska, 2016, p. 66). Such a product is comprehensive and covers the tourism offer of the area created by economic entities (travel companies) operating on the tourism market, but also by or with the participation of local government units or tourism organizations. It is a product understood on a macro scale, which includes goods, services and other offers delivered to service recipients (Mazurkiewicz, 2005, p. 83).

M. Marczak and J. Bożyszkowski (2009) present a different approach to the definition of an area as a tourism product, by stressing that the product of a tourist reception area should not be equated with tourism supply in a given area. In order to define the tourism product, elements of tourism supply should be subject to a common concept aimed at satisfying the needs of tourists. This means that the same area can offer several products addressed to various groups of recipients, and that one of the most important management problems is the proper selection of their assortment (Dziedzic, 1998, p. 23).

On the other hand, A. Panasiuk, points out that the tourism product of an area can be interpreted in two methodological approaches:

- a) subjective – developed by tourist destinations with existing (material as well as non-material) elements of tourism potential of an area and then presented on the market as an offer of that area;
- b) psychological – resulting from tourists' ideas and expectations concerning a tourist destination and supported by the selection of material and non-material elements enabling creating an individual offer for a specific tourist (Panasiuk, 2014, pp. 112–113).

Although the author indicates that the image does not constitute an element of the offer, it is undoubtedly an image of the perception of the product's identity. From the marketing point of view, both approaches should be considered important when creating a competitive tourism product of an area.

As underlined by K. Orfin-Tomaszewska (2016, p. 63; Żemła 2003, p. 22), the concept of a tourism product of an area results from the development of territorial marketing, which is nowadays an indispensable element of the activities of local government units. A. Niedzielska emphasizes that recent years have proven that marketing activities carried out by local authorities are necessary and support the implementation of important development goals of local governments (Niedzielska, 2017, p. 144). These include, among others, an increase in the competitiveness of a specific urban space. Furthermore, as previously indicated, urban space may comprise different types of tourism products, of both simple (such as accommodation services, pilotage or guiding) and a more complex nature (trail, event). Moreover, these can be both products offered by entrepreneurs, i.e. of a commercial nature; but also products initiated by associations or products of public and often non-profit nature offered by the city. Such products may also include unique goods that are characteristic for a given city, as well as products that are popular in their own way, and thus reproducible. The variety and richness of these products means that achieving success in the market requires following new marketing trends, regardless of the kind/type of product.

Selected trends in tourism marketing

The literature studies conducted for the purposes of the article indicate the growing interest of researchers in the subject of experience marketing.

When presenting the essence of experience marketing, it should be noted that this concept is relatively new to Polish literature and is most often understood as distinguishing the offer by creating experiences that accompany consumption. Among the main factors influencing its distinguishment, the most often mentioned factor is postmodernism, where consumption plays the most important role, with products, apart from their use values, becoming carriers of attitudes, lifestyles or beliefs. Furthermore, the ritualization of the consumption process is indicated as a premise, which shows that the modern consumer expects sensation, emotions and extreme experiences, and that the progressive diversification of the offer addressed to consumers makes products more adaptable to their expectations and needs. Moreover, the uniformity of product standards limits the possibilities of creating a competitive advantage in a given area, as well as is a factor indicating the need to look for new solutions for marketing product development based on experience (Brandys, 2016, p. 13).

The need to take the concept of experience marketing into consideration is also noticed in the creation and management of tourism products, especially tourist attractions. This subject has been investigated by, among others, A. Stasiak, B. Marciszewska, M. Żemła, A. Niezgoda, S. Bosiacki. Tourism is a field whose basic “product” is, by definition, experience. Thus, cultural institutions or travel companies transform into specific factories of emotions, sensations, thrills and memories (Żemła, 2017, p. 10).

For example, A. Stasiak (2015, p. 335) emphasizes that nowadays the consumption of goods becomes of secondary importance, while the importance of sensations and emotions increases. Moreover, A. Stasiak attempts to determine experience as a market offer (p. 335). He points out that experience is not a new phenomenon, as it has always existed as an involuntary, accidental, not fully realized and unplanned result of the customer’s contact with the company (service provider). Interactions between these entities leave specific, highly individualized traces in the client’s psyche. The trick is to give them the right shape and emotional appeal that is desired by buyers, as well as make them memorable. This is possible only in the case of events that engage an individual at the emotional, physical, intellectual and spiritual levels (Stasiak, 2015, pp. 335–336).

On the other hand, A. Niezgoda emphasizes the importance of the experience economy theory assumptions for travel companies. In order to become part of this new market, they must abandon the current thinking and behaviour pattern when designing and creating the tourism product. Instead of focusing on the functionality of the product, excessively taking care of the highest possible quality of services, etc., they should, first, assess the way consumers consume the product, including, in particular, the analysis of the experiences and satisfaction that may arouse in their minds. Consumers of the experience market want to spend their time as effectively as possible, primarily on products that provide a wealth of unforgettable experiences. During a trip, they want to experience as much as possible (Stasiak, 2015, p. 336; Niezgoda, 2013).

When referring to B. Pine and J. Gilmore (1999), A. Stasiak presents selected recommendations for the development of tourism products based on marketing experience, which include:

- a) organization of experiences around a specific topic – to facilitate the creation of a coherent, expressive, easily memorable image, and to distinguish oneself from the competition;
- b) striving to create positive impressions during every contact with the client;
- c) striving to eliminate negative impressions (including those that are contrary to the leading topic or just distract customers from it);
- d) creating multi-sensory products that affect all the tourist’s senses – the more involved senses, the stronger emotions and experiences, and consequently, a better-remembered experience, more vivid memories, etc.;

- e) preparing memorabilia related to the experience, which will enable longer preservation of undergone emotions, reliving moments from the past, the opportunity to recall memories and share them with others.

Application of experience marketing results in the so-called the “wow!” effect, which is a concept that is gaining more and more popularity in marketing practice. The term comes from English, where the word “wow” has several meanings: 1. hit, 2. great (sensational) success, 3. great (terrific) thing, 4. make a great impression, excite. However, it is used most often as an enthusiastic exclamation simultaneously expressing admiration, surprise and respect. Involuntarily uttered “wow” is the greatest compliment, a sign of the highest recognition and acceptance. In marketing, the “wow!” effect is understood as the state of the highest customer satisfaction, resulting from the extraordinary gratification with the purchase made and the benefits gained; surprise by an exceptional, above-average experience. When preparing an offer, it is worth knowingly planning the elements that will delight customers. The selected components of the tourism sector's offer, which may contribute to the unique and memorable experience of their clients, include both small, seemingly insignificant gestures and behaviours, as well as significant, additional goods and services (e.g. interpretation of heritage by a pilot or guide (storytelling), playing music, dressing up costumes, urban games (Questing), staging, personal contact with a service provider, interior design, surprises and gifts (Stasiak, 2015, pp. 342–344).

An example of the application of “experiences” in the city's marketing activities is Kraków. The City Council of Kraków in 2016 approved the Strategic Program of Promotion of the City of Kraków for 2016–2022 (Program Strategiczny Promocji Miasta Krakowa na lata 2016–2022), whose main promotional idea was expressed in the “Kraków gives meanings and moves minds” slogan. It was based on the so-called Emotional Selling Proposal (ESP) – an innovative concept in line with current trends in territorial marketing, which emphasize the evocation of specific emotions and the use of associations related to a given place. According to the assumptions of ESP, the modern consumer is less interested in the rational aspect, tourist attractions or heritage, and more in the sensations and emotions. For example, according to the new approach, the concept of communication related to the organization of a sporting event implies evoking specific emotions among the recipients, for example, emphasizing the importance of relationships, the spirit of fair play and free time, whereas activities related to festivals and cultural events supported by the city should be selected to show authenticity, the creators' freedom and imagination (Kamińska, 2017, pp. 10–11). Thus, the Strategic Program of Promotion of the City of Kraków includes a task dedicated to tourists named “Kraków Moves New Places”. The task brings together undertakings aimed at promoting new places, districts and products among tourists, in order to enrich and diversify the tourist offer of Kraków and intensify tourism outside the city centre itself (*Program strategiczny...*, 2016).

Another trend in marketing that can be used in promotion, arrangement and provision of tourism products is the so-called storytelling, also known as narrative marketing. It involves building the company's image (its products and services) by creating a story about it. Under the concept of the story lies the authentic plot that is devoid of marketing jargon, reveals the history of the brand or product, refers to the emotions of the recipient, as well as stimulates their imagination (Orlikowska, 2017, p. 18). Although the idea of “storytelling” is nothing new for guides, it should be recognized that the ability to use it influences the assessment and reception of tourist attractions. Story is the art of choosing words and metaphors to illustrate a certain idea or wisdom in a way that stimulates the imagination and arouses emotions. Passing on history and legends is a way of communication that has existed for centuries, becoming the foundation of cultural heritage. In the new dimension, it is a tool for learning, remembering, combining facts and understanding the context as a whole. Oral tradition help listeners

understand the motives of their characters' actions; it can inspire, motivate, activate, and stimulate creativity thanks to the emotional load contained in it. Storytelling encourages local narrators to pursue their own activities and search for ways to build interesting stories based on local tradition (Połucha, 2015, pp. 63–74). The example of the introduction of experience marketing to the tourism industry is the evolution of museums – from a place where heritage is collected and presented into a place providing specific experiences and active participation of visitors. Moreover, the role of the guide in cognitive tourism has undergone some changes. The modern tourist guide has to not only communicate the facts, but also interpret the encountered heritage. This comes down to explaining different meanings and dependencies by choosing original sites, directly experiencing them, using various media, as well as being emotionally involved (Kruczek, Kurek, Nowacki, 2010). The interpreter's job is to help tourists understand the meaning of a given place, its unique history and present time, as well as fully experience the visited area with all senses (Stasiak, 2013, p. 32), while providing tourists with unforgettable impressions, emotions and entertainment (Żemła, 2017, p. 12).

It should be noted that new forms of sightseeing are complementary to traditional tourist services, with the goals of using experience being:

- promoting and highlighting natural and historical-cultural heritage, showing values that are not noticed during traditional sightseeing,
- encouraging tourists to explore the surroundings by themselves,
- interactive sharing of information regarding visited places,
- learning about sites that are outside the marked trails,
- educating through active participation in organized events,
- enabling tourists to co-create a tourism product,
- involving a wide range of participants as a result of gamification (Połucha, 2015, p. 69).

Selected tourism products of “experiences” of Szczecin

For the purpose of this article, selected tourism products of the city were presented, whose concept of creation is based on the experience marketing, and which are at the initial stage of introduction to the tourism market of the city. The selection of products was purposeful. These are the “The PRL Trail” and “The Underground Trails of Szczecin”. The first product is a new venture that was created on the citizen's initiative, while the other has an established position on the Szczecin market and constitutes an offer of a travel company. Moreover, both products are unique and can be an alternative to traditional tourism products of the city.

“Szczecin on the PRL trail” is described by its author (Justyna Machnik guide) as a trail leading around Śródmieście (Midtown) (mainly Wojska Polskiego Avenue and Jagiellońska Street), whose aim is to present the Szczecin symbols of a bygone era – flavours, fashion, music, culture, industry. The trail is located a little bit further from the typical monuments and architecture that represent the socialist-realist style, as well as places where Paprykarz Szczeciński (Szczecin goulash) was being sold, big-beat was listened to, and people queued for clothes. Here, the dullness of the *Polish People's Republic* (PRL) mingled with entertainment and cultural animation. A particular attention is paid to mosaics and neon signs. The participants of the trail are guaranteed tastings, riddles and retro-prizes.

It is worth noting that the initiative required cooperation with many entities. It was noticed by the City of Szczecin, precisely by Żegluga Szczecińska Turystyka Wydarzenia Sp. z o.o.,¹ which included the trail in the Szczecin City Walk offer (Szczecińskie Spacerki Miejskie). The product was also noticed by the Marshal's Office of Zachodniopomorskie Voivodeship and was part of the Zachodniopomorskie Heritage Days 2018 program (Zachodniopomorskie Dni Dziedzictwa 2018). Moreover, the creator of the product cooperated with entrepreneurs that included, among others, Mark Invest – Kosmos cinema, Minifot photography studio, Pasztecik, Pizzeria Piccolo, ProMedia store, Bistro Rybne Seamor, Bistro Gruba Ryba by Seamor, Primo store, Stella hair salon, Ziemniak i Spółka and Szczecińska Agencja Artystyczna. However, it should be noted that the activities of these companies are associated with the traditional products of the city, which constitute the Szczecin brand (e.g. Pasztecik). The inhabitants of Szczecin and sales staff from the kiosk located on the trail – Mr. Marika and Renata – were also involved in the initiative, a fact that indicates individual character of the undertaking.

As it has already been mentioned, the product is in the phase of introduction into the Szczecin market, as the premiere of the trail took place in June 2018. Despite the short product life, its fan page on the social networking site Facebook is observed by 508 (as of 19.11.2018).

The interactive, innovative character of the product and interest in the trail are also reflected in press reports. The article of "Kurier Szczeciński" present a review of the trail, which focused on the beginning of the event with the sounds of big-beat; the opportunity to get to know the city from a typical tourist side; refreshments in the form of sweets and Szczecin goulash; visit to the iconic Pasztecik; opportunity to smoke "Popularne" cigarettes"; as well as presenting each gentlemen with a tie, because, as everybody knows, men in ties "make less fuss". The atmosphere of the previous era was also depicted by Justyna Machnik, a guide. Her handbag and suitcase were hiding many surprises, among others, entry tickets to the currently closed "Kosmos" cinema. The more diligent participants received prizes. For the correct answer to a difficult question, you could win a few rolls of grey toilet paper on a string or a small amount of money. "It turns out that everything is possible in Szczecin – you can even fill your pockets during a free walk!" (*Spacer krzepi*, 2018). The initiative was also mentioned in *Głos Szczeciński*, as well as in broadcasts of Radio Szczecin.

The other product, which refers to the heritage of the city, and whose today's concept is also based on experience, is the offer of Centrum Turystyki Magnolia company, named "The Underground Trails of Szczecin". This is not a new product, as it was included in Szczecin's offer in 2008. In 2009, the product received the POT (Polish Tourist Organization) certificate for the best tourism product in Zachodniopomorskie Voivodeship. The basic offer of "The Underground Trails of Szczecin" includes two routes that have been prepared for tourists in the largest civil shelter in Poland that is open to public (2.5 thousand m²). Its entire space was arranged in such a way so that it would reflect the life in a shelter, with numerous furniture, everyday objects, etc. placed all over it. In the shelter, visitors can follow one of two specially prepared trails. The "World War II" trail reconstructs the life in a shelter during air raids and presents the technique of building a shelter. The other – "Cold War" – presents the history of the shelter and everyday life during the Cold War period. It takes about an hour to visit each trail.

¹ Żegluga Szczecińska Turystyka Wydarzenia Sp. z o.o. is a company whose activities stipulate a public service obligation. The primary purpose of its operation is to perform tasks of the City of Szczecin. The company's tasks include administering wharfs owned by both the City of Szczecin and the company, as well as, among others, the provision of tourist-recreational and cultural services and port services for tourist and passenger units. The company also organizes events, fairs and promotional exhibitions.

The shelter is also an original venue for the organization of various events, such as concerts, theatre performances, as well as interesting integration events (www.polska.travel).

Observation of the functioning of the entity in the recent years allows noticing the continuous development of the offer. In addition to visiting the basic trails, the last year brought about an offer for small groups called "Sightseeing with a thrill", during which participants illuminate the route with flashlights. The company also offers the opportunity to use the so-called museum lessons. This year's offer is named "For the Glory of the Homeland 1918–2018". The aim of the lesson is to consolidate information related to the 100th anniversary of regaining independence by Poland through play and participation in the reconstruction of the appointment of Józef Piłsudski as the Riflemen *Legion* Commander. The exhibition is run by the author, whose family history is related the Polish Legions, and who, during the "lesson", is dressed up in the uniform of the captain of the 1st Brigade, Józef Piłsudski. During the visit, the participants are divided into groups and take part in a contest (an element of competition). Moreover, all participants are appointed riflemen, receive a nomination diploma, and at the end of the lesson, sing the songs of the 1st Brigade together. It should be added that the short version of the lesson is also a part of the basic version of the offer organized every Sunday at 12 (www.schron.szczecin.pl).

The offer of "Underground Trails" is very popular among both tourists and the residents of Szczecin. It is possible to participate in such events every day throughout the year. The product also has its own website, as well as promotes itself using the social networking site Facebook. The number of likes of the website is 4,296, which is a sign of interest in the product. In addition, information about it can be found on szczecin.eu, visit.szczecin, trip.advisor.

Conclusions

The considerations presented in the theoretical part indicate the main trends observed in tourism marketing. Marketing shaping a tourism product based on the use of the concept of experience, storytelling or creating an experimental sale proposal, is becoming an indispensable element of the marketing activity of all entities creating the tourism product of cities.

Szczecin is a city whose tourism product is diverse. This creates difficulties in defining the unique proposal to sell a comprehensive tourism product of the city. Nevertheless, the tourism policy entities of the city understand the necessity to follow modern marketing trends (*Żegluga Szczecińska Turystyka Wydarzenia Sp. z o.o.*, the Marshal's Office of Zachodniopomorskie Voivodeship, West Pomerania *Regional Tourism Organization*). In their activities, these entities support the initiatives of already existing and new tourism experience products – a fact which contributes to the promotion and development of the tourism product of the city, enhances the free time space for both tourists and residents, as well as builds the city's identity and, consequently, its desired image.

Despite not being the only tourism products in the city, the presented examples of tourism products of "experiences" of Szczecin, based on the concept of experience and storytelling, are evidence of the high awareness and sense of current trends, while creating a unique offer. Moreover, the success of the "Underground Trails of Szczecin" product, and its observed development, prove that this is the right direction of the marketing development of tourism product of an area.

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Cite this article as: Sawińska, A. (2018). New trends in shaping tourism products in spatial units – on the example of Szczecin. *European Journal of Service Management*, 4 (28/2), 403–411. DOI: 10.18276/ejsm.2018.28/2-48.

HOW TO CREATE INDICATORS IN BALANCED SCORECARD FOR A TRAINING COMPANY?

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION L10, M20, O30

KEYWORDS indicators, Balanced Scorecard, training company, management

ABSTRACT The Balanced Scorecard is both a tool for implementation and monitoring of the training company's strategy. Basically, it consists of four perspectives: internal development and innovation, internal processes, client and finance. The article aims to present the main aspects of a Balanced Scorecard in a training company, focusing mainly on the process of creating indicators. The theoretical part discusses both the essence and the four key areas of Balanced Scorecard. The practical part shows an example of Balanced Scorecard for a company providing training services along with a specification of indicators to measure the achievement level of strategic objectives.

Introduction

Nowadays companies in the training industry operating in a turbulently changing environment are trying to flexibly adapt their strategy to the expectations of diverse groups of stakeholders. Thus, they are looking for strategic tools that will simplify the processes of implementation and control of strategic options. The example of such a tool is

Balanced Scorecard, a significant signpost of a strategic implementation of the crucial goals in everyday company performance.

Method

The aim of the article is to outline the essence and areas of the Balanced Scorecard for the training company, including highlighting the process of creating indicators important in business practice. The author of the article uses the following research methods: in the theoretical part literature review; the practical part is based on author's experience in the construction of the Balanced Scorecard for enterprises in the training sector.

The essence of the Balanced Scorecard — literature review

The Balanced Scorecard, constructed by Robert S. Kaplan and David P. Norton, is a modern strategy implementation tool that facilitates translation of the company's vision, mission and strategy into operational goals for individual organizational units and employees, indicating appropriate measures of these goals, and providing full and complete information on the current situation of the company (based on financial indicators and operational measures). It can therefore be said that it is a kind of a bridge between the strategy and its implementation. It allows the strategic planner to include all the employees to develop strategies, to use their knowledge, experience and initiatives (Pierścioneck, 2003, pp. 52–53).

The Balanced Scorecard can be described as a management philosophy supporting the implementation of the strategy by: formulating of strategic goals; a system of measures of the effectiveness of activities and expected values of these measures and strategic initiatives taken in the event of deviations; linking every goal and measure with the expected financial result (Olszewska, 2008, p. 238).

Using a set of measures individually matched to each process and for each employee enables to monitor the implementation of tasks related to strategic goals on an ongoing basis. Consequently, the concept of the Balanced Scorecard fills the gap existing in management systems, consisting of a lack of consistency and regularity in the process of strategy implementation.

A properly prepared Balanced Scorecard should contain: causal relationships (each target should be in the cause-and-effect chain of the company's strategy); connection with financial results (each goal should lead to a specific financial result); the factor of future success (the card should contain not only financial measures but also indicators of future success and efficiency improvement); measures to stimulate change according to certain procedures, behaviours and processes (Olszewska, 2008, pp. 238–239).

To sum up, the Balanced Scorecard is more than just a system of measuring operational efficiency. Innovative enterprises use this tool as a strategic management system, supporting the implementation of the strategy in the long term. They use the system for measuring the efficiency of the BSC (abbreviation of Balanced Scorecard) in the following key management processes: developing vision and strategy; explaining strategic goals and measures and their integration with management systems; planning, setting goals and undertaking strategic initiatives; improving systems for monitoring the implementation of the organization's strategy and learning areas (Kaplan, Norton, 2001, p. 29).

Areas of the Balanced Scorecard for a training company

The Scorecard defines the decisive factors for the effectiveness of strategy implementation from four points of view, reflecting the key aspects affecting future success, which include (Kaplan, Norton, 2001, pp. 27–29):

Financial perspective, which focus on: monitoring the measurable, economic, effects of past activities, as well as evaluating the impact of current activities on future effects and profits.

Customer perspective, which allows strategic planner to look at the organization through the eyes of the customer. Factors such as the level of service quality and customer satisfaction can be taken into account in that perspective.

The perspective of internal processes, which allows for linking operational and innovative processes with the company's strategy and for assessing the effectiveness of these processes using performance indicators, costs, quality improvement or the number of missing items, etc.

The perspective of development and innovation concerns the company's infrastructure and employee training, allowing the assessment of intellectual capital management from the point of view of future challenges. This perspective includes: innovation indicators, expenditures on training (development) of employees, access to strategic information and information technologies.

The picture of each of the above areas is a set of certain measures/indicators. Balanced Scorecard is a measurement method that includes both an internal and external perspective, taking into account financial and non-financial measures as well as past, present and future goals. Each 'card' of the BSC represents one observed area. It is worth noting that the Balanced Scorecard provides some measurement-related capabilities that other strategic tools do not provide (Tiwana, 2003, pp. 349–350): direct connection of financial and non-financial value stimulators (profits, margins and revenues on the one hand, as well as customer satisfaction and employee competences, on the other); translating a vision into more feasible, realistic and concrete results-driven goals; the ability to define the status of the company at any time; built-in causal relationship that helps shape the e-business strategy; a sufficient number of stimulators and measures of results; the ability to communicate strategy throughout the company and to bind individual goals to the overall company strategy.

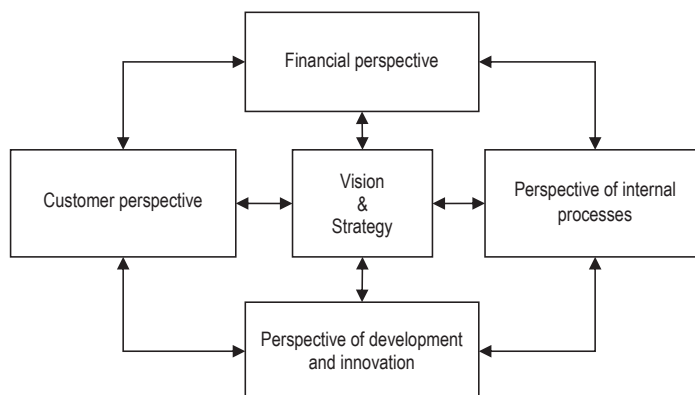


Figure 1. Diagram of the Balanced Scorecard

Source: Kaplan, Norton (2001), p. 27.

The type and number of areas covered in the Balanced Scorecard is a matter of choice. There are four areas in the original model, but nothing stands in the way of adding more (Kaplan, Norton, 2011, p. 34). The experts creating Balanced Scorecard, however, should have in mind to not exceed seven areas to avoid information overload and dealing with less important ones. Table 1 shows examples of the main areas of the BSC perspectives for the training company.

Table 1. Examples of the main areas of the Balanced Scorecard perspectives on the example of training company

Perspective of development and innovation	The perspective of internal processes	Customer perspective	Financial perspective
Continuous research of market needs and adjustment of the training company's offer to the needs of the market	Understanding the clients' needs – creating 'tailor-made' training services	Concentration on a specific customer segment	The impact of BSC on the ability to control company performance (sales volume, net profit, company's liabilities management)
Raising the qualifications of trainers	Comprehensive service for both individual and institutional clients	Acquiring customers via the Internet (promotion of a training company through social media)	Debt collection policy and granting discounts for regular customers of the company
Matching personal goals of trainers with company goals	Electronic system of payment control	Improving the profitability of sales of training services through their differentiation/adaptation to the client's needs	Changing the bonus system for trainers

Source: own study.

It is worth noting that the creating of personalized Balanced Scorecard is not easy. There is also relatively limited possibility of some modeling on other companies where they are also used (Tiwana, 2003, p. 351). Unfortunately, an individual approach is often used according to construct Balanced Scorecard in business practice, based on the method of trial and error in developing own solutions, often giving rise to the need to involve employees at all levels in the company.

The basic factors describing each of the perspectives included in the card are: general objectives of the company to be achieved in the long term; specific objectives of the business unit and measures of these goals, specified in a specific norm; milestones and sub-objectives of the organizational unit to be made in the next financial year; initiatives related to the implementation of set goals; determination of responsibility for the implementation of each of the initiatives and general goals and partial objectives included in the strategy (Falek, 2011, pp. 43–44).

Examples of indicators of the Balanced Scorecard for a training company

The implementation of the Balanced Scorecard as a strategic management instrument is a multi-phase and long-term process. The exact process of the implementation of the BSC depends both on the specification of the company providing training services and on the market segment on which it operates. The main goal of each training company is to achieve the highest possible growth rate and the ability to adapt flexibly to dynamically changing customer needs. It should be mentioned that the detailed strategic objectives as well as the objectives measures assigned to them may differ substantially, quantitatively and qualitatively, in relation to particular training companies, their specificity of functioning and the current market situation.

Table 2 presents an example of a Balanced Scorecard for a training company. Its main elements are: strategic goals in each of the perspectives, exemplary measures of these goals and planned and current results. In the

perspective of internal development and innovation, listed strategic goals have been formulated: development of training services and development of training programs for trainers. The main objectives of the internal processes perspective assume: the development of a new website and the use of social media portals (including Facebook) for contact with clients. The prospect of customer relations puts a special emphasis on increasing the volume and satisfaction of both regular and new customers. The whole of the above activities is to contribute to the increase in revenues from the sale of training services in the financial perspective.

Table 2. An example of a Balances Scorecard for a training company

Goal	Indicator	Planned result	Current result
Perspective of development and innovation			
Development of the training company offer	Development of a customer relationship management strategy	Yes Document until 30/04/2019	
	Inclusion of potential clients – service recipients in the co-creation of training services	Yes >2 training products co-created by customers every year	
	Establishing cooperation with new trainers	>2 new trainers a year	
	Introduction of new trainings to the offer	>5 new trainings a year	
Development of training programs for trainers	Number of trainings held by trainers covered by the professional skills improvement program	– minimum 4 trainings per year for each trainer	
	Number of trainers ending the above training with a good result	>80% of the total	
Perspective of internal processes			
Development of a new website by a newly employed IT specialist	Number of new visits to the site	>30 visits per week	
Using social networks (Facebook) to contact customers	Number of Facebook likes	>20 likes under 80% of total posts	
Perspective of customer			
New customers	Number of new individual customers	>100 per year	
	Number of new business customers	>30 per year	
Regular customers	Number of regular customers	>25	
	Increase in the number of regular customers	>10% per annum	
The level of customer satisfaction	The average assessment of a standard training (in the offer for over one year)	>4 (on a scale from 0 to 5)	
	Average rating of new trainings	>3.5 (on a scale from 0 to 5)	
	Average grade of the trainer	>4 (on a scale from 0 to 5)	
Perspective of finance			
Improvement of financial results	Increasing revenues from sales of training services	>5% per annum	

Source: own study.

The above-mentioned Balanced Scorecard is developed for the entire enterprise. It can be translated into objective cards for individual company departments or individual goals cards for each employee – trainer. In the process of designing a goal card, as in the construction of the Balanced Scorecard, those responsible for analyzing each of the perspectives should set strategic and detailed goals and measures of these goals, as well as the initiatives and responsibilities associated with them. Initiatives and related tasks that should be performed by the

department/employee of the company should be assigned to individual organizational departments/employees. The measures included in the card related to the implementation of strategic goals should relate to the measurement of past events – indicators of the past, as well as factors determining the future success of the company – future indicators (Falek, 2011, pp. 45). Table 3 presents an example of the sample card of goals for trainer X in the perspective of internal development and innovation.

Table 3. A sample card of goals for the trainer X in the perspective of internal development and innovation

Strategic goals	Measures	Period	Specific objectives	Initiatives	Responsibility
Develop-ment of training programs for the trainer X	Number of completed trainings – planned 4 per year	1 year	Development of competences and professional qualifications	<ul style="list-style-type: none"> – identification of training needs of trainer X, – individual development of the training plan by the trainer X, – participation in trainings 	Trainer X
	Average rating obtained from competence tests (>80% of total points)	1 year	Raising competences and professional qualifications	<ul style="list-style-type: none"> – participation in competence tests (each time after the training), – testing the acquired qualifications in the business practice 	Trainer X

Source: own study.

At the same time, it is significant to formulate a card of goals in the financial perspective for trainer X, as shown in Table 4.

Table 4. A sample card of goal in the financial perspective for trainer X

Strategic goals	Measures	Period	Specific objectives	Initiatives	Responsibility
Improvement of financial results	Value of the volume of revenues generated by the trainer X	1 year	Increase in sales revenues attributable to the trainer X	<ul style="list-style-type: none"> – increase in the number of trainings – improving the quality of trainings 	Trainer X

Source: own study.

Summarizing the assumptions of the BSC for the trainer – the planned objectives from the internal development and innovation prospects should enhance the implementation of the objectives from financial perspective and thus contribute to the achievement of general objectives for the entire enterprise providing training services.

Conclusions

When composing a set of indicators in Balanced Scorecard, it is worth preserving the amount of moderation – especially when the tool is used for the first time. The mistake made by many managers is to succumb to the temptation to create ‘artificial’ measures that look good in reports, but do not reflect the realities of business. A smaller number of indicators does not mean a worse tool, especially as the BSC, like any strategic management tool should be modified and updated over time. To sum up, the obvious conclusion is that if we are not sure whether a given indicator may be useful – next let’s not put it in the BSC, having in mind that in the process of change in the

tool we will have the opportunity to add it. A smaller number of measures also means easier monitoring system, especially if we do not use specialized IT programs.

An important advantage of BSC is the possibility of complete freedom both in terms of formulating perspectives and selection of measures allowing to assess the degree of implementation of the strategic goals of the training company. This allows strategic planner to create an individual, 'tailor-made' tool for the training company, adapted to its specifications and needs.

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Cite this article as: Smolska, M. (2018). How to create indicators in balanced scorecard for a training company? *European Journal of Service Management*, 4 (28/2), 413–419. DOI: 10.18276/ejasm.2018.28/2-49.

SOURCES OF KNOWLEDGE IN KNOWLEDGE MANAGEMENT IN CREATIVE SECTOR

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RECEIVED
ACCEPTED

10 December 2018
28 December 2018

JEL
CLASSIFICATION

D81, D83

KEYWORDS

knowledge, economic knowledge, management, process, creative sector

ABSTRACT

Nowadays, the concept of competitiveness refers not only to the development of material resources and their impact on the economic expansion of individual economic units or larger structures such as regions. In the literature, it is assumed that the current success of the socio-economic development depends primarily on intangible factors such as knowledge and innovation. These resources are determined by the value of human capital, therefore much attention is devoted to its proper development. It is claimed that the quality of this capital determined by the level of employees' knowledge, influences the expansion and development of both successful enterprises and those in a difficult market situation. Therefore, the main focus of this article is to determine the sources of information and knowledge used in the process of managing knowledge in companies and to identify the level of the awareness of entrepreneurs on the benefits that properly used knowledge brings to the organizations. In order to achieve the assumed goal, focus studies were conducted among the employees of enterprises from the SMEs sector located in the West Pomeranian Voivodship.

Introduction

Nowadays, knowledge determines the value of the organization, and a management of the company is more and more often related to undertaking investments in the development of information and communication technologies, software, networks, databases, etc. All these elements stem from knowledge, which along with other intangible assets of the organization influences its competitive position on the market. Therefore, organizations

building their market competitive position based on knowledge must take actions to assess existing intangible resources and identify both internal and external gaps in knowledge. Lack of activities in this area leads to a gradual loss of competitiveness by organizations. Therefore, knowledge is the superior causative factor of all decision-making processes and their cause and effect relationships in economies and organizations, especially those that base their activity on creativity. In order for knowledge to bring the expected benefits to the organization, it must be used wisely. However, the implementation of this process requires identification of sources of knowledge and ensuring access to them.

Knowledge management in the organization – introductory issues

Referring to contemporary concepts of both entire economies' and individual entities' development based on the proper generation of knowledge, it should be emphasized that intellectual capital is of decisive importance in this process. A properly educated employee, possessing specific knowledge and skills of its practical use, becomes a valuable source in the process of design and implementation of new solutions, including in the area of management methods and techniques. In line with the current economic trend, the ability to use the achievements of science and practice so that the company gains the high position in the market competition, should be focused on the issue of knowledge management (see authors: P. Drucker, P. Strassmann, P. Senge, Ch. Argyris, Ch. Bartlett, D. Leonard-Barton, E. Rogers, T. Alle, D. Engelbart, R. Acksyn, D. McCracken, T. Stewart, I. Nonaka, T. Hirotaka, I. Figurska., A. Sokół, I. Figurska). Knowledge management is of interest to representatives of various scientific disciplines (e.g. philosophy, sociology, management, economics, information technology and others.), therefore the one definition of KM that would be widely accepted in scientific and business circles has not been elaborated as yet. Selected definitions of knowledge management are presented in Table 1.

Definitions of knowledge management point to some common goals of this process, which include: knowledge creation, storing, dissemination and use, identification of valuable and useless knowledge, reducing the risk of losing knowledge and finally – raising the organizational advantage.

Table 1. Definitions of knowledge management

Author(s)	Knowledge management is...
1	2
M. Sarvary	a business process thanks to which companies create and put in practice their institutional or collective knowledge
K.M. Wiig	"[...] the systematic, explicit, and deliberate building, renewal, and application of knowledge to maximize an enterprise's knowledge-related effectiveness and returns from its knowledge and intellectual capital assets"
G. Probst	the amount of all initiatives and tools, thanks to which such processes as localizing, acquiring, improving, sharing and spreading, measuring and defining adequate knowledge sources within the company are supported
M. Armstrong	"[...] about getting knowledge from those who have it to those who need it in order to improve organizational effectiveness"
D.J. Skyrme	"[...] the explicit and systematic management of vital knowledge and its associated processes of creating, gathering, organizing, diffusion, use and exploitation"
P. Murray, A. Myers	a "collection of processes that govern the creation, dissemination and utilization of knowledge to fulfil organizational capabilities"
K. Dalkir	"[...] the deliberate and systematic coordination of an organization's people, technology, processes, and organizational structure in order to add value through reuse and innovation"
T. Davenport	"[...] the process of capturing, distributing, and effectively using knowledge"
O. Serrat	"[...] explicit and systematic management of processes enabling vital individual and collective knowledge resources to be identified, created, stored, shared, and used for benefit"

1	2
M. Levinson	"[...] the process through which organizations generate value from their intellectual and knowledge-based assets"
J. Girard, J.A. Girard	"[...] the management process of creating, sharing and using organizational information and knowledge"
I. Figurska	"[...] a set of systematic, organized, thoughtful and flexible actions aimed at knowledge resources (individual, collective and organizational; explicit and tacit) of the organization, taken and performed with the intention of achieving the objectives of the organization efficiently and effectively". These actions enable the organization to realize knowledge management processes as well as shape the environment conducive to KM, using for this purpose appropriate methods and tools

Source: Sarvary (1999); Wiig (2008); Probst, (2004); Armstrong (2006); Murray, Myers (1997); Dalikir (2005); Skyrme (2003); Davenport (1994); Serrat (2009); Skrzypek, Sokół (2009), p. 35; Levinson (2007); Girard, Girard (2015), Figurska (2012), p. 276.

Organizations present different approaches to knowledge as a resource, and knowledge management, which is why different KM strategies are distinguished in practice. These include (Paliszkievicz, 2007, p. 357):

- codification and personalization strategies (see authors: M.T. Hansen, T. Tierney),
- strategies of knowledge creation, transfer or protection (see authors: J.M. Bloodgood, W.D. Salisbury),
- leveraging, expanding, appropriating and probing strategies (see authors: G. Von Krogh, I. Nonaka, M. Aben),
- strategies for: comprehensive knowledge management, knowledge transfer and shaping of best practices, management of knowledge about clients, personal responsibility for knowledge, intellectual property management, innovation and knowledge creation.

Organizations that communicate by means of knowledge exchange benefit in the form of innovation. However, it is worth noting that knowledge generates value for business only when it is transferred in the organization. The reduction of risk, which consists in avoiding of existing knowledge losses, can be achieved through storage, dissemination or re-use of knowledge, which is undoubtedly another advantage of this process. In addition, knowledge management leads to increased productivity, improved cash flow, increased customer satisfaction with better products and services, improved employee satisfaction and improved financial results of the organization (Grudzewski, Hejduk, 2004, p.103).

However, in order to achieve the above-mentioned benefits, knowledge selection should be done. Nowadays, a rapid growth of information and the growing need to use the right knowledge are observed. This is possible thanks to knowledge management that enables the organization to function effectively in a knowledge-based economy.

Knowledge management should encourage employees to creatively develop knowledge resources in organizations by mutual consultation, brainstorming, scientific conferences, seminars programming and designing plans and projects, creating the conditions for sharing ideas, facilitating access to ideas, creating innovative workshops as well as transformations of hidden knowledge into explicit.

Analyzing the literature of the subject, it can be concluded that most enterprises implement knowledge management systems to reduce costs and optimize operations (Sokół, Figurska, 2017, p. 24). This is done mainly through two processes called structuring and making accessible. The first one consists in collecting and systematizing information. Structuring enables the company to organize information into groups of data, which subsequently can be easily processed and shared. The process of providing appropriate information to target groups is facilitated by information and communication technologies, such as database or Intranet. Unfortunately, the use of knowledge management systems to create development by introducing innovations is still uncommon practice in organizations. It is worth emphasizing that a modern approach to knowledge management systems enables a better

understanding of the competitive position that facilitates and /or shortens the process of implementing new products on the market. The purpose of such a system is to generate new knowledge and make it available to appropriate units of the company. Understandably, meeting such modernity requires IT infrastructure and other processes such as absorption or scanning. Absorption means acquiring knowledge and improving operational processes, while scanning means identifying, collecting data and associating it in such a way as to identify and solve problems that arise in the organization.

Typology of knowledge sources

In the knowledge based economy it is more and more difficult to locate knowledge that is necessary to make decisions and actions in the organizations. The important for the organization knowledge sources can be divided into internal and external. Internal sources are within the organization and include, among others, knowledge possessed by employees, all kinds of organizational documents, organizational culture as well as information and communications tools. On the other hand, external sources of knowledge are outside the organization, in its widely understood external environment. They include, inter alia: clients, suppliers, market, business environment, research centres, institutions of higher education, conferences, seminars, exhibitions, publications, consulting firms, knowledge brokers, market research agencies, business competitors, politicians, media, the Internet, best practices, employees' informal contacts and other sources (Skrzypek, Sokół, 2009, p. 35; Figurska, 2012, p. 276; Figurska, 2014, p. 211; Sokół, Figurska, 2017, p. 24).

What makes the important knowledge sources accessible is their presentation (visualization). The most popular methods of knowledge sources visualization include address books, communication networks, metaphors and knowledge maps.

Both internal and external sources of knowledge are important for the functioning and development of the organization. Internal knowledge sources create the organization's knowledge base and determine its ability to acquire and receive knowledge from the external environment. External sources of knowledge, in turn, play a critical role in the process of searching for new ideas and knowledge required for the emergence of innovation (Doloreux, 2015, p. 104).

Research on knowledge management in organizations conducted by I. Figurska in 2012 and 2016 brought interesting information about the use of internal and external knowledge sources by employees. Considering the internal sources of knowledge, respondents most often used the knowledge of their closest co-workers, superiors, as well as internal instructions, manuals and regulations. On the other hand, the least frequently used internal knowledge sources include: service operating as a discussion group, containing the employees' experiences and skills, a database of reports on tasks and projects and internal communication platforms. Considering external knowledge sources, the Internet, cooperating organizations, customers, professional publications, software and legislation were the most commonly used by the respondents, while knowledge brokers, politicians, market research agencies, patents, exhibitions and consulting companies were the least popular among research participants. The results of the study lead to the conclusion that generally respondents use internal sources of knowledge more often than external knowledge sources. What is more, they use these sources which are close, well known to them and easily accessible, rarely reaching for other, less accessible sources.

Summing up above considerations it should be noted that "there are many potential sources of knowledge, both in the organization and outside it. It cannot be clearly determined which ones (internal or external) are more

important to achieve a competitive advantage by the organizations. It seems that the best option is a wise, thoughtful combination of knowledge from various sources in order to create new knowledge and use it in an innovative way for the benefit of the organization and its employees" (Figurska, 2019, p. 35).

Sources of knowledge in knowledge management in the creative sector — research results

The article presents the scope of the issues of own research concerning knowledge sources. The research area of this article includes both theoretical (literature studies) and empirical (conducted focused group interviews) analysis of the issues discussed. The application of appropriate scientific methods and procedures has allowed to define the concept of knowledge and its sources as well as to identify its impact on knowledge management in organizations from the creative sector.

The following methods were used in the research: analysis, synthesis, induction and deduction. The conclusion for the conducted research has been the answer to the following research questions: Do knowledge sources and the way they are used affect the correctness of the development process of creative sectors? How to improve the process of acquiring and using knowledge sources in order to increase the efficiency of knowledge management in the creative sectors?

Consequently, the following hypothesis was put forward: Effective acquisition and use of knowledge from various sources in the process of knowledge management determines the development of creativity in organizations from the creative sector, and thus the number of generated innovations.

In qualitative research, focused group interviews (FGI) were conducted. In the framework of the discussion, phenomena related to the issue of knowledge sources and their impact on knowledge management processes in the development of the creative sector were analyzed.

Focused group interviews were conducted in November 2018 among people aged 23 to 35 years. The study group consisted of 10 people (including 4 women), and the participants of the discussion were employed in creative industries such as: advertising, media, industry, publishing.

At the beginning of the research, participants of the discussion were asked what they associate the creative sectors with? Therefore, they were asked to finish the sentence: *creative sectors are...* In response, the participants of the discussion stated that the creative sectors are those whose core activity is innovation and which are related to creativity.

Next, participants were asked to indicate industries belonging to the creative sector. They listed the following industries: IT, advertising, architecture, design, innovative industry.

In answer to the next question about the types of activities that are best developing in their place of residence and work, participants of the discussion said: programming and advertising.

Then the respondents were asked: Does knowledge (its possession, development and proper management) contribute to the creation of creative works and, consequently, to innovation? The answers were different, although there was a general agreement that in the case of creating innovations of a specialist nature, knowledge possessed by people creating such products or services is of fundamental importance. There would be no technological progress without knowledge.

According to some people, education may be of secondary importance, because having passion can lead to increased knowledge in a given field, which can lead to the creation of unusual creative works. On the other hand,

all persons participating in the discussion confirm that education ensures that the knowledge of people working in creative sectors is used in the process of creating innovations.

Another aspect of the study was an attempt to assess the need for introducing knowledge management systems in contemporary organizations. Study participants were asked the following questions: How organizations perceive the impact of effective knowledge management on processes occurring in them? What are the main factors motivating the organization to implement knowledge management systems?

The answers to the first question were very diverse. As the reason for the knowledge management implementation in the organization, the respondents listed: the increase in the value of the company, the desire to improve the competitive position of the company, acquiring new customers, better management of the company and improving innovation. The respondents indicated that proper knowledge management also allows for increasing the flexibility of the entity, improving decision-making processes, generating time savings, effective use of human, material and financial capital, reducing decision-making uncertainty, reducing the risk of losing knowledge.

The obtained answers lead to the conclusion that the most important benefit determining the organization's willingness to implement effective knowledge management systems is achievement of a competitive advantage by the firm, which enables its development and consolidates its market position.

However, in response to the question about factors motivating organizations to knowledge management systems implementation, the respondents mentioned: development of employees' competencies determining effective development of the company and its expected growth, introduction of innovations, acceleration of operations, improvement of customer satisfaction and reduction of operating costs.

Another area of analysis were IT solutions, which in recent years have been introduced in organizations in which the study participants work. In response to this question, only two persons pointed to the implementation of knowledge management systems using IT solutions in their organizations.

Then the respondents were asked where they source knowledge. Most of them indicated that the Internet, media and traditional sources are those knowledge sources which are the most often used by them. In addition, the press, conferences, bulletins, reports and brochures were recognized as effective sources of knowledge.

However, when asked about the use of incentives to share knowledge in organizations in which they work, the majority of respondents answered that they are not motivated to knowledge sharing.

The last issue raised in the discussion were the upcoming plans for the future regarding the implementation of integrated knowledge management systems (KMS) in organizations in which respondents work. Almost all of the respondents admitted that the implementation of KMS would be beneficial for the development of their companies.

Conclusions

Knowledge management is not yet another theoretical idea as it is evidenced by the fact that KM has already been successfully implemented in numerous organizations operating in various branches. However, a concept of knowledge management is still not well known. The implementation of knowledge management systems and the realization of KM processes (such as knowledge localization, acquisition, development, sharing, use and preservation) in organizations belonging to the creative sector encounters numerous barriers both in their internal structures and relations with the environment. However, in the light of the results of the conducted study, it can be stated that the majority of respondents are aware of the importance of using knowledge and the need to structure it, which is undoubtedly a positive trend. It is worth noting, however, that knowledge management in organizations

is still at the stage of implementing individual projects, and the activities aimed at the realization of KM processes are not sufficiently formalized.

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Cite this article as: Sokół, A., Figurska, I. (2018). Sources of knowledge in knowledge management in creative sector. *European Journal of Service Management*, 4 (28/2), 421–427. DOI: 10.18276/ejsm.2018.28/2-50.

EXPENDITURE ON PUBLIC SERVICES IN THE COUNTRIES OF THE EUROPEAN UNION. DETERMINANTS OF FISCAL POLICY AND PUBLIC GOVERNANCE

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION E62, H51, H52, P43

KEYWORDS fiscal policy, public services, countries of the European Union, public governance

ABSTRACT The aim of the article is to present the General Government expenditure on public services in the European Union countries, including selected aspects of fiscal policy and public governance. In order to achieve this aim, the various research methods are used. The data used in the study comes from the following databases: Eurostat, OECD, PORDATA. The survey covers the period of 2007–2016. We note that expenditure on public services is an important determinant of fiscal policy and public governance. The originality of the analysis presented in the article is intended to emphasize the importance of GG spending on public services such as health and education spending in the socio-economic development of the country.

Introduction

Economic policy, including fiscal policy, is an important element of the state's public policy. Decisions taken by economic authorities as part of fiscal policy are reflected in the socio-economic development of the country. The management of income and public expenditure is an important aspect of public governance. On the other hand, good public governance understood as the manner and effects of exercising authority largely contributes to

the socio-economic development of individual states. To assess socio-economic development, a synthetic measure called the Human Development Index (HDI) is used. In this study, we used the Spearman's rank correlation coefficient to check the strength of correlation between the socio-economic development index HDI and the GG expenditure on public services – health and education (which are an important component of the HDI index).

The aim of the article is to present the General Government (GG) expenditure on public services in the European Union countries, including selected aspects of fiscal policy and public governance. In order to achieve this aim, the various research methods are used, including a statistical analysis method. The study was conducted for the EU countries in the period between 2007-2016. The data used in the study comes from the following databases: Eurostat, OECD, PORDATA.

Fiscal policy and public governance in the area of public services

Fiscal policy is an important part of economic policy (Grzywacz, Jaźwiński, 2007, pp. 7–36, 122–152). Fiscal policy is primarily used to implement the basic tasks of the state. Through the effects of fiscal policy, the state's activity in terms of the level of meeting social needs is also assessed. Thus, fiscal policy can be defined as the government's use of taxation and public expenditure on the aggregate level of public activity using tax tools and public spending (James, Nobes, 1987, p. 305). The effective management of public funds is important in the context of shortages of public funds for the implementation of many public tasks, including the area of public services. The relative size of these shortages of public resources depends on the implemented or prospective program of socio-economic development with a specific role of public intervention and broadly understood social expectations in this area (Małkowska, 2015, p. 533).

In the context of public expenditure management in the economy, the doctrine of New Public Management, which derives from economic theory and is applicable in practice, is of crucial importance. The efficiency of Public Management was influenced by the transition from the administration doctrine based on rigid procedures and political influences (the so-called bureaucratic model) to management based on economic assessment of the effectiveness of operations and the use of market mechanisms (the so-called managerial model) on which the New Public Management is based (Marchewka-Bartkowiak, 2014, p. 1). Therefore, through the absorption of market mechanisms and management methods and techniques used in the private sector by the public sector, as well as through the administration's focus on effectiveness and economic efficiency, there should be some improvement in the quality of management under New Public Management. One of the important elements of the NRP model is the orientation towards public services and more specifically achieving excellence in the process of providing public services (Młodzik, 2015, p. 185).

Kopits and Symansky report that the implementation of, among others, fiscal rules in the Public Management process was related to ensuring the macroeconomic stability of the state and preventing the economy from expanding fiscal policy, which is to a certain extent related to the possibility of achieving long-term sustainable economic development. The fiscal rules should also help to support monetary policy, prevent fiscal expansion between various levels of government and, consequently, increase the credibility of the fiscal policy (Kopits, Symansky, 1998, pp. 5–8). The new Public Management as a different approach to the functioning of the sector, based on indicators, norms and economic size seems to be an appropriate direction in which the management process in the public sector is heading (Stawska, 2015, p. 19).

A significant modification that improves management in the public sphere is *governance* understood as public co-management, participatory public management or interactive management. The concept of *governance* involves the necessity of public entities transferring part of their competences to other entities and refers to cooperation between sectors and the necessity of trusting (Rhodes, 2007, pp. 1243–1264). According to Office for Public Management and the Chartered Institute of Public Finance and Accountancy (2005, p. 5) good governance means focusing on the organisation's purpose and on outcomes for citizens and service users as well as on developing the capacity and capability of the governing body to be effective.

Analysis of changes in expenditure on public services in the countries of the European Union

In Table 1 the European Union countries are presented according to General Government expenditure on education as percentage of Gross Domestic Product (GDP) in 2007–2016. We note that public expenditure on education in many EU countries has not changed significantly during the period considered.

Table 1. General government expenditure on education as percentage of GDP

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Austria	4.7	4.8	5.1	5.1	5.0	5.0	5.0	4.9	4.9	4.9
Belgium	5.5	5.7	6.0	6.0	6.2	6.2	6.4	6.3	6.4	6.4
Bulgaria	3.6	4.0	4.1	3.6	3.4	3.3	3.7	4.1	4.0	3.4
Croatia	4.9	4.8	5.1	5.6	4.9	4.9	5.1	4.8	4.8	4.8
Cyprus	5.9	6.3	6.7	6.9	6.7	6.3	6.8	6.0	6.0	6.0
Czechia	4.7	4.7	5.1	5.1	5.1	5.0	5.1	5.1	4.9	4.5
Denmark	5.9	6.1	6.9	7.1	6.8	7.0	6.9	7.1	7.0	6.9
Estonia	5.9	6.7	7.2	6.6	6.2	6.3	6.0	5.7	6.1	5.9
Finland	5.8	5.8	6.5	6.6	6.5	6.4	6.4	6.4	6.2	6.1
France	5.3	5.4	5.7	5.6	5.5	5.5	5.5	5.5	5.5	5.4
Germany	3.9	3.9	4.3	4.4	4.3	4.2	4.3	4.2	4.2	4.2
Greece	3.6	3.8	4.1	4.1	4.4	4.5	4.6	4.3	4.3	4.3
Hungary	5.5	5.3	5.4	5.5	5.1	4.7	4.6	5.1	5.1	4.9
Ireland	4.3	4.7	4.7	4.6	5.1	4.9	4.7	4.3	3.3	3.3
Italy	4.5	4.4	4.6	4.4	4.1	4.1	4.1	4.0	4.0	3.9
Latvia	5.6	6.3	6.7	6.2	5.9	5.7	5.7	5.9	5.9	5.5
Lithuania	5.3	6.1	7.2	6.4	6.1	5.8	5.6	5.4	5.4	5.2
Luxembourg	4.5	4.8	5.5	5.7	5.6	5.8	5.1	4.9	4.9	4.9
Malta	5.2	5.2	5.4	5.6	5.7	5.8	5.8	5.6	5.5	5.4
Netherlands	5.1	5.3	5.7	5.6	5.5	5.5	5.4	5.4	5.3	5.3
Poland	5.7	5.6	5.4	5.5	5.4	5.4	5.3	5.3	5.3	5.0
Portugal	6.2	6.4	7.0	7.1	6.6	5.8	5.9	5.7	5.1	4.9
Romania	3.8	4.3	3.9	3.3	4.1	3.0	2.8	3.0	3.1	3.7
Slovakia	3.5	3.5	4.2	4.2	4.1	4.1	4.0	4.1	4.2	3.8
Slovenia	5.9	6.1	6.6	6.5	6.4	6.4	6.5	6.0	5.5	5.6
Spain	4	4.2	4.6	4.5	4.4	4.2	4.1	4.1	4.1	4.0
Sweden	6.3	6.4	6.8	6.5	6.4	6.5	6.6	6.6	6.5	6.6
United Kingdom	5.8	6.0	6.5	6.5	6.0	5.7	5.1	5.0	4.9	4.7

Source: Eurostat (2018).

During the discussed ten years, the most was spent on education by such countries as: Denmark, Cyprus, Sweden, Slovenia, Belgium, Finland, Estonia and Portugal. In turn, among countries that in 2007–2016 spent relatively less on education are: Romania, Bulgaria, Slovakia, Greece, Germany and Spain. Among the countries that during the discussed period covered the highest GG expenditure on education, four countries out of seven mentioned were characterized by the highest GDP per capita (Denmark, Sweden, Finland and Belgium). The figures presented in Table 1 show that between the EU countries the differences occur in the field of socio-economic development of a given country.

In Table 2 there are figures concerning GG expenditure on health as percentage of GDP in the European Union countries. The level of public spending on health in individual EU countries also did not change significantly in ten years (changes fluctuated around 1 percentage point).

Table 2. General government expenditure on health as percentage of GDP

	2007	2008	2009	2010	2011	212	2013	2014	2015	2016
Austria	7.4	7.5	7.8	7.9	7.7	7.7	7.8	7.8	7.9	8.0
Belgium	6.7	7.2	7.7	7.7	7.6	7.9	8.0	8.1	7.6	7.4
Bulgaria	4.0	4.4	4.0	4.4	4.2	4.4	4.5	5.5	5.5	5.0
Croatia	5.8	6.2	6.3	6.2	6.2	7.2	6.5	6.6	6.4	6.5
Czechia	6.8	6.9	7.8	7.8	7.7	7.7	7.6	7.6	7.6	7.4
Cyprus	2.6	2.7	3.0	3.0	3.1	3.0	3.1	2.6	2.6	2.6
Denmark	7.7	7.9	8.9	8.6	8.4	8.7	8.5	8.6	8.6	8.6
Estonia	4.3	5.1	5.5	5.3	4.9	5.0	5.0	5.2	5.5	5.3
Finland	6.6	7.0	7.9	7.9	7.8	8.2	8.3	8.3	7.3	7.2
France	7.4	7.4	7.9	7.9	7.9	8.0	8.0	8.2	8.1	8.1
Germany	6.3	6.4	7.1	7.0	6.8	6.8	7.0	7.1	7.1	7.2
Greece	6	6.5	6.8	6.9	6.5	5.8	5.2	4.7	4.7	4.9
Hungary	4.9	4.9	5.2	5.0	5.1	5.1	5.0	4.8	5.2	4.8
Ireland	6.2	6.9	7.8	7.5	7.5	7.5	7.2	6.8	5.3	5.2
Italy	6.7	7.0	7.5	7.4	7.1	7.2	7.2	7.2	7.0	7.0
Latvia	4	4.3	4.6	4.2	4.1	3.9	3.7	3.8	3.8	3.7
Lithuania	5.2	5.6	6.7	6.9	6.6	5.9	5.6	5.5	5.8	5.8
Luxembourg	4.3	4.4	5.1	4.9	4.7	4.9	5.2	4.9	4.7	4.8
Malta	5.5	5.3	5.1	5.3	5.4	5.5	5.7	5.7	5.8	5.6
Netherlands	6.7	6.8	7.8	7.8	7.9	8.3	8.2	8.2	8.1	7.7
Poland	4.5	5.0	5.0	5.0	4.7	4.6	4.6	4.6	4.7	4.6
Portugal	7.1	7.2	7.9	7.4	6.9	6.5	6.4	6.2	6.1	5.9
Romania	3.6	3.7	4.1	4.1	4.1	3.8	4.0	4.0	4.2	4.0
Slovakia	6.1	6.7	7.2	7.2	6.8	6.8	6.8	7.0	7.1	7.4
Slovenia	5.8	6.1	6.8	7.0	7.1	7.1	6.8	6.5	6.7	6.7
Spain	5.7	6.0	6.8	6.6	6.5	6.2	6.2	6.1	6.2	6.0
Sweden	6.4	6.6	7.1	6.8	6.8	6.9	7.0	7.0	6.9	6.9
United Kingdom	6.5	6.9	7.7	7.7	7.4	7.4	7.4	7.5	7.6	7.6

Source: Eurostat (2018).

Among the countries in which the indicator of public expenditure on health in relation to GDP was the highest, we distinguish: Denmark, Belgium, Finland, Austria, the Netherlands, Czechia, Germany, Sweden, Portugal and the United Kingdom. Among these ten countries with the highest GG expenditures on health care in the European Union, eight of them belong to the group of countries with the highest GDP per capita. On the other hand, the countries that have incurred the least public expenditure on health care are: Cyprus, Latvia, Romania, Luxembourg, Hungary and Poland. Among the six countries listed with the lowest GG expenditure on health care, only Luxembourg belongs to the group of countries with the highest GDP per capita in the EU. Therefore, it is possible that GDP per capita is a factor influencing higher GG spending on health care.

Expenditure on public services and Human Development Index

In individual EU countries, expenditures on public services affect social and economic development. Expenditure on education and health are basic investments in human capital (Jaźwiński, 2017, pp. 132–134). Social and economic development is mentioned among the most important goals of the state and public policy. Various indices and measures can be used to determine a level of social and economic development, including development of the European Union countries. It is worth drawing attention to the Human Development Index HDI (see: United Nations Development Programme, 2016, pp. 52–53, 198–209). This index is used by the United Nations, including also the United Nations Development Program (UNDP), for international comparisons. Synthetic HDI comprises the following measures (United Nations Development Programme, 2016, p. 198): life expectancy at birth, expected years of schooling, mean years of schooling, gross national income (GNI) per capita. Expected years of schooling and mean years of schooling show educational achievements of the society. It can be adopted that a measure of life expectancy at birth generally illustrates the general health level of society. HDI value equal 1 may mean that the particular country has the best values of all mentioned variables.

It is worth determining the correlation strength between Human Development Index and expenditure on public services (as percentage of GDP) using the Spearman's rank correlation coefficient, which is considered a measure of the linear correlation and determined by the formula (Stanisz, 2006, p. 296):

$$r_s = 1 - \frac{6 \sum_{i=1}^n d_i^2}{n(n^2 - 1)},$$

where:

- d_i – difference (positive or negative) between the ranks of corresponding features (variables x_i and y_i),
- n – group size.

Table 3 presents the results of the correlation between HDI and GG expenditures on public services (as the sum of public expenditure on education and health). We note that in the analyzed period, the Spearman's rank correlation index indicates a moderate and significant relationship between GG spending on public services and the indicator of social development – HDI in a given country.

Table 3. Analysis of the correlation of Human Development Index and expenditure on public services as percentage of GDP

Years	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Correlation ratio	0.5004	0.5107	0.5364	0.6032	0.6463	0.7192	0.7248	0.6448	0.5584	0.6051

Source: author's own study based on Eurostat and United Nations Development Programme data.

In the discussed period, GG expenditure on education and health in the EU countries was significantly correlated with the indicator of socio-economic development – HDI. In 2007–2016, the highest value of the correlation coefficient was achieved in 2012–2013, which may indicate that the GG expenditure on public services (health and education) incurred in previous years contributed to the improvement of socio-economic development measured by the synthetic HDI indicator.

Table 4 lists the European Union countries that were characterized by the largest difference in the ranking between public service expenditure and HDI in particular years.

Table 4. Countries of the European Union with the biggest difference in rankings according to HDI and expenditure on public services

Year	Countries
2007	Portugal, Germany, Luxembourg, Ireland
2008	Portugal, Germany, Luxembourg, Ireland
2009	Portugal, Germany, Lithuania, Luxembourg
2010	Portugal, Germany, Lithuania, Luxembourg
2011	Portugal, Germany, Luxembourg, Lithuania
2012	Germany, Portugal, Luxembourg, Lithuania
2013	Germany, Croatia, Portugal, Luxembourg
2014	Croatia, Ireland, Luxembourg, Germany
2015	Ireland, Luxembourg, Germany, Croatia
2016	Ireland, Croatia, Luxembourg, Germany

Source: author's own study based on Eurostat and United Nations Development Programme data.

Countries most frequently appearing in Table 4 are: Germany, Luxembourg, Portugal and Ireland, which may indicate that in these countries public service expenditure is not significantly reflected in socio-economic development. This can also be explained by substituting public expenditure with private expenditure.

Fiscal policy and public governance in the countries of the European Union — selected examples

This part will present information on fiscal policy in the context of public governance in three selected European Union countries, i.e. Latvia, Poland and Portugal.

Since the restoration of independence, the Latvian economy has undergone significant structural changes, both in the sectoral structure and in the financial and labour markets. Latvia has historically been a country with low tax revenues. Tax-to-GDP ratio shows that between 2006 and 2015 Latvia's revenues from taxes and social contributions were below the EU average by about 10–11%, fluctuating between 28% and 29% of GDP (Eurostat data). In the last ten years, Latvia's general government expenditure has, on average, been 9.4% lower than the

EU average, but some public services consistently receive higher than average EU funding. For example, public funding for education has consistently been above the EU average levels. However, many public services such as health care and social protection have generally been funded below the EU average levels. In Latvia public funding for education is one of the largest in Europe, however, the quality of education is moderate, with no apparent improvement in trends. The solutions for a better quality of education for the same money can include: optimizing the network of secondary schools and saving budget funds; shift saved funds to teachers' remuneration; improving the model of secondary school management and improving the quality of teaching content.

Eurostat data clearly shows that general government expenditure on health care is low compared to the other EU member states, and even other states from the former Soviet Union economies. The public health care system of Latvia can make efficiency gains although low funding is a serious problem. A recent publication by OECD notes that approximately one-fifth of health spending in OECD countries could be used more efficiently (OECD, 2017). For example, an OECD review of Latvia's health care system suggests that more extensive use of data to improve the provision and quality of services would increase efficiency (OECD, 2016). Similarly, strengthening quality assurance mechanisms, and monitoring adherence to clinical guidelines could also help. However, Latvia's health system has to deliver effective public health measures with a comparatively limited amount of resources. In other words, more funds will have to be allocated to health care in order to improve public health indicators in line with Latvia's overall level of economic development.

In turn, public income in Poland is characterized by a high share of social security contributions and a low share of indirect taxes. The ratio of public finance sector's revenues to GDP was 38.6% in 2005, 40.8% in 2007, 38.1% in 2010 or 39.2% in 2017. In Poland, public expenditure is characterized by a high share of expenditure on social protection. Public spending on education in Poland is relatively high, including mainly higher education. In Poland, relatively little is spent on health care (including the low level of investment spending) and on general public services (public administration, interest on the public debt) (Sawulski, 2016a). The share of public spending in GDP reached 42.1% in Poland, in 2014. It was a lower level than the EU and OECD average and lower than the median for all the analysed countries (43.5%). Also the share of public expenditure in GDP in Poland (4.2 p.p.) was lower than the EU average. However, the financial crisis had a much lower impact on the GG spending in Poland in comparison to other EU and OECD countries (Sawulski, 2016b).

In Poland, public expenditure on education in relation to GDP amounted to 5.9% and 5.7% in 2006 and 2007, and then fell to 5.0% in 2016. Average public spending on education in the EU in 2016 amounted to 4.7% of GDP. In the case of public health expenditure, we note that in 2007 these expenditures contributed 4.5% of GDP, then increased in 2008–2010 to 5% of GDP. In subsequent years, starting from 2010, public expenditure on health in relation to GDP started to decrease to 4.6% in 2016 (on average in the EU, public spending on health in 2016 amounted to 7.1% of GDP). The economic authorities in Poland face many challenges regarding social policy. It should be emphasized that as part of the implementation of social policy, economic authorities should draw on the best European practices, invest in education and take into account global challenges such as the aging of the population and other challenges of globalization.

Although we can speak of a context of "Social Policy" in Portugal before 1974, it was with the Carnation Revolution and the so-called Democratic State (April 25, 1974) that Portugal entered the modern context of social policies. The governance of these social policies was based on a triangle of forces – broadening the reach of social policies to the general population, increasing associated public spending, and entry of complex figures where

private individuals were called upon to collaborate. The following paragraphs reflect on two of the major pillars on which this modernization of the governance of Portuguese social policies was based: education and health. In 1974, the percentage of public spending on education in Portugal's income was 1.4% (PORDATA, 2018). As a result of the focus on social policy as well as the other axes, this percentage was 6.2% in 2007, reached a maximum of 7.1% in 2010 and has since decreased to 4.9% in 2016 (OECD, 2017). This decline – between 2010 and 2016 – coincided with the structural adjustment policies that the Portuguese public accounts suffered due to the presence of the “Troika” of financing entities (IMF/European Commission/European Central Bank). Additional reasons are related to the decrease in a number of children entering the education system (decrease in the number of children in Portugal), as well as a decrease in the value of association contracts (present in private colleges financed by public money) and public universities that became foundations (with own financing).

In terms of results, the extension of social policy in this sector – coupled with other levers of economic development – promoted the positive evolution of certain indicators: – the illiteracy rate increased from 25.7% (1974) to 5.2% (2016); – the percentage of the population with complete secondary education increased from 2.8% to 118.4% in the same period (reflecting the arrival of immigrant students, mainly from the Lusophone countries); – the percentage of the population with higher education has increased from 11.8% to 50% in these four decades. In the same period – after 1974 – the percentage of public spending on health in Portugal's income was 0.2% (PORDATA, 2018). This percentage increased from 7.1% in 2007 to reach a maximum of 7.9% in 2009. Since then, it has decreased to 5.9% in 2016. This decline – between 2010 and 2016 – is explained in part by the aforementioned structural adjustment policies. Additional reasons are related to the expansion of the health network in the hands of private groups, the extension of public-private partnerships in the health sector and the change in the state's share of the price of medicines. In terms of results, the extension of social policy in this sector – without forgetting the role of the other levers of economic development – promoted the positive evolution of certain indicators: – the infant mortality rate has risen from 55.5 per thousand (1974) to one of the lowest in the world: 2.7 (2017); – life expectancy increased from 67.1 years to 80.8 years in the same period; – the number of annual deaths because of tuberculosis has decreased from 626 to 194 in the last 44 years.

Conclusions

As a result of the analysis, we note that GG expenditure on public services, including in particular health and education expenditures, is a significant determinant of fiscal policy, and also they are the main components of the measure of the socio-economic development – Human Development Index. In addition, spending on social services is also an important element of public governance. In this context, striving to conduct a sustainable fiscal policy additionally based on good public governance is reflected in higher indicators of socio-economic development. In the analyzed period, the Spearman's rank correlation index indicates moderate and significant correlation of GG expenditure on education and health in the EU countries with the indicator of social development in individual countries. Thus, the originality of the analysis presented in the article is intended to emphasize the importance of GG spending on public services such as health and education expenditure in the socio-economic development of the country. Particular European Union countries are characterized by various conditions regarding fiscal policy and public governance.

Acknowledgments

The article is a part of the research project financed by the National Science Centre, Poland (grant No. 2017/26/D/HS4/00954).

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Cite this article as: Stawska, J., Jaźwiński, I., Mourao, P.R., Rupeika-Apoga, R. (2018). Expenditure on public services in the countries of the European Union. Determinants of fiscal policy and public governance. *European Journal of Service Management*, 4 (28/2), 429–437. DOI: 10.18276/ejsm.2018.28/2-51.

THE ANALYTIC HIERARCHY PROCESS AHP FOR BUSINESS INTELLIGENCE SYSTEM EVALUATION

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION C8, O12, O32

KEYWORDS AHP, multi-criteria methods, business intelligence, information systems, ICT

ABSTRACT The aim of the article is a presentation of the report of the latest studies carried out at the Faculty of Management and Economics of Services (University of Szczecin, Poland) on analyzing the quality level of two business intelligence system (Power BI and Tableau Public). Analysis was based on the multi-criteria analytic hierarchy process AHP method, a tool that is used for determining the main criteria of BI system evaluation. By structuring the problem based on the hierarchy, it is possible to better understand the level of quality, the criteria to be used and the alternatives to be evaluated. The proposed research concept can be used to analyze business intelligence problems within the framework of specific subjects, such as system quality, quality of analysis, data cleaning and data connectors, visualization etc. Assuming a proper (the best description of the nature of BI systems) selection of descriptive characteristics and transforming them into real determinants, the AHP concept can be used to improve decisions on quality issues in BI system evaluation.

Introduction

One of the key problems related to the development of civilization in the 21st century concerns the proper use of available information and converting it into useful knowledge. For managers and economists, the most important issue is the selection of such data analysis tools that will enable the use of the analysis results to make rational decisions and gain a competitive advantage on the market. One of the solutions that allow to carry out in-depth

research and analysis of business development opportunities are business intelligence tools. As a reminder, there are many definitions of BI systems (Ranjan, 2009, p. 34, Hashmi, 2006, p. 113, Nedelcu, 2015, p. 345, Muntean, 2012, p. 192), but for the purposes of this study, it is assumed that the concept of business intelligence concerns the collection and management of information to identify associations between key elements of the enterprise, enabling rational decisions based on reliable and up-to-date analyzes. In other words, business intelligence is “the capability of the organization or company to explain, plan, predict, solve problems, think in an abstract way, understand, invent, and learn in order to increase organizational knowledge, provide information to the decision process, enable effective actions, and support establishing and achieving business goals” (Wells, 2008, p. 67).

This outlined perspective indicates the need for a qualitative assessment of specific components at all levels: from the economic operator’s strategy, through the timeliness of information, to the assessment of the quality level of the systems and tools. Because the issue of assessment is closely related to the problem of measuring the identified factors that determine individual quality areas, there is a need to build a model based on the appropriate selection of existing methods that can be used in assessing BI tools. The choice and adaptation of methods is subjective and remains the responsibility of the researcher analyzing a specific object in terms of quality assessment and measurement.

In the literature on the subject, many theoretical models of quality assessment and their application in the form of analytical methods and techniques can be found: the evaluation of quality systems based on the SERVQUEL and SERVPERF methods (Cronin, Taylor, 1994, p. 23; Stecyk, 2016, p. 232), as well as methods based on IT quality level assessment and user satisfaction models, such as the comprehensive assessment model (DeLone, McLean, 2003, p. 98); satisfaction assessment model and key system dimensions (Cai, Jun, Pham, 2007, p. 17) and a model of system quality measurement and user satisfaction (Doll, Torkzadeh, 1988, p. 39).

The second group of tools that can be used for solving decision problems are multicriteria methods. The best known are PROMETHEE I and II, MAPPACC, PRAGMA, artificial neural networks (Diech, Korbicz, Rutkowski, Tadeusiewicz, 2000, pp. 45–88) or the AHP (analytic hierarchy process) and ANP (analytic network process) methods (Saaty, 2002, p. 56). The aim of the article is to use the multi-criteria analytic hierarchy process method (AHP) to evaluate two business analytic framework, such as Microsoft Power BI and Tableau Public, according to the adopted criteria.

Characteristics of the analytic hierarchy process method AHP

The AHP method enables the practical application of a multi – criteria decision-making concept to a given research problem. It was developed in the seventies of the last century and has, so far found application in such areas as economics, management, transport, politics, education, medicine, technology, etc. The main assumption of the AHP method is the relative scale of assessments/priorities made using reversible pairwise comparisons for both countable and uncountable criteria. Figure 1 presents a model view of the AHP method, which consists of the following stages:

1. Determination of the main objective (the purpose of the study, e.g. selection decisions, determination of priorities, etc.).
2. Selection of the basic criteria (if the researcher deems it valid also sub-criteria) according to which the given problem will be analyzed (C1–C4).
3. Selection of alternatives (solutions), which will be assessed according to the adopted criteria (A1–A3).

4. Conversion of the adopted factors to the numerical form, using the fundamental scale 1–9, and creation of a square pairing matrix.
5. Creation of a normalized matrix on the basis of priority vectors and calculation: the largest own size of the matrix λ_{\max} , the consistency index C.I. (responsible for the lack of consequences of comparisons) and the consistency ratio C.R. (responsible for the coherence of comparisons in pairs).
6. Calculation of local priorities (according to points 4 and 5) for alternatives to each criterion.
7. Optional performance of the sensitivity analysis, giving the answer as changes in the weights assigned to individual criteria, may affect the final result.

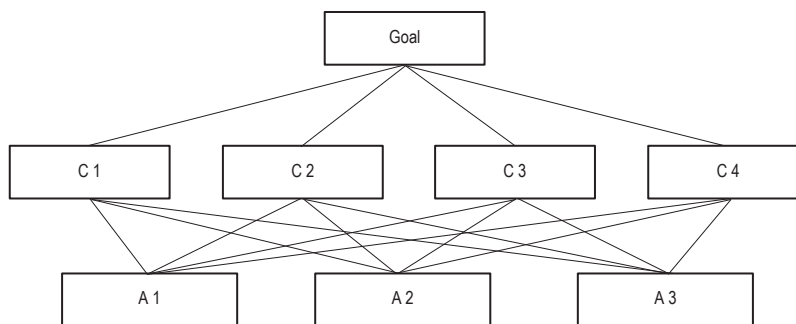


Figure 1. Decision hierarchy in AHP method

Source: Saaty (2002).

An important element of the method is the fundamental Saaty scale from 1 to 9, used to assess individual criteria and alternatives, which allows the application of expert knowledge and experience of the decision maker (or group of decision makers). Its main purpose is to indicate the number of times a specific element outweighs another in relation to the criterion being assessed. Table 1 presents the main assumptions of the discussed scale.

Table 1. The fundamental scale for pairwise comparisons

Intensity of Importance	Definition	Explanation
1	Equal importance	Element a and b contribute equally to the objective
3	Moderate importance of one over another	Slightly favor element a over b
5	Essential importance	Strongly favor element a over b
7	Demonstrated importance	Element a is favored very strongly over b
9	Absolute importance	The evidence favoring element a over b is of the highest possible order of importance
2, 4, 6, 8	Intermediate values between the two adjacent judgments	When compromise is needed. For example, 4 can be used for the intermediate value between 3 and 5

Source: Saaty (2002).

The basic task of experts in the AHP method is to make reversible comparisons in pairs between selected criteria, for which $a_{ij} = 1/a_{ji}$ and $a_{ii} = 1$. Expert judgment is entered into a square pairing matrix ($n \times n$) $A = [a_{ij}]$, in which it performs $n(n-1)/2$ of these comparisons. The consequence of this is a pairwise comparison of each criterion using the fundamental scale 1–9 and assigning the inverse of the evaluation for the second element. In the case of expert group evaluations analyzing a specific decision problem, the geometric mean of all expert assessments should be used to calculate the final assessment. An example of a pairwise comparison matrix is shown in Table 2.

Table 2. An example of pairwise comparison in the AHP method

	C1	C2	C3	C4
C1	1	7	1	2
C2	1/7	1	1/5	1/3
C3	1	5	1	1/9
C4	1/2	3	9	1

Source: own elaboration.

The next stages of using the AHP method are based on the calculation of a normalized matrix for selected criteria and the largest own size of the λ_{\max} matrix. The author of the method proved that pairwise comparisons are all the more consistent, when the λ_{\max} value is similar to the number of matrix elements n . On this basis, the calculation of the C.I consistency index was proposed, according to the formula:

$$C.I. = \frac{\lambda_{\max} - n}{n - 1}$$

and consistency ratio C.R.,

$$C.R. = \frac{100\% \times C.I.}{R.I.},$$

where $R.I.$ is a random consistency index, generated from several thousand matrices and proposed by the author in the form of Table 3.

Table 3. Consistency indices for a randomly generated matrix

n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
R.I.	0	0	0.52	0.89	1.11	1.25	1.35	1.40	1.45	1.49	1.52	1.54	1.56	1.58	1.59

Source: Saaty (2002).

It is assumed that the value of C.R. for matrix (3×3) and (4×4), should be adequate accordingly, less than or equal to 5% and 8%, while for larger matrices it should not exceed 10% ($C.R. \leq 10\%$). In that case consistency ratio C.R. is accepted, and the comparisons made are considered consistent. If the number of 10% is exceeded by the C.R. the criteria evaluation should be repeated in order to get rid of the incompatibility of comparisons in pairs. The next stage of the AHP analysis is the application of the same analytical technique to the sub-criteria

(if identified), and next, to the proposed alternatives, which will allow determining the priorities within the adopted hierarchical structure.

Application of the AHP method to evaluate business intelligence system

Based on the concept of the AHP method, the following preliminary assumptions regarding the levels of the decision hierarchy to assess two business intelligence systems were adopted:

Level 1. Main goal of the analysis – evaluation of selected BI tools.

Level 2. Criteria – interface (I), simple analyzes (SA), in-depth analyzes (IDA), data cleaning (DCL), data connectors (DCN), visualizations (V), interactivity and storytelling (IST), sharing and publishing (SP).

Level 4. Alternatives - a comparison between Microsoft Power BI and Tableau Public.

Table 4. Normalized matrix and weights for selected criteria

	I	SA	IDA	DCL	DCN	V	IST	SP	Weight
I	0.04	0.05	0.05	0.02	0.02	0.04	0.01	0.04	0.03
SA	0.19	0.26	0.33	0.23	0.19	0.36	0.13	0.12	0.23
IDA	0.27	0.26	0.33	0.40	0.31	0.36	0.40	0.35	0.33
DCL	0.12	0.07	0.05	0.06	0.19	0.04	0.04	0.04	0.07
DCN	0.12	0.09	0.07	0.02	0.06	0.04	0.13	0.12	0.08
V	0.12	0.09	0.11	0.17	0.19	0.12	0.22	0.19	0.15
IST	0.12	0.09	0.04	0.06	0.02	0.02	0.04	0.12	0.06
SP	0.04	0.09	0.04	0.06	0.02	0.02	0.01	0.04	0.04

Source: own elaboration.

The basic problem in the analyzed study is the identification of key criteria determining the quality level of BI tools. The initial analysis of the issue made it possible to identify 13 major determinants, which were verified by using a combination of heuristic methods, such as the method of concepts transferring, the definition method, the incompetence method, and the analogy method. In this way, the original list was limited to 8 factors and formed the basis for building a matrix of assessments in pairs. In the next stage, the values in the columns were summed up and the matrix was normalized by dividing all the matrix values by the sum of the relevant column. Next, the weights of the selected criteria were calculated (the arithmetic mean for all rows of the normalized matrix, Table 4).

In order to calculate the value of λ_{\max} , the product of the weight vector and the non-normalized score matrix in pairs was used, which gave the possibility to calculate the sum for particular rows of the new matrix, which were then divided appropriately by the weights from the standardized matrix. The arithmetic mean of the obtained results gave the required value of $\lambda_{\max} = 8.87$.

In the next stage, the consistency index C.I. = 0,1237 was calculated, as well as the consistency ratio (for $n = 8$, R.I. = 1.40) C.R. = 0.0884 (8.84%). According to the adopted assumptions, the C.R. can be accepted (it is less than 10%), which means that the comparisons made within the accepted comparison criteria are consistent.

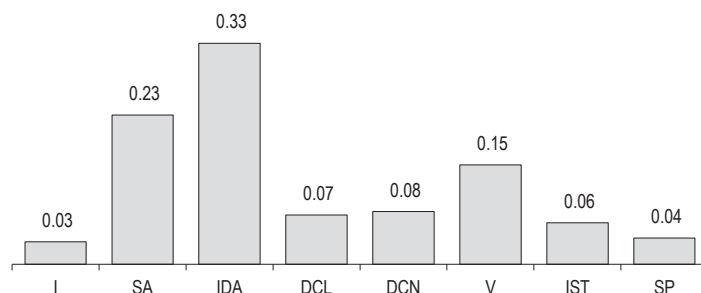


Figure 2. Weights for selected criteria in the evaluation of BI systems

Source: own elaboration.

At this stage of the analysis one can conclude about the importance of individual criteria for decision-makers to assess the evaluation of business intelligence systems. The most important criterion in this study is the in-depth analyzes (IDA = 0.33) and simple analyzes (SA = 0.23); the least important are the interface (I = 0.03) and tools for sharing and publication (SP = 0.04). Figure 2 presents weights for selected criteria in the evaluation of BI systems.

The next stage of the analysis is the calculation of the so-called local priorities for selected alternatives (Power BI and Tableau) in relation to the eight selected criteria. As the analytical technique has been presented in relation to the level of criteria, the method of calculating local priorities is presented only for the most important criterion, in-depth analyzes (Tables 5–6). The final results for other criteria are shown in Table 7.

Table 5. Comparison of alternatives with regard to the IDA criterion

In-Depth Analyzes	Power BI	Tableau
Power BI	1	3
Tableau	$1/3 = 0.33$	1
Sum	1.33	4

Source: own elaboration.

Table 6. Local priorities for the IDA criterion

In-Depth Analyzes	Power BI	Tableau	Priorities
Power BI	0.7500	0.75	0.75
Tableau	0.2481	0.25	0.25

Source: own elaboration.

The construction of the eight matrix for each criterion and two alternatives (Power BI and Tableau Public) made it possible to calculate local priorities for each criterion. Then, weighed priorities (the product of local priorities and criteria weights) were calculated, which consequently enabled calculating the results of final preferences (sum).

Table 7. Local priorities for all the criteria

	I	SA	IDA	DCL	DCN	V	IST	SP	
Weight	0.03	0.23	0.33	0.07	0.08	0.15	0.06	0.04	Sum
Power BI	0.01	0.08	0.25	0.05	0.06	0.04	0.01	0.02	0.51
Tableau	0.02	0.15	0.08	0.02	0.02	0.11	0.05	0.02	0.48

Source: own elaboration.

Conducted multi-criteria analysis using the analytic hierarchy process method (AHP) gave the answer to the question about the quality level of two business intelligence systems (Power BI and Tableau Public), assessed against each other and against eight selected criteria. The results indicate a slight preference for Power BI (51%) towards the Tableau Public (48%). In addition, the conducted analysis indicated the level of significance of selected criteria and may be a starting point for further, in-depth analyzes, eg. by performing a sensitivity analysis and changes in the weightings of individual criteria against each other.

Conclusions

To sum up the above considerations, it should be noted that the adoption of specific methodological assumptions in relation to the problem under consideration took into account all the difficulties and imperfections of the method (complexity of the problem, lack of universal methods, the problem of accuracy and reliability of criteria selection and evaluation, etc.). The above statement is in line with K. Popper's thesis: For the empirical method, it is characteristic that the system under review is available for falsification in all imaginable ways. The purpose of this method (the methods of overthrowing) is not to save the life of unserviceable systems, but rather to throw them all into the struggle for survival and to choose the one that is the best match (Popper, 2002, p. 121). The outlined perspective indicates the necessity of continuous improvement of methods and models used to measure and evaluate the IT systems, in order to understand the impact of technology on other spheres of social and economic life.

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Cite this article as: Stecyk, A. (2018). The analytic hierarchy process AHP for business intelligence system evaluation. *European Journal of Service Management*, 4 (28/2), 439–446. DOI: 10.18276/ejsm.2018.28/2-52.

APPROACHES FOR MONITORING THE LEVEL OF PROVIDING MUNICIPAL ADMINISTRATIVE SERVICES ELECTRONICALLY (UKRAINIAN CASE)

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION H75, L86

KEYWORDS municipalities, administrative services, e-government, e-administration, monitoring, assessment

ABSTRACT In the article several ways for creating methodology of monitoring e-government progress and perspectives on local level is analysed. This article seeking to review and contextualize the wealth of e-administration research in post-communist countries. On the basis of evolving monitoring practices some recommendations are proposed on how to improve the municipal e-services assessment quality.

Introduction

Municipalities increasingly active role during the time of building informational society patterns has drawn further attention to e-governance initiatives on regional and sub-regional levels. The crucial question for both academic and policy-making communities is: are local e-government monitoring tools for post-communist countries adequate for measuring progress in building truly effective, responsive and accountable local self-government?

Substantial progress in Ukraine towards higher levels of e-government development was achieved not only by launching a single state portal of administrative services or introducing e-procurement system ProZorro, but also due to establishing e-government on regional and local levels. Social transformation with strong demand on the development of horizontal links between the state and its citizens lead to such efforts in developing e-government tools.

Another critical issue implementation of the regional or municipal programmes and projects for e-services development. Such activity is possible if there is a relevant management system with relatively high level of maturity. E-government development should be accompanied by formation of a relevant administrative culture that can facilitate effective implementation of e-administration projects.

Before appropriate answers are found, lingering challenges must be addressed. First, what is meant by municipal e-government? In the article e-government is associated with implementation of administrative processes (narrow definition). The whole range of governance including e-democracy, e-voting, e-procurement, e-education or e-healthcare hasn't been addressed.

UN e-readiness evaluation models not fully described perspectives of e-government not only on central, but also on local levels. It is not surprising that the Online Service Index (OSI), which is included in generalized EGD (the United Nations E-Government Development Index) focus mainly on front-office (*United Nations...*, 2014).

Furthermore, the set of e-government monitoring concepts has been enriched with maturity, sophistication and some other indicators (Mukabeta Maumbe, Owei, Alexander, 2008; Kachwamba, Hussein, 2009; Lee, 2010; El-Qawasmeh, 2011; Ifinedo, Singh, 2011; Fesenko, Fesenko, 2016), a marketing model – on marketing indicators (Steyaert, 2004), a comprehensive framework – for the assessment the value of project post – implementation (Esteves, Joseph, 2008), a conceptual model – for measuring user satisfaction (Verdegem, Verleye, 2009), conceptual framework – for evaluation of public value (Karunasena, Deng, 2012; Bai, 2013; Ha, 2016), an integrated indicator model – for evaluation of e-government policies (Stanimirovic, Vintar, 2013). Although efforts are being made to create different e-government evaluation models at present there is no methodology that allows for flexible and comparative measurement of the phenomenon of e-government in a comprehensive and integral way (Luna-Reyes, Gil-Garcia, Romero, 2012), reference model as a reusable conceptual model for e-government assessment (Ostasius, Laukaitis, 2015).

Such range of studies aim to assess certain parameters or based on universal approaches which was adapted to each particular case. But a few researchers are focused on municipalities, which are playing much more essential role on Europe, as the most services are provided by local self-government bodies.

Second, how should an e-administration level should be studied, and which technology enrich solutions matter for post-communist countries? Many research studies are used technologically driven approaches based on assessment the level of technologic advancement. Some scholars have focused on the development of official websites and electronic document circulation system of local self-government bodies or have extended their analysis to different organizations (for example, Centers of Rendering Administrative Services in municipalities). More recently, quantitative research has investigated access to information for the public, to assist the transparency of local politics and combating corruption, to mobilize citizens and attract them to social and political processes. Main result of such researches is based on creating a rating of cities according to the certain indicators, and determined typical problems and best practices of introducing the electronic governance instruments.

Therefore, as a result of different approaches adopted most scholars explores front-office as well as back-office aspects of e-government from only one perspective either civic sector, businesses or public officials. This studies mainly focuses on provision of information services. However, the values of local administration and their changes seems to be essential as the certain services in post-communist countries are still dependent from human being factor and administrative culture is not fully constructed for perceived citizens like partners. Also e-administration could be assessed from transformation point of view. Is it helpful for introducing new philosophy of public administration based on enhancement civic engagement in post-soviet countries.

Objective and methodology

The objective of this article is to give an overview of assessment municipal e-government concept and to reveal the evolution of monitoring tools applied in Ukraine. It should be started with a review of the current experience, discussed digital market in Ukraine and finally outlined the latest trends in e-government assessment process along with the key challenges in Ukraine.

It was used a method of theoretical, logical and systemic analysis of literature (scientific papers, policy documents and statistical sources) to study various views on monitoring the level of providing municipal e-services and outline recent trends in Ukraine. Also methods of comparative analysis (to compare various approach for building indicators) are applied in the article.

Results and discussion

So far, there have been a very few studies on evaluating performance of e-government on regional and local levels. It is a new field of research in Ukraine. Main Ukrainian studies can be referred to the "first generation" of evaluating e-government: focus on the problems of implementing the concept of e-Ukraine or review of the problem of assessing e-government effectiveness (Chmelyova, Zolotar, 2014; Kondratenko, 2011; Novosad, Seliverstov, Yurynets, 2011).

First complex attempt to assess the level of introducing e-administration instruments in Ukrainian regions has been performed in 2015. In previous years, the efficiency of sites of oblast councils, local councils of oblast centers, and councils of the second largest cities in Ukraine, have been already conducted by the Civil Society Institute NGO, in particular:

- 2008 – sites of oblast councils (NUTS 2),
- 2009 – sites of local councils of oblast centers (NUTS 3),
- 2010 – sites of the second largest cities (LAU) in Ukraine.

It is also important to note a complexity of the OSI measurement method, as the expected assessment involves qualitative rather than quantitative values. It concerns four stages of developing and providing online services (*United Nations...*, 2014):

- a) stage 1: emerging information services: government websites providing information on public policies, governance, laws, regulations, relevant documents, and the types of government services provided;
- b) stage 2: enhanced information services: government websites delivering enhanced one-way or simple two-way e-communication between government and citizens, such as downloadable forms of government services and applications;

- c) stage 3: transactional services: government websites engaged in two-way communication between the government and citizens, which can include requesting and receiving inputs on government policies, programmes, and regulations; citizens can get specialized data and download various forms after electronic authentication of their identity;
- d) stage 4: connected services: government websites use Web 2.0 and other interactive tools to communicate with citizens. E-services and e-solutions cut across the departments and ministries in a seamless way; information, data and knowledge are transferred from government agencies through integrated applications. The government creates an environment that empowers citizens to be more involved in government activities to have a voice in developing and making decisions.

In early 2013, the Coalition of NGOs monitored the efficiency of introduced electronic governance system in 100 municipalities of Ukraine; the monitoring included the analysis of development and efficiency of using official websites and electronic document circulation system in local self-government bodies of selected cities (Kuspliak, Serenok, 2014). On the basis of the research was made a rating of local self-government bodies according to the activeness of using e-administration instruments; analyzed and summarized the results, developed recommendations for local self-government bodies regarding transparency, openness, and work optimization by the use of information and communications technologies.

Basic ground for e-administration monitoring is constitute Ukrainian legislation containing regulations on the use of information and communications technologies (ICT). Thus, a number of laws oblige local self-government bodies to use the ICT:

1. Law of Ukraine as of 6 September 2012 № 5203-VI On Administrative Services.
2. Law of Ukraine as of 13 January 2012 № 2939-VI On Access to Public Information.
3. Law of Ukraine as of 10 April 2012 № 2269-XII On the Rent of State and Communal Property.
4. Law of Ukraine as of 17 February 2012 № 3038-VI On Regulation of Urban Development.
5. Law of Ukraine as of 7 April 2012 № 3206-VI On Preventing and Combating Corruption.

Besides that, a number of Laws of Ukraine assume the use of ICT in activities of local self-government bodies.

These laws are:

1. Law of Ukraine as of 13 September 2003 No. 1160-IV On the State Regulatory Policy in Spheres of Economic Activity.
2. Law of Ukraine as of 1 June 2010 No. 2289-VI On Public Procurement.

On the basis of these laws and partly on OSI measurement, the certain criteria for the assessment of front and back-offices of local councils were formed. Simultaneously, for taking into account some points, important for territorial communities, they were included in the list of criteria. During this attempt was used a system of indicators divided into five categories (Kuspliak, Serenok, 2014):

- a) information access (contains 53 indicators: 35 – Information about activities of LSGB; 10 – information about the infrastructure and vital functions of a city; 8 – documents, that are recommended for publication. The maximum number of points in this category is 89);
- b) public feedback (contains 13 indicators, the maximum number of points – 15);
- c) administrative services and access to public information (contains 16 indicators, the maximum number of points – 31);
- d) user-friendly interface category (contains 8 indicators, the maximum number of points – 8);

e) timely content updates category (number of points for this category is 22).

It should be added that in the last category was assessed the promptitude of content updates, divided into eight types of information, according to the legislation:

- news – not later than 1 day (news for the current of previous day are published),
- draft regulatory acts – not later than 5 working days after publishing a notification about the promulgation of this regulatory act,
- other draft decisions – in 20 days before their adoption,
- decisions of city council – within 5 days after their signing,
- decisions of city mayor – within 5 days after their signing,
- decisions of executive bodies' chairmen – within 5 days after their signing,
- reports of city mayor – within 5 days after their signing,
- income declaration of city mayor for the last year – not later than after 30 days after its submission.

Thus, the official website of every selected local self-government body was analyzed according to 98 indicators, and the maximum number of points was 165. According to the results of assessment of official websites of LSGBs, was created a rating of local self-government bodies according to the total number of points, and in every category.

In case of the Centers of Rendering Administrative Services (CRAS) research main attention was paid not to assess the quality of services provided by CRASSs, but to analyze the quality of their basis functioning elements, like the electronic queue, information terminals and stands, accompanying services and conditions created for people with disabilities etc. This category contains 11 indicators, the maximum number of points – 13 (Kuspliak, Serenok, 2014).

Therefore, as a result of methodology adopted this monitoring concentrates only one perspective either citizens.

Later approach taking into account the developments that have taken place in recent years in the field of local e-government assessment, six key measurement dimensions were identified, namely (*Donetsk and Lugansk...*, 2018):

- measuring organizational capacity and development of technical infrastructure (back-office),
- measuring the information content of the official websites of the target authorities and ensuring the principles of the availability of web content in their work (front-office),
- measuring the use of e-participation tools in the target authorities (front-office),
- measuring access to public information in the target authorities in the form of open data (front-office),
- measuring access to administrative services electronically in the target authorities (front-office),
- measuring the scale of the practice of implementing electronic document management systems in the target authorities (back-office).

Further changes in finding proper indicators were made:

1. Green (C) means that there is convincing evidence of a high level of implementation (use) of e-government tools or activities.
2. Yellow (F) means that evidence of a high level of implementation (use) of e-government tools or activities is not so obvious.
3. Red (B) means there is strong evidence of problems with the implementation (use) of e-government tools or activities.

4. Gray (C) means that information for evaluating the implementation (use) of e-government tools or activities is not enough.

This approach could be very hard compared with previous model where every selected local self-government body was analyzed according to the system of indicators correlated with points.

Very specific domain constitutes the assessment of the electronic document circulation system which is quite complicated. On addition some gaps in Ukrainian legislation concerning the implementation and use of the electronic document circulation system in activities of government bodies are. In 2003, two relevant laws were adopted in Ukraine – On electronic document and electronic document circulation, and On electronic signature. They determine basic notions and paperwork requirements, general principles of electronic document circulation, give the definition of concepts, features, legal status, constituent elements of a digital signature, characterize concepts and requirements for digital signature key certificates, conditions and safety measures, and general principles of operation of key certification centers. However, according to the experts, these laws pay a little attention to the mechanism of implementation the electronic document circulation system in governmental bodies.

Besides that, the Ukrainian legislation regulates the use of electronic document circulation by the Resolution of the Cabinet of Ministers of Ukraine of 10/28/2004 No. 1452 On Approval of the Procedure for Electronic Digital Signature Use by National and Local Government Bodies and State-Owned Enterprises, Institutions, and Organizations; Resolution of the Cabinet of Ministers of Ukraine of 10/28/2004 No. 1453 On Approval of the Standard Procedure for Electronic Document circulation in Executive Bodies; Resolution of the Cabinet of Ministers of Ukraine of 5/26/2004 No. 680 On Approval of the Procedure for Certification of Existence of an Electronic Document (Electronic Data) at a Certain Point of Time; Resolution of the Cabinet of Ministers of Ukraine of 7/17/2009 No. 733 On the official electronic document exchange by executive authorities.

Some Ukrainian cities are actively introducing the electronic document circulation system for a long time already, and have reached the certain results. However, there are a lot of factors which negatively influence the introduction of fully functioning electronic document circulation systems by local self-government bodies. First of all – it's the absence of the unified strategy for step-by-step introduction of electronic document circulation with certain financing; absence of standardized certified programs and security rules, unwillingness of the senior officials refuse manual administration, and paperwork culture of local governments' employees; the problem of data storage reliability and smooth operation of the system; budget limitations.

The exploratory findings need to be considered carefully. Yet, they are still interesting because there is a little empirical research which have explored this complex matter. But the following research limitations should be take into account:

- a) hard to estimate the reliability of information, published on official sites of local self-government bodies;
- b) some assessed information was situated on the website connected to the official website of a city council;
- c) difficulties related to receiving delayed answers on information requests by city councils and also this answers are usually not full or contradictory;
- d) questionable validity of monitoring the quality of CRASs basis functioning elements, as long as such monitoring would require more opinions of users to form objective results.

Conclusions

Ukraine in time of transforming into a networked society trying to build horizontal connections between the state, municipalities and its citizens. In the course of adopting values of EU administrative space, the building of the effective and accountable e-government would help facilitate its capacity to manage resources, implement sound policies and better satisfy the need of its citizens. Therefore, it would be timely to set some light on the public value and how to use it for monitoring the e-government service performance because of its comprehensiveness.

“Second generation” of evaluating e-government in Ukraine focuses not only on provision of information services, but trying to find effective ways of involving citizens in public affairs on regional and local levels. Public value-based e-Government services monitoring should be understood at the regional and local levels.

Issues analysed by different approaches lead to different outcomes and give only part of the answer what is the level of e-government in a given local community. The correct evaluation of e-government on regional and local levels should more concentrate on effectiveness of municipalities; quality of public service delivery; and building transparency and accountability. Relationships among those dimensions, or how they relate each other in the field of e-Government performance can be clarified in future research.

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Cite this article as: Streltsov, V., Niedzielski, P. (2018). Approaches for monitoring the level of providing municipal administrative services electronically (Ukrainian case). *European Journal of Service Management*, 4 (28/2), 447–454. DOI: 10.18276/ejsm.2018.28/2-53.

SOCIAL ASSESSMENT OF THE NEIGHBOURHOOD SERVICES IN THE URBAN AREA ŻYDOWCE IN SZCZECIN (POLAND)

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION H4, P36, R23

KEYWORDS services, neighbourhood services, social assessment, urban area

ABSTRACT Satisfying social needs with an appropriate level of services is an important element of the quality of life in every settlement (village, urban district, neighbourhood). The neighbourhood services satisfy the basic everyday needs of the residents of a given residential area, which is covered by their range of influence. One of the methods used to assess the social assessment of this type of services is the direct interview. Based on the conducted direct surveys the level and quality of offered neighbourhood services, requiring improvement of them, and missing services in the urban area Żydowce in Szczecin were identified.

Introduction

Services are economic activities aimed at satisfying individual and collective needs, and no material goods transfer. They can be classified by the criterion of their character, impact range, frequency of use, hierarchy, location and sources of financing. The most important classifications of service activities are: the United Nations' International Standard Industrial Classification (ISIC), the Statistical Classification of Economic Activities

in the European Community (NACE), and similar national systems in other countries, like in Poland – Polska Klasyfikacja Wzrobów i Usług (PKWiU). Services can be provided at the international, national, regional, local, family, and individual level.

In the modern economy services are the most important sector, called the tertiary sector, supplying the majority of GDP and employing the majority of employees. Some of these service activities are specialized and support relatively small but efficient first (mining, agriculture, fisheries) and the second (industry) sector. They occur mainly in highly developed countries.

A special place among service activities, however, occupy those that serve the existential, basic and everyday needs of people living in a specific area. These service activities are called local or neighbourhood services. These types of services, although of different quality and not always in full range, are also found in the medium and low developed countries, creating numerous jobs. Because they require daily access, and the time spent to reach their place of distribution is limited, their location is determined by the distribution of residents. This is the effect of market forces as well as planned activities of local authorities. Some of these services are public and free. As a rule, they include (in medium and highly developed countries): nursery, kindergarten, primary and secondary school, health center, pharmacy, grocery store, butcher shop, bakery, dairy shop (or supermarket), tailor, shoemaker, beautician, hairdresser, pub, fast food restaurant, news stand, post office, Internet café. Forced or voluntary use of services determines the distribution of types of service facilities to the recipient. A necessary condition for the use of the offer is the spatial availability of services, especially at the local level. Improper placement of optional service facilities affects the profitability of enterprises, while difficult access to obligatory services causes numerous social problems (Barton, Grant, Guise, 2006).

The purpose of the presented research was to obtain a social assessment regarding the neighbourhood services located in the urban area Żydowce. The following research questions were posed:

1. How do the residents of the urban area Żydowce assess the quality of offered neighbourhood services?
2. How do they assess the level of offered neighbourhood services in the urban area Żydowce?
3. Which neighbourhood services, according to the respondents, need improvement?
4. What neighbourhood services are missing in this urban area?

The research questions posed in this way allowed the following hypotheses to be adopted:

- a) there is not enough neighbourhood services offered in the urban area Żydowce to meet the needs of their residents;
- b) the quality of offered neighbourhood services in the urban area Żydowce is at a poor level;
- c) among the neighbourhood services requiring immediate improvement, existing catering and gastronomy services as well as public transport can be distinguished;
- d) neighbourhood services currently lacking in the urban area Żydowce are medical care, pharmacies, entertainment and advanced catering and food supply services.

Literature review

The term “services” has many different definitions. American Marketing Association (2018) dictionary defines services doubly “firstly services as a products (e.g., as a bank loan or home security), that are intangible or at least substantially so. If totally intangible, they are exchanged directly from producer to user, cannot be transported or stored, and are almost instantly perishable. Service products are often difficult to identify, because they come into

existence at the same time they are bought and consumed. They comprise intangible elements that are inseparable; they usually involve customer participation in some important way; they cannot be sold in the sense of ownership transfer; and they have no title. Today, however, most products are partly tangible and partly intangible, and the dominant form is used to classify them as either goods or services (all are products). These common, hybrid forms, whatever they are called, may or may not have the attributes just given for totally intangible services. Secondly, services are also used to describe activities performed by sellers and others that accompany the sale of a product and aid in its exchange or its utilization (e.g., shoe fitting, financing). Such services are either presale or post-sale and supplement the product, not comprise it. If performed during sale, they are considered to be intangible parts of the product.”

A. Payne (1997, p. 20) defines a service as any activity containing an element of intangibility, which consists in influencing the client or objects or property in his possession, and which does not transfer ownership. J. Chmielewski (2001, p. 176) believes that services are the third sector of human economic activity. The goal is to meet social, material and non-material needs that are constantly growing. They can be performed at the level of family life, by one citizen for the other and by public institutions. K. Kłosiński (2011) claims that services are activities whose effect is to satisfy specific needs of an entity, which may be a person, enterprise, commune, city or country. D. Ilnicki (as cited in Nowosielska, 1994, p. 30) defines services as all service works (activities) irrespective of their place in the classification of the national economy, i.e. both services classified in the production sectors of the economy (in agriculture and forestry, and industry and construction) as well as work done in service departments (i.e. not being agricultural, industrial, etc.). P. Kotler (as cited in Hollins, Shinkins, 2006, p. 8) determines service as any act or benefit that can be given to someone else and is immaterial and has no effect on the ownership of anything. Its production may or may not be related to a physical product.

Large variety of services results from different features of their location and demand. Therefore, services can be differentiated between various divisions of service classification. E. Lipiński (as cited in Rogoziński, 1993, p. 65) distinguished three types of services:

1. Service for the buyer – it includes the buying and selling acts, transport, packaging, repairs and repairs of devices intended for satisfying consumption needs as well as for production purposes.
2. Personal service – this includes services that go beyond the field of elementary needs. They cover higher needs and corresponding ways of satisfying in the form of communication services and eating meals in a restaurant.
3. Personality support – it includes services satisfying higher-order needs. These are entertainment services, education, tourism and other forms of cultural “consumption”.

E. Jakubowicz (1993) proposed a detailed multicriteria classification of the service activities:

- a) the time of the appearance of the service effect can be distinguished here:
 - services whose effect is revealed after a very short time; they can also contribute to the creation of an additional work force,
 - services, the effect of which appears after an average period of time,
 - services, the effect of which is revealed after a long time;
- b) the size of the area covered by the action:
 - basic or local services, occurring in the village, housing estate, neighbourhood or urban unit in the city, e.g. small shops with basic articles or kindergartens,

- higher-level or post-basic services, occurring in village groups, small towns, districts of large cities, regions and over regions;
- c) the period of service provision:
 - permanent services,
 - services provided for a certain period of time;
- d) the exactness of the relationship with the given area:
 - services closely related to a given area due to conditions or size,
 - services related to the country's zonation due to supply,
 - services with a free location;
- e) social environment:
 - services covered by the existing situation,
 - services covered by the existence of the environment and capable of creating the environment,
 - services strictly requiring a specific social environment;
- f) remuneration for services:
 - paid services,
 - non-payable services;
- g) distribution method:
 - market services,
 - non-market services,
- h) the specificity of needs:
 - services for the village or the neighbourhood,
 - services for cities, services for adults,
 - youth services;
- i) leisure time management, i.e. services that fill free time;
- j) civilization level:
 - fixed, their number decreases along with economic development,
 - new, their development takes place with increasing consumption,
 - complementary.

According to the above presented proposal of E. Jakubowicz (1993), neighbourhood services have the some specific features. They are:

- basic or local services, occurring closely related to a small residential area,
- services whose effect is revealed after a very short time,
- services contributing to the creation of local work places,
- permanent services, sometimes offered around the clock,
- services covered by the existing situation,
- services both paid and market (shop) and non-payable and non-market (public school),
- fixed services, and their number decreases along with economic development.

Research scope and method

The urban area Żydowce is part of the administrative unit Żydowce-Klucz of the Szczecin City, numbering about 2.5 thousand inhabitants and located next to the southern bypass, approximately 10 km from the downtown of Szczecin. The area is peripheral, sparsely populated, dominated by the single-family housing, and surrounded by riverside meadows and arable fields.

The survey was conducted between 15:00 and 19:00, on 5–7.05.2016 in the urban area Żydowce using the direct interview method, on a sample of 50 respondents. Most of them, as many as 47 were residents of the urban area Żydowce, and three no residents, which constituted only 6% of the total number of respondents. The study was attended by 25 women and 25 men. Persons from five age groups were surveyed: 22% each from the age groups 40–54, 55–59, and over 60, 18% from the age group 15–24; and 16% from the age group 25–39. The duration of the interview was about five minutes. The survey results are representative for this urban area.

Results

Social assessment of the quality of neighbourhood services

The majority of respondents, as much as 62%, believe that there is not enough neighbourhood services in the urban area Żydowce. According to 32% of respondents, the number of services is sufficient. Only 6% of the respondents did not have an opinion on this topic.

The general assessment of the quality of the services offered in the urban area Żydowce is of poor quality, as many as 44% of respondents expressed such an opinion. The largest group of respondents, for whom the quality of services is poor, is a group of men – 24%. Women accounted for 20%, of which half of the women came from the 15–24 age group. The lowest number of respondents to the poor quality of service assessment was given by women from the 60+ age group (4%).

14% of respondents are of the opinion that the quality of the offered services is medium (of which women were 8% and men 6%). Most people gave such a response from the 25–39 age group, mainly employed and one person with the status of a retired or pensioner.

The quality of services was rated good by 22% of respondents. For the most part, they were women, they accounted for 73% of this group. Most people who answered that the quality of services in this urban area is at a good level is included in the age group 60+. They were three women and one man, all with the status of a retired person or a pensioner.

Only 10% of respondents rate the quality of neighbourhood services at a very good level. Thus, claiming that there is no shortage of services on the urban area Żydowce. The largest number of people who responded so were 60+ (6%). 10% (6% of women and 4% of men) of respondents said they have no opinion on the quality of services offered in the urban area Żydowce. In conclusion, it can be said that the positive assessment of neighbourhood service concerns older, retired residents, more women than men.

Neighbourhood services that need improvement

When asked “which services in the urban area Żydowce need improvement” respondents could indicate a maximum of five types of services. According to the survey results, the strong improvement requires: gastronomy and catering services (fast food restaurant, pizzeria, pub, café, ice cream parlor) and public transport (25% each);

sport and educational services (6% each). Most people in the 15–24 age group (12%) claimed that gastronomy and catering services need improvement. As far as the improvement of public transport services is concerned, the respondents from different age groups were of the opinion that it requires improvement, the three most-important groups of 10% are: young men and women aged 15–24, employed people in the 54–59 age group, and retired or pensioners aged 60+. Other services that need improvement include gastronomy and catering services (3%), entertainment (3%), medical care (2%), and banking services (2%). There was also a small demand for: repair, cosmetic, hairdressing, pharmacy and insurance services (1% each). However, 40% of respondents say that neighbourhood services do not need to be improved in the urban area Żydowce.

Missing neighbourhood services

In response to the question “What neighbourhood services are missing in the urban area Żydowce” respondents could indicate a maximum of five types of services. The respondents identified pharmacies and medical care (17% each) for the gastronomy and catering services most missing in the urban area Żydowce. Then they pointed to entertainment, services and sports (9% each). Fewer, respondents found that there is a lack of gastronomy and catering services (8%) and hairdressing services (6%) in the urban area. Next, the respondents indicated missing services of RTV-repair, and other repair services, culture and banking services (4% each). The least indications were the lack of construction and renovation services, dry cleaners and gas stations (1% each). The most opinions on the lack of pharmacies were given in the 40–54 age group (12%). As far as medical care is concerned, the majority of opinions were expressed by people working in the 55–59 age group.

The lack of gastronomy and catering services in the urban area Żydowce is most worried by women from the 15–25 age group (14%) and men from the 55–59 age group (8%). Women from the 15–24 age group (8%) complain about the lack of sports services. The respondents from the 55–59 age group most complain about the lack of gastronomy and catering services (8%, of which: 4% women and 4% men). However, the respondents' opinions on the lack of hairdressing services were equally distributed in four age groups of 16% each.

There is also no RTV-repair service in the urban area. For 8% of men, from the age group 25–39 and 40–54, this is a service that is needed in this area. The largest number of votes for the lack of culture and banking services was given to men aged 55–59 (8%). On the other hand, 16% of respondents claim that there is no shortage of neighbourhood services in the urban area Żydowce.

Conclusions

The use of direct interview method and the analysis of respondents' opinions made it possible to determine whether the taken hypotheses were confirmed in the research. The verification of the collected data shows that 62% of respondents believe that there is not an adequate number of services in the urban area Żydowce. The most missing services in this area include medical care, pharmacy and entertainment. The largest percentage of them is a group of employed people for whom the number of basic services offered on the neighbourhood is particularly important.

Further analysis of the respondents' answers confirms the second hypothesis, as 44% of respondents believe that their neighbourhood services quality is at a poor level, only 22% claims that the quality of services is good. 14% of respondents were in favor of the average quality rating. 10% of respondents said the quality was very good and 10% refrained from rating.

Referring to the results of the study, we find the justification for the next hypothesis, which talks about the need of services improvement in the urban area Żydowce. The respondents most frequently asked for services requiring immediate improvement were gastronomy and catering services (44%) and public transport (44%).

The respondents identified pharmacies and medical care (17% each) for the services most missing in the urban area Żydowce. Some of the respondents pointed to the lack of entertainment and sports services (9% each) and gastronomy and catering services (8%).

The improvement of the quality and broadening of the offer of the neighbourhood services is conditioned by the level of purchasing power of the residents. Local authorities may, indeed, improve access by public transport to the to the nearest district center and to the downtown of Szczecin. Such project, however, may reduce the demand for these services in the urban area Żydowce.

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Cite this article as: Sypion-Dutkowska, N., Karwan, M. (2018). Social assessment of the neighbourhood services in the urban area Żydowce in Szczecin (Poland). *European Journal of Service Management*, 4 (28/2), 455–461. DOI: 10.18276/ejism.2018.28/2-54.

SOCIAL ASPECTS OF REVITALIZATION OF URBAN PUBLIC SPACES

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION R11, R51, R58

KEYWORDS revitalization, urban spaces, local communities, social participation

ABSTRACT The main goal of the paper is to present the significance of social participation in management of the revitalization process of urban public spaces. On the basis of the available literature the paper discusses social challenges that local authorities face when trying to resuscitate degraded areas. The following research methods were used for the purpose of this paper: desk research, an analysis of the Polish and foreign literature on the subject as well as an analysis of the Polish legal acts regulating the procedures related to the subject of research and the methods of economic analysis. One of the final conclusions stated that local authorities usually pin their expectations on positive results of revitalization activities, but unfortunately not all attempts of restoration of degraded public urban areas bring the desired results. It happens that even numerous efforts to regain the urban degraded tissue do not lead to the expected level of economic, social or cultural revival.

Introduction

In city management, it is undoubtedly important to be able to use its potential by local authorities and overcome development barriers. For this purpose, it is important to develop integrated, perspective and multidimensional plans (Czermiński et al., 2001, p. 151), adjusting the concept of development to anticipated, changing situations that create market and environment conditions (Penc, 2002, p. 125), unique distribution of resources giving the city a unique

character (Gawroński, 2010, p. 34), and what is particularly important – including in this process various areas of social life, integrating local community, not only to approve the initiatives, but also actively participate in them.

One of the essential tools for city development, which undoubtedly forms the basis for the growth of its competitiveness and prevents the marginalization of some areas (Potoczek, Stępień, 2008, p. 54), is the process of revitalization (renewal) of degraded city tissue. It stimulates long-term economic development, further reducing chaos in the urban space, building a sense of local identity and strengthening social ties.

Local community representatives exhibit a different level of activity and involvement in city management, management of its financial and material assets, or transformation of the functional and spatial structure. Nevertheless, increase in the social awareness of the potential and right to influence the surrounding reality, in the number of entities participating in public life or in the number of opinions regarding the process of transforming space are becoming more and more visible. The aim of this study is to present the significance of social participation in management of the revitalization process of urban public spaces.

The essence of the revitalization process

In the light of binding provisions of the Act on Revitalization – revitalization denotes the process of recovering from the critical state of degraded areas, which is conducted in a comprehensive way by integrating the activities for the benefit of the local community, space and economy (Art. 2.1 Ustawy z dnia 9 października 2015 r. o rewitalizacji).

Revitalization is a term that mainly concerns a comprehensive process of regenerating an urban area, the space, functions and substance of which have been structurally devastated leading to a critical condition which renders impossible or hinders proper economic and social development of this particular area as well as sustainable development of the whole city (Belniak, 2009, p. 50; Szaja, 2016, pp. 169–173). Revitalization projects should not only be a tool for rehabilitation, but also a source of increase in the urban resources and infrastructure as well as provide an impetus for the optimization of using these.

Each urban system is characterised by a dualistic socio-spatial structure. Within the framework of the social subsystem a social level and an economic level can be distinguished. The urban subsystem encompasses urban substance and the natural environment. There is a fifth level as well, which concerns identity and image. One of the key elements of a successful regeneration of the public space is to understand how significant these levels of revitalization are and how they interrelate. In order to bring the expected results, the rehabilitation of degraded urban fabric must be carried out on all the aforementioned levels (Janas, Jarczewski, Wańkiewicz, 2010, p. 117) (see Figure 1).

Among the entities involved in the revitalization process, three basic groups can be identified (see Figure 2).

Although the process is usually slower after being included in the local community revitalization program, it is carried out more effectively and guarantees a permanent effect. Cooperation with residents and business entities as well as with public, social and economic institutions and also a well-thought-out and prepared revitalization program of degraded city areas causes that the institutional city hosts (i.e. local government) share the risks and costs of the undertaken ventures as well as the benefits resulting from the introduced improvements (Pirveli, 2008, p. 31).

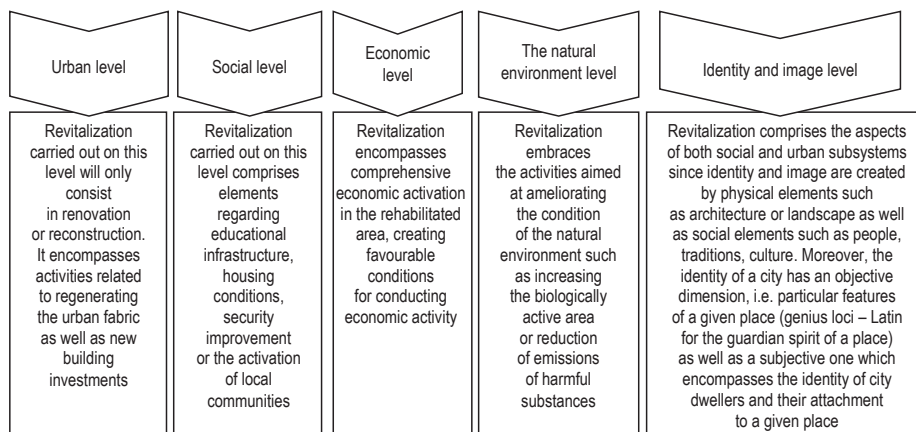


Figure 1. Revitalization levels

Source: own compilation on the basis of: Janas, Jarczewski, Wańkowicz (2010), p. 117.

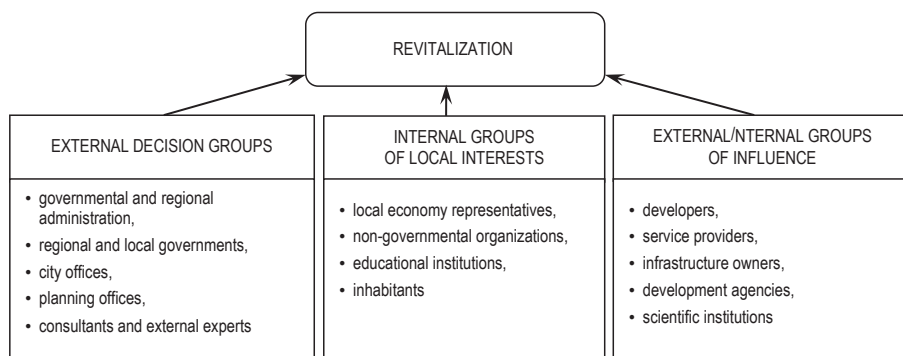


Figure 2. Entities involved in revitalization process

Source: own compilation on the basis of: LUDA-Team (2006), p. 16.

Role of public engagement in the urban revitalization process

The main among many tasks imposed on local authorities by the legislator is meeting the needs of urban residents. It is implemented, among others, through appropriate local space management, determining (adequate to the existing potential and external conditions) directions of the city's development, creating for local entrepreneurs a wide range of opportunities to undertake economic initiatives, guaranteeing safety on city streets, providing decent living conditions, providing housing conditions for current and future residents, checking the compliance of implemented projects with the sustainable development goals, etc. All initiatives implemented in the city are

primarily aimed at providing local stakeholders¹ with levels of agreement and cooperation to undertake activities conducive to achieving a specific level of development and economic profile of the individual.

Currently, local self-governments, in order to achieve the main goal (i.e. to initiate and coordinate broadly understood development), must look for new opportunities and create new localization qualities that can be achieved by qualitative development. It is located, among others through discovering historical and cultural values, restructuring of areas abandoned by industry, army and railways, renewal of old construction resources, qualitative development of centers and intelligent distribution of areas for modern technology, management, consumption, culture and science. In this way, urban development tasks become first of all tasks of a qualitative renewal of existing material resources and at the same time a renewal of human resources (Bielniak, 2009, p. 49).

The main aspects of city development include:

- improving the quality of living environment for residents,
- improving the quality of the socio-economic space (including through revitalization activities),
- creating jobs and a favorable economic climate,
- achieving economic stability and immunity to external disturbances,
- creating convenient settlement conditions for those seeking better living conditions.

It is in the interest of local self-government to create such opportunities that will attract activities that contribute to the implementation of the plans previously set, and additionally, their implementation, apart from individual benefits, will achieve the desired (maximum) local effect (Meyer, 2008, p. 160).

The desired local effect for any city is to achieve order in its most important areas of functioning: social, economic, spatial and ecological. Any changes introduced by means of individual tools that affect elements of the system should be expected (or at least accepted) socially, economically justified and environmentally acceptable (guaranteeing sustainable development of the city).

The fundamental values for the revitalization and development of urban public space are local communities, and in particular the mutual trust of these entities. The condition for building trust, and at the same time manifesting its presence, is the high quality of communication as well as clarity and transparency of activities. The space revitalization process is thus expressed in the emergence and development of social relations that characterize (Smagacz, 2008, pp. 11–12):

- a) increase in trust between individual and collective entities (residents, users, institutions); participants are becoming more and more open, more and more willing to undertake new tasks and challenges, carry out reflection criticism (e.g. personal criticism is replaced by substantive criticism);
- b) deepening cooperation – the emergence of new contacts between entities and the external environment; during the interaction, during interaction, groups are created to initiate new activities and solve specific problems;
- c) increase in activity; the accumulation of knowledge and results of actions drives further actions – new ideas appear, the number and diversity of tasks increases as well as the efficiency of activities;

¹ These are various interest groups, pursuing their own, not only economic goals, e.g. local residents, entrepreneurs, local government activists, politicians, employers, workers, hoteliers, parents of school-age children, etc.; often these entities are guided in their behavior by various motives, goals, ways of obtaining tangible results, as well as a different strength of action and influence (national authority, self-government authority, economic entities, community, etc.).

- d) increasing the conviction of individual and collective entities about their impact on district's life, including the sense of achieving success as a success of the local community;
- e) reaching a point of no return, that is, a level of participation from which there is no return, because this quality becomes a new culture of social life.

Community participation in the urban revitalization process

Being active in formulating, making decisions and implementing local politics by representatives of local communities is referred to as participation. In this way, residents try to influence decisions ultimately made by people with democratic legitimacy (Parry, Moyser, Day, 1992, p. 16). In practice, participation requires activity of both people, entities, organizations focused around some common interest (venture), as well as activities of groups organized on the basis of their common place of residence or activities of individuals who are representatives of these groups. The notion of community participation is therefore connected with the concept of representation (Swianiewicz, Klimska, Mielczarek, 2004, pp. 15–42).

An active society is one that primarily demonstrates commitment to the planning and implementation of development policy in the city. The participation of the local community involves the participation of two types of participants and can have a horizontal dimension (social participation) or community (vertical/civic/public participation) (Swianiewicz, Klimska, Mielczarek, 2004, p. 35):

- residents and their organizations (including participation of individual citizens as well as the presence in the politics of local civil society organizations),
- influential actors of social life (e.g. entrepreneurs and their organizations).

An expression of the local community's links with the city are activities undertaken for its benefit. They express themselves in various types of activities of local communities – undertaken consciously and voluntarily, general and targeted. Increasingly, forms of local communities participation are an integral part of city's promotion, contribute to its development in the social, economic, environmental and spatial sphere. One of such activities is an active participation of the local community in the process of spatial and functional transformation of the city, including the renewal of its degraded areas.

The range of opportunities for participation of local community in the revitalization process covers a wide range of activities: from information for residents, through leaflets and surveys, to permanent forums, whose members can constantly participate in planning and making decisions. The most important forms of participation in urban planning include (Sinning, Scholles, 2001, pp. 361–368):

- a) district/municipal/inter-municipal/urban/regional forums, which are a common space for commenting on planning problems, giving local governments advice, asking planning questions;
- b) councils, commissions, committees which are one of the most common forms of social participation; the way they are recruited and tasks depends on the laws in force in particular country; their aim is to provide advice without formal binding of local governments with its results;
- c) social expertise, planning cells are a model of participation related to a specific problem, e.g. people affected by a given category of problem and/or those interested in solving it are organized together with experts (professionals) in one organizational unit; participants develop solutions proposals based on acquired knowledge and experience; results in the form of so-called social surveys are finally published and made available to the public;

- d) plenipotentiaries for urban planning are trained planners appearing as residents' advocates in the planning process; their task consist of counselling, mediation and representatives the interests of social groups in municipal, regional and national bodies;
- e) committees and social initiatives.

Local community participation in the revitalization process of the degraded urban public area makes it possible to express, and the local authorities to take into account opinions and objections regarding the future of residents and the environment of the revitalization area. It can also make it easier (LUDA-Team, 2006, p. 13):

- a) thorough identification and understanding of a number of challenges faced by the revitalization area community;
- b) expression by the local community representatives their expectations, postulates, e.g. through participation in information campaigns or participation in meetings regarding the discussion on the assumptions for the revitalization program of selected areas of the city;
- c) public expression of the opinion of local actors based on their experience as consumers, entrepreneurs, residents, victims of crime or an unemployed;
- d) incorporating various perspectives and opinions of professional and political elites, contributing to a more integrated decision-making process.

The activity of local community can take the form of inspiration and skillfully developed by the local authorities. It can also be an expression of spontaneous initiatives taken by residents regardless of or against the local authorities. One of the example may be an objection to the location of highways, airports, industries polluting the environment, etc. (Gliński, Palska, 1997, p. 365).

Conclusions

Numerous benefits (social and economic) achieved by the city in the process of proper planning and subsequent implementation of revitalization works, can be a real and strong incentive to operate for other cities that face similar problems with development of urban public spaces. Local authorities should, however, have exceptional attention to the coherence of their actions and control individual stages of the revitalization process in order to be able to fully use the "dormant" city potential.

The main premise of revitalization process of degraded urban public areas is to preserve its continuity, engaging the largest possible and internally diversified group of recipients of the city's offer. Public entity is usually the initiator of revitalization and is usually able to accurately identify the local community expectations and to prepare the necessary cost calculation. Therefore, local decision makers and investors play the most active role in the revitalization process. Nevertheless, the guarantee of effective implementation and stability of the effects of activities undertaken in the city is the local community. It is a mistake, therefore, to limit the role of local actors of social life (i.e. residents, entrepreneurs, their organizations and associations) to the passive observer of the ongoing process. Apart from invoking unrelenting frustration, this may lead to a lack of acceptance of the changes directions in the functional and city's spatial structure. The inclusion of local communities is therefore necessary to ensure their full commitment to the long-term development goals of the territorial unit. The community's conviction that they are the basic beneficiaries of activities undertaken in the city, favors the implementation of the process and, as a consequence, contributes to the shaping of civil society.

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Cite this article as: Szaja, M.D. (2018). Social aspects of revitalization of urban public spaces. *European Journal of Service Management*, 4 (28/2), 463–469. DOI: 10.18276/ejsm.2018.28/2-55.

THE GROWTH OF SELECTED CENTRAL AND EASTERN EUROPEAN ECONOMIES WITH REFERENCE TO THE GLOBAL COMPETITIVENESS INNOVATION FACTOR

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION O30, O57

KEYWORDS innovation, GDP growth, Central and Eastern European economies

ABSTRACT Innovation is perceived as the key factor contributing to the economic prosperity of countries and regions. Endogenous growth models provide vast theoretical support for regarding technical progress as internal factor determining economic growth. The experience of developed countries proves positive impact of innovation on the growth of their GDP in the long term, on the other hand, many emerging economies search for the way of further transformation to support faster development. In this context, the analysis of innovation and business sophistication factor, as well as, GDP growth of selected emerging European economies, seems an interesting research area. The study's conclusions can contribute to the discussion of possible ways of further transformation of emerging economies of Central and Eastern Europe.

Introduction

In the current economic environment, as confirmed by economists and scientists, competitive advantage should be primarily associated with the innovation capacity and ability to continuously increase the level of innovation to achieve adequate efficiency (Perenc, Holub-Iwan, 2011, p. 9). Economists and experts of Global Future Councils believe that new, rapidly developing technologies will further influence the way of production,

goods transport, providing services, communication and cooperation. Opportunities and challenges caused by new technologies vast implementation will cause fundamental changes in global economy and will eventually create the fourth industrial revolution (Schwab, Davis, 2016, p. 10). These statements are based on the theories and models of economic growth, which are generally divided to exogenous and endogenous. Both categories include the factor of technological progress and innovation, however, they treat them differently. Exogenous growth models main assumption is that economy endeavors to long-term sustainable growth, the scale of which is determined by the external rate of technical progress. The most common in this group is so called Solow-Swan growth model. R. Solow refers to the theory of innovation introduced by J.A. Schumpeter and assumes that long-term economic growth is determined by three factors: labour resources, capital accumulation and technical progress, which is being treated as an external and major growth factor (Solow, 1954, pp. 65–94). On the opposite, endogenous growth models are based on different assumption. These models remain constitutive part of new growth theory, which perceives technical progress as a result of enterprises' investment decisions and rational consumers' choices. The rate of technical progress is therefore treated as an internal factor determining economic growth. One of the earliest attempts to perceive this progress as an endogenous factor was introduced with K. Arrow's phenomenon of learning by doing (Arrow, 1962, pp. 155–173). The researchers further point to another factors of growth such as for example: knowledge and human capital (R. Lucas) or research and development investment (P. Romer) and explain how innovations allow continuous increase of wealth (Aghion, Howitt, 1992, pp. 323–351). In addition, economists point out that innovation not only allow the rise of productivity, but also contributes to economic growth by increasing diversity and quality of products and services, enhancing competitiveness as a result (Grossman, Helpman, 1991, p. 22). Innovation is therefore the major factor contributing to the economic prosperity of countries and regions. The experience of developed countries shows that it is crucial for the growth of economies in the long term (Janasz, 2010, p. 103). The purpose of this article is to verify whether similar conclusions also concern selected emerging economies of Central and Eastern Europe during recent five-year period.

GCI methodology

The world's broadest research on the competitiveness of economies of both developed and developing countries, as well as, the impact of innovation on its level, has been realized by economists related to the World Economic Forum for more than forty years. The competitiveness assessment is based on the main determinants improving productivity and enabling growth and economic prosperity of countries. The results of this research include 140 countries in the world and are published regularly in the form of Global Competitiveness Report. The summary parameter measured in these studies is the Global Competitiveness Index (GCI), which was originally based on the assumptions created by K. Schwab and developed by X. Sala-i-Martin. The index methodology was originally based on the theoretical background of economic growth theory developed by J. Sachs and supported by M. E. Porter researches on business competitiveness. Up-to-date GCI consists of 114 indicators gathered in twelve pillars, grouped in three main sub-indexes, which have major impact on the long-term growth and competitiveness of economies. The detailed components of the Global Competitiveness Index and sub-indexes are presented on Figure 1.

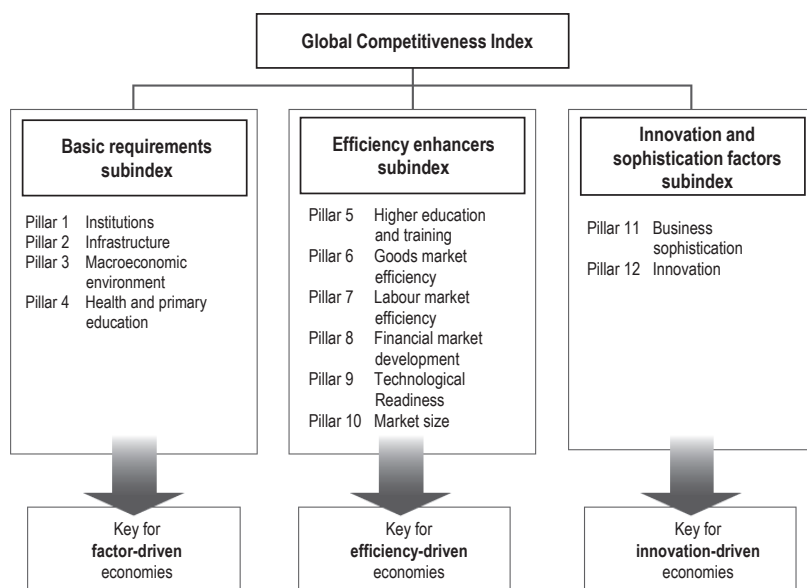


Figure 1. The detailed components of the Global Competitiveness Index and sub-indexes

Source: *The Global Competitiveness Report 2017–2018* (2017), p. 12.

One of the three main sub-indexes consists of innovation and business sophistication factors. The following indicators are analyzed within innovation pillar: capacity for innovation, quality of scientific research institutions, company spending on research and development, university-industry collaboration in research and development, government procurement of advanced technology products, availability of scientists and engineers, Patent Cooperation Treaty patents (number of applications per million population). The following indicators are analyzed within business sophistication pillar: local supplier quantity, local supplier quality, state of cluster development, nature of competitive advantage, value chain breadth, control of international distribution, production process sophistication, extent of marketing and willingness to delegate authority. Both pillars define the total factor for innovation-driven economies. According to opinions of many excellent economists, contributors to the global competitiveness research, innovation is therefore one of the pillars of economies' competitiveness and thus the capacity to achieve productivity increase, as well as, long-term GDP growth.

GCI innovation and sophistication factors in selected countries

In order to verify the assumption of positive influence of innovation on long-term economic growth also among emerging economies, six Central and Eastern European countries were selected for five-year comparison. The selection was accomplished basing on the following criteria: emerging status with similar economy transformation track-record, European Union membership, affiliation to one group defined by EUROSTAT according to real GDP per capita (EUR 11,800–17,200 in 2017) and homogeneous geographical region of Central and Eastern Europe. Real GDP per capita within EUROSTAT methodology stands for total final output of goods and services produced by economy in certain period of time and is calculated for average population of specific year.

The selected members of the group created basing on mentioned criteria are: Czech Republic, Estonia, Lithuania, Hungary, Poland and Slovakia. Global competitiveness index and sub-indexes for selected countries are scored between 1 to 7 points. The sub-index of innovation is additionally supported by the status of business sophistication, which includes cooperation within business sectors and suppliers. This approach is in line with the theory of open innovation (Chesbrough, 2006 and Chesbrough, Garman, 2012, pp. 46–56). The detailed information about total GCI and innovation and business sophistication sub-index scores in 2012 and 2017 for six selected countries are presented in Table 1.

Table 1. The detailed information about GCI and innovation and business sophistication sub-index scores for selected countries

	Total GCI score 2012	Total GCI score 2017	Innovation and business sophistication score 2012	Innovation and business sophistication score 2017
Czech Republic	4.50	4.80	4.10	4.20
Estonia	4.60	4.85	4.10	4.20
Lithuania	4.40	4.60	3.80	4.00
Hungary	4.30	4.30	3.70	3.50
Poland	4.50	4.60	3.70	3.80
Slovakia	4.10	4.30	3.50	3.80

Source: own elaboration based on: <https://ec.europa.eu/eurostat/tgm> (2018).

The top three scores of total GCI in 2012 involving all partial sub-indexes were achieved by: Estonia, Poland and Czech Republic with the same score. In 2017 the top three belonged to: Estonia, Czech Republic, Lithuania and Poland with the same score. The top three scores of innovation and business sophistication sub-index scores in 2012 were achieved by: Czech Republic and Estonia with the same score, and Lithuania. In 2017 the top three remained the same. In 2017 all selected countries either improved, or maintained their GCI total scores in comparison to 2012. In 2017 five selected countries improved their innovation and business sophistication sub-index scores except for Hungary. Top three countries further improved their situation in relation to others within then group – the scores exceeded 4. The scores achieved by Lithuania and Poland are especially interesting for comparison. Although, in 2017 total GCI scores were on the same level, innovation and business sophistication sub-index score achieved by Lithuania was higher. It means that the score of other sub-indexes remaining keys for factor and efficiency-driven economies were on higher level for Poland.

In order to further analyse the essence of innovation and business sophistication differences among selected countries, the detailed indicators were taken into consideration. The detailed composition of innovation indicators for selected countries achieved in 2017 are presented on Figure 2.

The best scores for innovation capacity were achieved by Czech Republic and Estonia followed by Lithuania. The best score for quality of scientific research institutions was achieved by Estonia followed by Czech Republic. The best score for company spending on research and development was achieved by Czech Republic followed by Lithuania. The best score for university-industry collaboration in research and development was achieved by Lithuania followed by Czech Republic and Estonia. The best score for government purchase decisions for the procurement of advanced technology products was achieved by Estonia followed by Slovakia. The best score for availability of scientists and engineers was achieved by Estonia followed by Poland. The highest number

of Patent Cooperation Treaty patents' applications per million population was achieved by Estonia followed by Hungary. The detailed composition of business sophistication indicators for selected countries achieved in 2017 are presented on Figure 3.

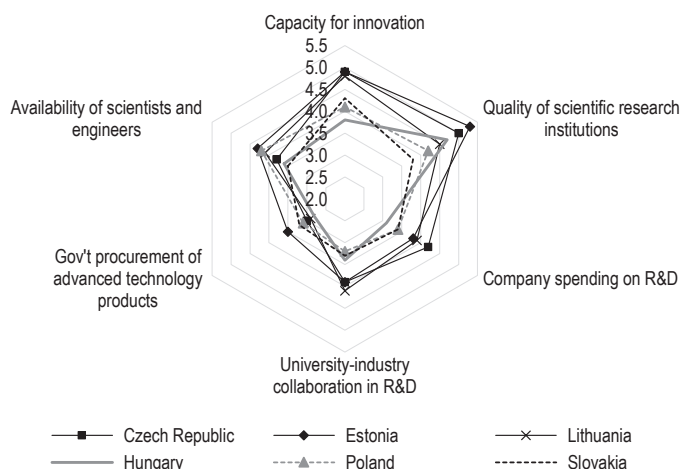


Figure 2. The detailed composition of innovation indicators scores for selected countries in 2017

Source: own elaboration based on *The Global Competitiveness Report 2017–2018* (2017).

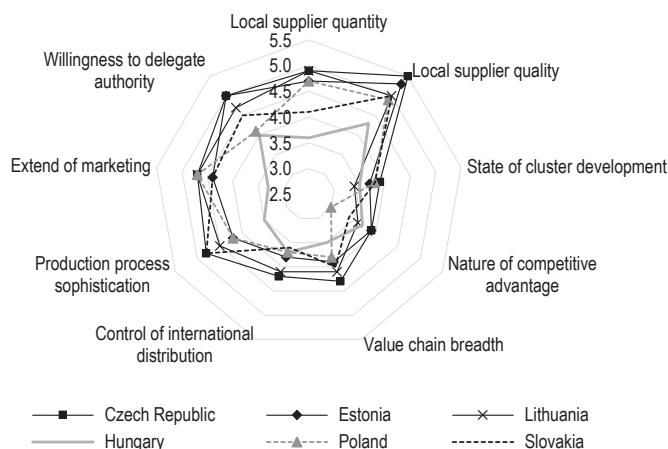


Figure 3. The detailed composition of business sophistication indicators scores for selected countries in 2017

Source: own elaboration based on *The Global Competitiveness Report 2017–2018* (2017).

The best scores for local supplier quantity were achieved by Czech Republic and Lithuania. The best score for local supplier quality was achieved by Czech Republic followed by Estonia. The best score for state of cluster

development was achieved by Czech Republic followed by Poland and Slovakia. The best scores for nature of competitive advantage were achieved by Czech Republic and Estonia. The best score for value chain breadth was achieved by Czech Republic followed by Lithuania. The best score for control of international distribution was achieved by Czech Republic followed by Lithuania. The best scores for production process sophistication were achieved by Czech Republic and Slovakia. The best scores for extend of marketing were achieved by Czech Republic, Lithuania and Poland. The best scores for willingness to delegate authority were achieved by Czech Republic, Estonia followed by Lithuania.

GDP growth in selected countries

Having verified the scores of both, total GCI, innovation and business sophistication sub-index, the next step is to analyse gross domestic product growth in selected economies. In order to support comparable background for analyses, real GDP per capita calculated according to EUROSTAT methodology for the same period of time (2012–2017) was taken into consideration. One should additionally have in mind, that weighted score for total GCI index, according to World Economic Forum reporting methodology, includes diversities depended on the stage of economy development measured by GDP per capita. Real GDP per capita, as well as, its nominal and relative growth 2017 vs. 2012 for selected countries are presented on Table 2.

Table 2. Real GDP per capita (in EUR) nominal and relative growth 2017 vs. 2012 for selected countries

	GDP per capita 2012	GDP per capita 2017	GDP per capita nominal growth	GDP per capita relative growth (%)
Czech Republic	15,100	17,200	2,100	13.9
Estonia	12,500	14,600	2,100	16.8
Lithuania	10,300	12,700	2,400	23.3
Hungary	10,000	11,800	1,800	18.0
Poland	10,000	11,800	1,800	18.0
Slovakia	13,100	15,000	1,900	14.5
Average	11,833	13,850	2,017	17.0

Source: own elaboration based on: <https://ec.europa.eu/eurostat/tgm> (2018).

The highest nominal real GDP per capita growth in 2017 vs. 2012 was achieved by Lithuania followed by Czech Republic and Estonia. At the same time, the nominal growth achieved by these three countries exceeds average nominal growth level of EUR 2 017 per capita by EUR 383 for Lithuania and EUR 83 in case of Czech Republic and Estonia. The remaining three countries achieved nominal growth levels as follows: EUR 117 below average for Slovakia and EUR 217 below average in case of Poland and Hungary. The highest relative real GDP per capita growth rate also belongs to Lithuania. The following countries relative growth rates should be perceived in relation to different basic GDP per capita levels achieved in 2012.

Conclusions

Having analysed five-year development of scores of innovation and business sophistication sub-index, calculated according to Global Competitiveness Report methodology, and real GDP per capita, calculated according to EUROSTAT methodology, positive influence of innovation on the growth of emerging economies seems confirmed. The analysis was accomplished on selected Central and Eastern European countries belonging to one group, in terms of economy stage of development, measured by GDP per capita and also having similar transformation background. There are three group innovation leaders: two of them – Czech Republic and Estonia have confirmed leading, established position, the third – Lithuania has made the biggest progress in the group during five-year period. It is worth to underline that Lithuania achieved significant leading position in university-industry collaboration concerning research and development. At the same time, the economy growth measured by real GDP per capita for selected group of countries confirms leading position of Lithuania, both in nominal and relative growth. The subsequent results were achieved by Czech Republic and Estonia. It is important to notice, that the nominal GDP per capita growth of the leader was 19% higher than average for the group of countries. The nominal growth of both followers was 4% higher than the group average. The total scores of GCI index for Lithuanian and Polish economies were the same in 2017. It seems additional confirmation that the majority impact on long-term growth, even for smaller, emerging economies is determined by innovation.

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Cite this article as: Szklarz, P. (2018). The growth of selected Central and Eastern European economies with reference to the global competitiveness innovation factor. *European Journal of Service Management*, 4 (28/2), 471–477. DOI: 10.18276/ejsm.2018.28/2-56.

QUALITY OF HOTEL SERVICES – SELECTED ISSUES

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION D21

KEYWORDS hospitality, quality, hotel service, quality management in hotel business

ABSTRACT The paper presents problems connected with quality relationship between hotels and their clients. The article discusses the most important aspects of the quality of hotel services. Method: Descriptive method. Basic conditions of the development of contemporary tourism is how to provide a suitable hotel product to clients who want to consume a perfect tourism service. The research into consumption in world tourism shows that prices, quality of products and the condition of the natural environment are playing, and in the future will play, a decisive role in the choice of destinations by tourists. Quality is a very important element of each product: good and service. Hotels must concentrate on many elements for creating high level of quality. The quality of hotel services can be discussed, on the one hand, from the point of view of the service provider as a standard of service based on experience and forced externally, that is - a collection of characteristics that a given service should possess in order to fully satisfy the needs of a hotel guest with regard to accommodation and food. On the other hand, the quality of services is perceived individually by the customers, who define it as the difference between what they expect and a subjective judgment of what they receive.

Introduction

The research into consumption in world tourism shows that prices, quality of products and the condition of the natural environment are playing, and in the future will play, a decisive role in the choice of destinations by tourists. Therefore, hotel enterprises must accurately identify the needs and expectations of their customers. The specificity of hotel services lies in the direct contact and specific relations between the hotel staff and the guests. However, the

hotel operator's personnel do not always use their knowledge in order to raise the quality of their services and, in consequence, to raise the quality of customer service. The reasons for this might be many and various, e.g. a lack of awareness among the personnel of how important it is to know the customers and know how to provide them with quality service, a lack of interest on the part of hotel managers, a lack of proper and well-functioning information channels within and without the hotel, a lack of a data gathering and processing system. By implementing carefully planned pro-quality actions the abovementioned reasons can be eliminated – the first two by implementing an effective training system, the other through appropriate organization and management and accurate description of processes within the hotel facility (Szostak, 2004, p. 75).

The quality of service

The quality of service cannot be defined without considering the essence of service itself, i.e. the characteristics that define its very nature, that is, e.g. its immateriality, unity of production and consumption, variety (difficulty of carrying out universal standardization). The quality of hotel services can be discussed, on the one hand, from the point of view of the service provider as a standard of service based on experience and forced externally, that is – a collection of characteristics that a given service should possess in order to fully satisfy the needs of a hotel guest with regard to accommodation and food. On the other hand, the quality of services is perceived individually by the customers, who define it as the difference between what they expect and a subjective judgment of what they receive. Customers usually analyze how much the service lives up to their expectations, at the same time comparing it with their acceptable price level. The bigger the gap, the greater the customer's dissatisfaction, which in consequence can make the customer decide not to use the services of the given provider or even not to use this type of services at all. In many cases the price is the indicator of quality, e.g. the higher the hotel's category, the higher the price of hotel services, and the level of prices is commonly accepted. The willingness to use more expensive services depends solely on the customer and his purchasing power. Similar assumptions can be made with regard to catering facilities. In the case of hotel facilities with a proper category or functioning within a given hotel system, the customer knows in advance what quality of service he should receive. Such an approach to the quality of hotel services originates from the tradition of the Polish and world hotel industry, the development of which is largely dependent on providing services of certain quality standards (Brown, 2003, pp. 46–48).

Hotel service quality

The consumer of hotel services judges the quality of service not only on the basis of the end result in the form of the benefits purchased, but also on the basis of how the service is provided. The first contact personnel is of utmost importance in hotel enterprises (e.g. receptionists, waiters, maids) and their skills determine the professionalism and atmosphere in which the services are used by customers as well as the end result in the form of customer satisfaction or dissatisfaction with the service (Dominik, 2012, pp. 107–117). One of the rules of interpersonal communication says that a well-served and satisfied customer will tell three other potential customers about his experiences, while one unhappy customer will inform seven other potential customers. Through appropriate customer service in modern hotel industry it is necessary to skillfully influence the perception of the hotel guest (how he perceives the services) in respect of how he perceives the sub-services of the accommodation, which is mainly a result of permanent comparisons of individual and particular expectations of the guest with the reality he

runs into at a given hotel facility. In modern hotel industry the cost of attracting new customers is five times higher than the cost of increasing the quality of services in order to keep current customers who have stayed at the hotel more than once. Quality becomes the element that lets the hotel stand out, irrespective of the type and category, from other hotel facilities that offer similar or substitution services. If the quality of service is at an appropriate level, accepted by the customers, those customers will, as hotel guests, become regular customers. This leads to the following conclusions:

- a) a regular customer is willing to pay a higher price for higher quality, because he has already purchased services at a given hotel and restaurant and was satisfied;
- b) regular customers provide the company with free “word-of-mouth” advertising by telling about the level of service and their satisfaction with the end result (Kowalik, 2003, pp. 17–18).

So two basic elements of the organization and management system influence the level of quality and the process of providing quality in a hotel facility:

- the process of providing hotel services (a guest's stay at the hotel),
- the end result of the service provided (satisfaction or dissatisfaction of the guest after leaving the hotel).

In view of the above, in the case of hotels functioning in the modern tourism market, an important action towards maintaining or increasing the quality of accommodation services provided is the ability to synchronize technical quality, i.e. the fixtures and fittings of the facility and the qualifications of the personnel with functional quality, i.e. the manner of delivering the service, e.g. the personnel's behavior, communicative skills, professional attitude and ability to understand the needs of guests. It can be assumed that the quality of services provided is directly related to the profitability and competitiveness of modern hotel facilities. Economic practice in modern hotel industry shows that common examples of pro-quality routines include developing and implementing individual reception standards for each hotel or chain, catering standards, floor service standards. In many hotels such standards regulate procedures for customer service, appearance (uniforms) of receptionists and various customer service personnel, code of conduct in particular situations at work, equipment of work stations. Such standards are systematically monitored and amended as necessary in order to raise the quality of customer service and enhance the functionality of the rooms and facilities for guests at the hotel. The standard and manner of customer service are influenced by many external factors connected to new needs, such as:

- more and more customers expect non-smoking rooms; separate floors for non-smokers are prepared at hotels, and in restaurants – special areas or even whole rooms,
- a hotel should be accessible by disabled people; for that reason many hotels and restaurants convert their facilities, e.g. lower part of the reception desk for people moving in wheelchairs or for exceptionally short people, install speakerphones, widen doorways, eliminate architectural barriers (e.g. remove doorsills, build ramps).

In the case of hotel services, a few universal quality demands may be specified and identified, such as:

- reliable performance, where a reliable hotel always provides its services appropriately and professionally and keeps the promise that it will deliver the right service at the right time,
- speedy service, which is related to the readiness of the hotel's or restaurant's personnel to provide a given service, which consists in prompt and accurate performance of actions that make up the process of providing the service (this is particularly significant in the case of meals served in catering enterprises),

- confidence and professional attitude on the part of the personnel, which is made up of the knowledge and skills of the direct customer service personnel, the company's reputation, personality of the personnel, confidence in the company, etc.,
- individual approach to customers, which consists in, among other things, the ability to recognize regular customers, remembering their detailed requirements, individualizing the manner of providing services; individual approach to customers should make the hotel guests feel like home.

An important tool for shaping the quality of services in a hotel enterprise is the implementation, especially in international hotel chains, of the Total Quality Management (TQM) system in which all the tangible and intangible assets of the enterprise influence the quality of products and internal as well as external processes. Therefore both the quality of those products and processes and the quality of the assets (resources) of the enterprise should be embraced by management functions. TQM is one of the ways of effective management of a hotel enterprise, focused on quality, based on the participation of every member of the enterprise and looking for achieving long-lasting success through customer satisfaction and benefits for all members of the enterprise. In a hotel enterprise, TQM consists of three significant elements, i.e. focus on the customer's needs, an integrated way of thinking and cooperation between all members of the enterprise. TQM is mainly a type of organizational culture of the enterprise, based on teamwork ability. It is a philosophy of how a hotel enterprise functions more than a management technique that can be introduced by issuing a directive or taken over from other enterprises (Panasiuk, Szostak, 2008, pp. 266–276).

The economic conditions for creating a system of pro-quality actions in a hotel depend, in the fundamental aspect of the problem, on the following factors:

- a) type of building, its construction standard, development of the surrounding area;
- b) the size, number and type of rooms, types of fittings, technical and service equipment;
- c) furniture and other movables;
- d) kind and quality of materials used in hotel rooms and catering facilities;
- e) type and category of the catering facility functioning within the hotel;
- f) type and scope of services provided by the hotel apart from the basic services: accommodation and catering;
- g) the range and quality of dishes and drinks served in the hotel's catering facilities;
- h) the number of personnel, their vocational qualifications, skills in foreign languages, service-providing skills;
- i) organization, rules and procedures for dealing with specific situations, standards of service.

One of the main rules of the hotel industry is care about the well-being of the guests during their stay at the hotel, and that is why serving the guests is the most important task for all the personnel, irrespective of their job. So, the tourist coming to a hotel is not a mere consumer or customer, but a guest. He expects more than the basic service he has paid for, that is high quality of service, professional attitude, kindness, respect, a nice, family atmosphere. Some guests prefer smaller hotels where the personal care of every staff member about the guests and their needs is clearly noticeable and the guests' requirements and habits are treated with respect. In large hotels with extended internal structure, there are special sections responsible for maintaining good relationship between the hotel and guests, known as guest relations or specially trained staff members referred to as *consierge* (Pląder, 2001, pp. 11–14).

The quality of hotel service is not simply an arithmetic sum of the particular components of the product, but a positive appraisal (satisfaction) of each of them by the guests. A hotel guests renting e.g. an accommodation unit expects certain comfort, and specifically, most of all:

- thermal comfort (appropriate temperature, ventilation, air conditioning),
- acoustic comfort (isolation and protection from noises, loud music, street noise),
- lighting comfort (appropriate natural and artificial lighting),
- sanitary comfort (appropriately furnished and equipped sanitary facilities),
- safety comfort (fire safety, security of the building and possessions left in the room etc.)

The perfection of a hotel enterprise from the point of view of quality is mostly determined by such elements as:

- good reputation of the quality of service,
- honesty of personnel at all levels of management,
- orientation towards customers and sales (e.g. linking customer satisfaction with personnel satisfaction),
- good quality of the hotel's product, as high quality services sell better than low quality services,
- using appropriate means (tools) to motivate customers to buy (e.g. qualified and competent personnel, clean restrooms),
- appropriate personnel remuneration system connected with effectiveness of work (Wolak, 2003, p. 1).

The process of adjusting the furnishings to the needs of today's hotel guests and providing them with comfortable rest night and day is so dynamic that the categorizing and standardizing requirements of many modern hotels cannot keep pace (Borkowski, Wszendobyl, 2011, pp. 30–31).

Conclusions

Quality becomes necessity for many hotel operators whose most important goal is to be present in the national and international tourism market through:

- increasing the attractiveness of their accommodation through constantly increasing standards and keeping the standards at the European level,
- determining their place in categorization groups (Jaremen, 2005, pp. 155–172),
- working along a schedule of short-term and long-term undertakings in creating appropriate pro-quality policy,
- determining the specificity of their own accommodation and their target markets.

Raising the standards of furnishing and service, and then keeping those at an appropriate level accepted by the customers should pertain to all service sections and units that are fundamentally important from the point of view of the nature and specificity of hotel accommodation (in hotels, motels and guesthouses).

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Cite this article as: Szostak, D. (2018). Quality of hotel services – selected issues. *European Journal of Service Management*, 4 (28/2), 479–484. DOI: 10.18276/ejsm.2018.28/2-57.

RESPONSIBILITY FOR PROVIDING FALSE INFORMATION IN CONNECTION WITH PROVISION OF DETECTIVE SERVICES

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RECEIVED
ACCEPTED

10 December 2018
28 December 2018

JEL
CLASSIFICATION

K12

KEYWORDS

personal interest, detective services, liability, due diligence

ABSTRACT

The detective service consists of obtaining and providing the information about persons, objects and events. For evaluation of quality of this kind of economic activity the basic criterion is true information. This article deals with the issue of the detective liability for providing false information during providing a detective service. It could be both the contractual liability as well as the tort liability. The main goals of this research is pointing out what kinds of damages may occur in the connection with the detective activity. Since one of the main duties of a detective is providing the true information, the detailed goal of this research is an explanation in what way false information may cause damage and what is the connection between false information and infringement personal interests, which are a private life, a honor, family ties (marital ties). In this paper the attention is drawn to the cases in which a personal interest is violated. They are torts, for which the detective may be sued not only by the person who is a party of detective service contract, but as well as by any person suffered from damages arising as the result of false information. The detailed goal for considerations relates to the issue of pointing out a professional standard of detective due diligence and legal premises of detective liability for damage arising from his negligent action, in particular from false information providing by him, and answer to the question how the detective can be released from this liability. For that it is necessary to introduce a pattern of reasonable detective and principles of proper performing detective services. They shape the standards of due diligence for a detective. The method used is analysis a legal regulations, juridical-cases and doctrine view in order to set out conclusion for future legislation.

Introduction

The Act on Detective Services (called later: ADS) regulates the branch of economic activity called Private Police. Detective activity is a specific type of economic activity relating to the penetration of a private life. In details, the contract on detective services covers activities consisting of obtaining, processing and transferring information about persons, objects and events. Because the main purpose of the detective service is to obtain and provide the

information about persons, objects and events (Kudła, Pawlik, 2018, p. 104), thus, there is a very high level of risk of the violation of the right to privacy, which is a fundamental human right. Therefore the legislator did not grant special powers to detectives to facilitate their services, but on the contrary strengthened legal measures to protect the right to privacy. The basic duty for professionals of detective service is to provide true information.

The Act on Detective Service indicates providing false information as the cause for occurring a damage. The person who may suffer from damages arising in connection with providing the false information is not only the person who commissioned detective service but as well as the person who is traced by the detective. Notwithstanding that is a contractual liability of entrepreneur under the Civil Code (art. 471 Civil Code, called later: CC), the Act on Detective Services sets out a tort liability, which is mentioned in art. 14 ADS as to a legal ground for the liability of a detective and art. 23c ADS as a legal ground for the liability of an entrepreneur. The main goal of this article is to explain how regulations mentioned above modified the civil liability arising from providing detective service, in respect to the Civil Code rules. Moreover, it will be examined what scope of damages caused by providing false information may be and who takes the civil liability for it.

The entities responsible for providing false information and the extent of their liability

In this point I am going to present options for configuration of subjects who may claim before the court for damages arising from false information in connection with a detective service. In other words: who may sue and who may be sued for it. First of all, false information may be treated as improper performance of contract on detective service. As it was mentioned above, the main purpose of detective activity is to obtain and to provide information. An entrepreneur and commissioner are the parties of contract on detective service. Since the major object of this contract is providing information, so the entrepreneur is obliged to provide true information. His liability is based on civil code rules (art. 471 CC). The entrepreneur takes responsibility for it regardless of who did operational act. The contractual liability charges only the entrepreneur, although the operational action causing damage was done by the detective. The entrepreneur takes 'vicarious liability' against person who is a party of contract (Article 474 CC). Next, the entrepreneur may have a refund claim against his employee or his sub-contractor (Brylak, 2016, p. 114).

Under the contractual liability only the commissioner is protected. He is a receiver of the false information, however beyond contractual liability there are persons who are investigated by a detective. The false information could affect this person who is not a party of contract (called a third party). Moreover, this person is unaware of being traced. Although the scope information to be investigated by the detective is wide, the main goal of his activity is to reveal the hidden information. The most wanted are personal data, especially the sensitive information. A detective has no duty to get permission to receiving and forwarding these information (art. 25a (4) ADS in the connection with art. 25 and art. 32–35 Personally Identifiable Information Protection Act). A traced person cannot correct these data which will be provided to the commissioner, so the crucial issue is to provide the true information.

Therefore contractual liability of an entrepreneur for no-performance or improper performance arising from art. 471 CC is too narrow to reward damages to an aggrieved person, so the legislator sets out, simultaneously with the contractual liability, the tort liability. Responsibility for the tort arising from false information charges the detective (Article 14 ADS) and the entrepreneur (art. 23c ADS). Each of them can be directly sued by the aggrieved person who does not have to be a party to the contract on detective service.

Gozdór thinks similarly pointing to art. 429 CC as the basis of liability for the false information. He explains that despite the fact that the detective is employed by an entrepreneur, he is not a person directly subject to the

entrepreneur's instructions. Hence, his tort liability is not transferred to an entrepreneur and art. 430 CC is not applied (Gozdór, 2006, p. 110). The detective who is an employee or a subcontractor of the entrepreneur under civil contract may be directly sued before the court for a tort under the art. 14 ADS. The claimant may be a commissioner or other person who is not bound by the contract on detective service. Article 14 ADS covers direct civil liability of a detective as the person taking operational action, regardless of whether he is an entrepreneur or a subcontractor (who is mentioned in art. 747 CC). Under the art. 14 ADS a detective, as a certificated professional, takes direct liability for damages caused while performing the activities referred to in art. 2 (1) ADS, and as a result of providing false information, according to the rules set out in the Civil Code. It seems that the aforementioned article 14 ADS modified rules of Civil Code in this way that the detective takes direct responsibility for full damages arising as consequences of providing false information regardless of the scope of his liability against his employer.

False information as legal cause of occurring damages

Art. 14 ADS and art. 23c ADS indicates false information as legal cause occurring damages. These are special regulations which are the exception to the general principle according to which satisfaction of claims for indirect damages for third parties are denied (Stecki, 1990, p. 290). The limitation of liability to direct damage, i.e. to the first aggrieved party, is justified by the danger of flooding with claims by third parties. So this view is accepted that the indirect damage may be satisfied only if it is allowed in the statutory law (e.g. art. 446 CC). The indirect damage appears when the causative action or omission is connected with another event or with the extraordinary features of the person and the things that consequently lead to the damage (Stecki, 1990, p. 289). The risk from to high amount of claim may be limited by demonstrating the absence of an adequate causal relationship, which is very likely in the case of multi-elements sequences of events (Lackoroński. 2007, p. 151). The indirect damage may be satisfied if there is an adequate connection between it and the primary event causing it, which is called *causa proxima* (Kaliński, 2014b, p. 320).

The legislator indicates providing the false information as an initial event which may lead through the sequences of events or omission to the damage. The third person's harm is a result of series of events which are connected with providing the false information to the commissioner. The commissioner who receives false information is an intermediate chain and he may spread this information or keep it. The significance in art. 14 ADS (like art. 23c ADS) is that, it indicates the false information as a *causa proxima*, which is the active, efficient cause that sets in motion a chain of events bringing about a result, without the intervention of any force, beginning and working actively from a new and independent source.

Kinds of damages which may arise from providing false information

As to the kinds of damages for which a detective is liable, the provision art. 14 ADS refers to rules of civil code. So it should be explained what kind of damages caused by providing false information may be considered in the detective activity (similar remarks will refer to art. 23c ADS). In the civil law there are two kinds of damages. These are: the property damage and non-property damage. First one is an economic loss which decreases value of assets (damage in property). The second one is a personal harm. There are two subcategories of economic losses. First one is the damage which includes the losses incurred like expenses, costs. Second subcategory is a damage including the benefits which the person could have obtained if the event had not happened. For calculating the amount of the first subcategory of damages the difference between the value of assets before the event causing

damage and the value of assets after this event had happened is needed. The term used sometimes for this kind of damage is 'out of pocket'. The second category covers potential earning or other benefit which would belong to assets if the event had not happened. As an example is the false information about finance state of company, which entails in making the wrong decision on financial investment, which causing loss of potential profits.

As to the non-material damage, it is the negative experience (pain, trauma) and feelings of the injured person (victim). Not all non-material damage is compensated in our law, but only these which are pointed out in statutory law. One of them is the harm which is a consequence of the personal interest violation (Kaliński, 2014a, p. 100).

The personal interest, especially that which could be violated by the detective who provide false information, is: a honor, a good name or a private life. In this cases non-material damage is called harm. A consequence violating the personal interest shall be a damage. Moreover, in science, there is a view that just entering the sphere of the rights of another person is a violation of personal interest, which recognized as doing damage (Kaliński, 2014a, p. 101). Of course, not every piece of false information causes an infringement of personal interest, but only that which covers a serious allegation.

For example, as we consider a defamation, which is one of cases treated as violation of personal interest, it is necessary to prove that false information affects a negative self-evaluation of an injured person (Wierciński, 2002, p. 10). The aggrieved person may suffer from the stress pain, grief, disappointment as result of false information being defamation.

Other cases of violation of personal interest could be destruction of family ties. In doctrine the value of family life is recognized as one of the types of personal interest entering a wider scope of private life (Pazdan, 2007, p. 1143). For example, the person who is being followed by the detective, may sue him before the court for false evidence of his marital infidelity, which led to divorce which causes both finance damages and harm (Kosińska, 2012, p. 667).

In this case there are two type of claims. They are: a non-finance claim and a finance claim. The non-finance claim is included in art. 24 § 1 CC. An injured person may demand from a person committing the infringement to perform the actions, which are necessary to remove negative effects, in particular that the person makes a declaration of the appropriate form and substance. The second type is finance claim. There are two kind of finance claims. The first is a claim of money indemnification for suffering a harm. According to the terms provided in the Civil Code, an aggrieved person may demand money compensation for himself or to a specific public purpose. The detective may be sued for making harm, which is breaking of the marital bond or loss of trust of the spouse. Under the art. 14 ADS, in the court proceedings, the aggrieved person may, in easier way, prove the direct connection between false information and an infringement of personal interest. In other words, in order to prove occurrence of damage it is not necessary to prove a full sequence of consecutive events which ultimately lead to the occurrence of damage. There is a view that to support claims of harm compensation, it is enough to prove a violation of personal interest. It is not necessary to supply an evidence to prove the damage occurs. The indemnification should be paid if there has been a violation of the personal interest (Barta, Markiewicz, 2005, p. 792). Although it is difficult to fix an appropriate amount of money as compensation for such harm, which is not adequate to an economic value, however the court may award a cash payment having regard to: the degree of violation, its severity and duration of suffering (Cygan, 2012, p. 364). See more details: justification of High Court judgment from 19.11.2008, III CSK 171/08, Lex 584204).

As to the second kind of damage, the detective may be also sued for a proprietary-damage arising in the connection with a harm. It could be an expenditure for medical treatment, pills, injections, etc. In a divorce case, the finance damages could cover a loss of living standards. Other examples of the liability of the detective for economic losses caused by the false information refer to business relations, payment capabilities or credibility in these relationships (Patryk, 2017, p. 155). Under the influence of false information the businessman may take wrong decisions as to a future contract or its omission.

The legal prerequisites of detective's liability

In this point I will discuss the legal prerequisites of the civil liability of a detective for tort arising as the result of the untrue information. Therefore the most court cases refers to infringement the personal interest, so I focus, mainly on art. 24 CC. It covers a legal presumption of illegality of violation. It means that, if a person, who made such a violation, wants to avoid the responsibility, he should prove that his act was legal. Otherwise, if he fails he will be charged with a liability. In the doctrine two separate premises are distinguished. One of them is an illegal action of a perpetrator, but the second one is that his conduct was negligent.

For supporting a non-finance claim is enough that a perpetrator's behavior was illegal. In order to release from it, he shall point out a special statutory provisions which allow on entrance in area of a personal interest of this person or consent of aggrieved person. Otherwise a perpetrator is obliged to fulfill a non-finance claims. For finance claims, there is necessary to prove one more circumstance which is a perpetrator's guilt (Machnikowski, 2016, p. 64). The doctrine accepts the view that a careful conduct (due diligence) of a perpetrator releases him from finance liability. So that, the detective as the defendant should prove a due diligence what means that the burden of proof is put on him in order to release him from a liability (Barta, Markiewicz, 2005, p. 795). In the situation in which he fails in evidence for his innocence, he will be charged with responsibility. If the action was illegal, but he acted with a diligent care, he may be released only from his finance liability. He should prove that he acted carefully, with due diligence and reliability. This is accepted by the case law (see judgment of High Court of 14.05.2003, I CKN 463/01, OSP 2004/2/22, judgment of High Court of 5.03.2002, I CKN 535/00, www.orzecznictwo.sn/sites/orzecznictwo/orzeczenia.pl) The key issue is what a professional standard shall be applied to the detective activity. I start from the professional standard which is set up for a detective in the Act on Detective Service. It includes the rules which shape the pattern of due diligence for the detective. According to art. 6 ADS, the detective should, when performing the activities, be guided by the principles of ethics and loyalty to the person ordering the service and with a special care not to violate the freedoms and rights of people and citizens.

While, according to the art. 11 ADS, the detective who wants to avoid responsibilities while performing detective services is obliged to:

- a) obey the law and refuse to perform an illegal or unethical act;
- b) exercise due diligence and reliability, and especially check the truthfulness of the information obtained.

Both abovementioned provisions shapes a pattern of due diligence in detective activities.

Professional standard in verification of untrue information

The defense of the detective may consist of presentation of evidence that he acted with due diligence in collection of information and verified them. The more serious allegation is the more professional diligence it should be (Wierciński, 2002, p. 137). Untrue information is false or poor quality information (e.g. quotes with cut out pieces

are treated as false information (Barta, Markiewicz, 2005, p. 792). Moreover, the detective may be commissioned to make a verification of information. As an example I give an insurance activity in which there is a risk of insurance fraud. Thus, when the insurer suspects that this type of crime has been committed (insurance fraud) he commissions investigation of the event which caused a damage in order to know, whether an event was faked or not (Patryk, 2017, p. 160).

The detective is obliged to follow the professional standard which is more severe than for other professions. The similar standard is demanded from the journalists, who can be treated on the same level of the risk connecting with false information. The parallel is in obtaining information, however the differences regards a purpose to which it is used. In press activity the aim is delivering of information to the public (unlimited group of people), but in detective activity the detective has the commission to obtain information which will be used by the client who undertakes the actions against the person to whom this information refers to.

At the stage of collection and providing information, the victim is not able to prevent its consequences, because he does not know about action taking against him. Thus the standard of the diligence shall be strict. Such a conclusion come out from art. 25a ADS with connection with art. 25 and art. 32–35 Personally Identifiable Information Protection Act, which releases the detective from the obligation to obtain consent for the processing of personal data of the investigated person. The detective's duty is a research of all potential available sources. Cutting or omitting some information may result in false information (Wierciński, 2002, s. 153). Unreliable sources of information shall be verified. The reliable information is total, information which is precise and accurate. The detective should avoid biased facts and skipping of some of them that can lead to erroneous findings as to the course of real events (Wierciński, 2002, pp. 152–153).

The standard of due diligence for verification of information is also influenced by its status (source, from which information is retrieved. (Barta, Markiewicz, 2005, p. 799). Official information or data on entities, which was derived from the public source like the Nation Court Register or Land Register are covered by the special legal presumption on truth, reliance and trust. The detective may rely on credibility of the data included in the public register. As to information which is a circumstantial evidence, that is based only on indirect traces, it may be used it although a detective needs to act with a special precaution when providing such information (Barta, Markiewicz, 2005, p. 800).

The review of the court cases shows that the injured person is protected both in the case in which there is not enough evidence to support the statement that the allegation was true, as well in case when there is not enough evidence to prove the contrary statement, which is that 'the allegation was false'. Such a view is confirmed by the court judgment which states: Although the result of proceeding doesn't entail certainty that it was defamation or not, although there is no enough evidence to support any of both contrary statements, however the perpetrator may be charged with making the declaration that there is no basis for spreading of the message (Judgment of Appealing Court in Krakow from 16.09.1993, I ACz 406/93. quoted from: Barta, Markiewicz, 2005, p. 794).

Conclusions

In detective service, false information could be a cause of wide scope of damages. In the Act on Detective Services, it is mentioned twice (in art. 14 ADS and art. 23c ADS). It is a *causa proxima* of damage which could appear in connection with a detective service.

It seems that the legislator has undoubtedly strengthened the position of the aggrieved party, who can assert claims from both the entrepreneur and the detective, regardless he is an employee or subcontractor. Under Polish

law there is no special rules for liability of detectives for damages arising in connection with their professional activity, but legislator put stress on quality of that service which consists of providing true information. Firstly, the legislator provides suggestion for legal interpretation that there is a direct connection between false information and economic damages or harm of people which are the object of operational action of a detective. In the court proceedings the victim may prove in easier way that infringement of personal interest is a result of false information, because it is not necessary to prove a full sequence of consecutive events which ultimately lead to the occurrence of damage.

The secondly, the legislator pointed out that the detective as the person who is directly liable for damages caused while performing his operational activities and as a result of providing false information. It is tort liability which consists in misconduct of the detective causing damages as result of providing false information. An injured person may be a commissioner or other person not being a party of contract on detective service.

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Cite this article as: Szymczak, I. (2018). Responsibility for providing false information in connection with provision of detective services. *European Journal of Service Management*, 4 (28/2), 485–491. DOI: 10.18276/ejsm.2018.28/2-58.

THE USE OF SOCIAL MEDIA IN EMPLOYER BRANDING IN THE LIGHT OF THE RESEARCH ON THE ICT SECTOR ENTERPRISES

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION Q31

KEYWORDS employer branding, social media

ABSTRACT This article, in its first part, presents a theory related to the creation of an employer and social media brand as a new group of tools supporting employer branding. The second part depicts the results of qualitative research carried out among ICT sector enterprises to illustrate the phenomenon described above. The aim of the article is to show the importance of social media in employer branding. The research method used in the article are individual interviews carried out among managers of the ICT sector enterprise.

Introduction

In the last decade, employer branding has aroused interest of both the scientific community and business practitioners. The main reasons for this result from, inter alia, the intensification of competition between enterprises and thus the increase in the demand for talented and valuable employees. It should be noted that in dynamically developing sectors, such as ICT, there is a lack of specialists, hence acquisition of employees relevant for the

company becomes an important goal of the organization. In response to the situation, many enterprises focus their activities on creating the right image of the employer, both among potential and existing employees. As part of communication channels and tools, social media is used more and more efficiently to create the company's brand as a desirable employer on the market.

The purpose of this article is to present the scope of using social media in creating the employer's image in the ICT sector. The author used in-depth individual interviews to collect opinions as well as verify the scope and functions of social media in employer branding.

Roles and functions of social media in creating the image of an employer

First attempts to investigate the relationship between the brand considered in terms of marketing and human resources management were undertaken by Ambler and Barrow. They defined employer branding as a package of functional, economic and psychological benefits provided by employment in a given enterprise and identified with the employing company (Ambler, Barrow, 1996, pp. 185–206).

K. Backhaus and S. Tikko underlined that it exposes unique aspects of working in a company, allows to distinguish an employer from others and is based on encouraging, motivating and maintaining the present employees and acquiring new ones (Backhaus, Tikko, 2004, pp. 501–517). These unique features of the employment offer, i.e. the package of benefits and values offered, are referred to as the Employer Value Proposition (Barrow, Mosley, 2005, pp. 86–89).

Various factors determine employer branding, including: sector attractiveness, company reputation, quality of products and services, location, work environment, pay, economic conditions, employee benefits, people and culture, balance between work and private life, social responsibility (Mehta, Sharma 2016, pp. 37–38). It is imperative that companies strengthen their image by working on each of the above factors and verify the perception of the brand among employees.

Organizations with strong employer branding derive benefits from it, the most important of which are (Mehta, Sharma, 2016, pp. 37–38):

1. Acquiring better quality candidates: organizations that can attract the best talents can gain an advantage over the competition (Harari, 1998, pp. 23–26). It is easier for such organizations to recruit qualified candidates, as such candidates understand and identify with the culture of the organization that makes them feel part of it.
2. Acquiring passive candidates: clearly articulated employer branding helps to attract candidates who do not want to actively change jobs but would consider a good opportunity if such was made available to them. A global survey conducted by the Corporate Leadership Council (CLC) in 2006 showed that effectively building employer's image allows organizations to have access to a deeper pool of talents.
3. Transition towards a psychological contract: a strong employer brand psychologically ties employees more tightly than a contract of employment. Such employees prefer to stay in the organization longer even if the circumstances lead to consideration of other employment opportunities. This lowers the employment turnover rate and the associated organizational costs.
4. Reducing recruitment costs: a convincing and well communicated message from the organization may lead candidates to ask for vacancies. The organization does not have to inform about vacancies or wait

for applications, and at the same time it saves time and expenses related to the employment of new candidates.

5. Brand ambassadors: when employees accept their organization, they not only engage in its goals but also talk about it, giving good opinions to its peers, which helps in replenishing the talent pool.
6. Increased profitability: a strong employer brand attracts the best and most diverse talents increasing productivity and profitability.

Employer branding activities can be divided into two types: internal, directed to current employees of the company, and external. *External employer branding* are activities designed to shape the employer's brand in an environment whose participants are entities in direct relations with members of a given enterprise and potential new employees (Bednarska-Olejniczak, 2017, pp. 45–46). External employer branding can be divided into the image and recruitment categories. The first one focuses on creating an image of the company as an attractive employer, whereas the other on actions aimed at facilitating the company's acquisition of employees.

As literature on the subject indicates among companies that consciously create the employer's brand, there is an increasing interest in using social media, both in the recruitment process and creation of an experience environment for both employees and candidates.

A.M. Kaplan and M. Haenlei proposed the fullest definition of the concept of social media which treats social media as: a group of web-based application solutions that rely on the ideological and technological basis of Web 2.0 and which enable the creation and exchange of user-generated content (Kaplan, Haenlei, 2010, pp. 59–68). Another definition describes social media as media subject to social control, which can be used on any scale. It contains both the content of the message and possible points of view relating to information (Kaplan, Haenlei, 2010, pp. 59–68). The above definitions refer to the basic feature of social media, which is the maintenance of interpersonal relationships through mutual exchange of content. V. Vouri, deepening the subject of social media in her research, points to more specific features of social media which are (Vouri, 2011, pp. 59–66): interactivity, two-way communication, many-to-many communication, open channel, information democratization. Relating to the above, at the level of activities carried out in the enterprise, the use of social media allows for:

- engaging participants of internal and external environment in the co-creation process,
- publishing and sharing content online,
- connecting users and creating convenient conditions for interaction between them,
- completing content by adding a description or filtering information, marking content and showing connections between content,
- consolidating and matching content by attaching existing virtual content.

The features presented above, such as the scope of using social media, indicate their multifunctionality, identified as communicating, collaborating, connecting, completing, and combining (Vouri, 2011, pp. 59–66).

Communicating function can be understood as sharing opinions, storing and publishing content/image or audio. Its main communication channels include: blogs, websites, microblogs, forums, discussion groups, presentations. Examples of tools that perform the above function include: YouTube, Blogger, Twitter, Instagram, SlideShare, and Skype.

Collaborating is associated with mutual creating, testing and editing of content without location and time constraints. Tools most often used in this context are wikis, forums and discussion groups, as well as specialist/industry related communicators. Exemplary tools include TWiki and Google Docs.

One of the most popular functions is connecting, understood as creating a community, communicating and making contacts within the community. The channels most often used in connecting are social networks and virtual reality. In case of tools, the most important function is performed by Facebook, LinkedIn, and SecondLife.

Completing is a function whose aim is to complete, describe, acquire, add or filter information, and display links between content. The most often used channels include social bookmarking, forums and discussion groups with the exemplary tools being Pinterest, FeedDemon, and Twitter.

The last function is combining, which is understood as connecting and integrating information via external channels on platforms that function as mash-ups. In this case, the most typical tool that performs the combining function is Google Maps, while other services such as Facebook or Snapchat are just starting to perform this function as well, due to their constant development.

Considering the features and complex functions of social media in image management can significantly influence the employer's brand. However, this requires appropriate competencies on the part of the company in the scope and manner of using social media in employer branding.

Methodological assumptions and test results.

In the first stage of the research, the author applied the method of observation known as netnography, a form of research designed to analyze cultures and online communities. (BM) The subject of the research were internet websites run by ICT industry companies, including websites and social networking sites. During the observation period, information on selected websites, as well as the degree of involvement of the surveyed enterprises in active, two-way communication with recipients, including candidates for employees, were analyzed.

The implementation of netnographic research has shown the need to deepen knowledge about the opinions and judgments of owners and managers of companies from the ICT industry regarding the use of social media aimed at creating the image of the employer. This has also become the basic goal of planned qualitative research carried out using in-depth individual interviews. Companies from the ICT industry were selected as researched entities, for whom the maintenance of creative employees and the acquisition of new talents became an important challenge. In-depth individual interviews were carried out in 10 companies with a different business profile in IT services. A partially structured research scenario was developed based on the characteristics of media functions in relation to activities related to image creation and recruitment of employees.

Table 1. The scope of using social media functions and characteristics of activities carried out by the surveyed enterprises

Roles and functions of social media	Activities of the surveyed companies in the scope of employer branding
1	2
Communicating channels: blogs, websites, microblogs, forums, discussion groups, presentations.	All surveyed companies used Instagram to present photos describing: <ul style="list-style-type: none"> – interpersonal relationships in the organization, – friendly working conditions, – openness and support for employees in various situations.
Tools: YouTube, Blogger, Twitter, Instagram, SlideShare, Skype.	The actions implemented on Instagram supported the creation of image among both existing employees and potential candidates.
Main goal: sharing opinion, storage and publishing content/ image, sound	Several of the surveyed companies pointed to YouTube as a place for effective sharing of content in the form of videos referring to the employee's profile and the characteristics of the work carried out in a given organization. Videos posted on YouTube were dedicated more often to candidates and supported recruitment activities. The respondents emphasized that the attractiveness of the content conveyed had greater willingness to share the posted materials.

1	2
Connecting channels: social networks, virtual world.	The companies surveyed primarily pointed out Facebook as a tool for contact with passive candidates. Most of the respondents published job offers on Facebook and detailed information on the requirements for candidates. Several of the respondents indicated Facebook as a platform for sharing knowledge and information about various company events.
Tools: Facebook, LinkedIn, SecondLife, World of Warcraft.	According to the respondents, LinkedIn was mainly used to present the profiles of employees as specialists in the company. The less frequently indicated service was used to present the recruitment offer.
Main goal: Forming conditions for creating and communicating with the community	

Source: own study.

According to the conducted research, companies from the ICT industry notice the need to use social media in creating the employer's brand both outside and within the organization. This approach is supported by the fact that employees and candidates for employees of technology companies are representatives of Generation Y, which declares intensive use of electronic sources in the process of job seeking.

However, it should be noted that the range of channels and tools used by the surveyed companies in relation to the functions of social media is mainly limited to communicating and connecting. The five key functions mentioned above clearly lack the tools and channels associated with collaborating. At the same time, it should be noted that the way of using tools for communication, including sharing opinions and content, is quite simple, and that there are no activities carried out on blogs, forums or discussion groups. In the case of social services such as Facebook, the involvement of the surveyed enterprises in creation of the community is too small and the care of interesting content, used to build the reach and involve online communities, is insufficient. Clearly, the LinkedIn service was undervalued among the respondents. As a service for specialists and a potential place for recruiting employees, it should be an important tool for presenting recruitment offers.

Analysis of respondents' opinions seems to indicate, on the one hand, a clear need to use social media in creating the image of the employer and, on the other, a lack of sufficient skills in this area.

Conclusions

Enterprises that care about building an attractive employer brand should use social media for this purpose in the full range of functions assigned to them. Even today, too many employers still use social services as a place for presenting information, instead of getting involved in community development and active search for talents. It should be noted that the surveyed enterprises from the ICT sector treat social media in this way.

Using social media to create an employer image is especially important in the case of enterprises that employ and recruit young employees. Using channels and means of communication appropriate for Generation Y, whose representatives form online communities and often communicate constitutes the basis for understanding the expectations, preferences and lifestyle of potential employees. In this sense, social media becomes a space where the image of the employer is verified in terms of authenticity and the degree of adaptation to the vision of the world professed by Generation Y.

Recognizing social media as a spectrum of channels and tools, as well as using it with its intended use, can facilitate the involvement of employees in the process of co-creating values in the organization. It seems that soon most companies will have to leave the comfort zone designated by what is known and move to a world in which co-participation, co-creation and open communication will determine the strength of the employer's image. In this sense, social media provides opportunities, but also sets requirements for its use.

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Cite this article as: Szwajlik, A. (2018). The use of social media in employer branding in the light of the research on the ICT sector enterprises. *European Journal of Service Management*, 4 (28/2), 493–498. DOI: 10.18276/ejsm.2018.28/2-59.

DESIGN AS AN ELEMENT OF THE SERVICE COMPANY'S STRATEGY

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RECEIVED
ACCEPTED

10 December 2018
28 December 2018

JEL
CLASSIFICATION

D40, M20, M29, O22, O31

KEYWORDS

design, design management, service enterprises, innovation, SME sector

ABSTRACT

As the research conducted by Design Council in UK shows for every £ 1 invested in design, businesses can expect over £ 20 in increased revenues (Design Council, 2018). This article raises the question whether it is justified to include design in a service company's strategy, and companies' readiness to treat design as a key element of their strategy. The goal of the article is to describe the external and internal conditions that must exist for service companies to incorporate design into their strategies and use it as a generator of value for them. To verify the above issues the desk research analysis and answers from experts gathered during individual in depth interviews has been used. In the course of conducting interviews, it could be noted that despite the fact that experts come from different countries, as well as worked for various entities, they have very convergent views on the entities problems in the implementation of design, as well as on creative innovation management. Experts also had similar guidance for these organizations.

Introduction

For most of the history design has been treated as the next step in the process of designing objects. R. Loewy designed trains, F. Lloyd Wright houses, C. Chanel haute couture clothes, P. Rand logotypes, while D. Kelley products, including the most famous mouse for the Apple computer. As it became clear that effective design was the foundation of commercial success, companies began to make increasing use of it, and by the

second half of the twentieth century design had become an increasingly valuable competitive advantage. Today, in order to create a value chain, businesses need to generate ideas that are better suited to the needs and desires of consumers. Thus, for example, high-tech companies that had previously hired designers to invent the shape and layout of smartphones began to ask them to create the appearance of the user interface, then to design the user experience, and then immediately began to use the design process to create a corporate strategy. Nowadays, design is also used to improve the functioning of the stakeholder network and the organization as a system (Brown, Martin, 2015). Design has never been more valued as an economic force, nor has it been as culturally influential as it is now. All types of organizations have begun to adopt “design thinking” (Brown, 2018; Stickdorn, Scheider, 2014, pp. 9–14) as their guiding principle and are building their internal design competencies (Rousseau, 2018).

Design in companies — place and role

There are many approaches to position of design in companies as well as correlation between design and economic success. One of them suggests that in order to measure and communicate the value of design management, the Balanced Score Card model should be used and be structured in the following four categories (Mozota, 2006):

1. Internal business processes: design management as an innovation process, providing improvements in company performance and processes. Here, these innovations and processes are totally invisible to outsiders.
2. Learning and growing: beyond advanced design management. Design explicit knowledge is applied to strategic focus and improves the quality of staff.
3. Customer and brand: design management as perception and brand. Design knowledge is applied to corporate difference building and strategic positioning.
4. Financial: the historic design management economic model. Design management as an explicit and measurable value for company reputation and stock market performance.

The Danish Design Centre has developed a design ladder to illustrate the use of design by companies. This is a communication model that illustrates the diversity of use of design in organisations. The design ladder is based on the assumption that there is a positive relationship between higher revenues and a greater emphasis on design in the early stages of product or service development, and giving design a more strategic position in the company's overall business strategy. Design can be used at different intensities:

Stage 1: design – not designed:

Design is an invisible part of e.g. product development and is not realized by trained designers. The solutions are based on the ideas of the employees involved in the process and concern good functioning and aesthetics. The user perspective plays little or no role in this process.

Stage 2: design as shaping:

Design is seen only as the final stage of shaping, both in terms of product development and graphic design. Many designers use the term ‘styling’ in this process. The task can be done by professional designers, but is usually handled by people with a different education.

Stage 3: design as a technological process:

Design is not a result, but an integrated approach at an early stage of the development process. The solution is problem-based and user-driven and requires the involvement of a wide range

of skills and capabilities, for example, process engineers, materials engineers, marketing experts and administrative staff.

Phase 4: design as a strategy:

The designer works with the owner/management to reconsider the business concept in whole or in part. In this case, the main focus is on the design process in relation to the company's business vision and desired business areas and its future role in the value chain (Design Council, 2018).

How to manage design in a company

Companies face different challenges when it comes to innovating based on what markets they are in and where they are in terms of growth. Start-ups have a very different set of issues to companies that are expanding rapidly or are operating globally. The processes and systems for capturing, developing and implementing new ideas change. But ultimately all companies face the issue of accelerated change happening in the world, so everyone needs to consider how to be creative and deal with uncertainty. That is why implementing design in service companies can be so important. Nevertheless it is not easy to manage design in company especially when managers are implanting design for the first time.

The group of experts who took part in the IDI (individual in-depth interviews) study within the scope of the subject analyzed the application of design management rules in the entities they represent or cooperate with. The object of the study was management techniques used in companies and ways of implementation design. For this reason, the technique of qualitative research was chosen to deepen this complex issue. The interviews were conducted in the third quarter of 2018 by the authors (researchers from the University of Szczecin). The results are worth attention because authors managed to obtain information from international experts (from Netherlands, Ireland and Germany), who are practitioners of design implementation in entities from various sectors. In the course of conducting interviews, it could be noted that despite the fact that experts come from different countries, as well as worked for various entities, they have very convergent views on the entities problems in the implementation of design, as well as on creative innovation management.

Implementation of user-centered approach is very often pointed as a way of starting process of design implementation. But also this way of thinking is something that companies still missing. Experts asked in the IDI study what they think about user centered approach to deliver sustainable innovation, is it common in companies or this is something that companies still have to learn that the very often companies make assumptions about knowing their users, so they may think they are user-centered, but may not actually spend time with users regularly. Running and growing a business involves a whole range of considerations. Teams can become drawn into meeting short-term tasks and too many meetings inside the company, or become focused on improving their products and services rather than the user experience. It becomes easy to get disconnected with users, or meeting with users can be seen as only for sales people.

According to experts spending time with users is the best way to show people how valuable it can be. So, this is the way to encourage managers to implement user-centered approach, so that they do not think it is a waste of time or money. Spending time with users reveals a different perspective and often unexpected insights. It is not difficult for people to know that a great user experience is what they want to deliver, the difficulty is structuring ways to do new research on that – with how many people, which people, what type of research? The cost implications are important, so starting with a small sample can be a good way to start.

The key methodology for effective user research it is work with researchers who capture results in ways that can show clear and compelling insights. The hardest part for companies doing research themselves is that they are biased and can want to hear or see only positive responses. Users can also want to please people if they know the company is theirs, so this makes the problem of open listening and observation harder. According to experts it is essential in any methodology to know what managers are seeking to understand and then how they can create an open situation where people are free to demonstrate or explain their perspective.

In process from research to insight to solution creation experts stated that it is very important to firstly decide on a group of users that is a good representative of users – perhaps typical, or extreme or one particular sub-type. Then there are a range of options in terms of in-context interviews, observation visits, shadowing or immersion. Capturing these visually, verbally and in writing. Then patterns might emerge or something unusual may stand out. These can then be taken back and used to develop prototype solutions for testing. All these stages can be adapted to different scales and budgets depending on what a company wants to achieve.

In process of using design in company it is very important to implement insights and transform them in to a vision statement. To do that managers have to reframe insights into something that can be turned into creative ideas. So rather than 'let's design a better product', insights might reveal a situation where managers can reframe the problem into something more specific such as "new younger customers need a better way to fit our product into small cars, because this is causing them inconvenience and extra cost".

According to experts point of view method that can be recommend to companies for concept building and validation it is to design a way to test an idea in terms of 'minimal viable product'. That might mean taking a prototype to a test group. It might mean a test launch in one region or one store. It might mean also taking a new idea to a trade show for feedback. Whatever way is possible, managers have to turn an idea into something that can be bought or used, so that there is genuine feedback. Asking people 'would you like this' is not strong enough, but a full launch can be too risky. Managers should start small, test early, then iterate – this can be done in the market with user involvement.

Risk management according to experts is very important in commercialization process and still not used by managers very often. Steps that can help in risk management are:

- make checkpoints,
- revisit the original brief,
- be honest about feedback and results,
- keep check on the levels of investment.

According to experts it is also significant that there are examples of innovations that were pushed through with passion even though feedback was negative, but there are many more start-ups that refuse to acknowledge that the idea is not getting good feedback. Knowing when to stop or when to keep going can be a very difficult decision.

Dealing with design and innovation after deployment is also very important because launching is just the beginning even for design issues. Then a business faces a whole new set of sales and distribution issues. According to IDI experts designers or innovators are not always the best people to run and then scale a business, so it is important to have a balanced team with different skills. Launching a new product or service can also involve branding, marketing materials, websites, packaging, interior spaces and any number of other 'touchpoints' in the sales experience. Different designers may be required and budgets need to be prioritized and allocated. A design management role here ensures the full perspective to achieve a strategic goal.

Experts stressed that still managers have to be encourage to implement design, because they are afraid of the process as well as the costs. So to make it easier there has to be a business case for using design and a clear set of goals in terms of what success will look like and will be measured on. In other words a clear strategic brief needs to be created at the beginning. Too many businesses bring in designers at the end of a project to add a few 'nice looking marketing materials' – and too many designers will also deliver on that basis. It severely limits success and keeps design as 'finishing touches' rather than at the core of the business. When businesses meet and work with designers that have strategic ability, and can demonstrate the benefits and the process, it can change people's perspectives.

Conclusions

The inclusion of design in a strategy aims to combine business and creative assumptions in a way that goes beyond aesthetic design activities and raises the concept of design to the level of a strategic tool that companies can use. Business and design strategies, although inextricably linked, meet different needs. The first includes financial, product and market objectives, which are best expressed through the points of contact with the brand. The design strategy, on the other hand, is an action plan to implement the visual and media elements that contribute to the achievement of these objectives. The design strategy can be presented as the development of the language that best reflects the business strategy (Koval, 2018).

The design strategy is formulated on the basis of parameters and potential of a specific challenge, which is the driving force for a whole range of solutions. It is simple, convincing and efficient. As with any language, evolution and changeability are inevitable and should be taken into account. It is worth noting that this is in line with the following change in the management and abandonment of know-how, in favour of know-what, which in turn is heading towards know-why. Design focuses on the last phase by guessing consumer expectations, which is only possible through close cooperation between the two parties, starting from the product development phase. In this case, we can speak of an advanced process, based on design (Celaschi, Celi, Garcia, 2011, p. 6).

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Cite this article as: Tomczyk, M., Spychalska-Wojtkiewicz, M. (2018). Design as an element of the service company's strategy. *European Journal of Service Management*, 4 (28/2), 499–503. DOI: 10.18276/ejsm.2018.28/2-60.

SOCIAL EVALUATION OF PUBLIC UTILITY SERVICES IN THE DOWNTOWN RESIDENTIAL AREA OLD TOWN IN SZCZECIN (POLAND)

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION H4, P36, R23

KEYWORDS cities, neighbourhoods, public services, social evaluation, downtown residential areas, Szczecin

ABSTRACT The term "services" is defined in a variety of ways, depending on the research approach. Among service activities, a special role is played by public services located in downtown residential areas. They constitute a specific mix of various types of private and public activities, which provide tangible and intangible goods to the inhabitants of this area, who use them constantly or frequently, but also citywide services, which are used by all inhabitants of the city. The basic aim of this article is to determine the opinion of inhabitants about the services located in the downtown residential area Old Town in Szczecin. Based on the survey, the type of public services used by inhabitants and people outside this area was specified. Moreover, an assessment was made as to whether there is a sufficient number of services in the given area and evaluation of their burdensomeness.

Introduction

In economic research, more and more often attention is put on the causal links between service activities and an area. There can be noticed spatial differentiation in the level of consumption or provision of services. Services are located mostly proportionally to the population distribution. The basic condition for the optimal performance

of the national economy is the level of development of the given area. It is very important to create conditions for the efficient functioning of production in a given area, as well as the welfare of the population, i.e. the service function.

Literature review — Services consumed by persons (B2C)

S. Balin and V. Giard (2006) reviewed numerous definitions of services presented in the world literature. Polish publications also present a wide variety of approaches and definitions. J. Chmielewski (2001, p. 176) believes that services are the third sector of human economic activity. They aim at meeting social, material and non-material needs, which are constantly increasing. Services can be provided at the level of family life, by citizens for the benefit of others and by public institutions.

According to K. Kłosiński (as cited in: Ilnicki, 2009, p. 30), services are activities whose effect is to satisfy the specific needs of an entity, be it a person, company, commune, city or country.

F. Kłosowski (as cited in: Ilnicki, 2009, p. 29) described the essence of services as all institutional activities aimed at an entity – which may be a person, an enterprise or a thing – in order to give, preserve or restore a new or existing value that does not provide a material product.

An original and different definition of services was formulated by K. Rogoziński (as cited in: Ilnicki, 2009, p. 29). According to this definition, the service, in addition to its other features, is commissioned and consumed by specific individuals before the service system develops. A service is commissioned provision of work and benefits to enrich personal qualities or the volume of use values that the recipient has. The author of this definition treats services as not only a supplement to the basic manufacturing activity of industry, but also as satisfying one's important and specific needs.

Individual services and those that result from the functions of the state (health care, social welfare, education, defense, public administration and others) are non-market services (Stefaniak, 2007, p. 99). The result of the non-market activities is free or partly paid. There is a consensus that market services are activities governed by market mechanisms, and their result, in the form of goods, is acquired from personal income (Ilnicki, 2009). These services play a significant role in the socio-economic life and spatial development of cities, as well as largely shape the level and quality of life of its inhabitants (Dzieciuchowicz, 2006).

J. Chmielewski (2001, p. 178) divided service facilities and institutions into two groups. The first includes social-type services, which are an indispensable part of the municipal infrastructure of the city. These services are protected by the state and local governments, and are founded from local or government budgets. This group includes education, culture, upbringing, leisure, health and social care, and administration. The second group comprises commercial facilities and institutions. Their standard, locations and impact zone are defined by the market. They include, among others, commerce, catering, living services, communications, automotive facilities and entertainment. When taking into consideration the purpose, there can be distinguished production, consumer and general social services. Production services are related to the production of material goods, e.g. electricity distribution. Individual and collective consumers use consumer services, e.g. transport, commerce, science, culture and hairdressing. General public services include, among others, public safety and public administration (Panasiuk, Tokarz, 2005, pp. 41–42).

Method

The study was conducted using the direct interview method among 100 respondents (50 inhabitants of the Old Town in Szczecin and 50 people not living in the Old Town). 50 women and 50 men participated in the study. The average duration of an interview was about five minutes. The survey was conducted at three different times of the day, from 10.00–12.00, 14.00–16.00 and after 18.00. The elderly were interviewed mainly in the morning hours. Most people who did not live in the Old Town were met during the weekend and were usually aged 26–65.

Results

The educational background of the survey participants shows that the dominant group consisted of respondents with secondary education (40%). These are mainly working people and pensioners. People with higher education accounted for 29% of the sample. Respondents with primary education constituted only 15% of the sample (pupils), whereas 16% were people with vocational education.

As far as professional status is concerned, in the structure of participants it can be observed that working respondents (54%) are dominant. There were interviewed 14% of the pupils and students, 13% of pensioners, and only 5% of the unemployed.

Overall assessment of existing public services

The respondents could choose four responses regarding the quality of services located in the Old Town of Szczecin. They could assess, at their own discretion, the quality of services as “very good”, “good”, “average” or “poor”. The respondents were to assess the quality of services located in the Old Town, including cultural, entertainment, educational/school system, health care, public administration, sports and numerous tourist services. 47 people assessed the services as “good”, 28 as “very good”, while 21 respondents chose “average”. None of the respondents rated the quality of services located in the Old Town as “poor”. One person out of twenty-five surveyed did not answer this question, as they do not use services located in the area.

Services for inhabitants

Services for inhabitants include, inter alia, health care, numerous grocery stores, churches, kindergartens, schools, vegetable and fruit kiosks.

All interviewees declared that they use services located in the Old Town. It can be seen that most people use commercial services – this answer was chosen by as many as 39 respondents. As many as 35 inhabitants willingly use catering services, and 28 respondents enjoy financial services such as banks. 22 respondents use cultural services, such as the Museum of Contemporary Art at Żołnierza Polskiego square, the National Museum in Szczecin at Staromłyńska Street, and the Castle Museum at Korsarzy Street. This answer was chosen mainly by working people with secondary and higher education. The hairdresser and cosmetic services are used by 19 inhabitants. 18 respondents use health care services, whereas 16 inhabitants chose entertainment services and 11 public administration services. Educational and school system as well as sports services were chosen by 9 respondents. The services that were the least frequently chosen are: tourist services (8 people), repairs such as shoemaker, computer and bicycle services (9 people). Only 4 people wrote “the church” in the “other” section, i.e. they use sacred services.

Women more frequently use the services of culture, gastronomy, commerce and health care, hairdresser and beautician, whereas men more willingly chose sports, entertainment and financial services. The inhabitants use services located in the Old Town mainly several times a week (39 people). 8 respondents use services located in the area every day; 2 respondents once a week; and 1 person several times a month.

When using services in the Old Town, the inhabitants are mainly driven by their place of residence (48 people) and location (17 people). Less popular was the price (8 people), the prestige of the place (5 people) and the place of work (3 people).

Services for tourists

People from outside of the Old Town are more willing to use tourist services. They visit the Old Town mainly at weekends to meet friends and try catering services. Young people attend schools that are located in the Old Town. University students often visit the Pomeranian Library.

Out of 50 people questioned from outside of the Old Town, 6 respondents declared that they do not use services located in the area. Most respondents use commercial services (28 people) and catering services (23 people). 17 people use tourist services. The Old Town is an attractive place for people who like to visit the historical sites of the city. Financial services are used by 13 respondents, entertainment services by 12 respondents, and education services by 11 respondents. The less frequently chosen services include: cultural (7 people), sports (4 people), hairdresser/ beautician (4 people), health care (3 people), and public administration services (3 people). The service most rarely chosen was repairs, for example, shoemaker, computer and bicycle services; this answer was chosen by every 25th respondent. Young people more often choose entertainment services. On the other hand, working people willingly use catering, commercial, financial and tourist services.

People from outside of the Old Town use services in a given area mainly once a week (17 people) and several times a month (11 people). 9 people use the services located in the area of the Old Town several times a week, 4 people once every six months, and 3 people once a month. Only 6 people replied that they do not use the services in the Old Town.

When using services in the studied area, people from outside of the Old Town are driven mainly by the location (28 people) and the prestige of the place (11 people). Every 10th person uses services in a given area because of the place of work. The smallest number of people use the services located in the Old Town due to prices (4 people) and the place of residence (two people). The "other" answer was indicated by 6 respondents. One person uses services in the Old Town due to the popularity of the place, two people attend schools in the area, and two people visit their family there.

Desired and undesired services

All respondents were asked the question: "Is there enough services in the Old Town?". The respondents could choose four answers (yes, no-there are not enough of them, there are too many of them, I have no opinion). Most respondents believe that there are enough services in the Old Town (76%). Only 8% of respondents said that there are too many services. 7% think that there are not enough services in the Old Town, and 9% of respondents have no opinion.

To sum up, it can be stated that majority of respondents think that there are enough services in the Old Town. More people living in the analysed area than people from outside of the area recognized that there are not

enough services. There is mainly a lack of services for pensioners. The Old Town is inhabited by a large number of *retirement-aged people*, who use mainly commercial and sacred services. The rest of the interviewees gave their individual preferences, such as a football pub or a health food market. People who think that there are too many services have in mind mainly restaurants, which according to them are in abundance in some parts of the Old Town. In their opinion, this is associated with parking and noise problems.

Burdensomeness of services

A group of a hundred people were asked if the services located in the Old Town are burdensome. According to 68% of respondents, services located in the Old Town are not burdensome. 6% think they are burdensome, and 26% of respondents have no opinion on this subject. Of no opinion were mostly people living outside the Old Town. They were not able to comment on this subject, as some of them rarely use services in the area.

The majority of inhabitants, i.e. 36 people (72% of the total number), believe that services located in the Old Town are not burdensome. 8 people (16% of the total population) do not have any opinion about the burdensomeness of the services. Only 6 people think that services in the given area are burdensome by mainly indicating restaurants and pubs. The inhabitants are tired of noise made by moving tables in front of the restaurants and loud conversations of people leaving pubs in the evening. Moreover, the problem for them is parking, mainly at weekends, when people from outside of the Old Town are more willing to use catering services.

Conclusions

Today, the Old Town is a specific residential area of Szczecin. It covers the oldest part of the city, which for many years has changed its infrastructure and image due to wars and various architectural concepts. This residential area shapes the city's image and attracts tourists. It is dominated by multi-family residential units with related services and service development area. It includes, among others, numerous services of culture, catering, commerce and tourism. The area is inhabited by working and post-working age population. This is due to the fact that after settling down and finishing their education, etc., people more and more often decide to live outside the city centre. They choose more favourable locations that offer better housing conditions. The respondents, who know the studied area well, often mentioned the large throughput of homeless people and the lack of sufficient number of police patrols.

Most respondents are aged 36–65, have secondary education and are mainly working people. The most popular services are commercial, catering and financial services. The reason for this may be that this area offers the greatest number of such services. Moreover, cultural and entertainment services are popular. Most respondents believe that there are enough services in the Old Town. Inhabitants of the Old Town in the post-productive age lack places designed just for them. Senior clubs or places where the elderly can share their life wisdom and experience can be created there. Four inhabitants of the Old Town said that there are too many services in the area. According to six inhabitants, restaurants and pubs are bothersome. They also stated that they have problems with parking during the weekend. People from outside of the Old Town were more likely to have no opinion on the given topic. None of the people living outside of the Old Town has found services burdensome. Only three people who live outside the given residential area believe that there are not enough services. They exchanged services that interest them the most, e.g. a football pub. The inhabitants of the studied area use the services mainly a few times a week, and are mainly driven by the place of residence. People from outside of the residential area use services in the

area less frequently, mainly thanks to the location and prestige of the place. The service quality was evaluated as “good”. The inhabitants of the Old Town were more critical and more frequently described the quality of services as “average”. People living in the area had no problems with answering the questions, only a few people from outside of the Old Town did not respond because they do not use the services.

Women more frequently use the services of culture, gastronomy, commerce and health care, hairdresser and beautician. Men more willingly chose sports, entertainment and financial services. Women and men are eager to use gastronomy and commercial services. Women more willingly answered the questions, however they were more critical about the quality of service. Pupils and students are satisfied with the quality of services. This may be due to the fact that the area includes the Pomeranian Library and numerous restaurants and pubs.

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Cite this article as: Towpiko, K., Sypion-Dutkowska, N. (2018). Social evaluation of public utility services in the downtown residential area Old Town in Szczecin (Poland). *European Journal of Service Management*, 4 (28/2), 505–510. DOI: 10.18276/ejsm.2018.28/2-61.

ARRIVALS OF FOREIGN TOURISTS TO POLAND

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION C65, Z31, Z32

KEYWORDS inbound tourism, expenditure, foreign tourist, direct impact, total impact

ABSTRACT Tourism is one of the world's largest economic sectors. It creates jobs, drives exports, and generates prosperity across the world. As well as its direct economic impact, the industry has significant indirect and induced impacts. In 2017, the sector accounted for 10.4% of global GDP and 313 million jobs, or 9.9% of total employment. Tourism is important to significant extent for numerous fields of social and economic life in Poland. The aim of the article is to examine the impacts of two factors influencing the total amount of money spent by foreign tourists visiting Poland. The first factor is the number of trips to Poland, and the second one – the mean spending per trip.

Introduction

Introduction

The term “tourism” – in accordance with the regulation No. 692/2011 of the European Parliament and the Council – means the activities of visitors taking a trip to a main destination outside their usual environment, for

less than a year, for any main purpose, including business, leisure or other personal purpose other than to be employed by a resident entity in the place visited. The “tourists” term does not mean the same as the ‘visitors’ term. The ‘visitors’ category refers to tourists (i.e. visitors who occupied accommodation establishments within the given location for at least one night) and same-day visitors (not accommodated).

The economic impact of tourism

Tourism contributes to Gross Domestic Product (GDP) and employment in many ways. The total contribution of the industry consists of the direct, indirect and induced impacts on the economy. The indirect impact includes the GDP and jobs supported by:

- a) tourism investment spending (such as the purchase of new aircraft and construction of new hotels);
- b) government spending on tourism marketing and promotion, aviation, administration, security services, sanitation services, etc.;
- c) domestic purchases of goods and services including – for example – purchases of food and cleaning services by hotels, of fuel and catering services by airlines, and IT services by travel agents (*Travel & tourism...*, 2018).

The induced contribution measures the GDP and jobs supported by the spending of those who are directly or indirectly employed by the tourism industry. The data concerning Poland, the European Union and the whole world are given in Table 1.

Table 1. Tourism's absolute and relative contribution in 2017

Specification	Absolute size	Relative size (%)
1	2	3
Total contribution to GDP		
Poland	23.9 bn USD ≈ 89.9 bn PLN	4.5
European Union average	63.8 bn USD	10.3
World average	62.9 bn USD	10.4
Direct contribution to GDP		
Poland	10.2 bn USD ≈ 38.2 bn PLN	1.9
European Union average	23.8 bn USD	3.9
World average	21.5 bn USD	3.2
Total contribution to employment		
Poland	738.2 thous. jobs	4.5
European Union average	975.2 thous. jobs	11.7
World average	2,341.0 thous. jobs	9.9
Direct contribution to employment		
Poland	332.0 thous. jobs	2.0
European Union average	424.6 thous. jobs	5.1
World average	937.5 thous. jobs	3.8
Contribution to exports		
Poland	13.0 bn USD ≈ 49.1 bn PLN	4.6
European Union average	16.2 bn USD	5.8
World average	8.1 bn USD	6.5

1	2	3
Contribution to capital investment		
Poland	2.8 bn USD \approx 10.4 bn PLN	3.0
European Union average	6.3 bn USD	5.1
World average	4.8 bn USD	4.5

Source: own compilation based on (*Travel & tourism...*, 2018).

In 2017, the world total contribution of tourism to GDP was 62.9 bn USD per country (with direct contribution of 21.5 bn USD). The sector supported on average 2,341.0 thous. jobs (937.5 thous. directly). It should also be mentioned that tourism attracted investment of 4.8 bn USD/country and generated on average 8.1 bn USD in exports.

As shown by the data in table 1, the relative size of the sector in the Polish economy is considerably smaller than in the average European Union economy and smaller than in the average economy in the world.

Inbound tourism in Poland — key information

Poland has a diversified natural environment. The Baltic Sea in the north and the Sudetes and Carpathian mountain ranges in the south form natural borders of the country. The best recreational destinations include (Turczak, 2018):

- Masurian lakes (the Masurian Lake District in north-eastern Poland counts around 2,000 lakes on an area of about 52,000 km²);
- Baltic coast (there are dozens of sea resorts on the coast of Baltic Sea; the coast stretches 770 km; a distinctive part of the coast is the Hel Peninsula, which is 35 km long);
- Tatra mountains (this is the highest mountain range of Carpathians; the most famous resort for skiing and hiking in the Tatras is Zakopane);
- Sudetes (there are lots of tourist resort – e.g. Karpacz, Szklarska Poręba – for skiing and hiking in the Karkonosze mountains, which is a part of the Sudetes mountain range);
- Białowieża Forest (Białowieża National Park is the last fragment of the primeval forest which once stretched across the European plain; it is home to the world's largest population of European bison and many other endangered species; the oldest oaks in this forest are 650 years old).

Since 2014, the Central Statistical Office has conducted research providing information on the arrivals of foreigners to Poland. There have been also collected data on expenditures of foreigners related to travel. According to that collection of data, there were 83.8 million foreigners, including 18.3 million tourists and 65.5 million same-day visitors, who came to Poland in 2017 (13.7%, 14.1% and 13.3% more than in 2014, respectively). Almost every second arriving foreigner was in the age group of 35–54 (in 2017, 48.2%). People aged 25–34 also constituted a large group (18.8%).

Tourists travel for variety of different reasons. The purposes of international tourism can be, among others (Inkson, Minnaert, 2012, pp. 21–22): leisure, recreation, and holidays; visiting friends and relatives; education and training; business and professional reasons; health treatment; religion and pilgrimages; shopping.

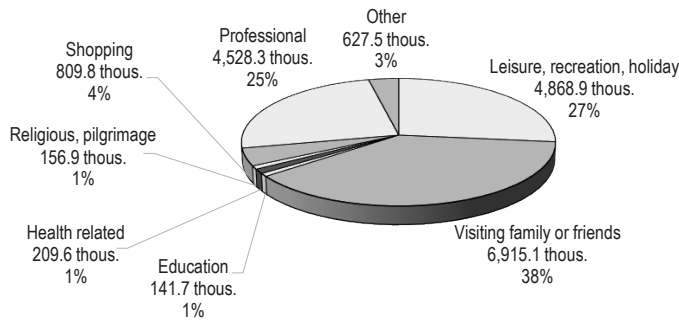


Figure 1. Trips of tourists to Poland by main purpose in 2017

Source: own compilation based on *Tourism in 2017* (2018).

In 2017, expenditure of foreigners visiting Poland¹ amounted to 56.7 bn PLN, which was 31.6% more than in 2014, of which tourists – 32.8 bn PLN (42.6% more than in 2014) and same-day visitors – 23.9 bn PLN (18.9% more than in 2014).

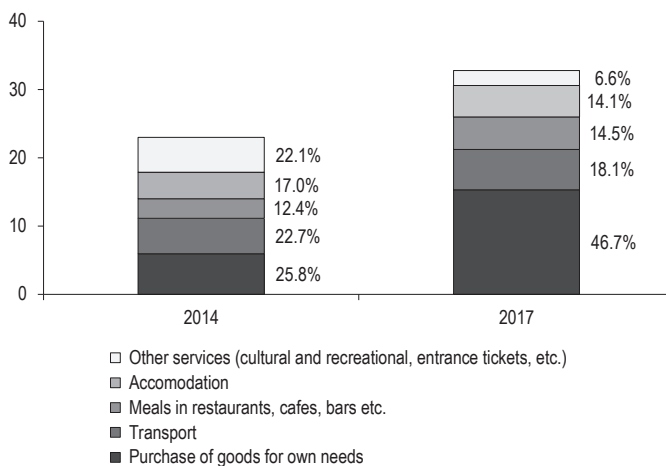


Figure 2. Expenses of tourists connected with travel to Poland in 2014 and 2017 (bn PLN)

Source: own compilation based on *Tourism in 2014* (2015) and *Tourism in 2017* (2018).

¹ Tourism expenditure covers expenditure (monetary) for the purchase of consumer goods and services (including durable consumer goods and high value objects) incurred before and during the trip directly by tourists as well as financed or reimbursed by the employer, other persons or institutions. They include all tourism expenditure even if the services were booked and paid before the trip or if the actual payment occurred after the trip. Tourism expenditure does not include expenditure on the purchase of goods for resale.

Methodology used

The objective of causal analysis is to determine how various factors affect a given variable (Szczecińska, 2007). Therefore, causal analysis can answer the question of whether a particular factor causes an increase or a decrease of the studied variable, and enables us to assess how big the impact of this factor is (Turczak, 2016).

Expenditure of tourists arriving from abroad to Poland might be calculated by multiplication of the number of foreign tourists² visiting Poland and the average spending per trip. The following notation has been adopted for the purpose of this article:

- M_{17} (M_{14}) – expenditure in 2017 (in 2014),
- $M_{17} \div M_{14}$ – the nominal index referring to expenditure (current prices),
- $i_{17/14}$ – price index of goods and services (2014 = 1),
- $\frac{M_{17}}{i_{17/14}} \div M_{14}$ – the real index referring to expenditure (2014 prices),
- n_{17} (n_{14}) – the number of tourists in 2017 (in 2014),
- $n_{17} \div n_{14}$ – the index referring to the number of tourists,
- m_{17} (m_{14}) – expenditure per trip in 2017 (in 2014),
- $m_{17} \div m_{14}$ – the nominal index referring to expenditure per trip,
- $\frac{m_{17}}{i_{17/14}} \div m_{14}$ – the real index referring to expenditure per trip (2014 prices).

Since $\frac{M_{17}}{i_{17/14}} = n_{17} \times \frac{m_{17}}{i_{17/14}}$ and $M_{14} = n_{14} \times m_{14}$, when dividing $\frac{M_{17}}{i_{17/14}}$ by M_{14} , the result is:

$$\frac{\frac{M_{17}}{i_{17/14}}}{M_{14}} = \frac{n_{17} \times \frac{m_{17}}{i_{17/14}}}{n_{14} \times m_{14}}.$$

The same can be shown in a different way, namely:

$$\left(\frac{M_{17}}{i_{17/14}} \div M_{14} \right) = (n_{17} \div n_{14}) \cdot \left(\frac{m_{17}}{i_{17/14}} \div m_{14} \right).$$

Taking the common logarithms of both sides of the equation, the following expression can be obtained:

$$\log \left(\frac{M_{17}}{i_{17/14}} \div M_{14} \right) = \log \left[(n_{17} \div n_{14}) \times \left(\frac{m_{17}}{i_{17/14}} \div m_{14} \right) \right].$$

² The term 'number of tourists' shall stand for the number of arrivals for the purpose of this article. That means if one person arrived to Poland more than once during the analysed year, they will be counted repeatedly, i.e. in accordance with the number of arrivals (UNWTO Tourism..., 2018).

Then, using the logarithm property stipulating that the logarithm of a product of some numbers is equal to the sum of the logarithms of these numbers (Turczak, 2017), the equation presented below can be derived:

$$\log\left(\frac{M_{17}}{i_{17/14}} \div M_{14}\right) = \log(n_{17} \div n_{14}) + \log\left(\frac{m_{17}}{i_{17/14}} \div m_{14}\right).$$

The next step is to divide both sides of the equation by the term $\log\left(\frac{M_{17}}{i_{17/14}} \div M_{14}\right)$. This results in the expression:

$$1 = \frac{\log(n_{17} \div n_{14})}{\log\left(\frac{M_{17}}{i_{17/14}} \div M_{14}\right)} + \frac{\log\left(\frac{m_{17}}{i_{17/14}} \div m_{14}\right)}{\log\left(\frac{M_{17}}{i_{17/14}} \div M_{14}\right)},$$

where:

$$\frac{\log(n_{17} \div n_{14})}{\log\left(\frac{M_{17}}{i_{17/14}} \div M_{14}\right)} - \text{the impact of the change of } n \text{ on the change of } M,$$

$$\frac{\log\left(\frac{m_{17}}{i_{17/14}} \div m_{14}\right)}{\log\left(\frac{M_{17}}{i_{17/14}} \div M_{14}\right)} - \text{the impact of the change of } m \text{ on the change of } M.$$

The final step is to multiply both sides of the equation by the absolute change (i.e. the absolute increase or the absolute decrease) calculated for the variable M . Finally:

$$\frac{M_{17}}{i_{17/14}} - M_{14} = \left(\frac{M_{17}}{i_{17/14}} - M_{14}\right) \frac{\log(n_{17} \div n_{14})}{\log\left(\frac{M_{17}}{i_{17/14}} \div M_{14}\right)} + \left(\frac{M_{17}}{i_{17/14}} - M_{14}\right) \frac{\log\left(\frac{m_{17}}{i_{17/14}} \div m_{14}\right)}{\log\left(\frac{M_{17}}{i_{17/14}} \div M_{14}\right)},$$

where:

$$\frac{M_{17}}{i_{17/14}} - M_{14} - \text{the absolute change of } M,$$

$$\left(\frac{M_{17}}{i_{17/14}} - M_{14}\right) \frac{\log(n_{17} \div n_{14})}{\log\left(\frac{M_{17}}{i_{17/14}} \div M_{14}\right)} - \text{the change of } M \text{ caused by the change of } n,$$

$$\left(\frac{M_{17}}{i_{17/14}} - M_{14}\right) \frac{\log\left(\frac{m_{17}}{i_{17/14}} \div m_{14}\right)}{\log\left(\frac{M_{17}}{i_{17/14}} \div M_{14}\right)} - \text{the change of } M \text{ caused by the change of } m.$$

Analysis of tourism expenditure

The first task is to compare expenditure incurred in connection with foreign tourists' trips to Poland in 2017 with the analogous value in 2014. Table 2 contains the relevant data.

Table 2. The index referring to expenditure

Country of permanent residence	Expenditure (million PLN)		Nominal index referring to expenditure	Real index referring to expenditure
	2017	2014	2017/2014	2017/2014
Netherlands	852.4	180.1	4.732	4.715
Latvia	603.6	157.9	3.822	3.808
Spain	729.8	313.8	2.325	2.317
Romania	208.4	97.7	2.132	2.125
China	1,044.4	552.0	1.892	1.885
Italy	946.8	519.6	1.822	1.815
Lithuania	747.5	424.2	1.762	1.756
Ukraine	1,434.6	837.1	1.714	1.708
Other countries together	5,778.9	3,536.5	1.634	1.628
Sweden	602.6	378.4	1.593	1.587
Czech Republic	263.7	171.2	1.540	1.534
Germany	10,003.1	6,619.4	1.511	1.506
France	852.5	621.9	1.371	1.366
Hungary	319.6	254.6	1.255	1.251
Slovakia	166.0	135.0	1.230	1.225
Austria	702.7	606.4	1.159	1.155
Norway	724.8	641.7	1.130	1.125
United States	2,695.4	2,407.8	1.119	1.115
Ireland	404.7	377.9	1.071	1.067
Belarus	754.1	721.2	1.046	1.042
United Kingdom	1,589.3	1,825.2	0.871	0.868
Russia	1,066.1	1,264.8	0.843	0.840
Switzerland	276.9	331.1	0.836	0.833

Source: own computation based on *Tourism in 2014* (2015); *Tourism in 2017* (2018); *Concise...* (2018).

The top place was taken by the Netherlands (the greatest increase, i.e. 373.2% in nominal terms and 371.5% in real terms). The last place was occupied by Switzerland (the largest decrease, 16.4% and 16.7%, respectively).

Analysis of the number of foreign tourists

The next task carried out is to compare the number of foreign tourists in 2017 in relation to the number in 2014. All the data needed have been presented in Table 3.

The first position belonged to the Netherlands (an increase of 261.8%). In turn, the lowest index number concerned the United Kingdom.

Table 3. The index referring to the number of tourists

Country of permanent residence	Number of persons (thousand)		Index referring to the number of tourists
	2017	2014	2017/2014
Netherlands	460.6	127.3	3.618
Latvia	368.0	131.4	2.801
Spain	374.9	143.4	2.614
Sweden	323.8	208.6	1.552
Other countries together	1,919.5	1,263.7	1.519
Norway	445.8	298.2	1.495
Italy	526.1	357.4	1.472
Ukraine	1,359.8	1,072.8	1.268
Romania	142.8	113.6	1.257
Slovakia	188.4	158.2	1.191
Czech Republic	307.2	265.5	1.157
Germany	6,503.9	5,743.1	1.132
Lithuania	677.4	605.2	1.119
France	518.2	514.9	1.006
Belarus	763.3	811.5	0.941
Ireland	220.4	234.6	0.939
China	144.3	159.4	0.905
Russia	875.4	1,003.1	0.873
Switzerland	166.8	203.3	0.820
Austria	388.0	484.4	0.801
United States	495.6	645.0	0.768
Hungary	236.9	316.0	0.750
United Kingdom	850.7	1,138.8	0.747

Source: own computation based on *Tourism in 2014* (2015) and *Tourism in 2017* (2018).

Analysis of tourism expenditure per visitor

The third task is to compare expenditure incurred in connection with foreign tourists' trips to Poland in proportion to the number of persons visiting this country. The necessary data have been given in Table 4.

Table 4. The index referring to average expenditure per tourist

Country of permanent residence	Average expenditure per tourist (PLN)		Nominal index referring to expenditure per tourist	Real index referring to expenditure per tourist
	2017	2014	2017/2014	2017/2014
1	2	3	4	5
China	7,235	3,463	2.089	2.082
Romania	1,460	861	1.696	1.689
Hungary	1,349	806	1.674	1.668
Lithuania	1,104	701	1.575	1.569
United States	5,438	3,733	1.457	1.451
Austria	1,811	1,252	1.446	1.441
Latvia	1,640	1,202	1.364	1.359
France	1,645	1,208	1.362	1.357

1	2	3	4	5
Ukraine	1,055	780	1.353	1.348
Germany	1,538	1,153	1.334	1.329
Czech Republic	858	645	1.330	1.325
Netherlands	1,850	1,415	1.307	1.303
Italy	1,800	1,454	1.238	1.233
United Kingdom	1,868	1,603	1.165	1.161
Ireland	1,836	1,611	1.140	1.135
Belarus	988	889	1.111	1.107
Other countries together	3,011	2,799	1.076	1.072
Slovakia	881	854	1.032	1.028
Sweden	1,861	1,814	1.026	1.022
Switzerland	1,660	1,629	1.019	1.015
Russia	1,218	1,261	0.966	0.962
Spain	1,947	2,188	0.890	0.887
Norway	1,626	2,152	0.756	0.753

Source: own computation based on *Tourism in 2014* (2015); *Tourism in 2017* (2018); *Concise...* (2018).

The top place was taken by China (the greatest increase, i.e. 108.9% in nominal terms and 108.2% in real terms). The last place was occupied by Norway (the largest decrease, 24.4% and 24.7%, respectively).

Results of the causal analysis

In the last part of this research the remaining stages of the logarithmic method will be performed. The results are shown in Table 5.

Table 5. The index equality and the equation of impact effects (in real terms)

Country of permanent residence	The index equality	The equation of impact effects (results in million PLN)
1	2	3
Netherlands	4.715 = 3.618×1.303	(+669.1) = $(+554.9) + (+114.1)$
Latvia	3.808 = 2.801×1.359	(+443.5) = $(+341.5) + (+101.8)$
Spain	2.317 = 2.614×0.887	(+413.3) = $(+472.7) + (-59.2)$
Romania	2.125 = 1.257×1.689	(+109.9) = $(+33.4) + (+76.5)$
China	1.885 = 0.905×2.082	(+488.6) = $(-76.7) + (+565.0)$
Italy	1.815 = 1.472×1.233	(+423.7) = $(+274.7) + (+149.1)$
Lithuania	1.756 = 1.119×1.569	(+320.6) = $(+64.2) + (+256.6)$
Ukraine	1.708 = 1.268×1.348	(+592.3) = $(+262.4) + (+330.2)$
Other countries together	1.628 = 1.519×1.072	(+2,221.2) = $(+1,905.0) + (+316.2)$
Sweden	1.587 = 1.552×1.022	(+222.0) = $(+211.4) + (+10.5)$
Czech Republic	1.534 = 1.157×1.325	(+91.5) = $(+31.2) + (+60.2)$
Germany	1.506 = 1.132×1.329	(+3,347.0) = $(+1,017.5) + (+2,326.5)$
France	1.366 = 1.006×1.357	(+227.4) = $(+4.7) + (+222.7)$
Hungary	1.251 = 0.750×1.668	(+63.8) = $(-82.2) + (+145.9)$
Slovakia	1.225 = 1.191×1.028	(+30.4) = $(+26.2) + (+4.1)$
Austria	1.155 = 0.801×1.441	(+93.7) = $(-144.7) + (+238.3)$
Norway	1.125 = 1.495×0.753	(+80.5) = $(+273.9) + (-193.4)$

1	2	3
United States	$1.115 = 0.768 \times 1.451$	$(+277.7) = (-670.3) + (+947.8)$
Ireland	$1.067 = 0.939 \times 1.135$	$(+25.3) = (-24.4) + (+49.6)$
Belarus	$1.042 = 0.941 \times 1.107$	$(+30.2) = (-45.1) + (+75.0)$
United Kingdom	$0.868 = 0.747 \times 1.161$	$(-241.7) = (-496.3) + (+254.1)$
Russia	$0.840 = 0.873 \times 0.962$	$(-202.6) = (-158.0) + (-44.5)$
Switzerland	$0.833 = 0.820 \times 1.015$	$(-55.2) = (-59.9) + (+4.6)$

Source: own computation based on Tables 2–4.

As an example, the values obtained for Germany shall be interpreted. In 2017, German tourists arriving to Poland spent a total of 10,003.1 million PLN³ (in 2014 – 6,619.4 million PLN). Had the average amount of money spent by 1 tourist from Germany been in 2017 at the level it was in 2014, the German tourists' expenditure would have been 1,017.5 million PLN⁴ higher in 2017 than in 2014, only due to the fact that more German citizens visited Poland in 2017 than in 2014 (6,503.9 thous. versus 5,743.1 thous.). Had the number of persons from Germany visiting Poland been in 2017 the same as in 2014, the German tourists' expenditure would have been 2,326.5 million PLN⁵ higher in 2017 than in 2014, which would have been a result solely of the greater average amount of money spent by Germans per one stay in Poland (1,538 PLN/trip⁶ against 1,153 PLN/trip).

Conclusions

Visitors are people taking a trip to a main destination outside their usual environment, for less than a year, for any main purpose (business, leisure or other personal purpose) other than to be employed by a resident entity in the place visited. Visitors are classified as tourists if their trip includes an overnight stay, and as same-day visitors (excursionists) otherwise.

Tourism affects destination areas in many ways. That is why it is so important to emphasise that the proper objectives of sustainable tourism are: to improve the quality of life of host communities, to provide a high quality experience for visitors, and – at the same time – to take care of the environment (Mill, Morrison, 2009, p. 61).

Tourism, which already supports one in every ten jobs on the planet, is a dynamic engine of employment opportunity. Over the past ten years, one in five of all jobs created across the world has been in this sector.

2017 was one of the strongest years of GDP growth in a decade with robust consumer spending worldwide. The global growth transferred again into tourism with the sector's direct growth of 4.6% outpacing the global economy for the seventh successive year.

Poland is one of the countries with constantly increasing number of visitors. In 2017 the number of tourist arrivals to this country amounted to 18.3 million. In 2017 in Poland, the entire contribution of tourism to GDP was 89.9 bn PLN (4.5% of total GDP). The direct contribution to GDP was 38.2 bn PLN (1.9% of GDP). The whole contribution of tourism to employment accounted for 4.5% (738 thous. jobs), and the industry supported 332 thous.

³ Current prices; 9,966.4 million PLN – 2014 prices.

⁴ 2014 prices.

⁵ 2014 prices.

⁶ Current prices; 1,532 PLN/trip – 2014 prices.

jobs directly (2.0% of total employment). In 2017 in Poland, the amount of 10.4 bn PLN was invested in this sector (3.0% of total investment) and tourism generated 4.6% of exports (i.e. 49.1 bn PLN).

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Cite this article as: Turczak, A. (2018). Arrivals of foreign tourists to Poland. *European Journal of Service Management*, 4 (28/2), 511–521. DOI: 10.18276/ejsm.2018.28/2-62.

LEGAL SITUATION ON THE SO-CALLED “ACTUAL CARRIER” IN INTERNATIONAL CONVENTIONS

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RECEIVED 10 December 2018
ACCEPTED 28 December 2018

JEL
CLASSIFICATION K12

KEYWORDS contract of carriage, actual carrier, claims between carriers

ABSTRACT The subject matter of this article is to describe the legal situation of the actual carrier on the basis of international conventions governing the contract of carriage in the various branches of transport. After an analysis of the existing provisions contained in the various international conventions, using the methods of interpretation developed in the legal science, the author points out the diversity of this situation. Where the actual carrier is directly liable to the entitled person and this liability has been formed as a joint and several liability or *in solidum* (together with the contracting carrier) the claim between the carriers is of a recourse nature. On the other hand, if the entitled person from the original contract of carriage cannot pursue claims against the actual carrier (which takes place in the case of claims brought by the sender on the basis of CMR), the claim of the contracting carrier against the subcontractor is of an independent nature. This results in further consequences as indicated in the article.

Introductory remarks

The situation of carriage with the participation of the so-called actual carrier (also called substitute carrier) occurs when the carrier who has assumed the obligation to relocate a person or goods (the so-called contracting carrier) concludes another contract of carriage with another carrier and entrusts to it the carriage of that person or goods for the whole or part of the carriage. For the contracting carrier, the actual carrier is a subcontractor.

In case of carriage of goods the contracting carrier takes the position of the sender of the consignment. The chain of subsequent contracts may, of course, be longer. This includes situations in which several carriers actually participate in transport, as well as situations in which a number of agreements concerning one operation have been concluded, but the whole transport is performed by only one carrier (the so-called actual one).

The subject matter of this article is to describe the legal situation of the actual carrier on the basis of international conventions governing the contract of carriage in the various branches of transport. This situation is not homogeneous, which has significant consequences, including those not explicitly mentioned in the legislation. The purpose of this article is to indicate these consequences. It is also a matter of formulating conclusions *de lege ferenda*.

Scope of regulation

International conventions governing the contract of carriage in the various branches of transport relate to contracts with subcontractors in different degrees. Thus, the CMR Convention does not contain any separate rules for such transport. The exception is a specific type of transport, regulated by the provisions of Article 2 of the CMR (the so-called “piggy – back” transport). In this case, however, the subcontractor of a road haulier is the carrier of another mode of transport, carrying a lorry together with the goods. This issue therefore goes beyond the scope of the article (with regard to “piggy-back” transport – see: Messent, Glass, 1995, p. 41; Hoeks, 2010, p. 165; Bombeeck, Hamer, Verhaegen, 1990, p. 134).

However, there is no doubt that Article 3 of the CMR applies to transport with the participation of the actual carriers (cf. judgment of the Court of Appeal of 10 February 1988). In accordance with that provision the carrier shall be responsible for the acts or omissions of his agents and servants and any other persons of whose services he makes use for the performance of the carriage, when such agents, servants or other persons are acting within the scope of their employment, as if such acts or omissions were his own.

The most extensive regulation is contained in the conventions regulating air transport (the Guadalajara Convention supplementing the Warsaw Convention and then the Montreal Convention) and railway conventions (CIV, CIM). These regulations concern both the relationship between the entitled person – contracting carrier, the entitled person – actual carrier, as well as relations between carriers.

In the light of all transport conventions, the contracting carrier is liable for the acts or omissions of its subcontractors as if such acts or omissions were his own (Article 39 CIV, Article 27 § 1 CIM, Article II of the Guadalajara Convention, Article 40 of the Montreal Convention), although the provisions do not always expressly provide for the actual carrier (cf. the above comment on Article 3 of the CMR). The contracting carrier therefore bears the risk of incorrect acts or omissions of its subcontractors. There is no doubt that this rule is not limited solely to the acts or omissions of the subcontractor of its choice, but also to any further subcontractors, even if the entrustment of the carriage to them is beyond the will of the first carrier. It also applies to activities which, in other circumstances, could be treated not as performance of the obligation but “on the occasion” of performance of the obligation (e.g. theft of transported goods – see the judgment of Sąd Apelacyjny in Warsaw of 21 February 2013).

The legal position of the actual carrier in relation to the original contracting party

Conventions concerning the contract of carriage in different ways regulate the situation of the actual carrier in relation to the original party to the contract (passenger, sender of the consignment). Thus, the provisions of the

CMR do not provide for a legal link between actual carrier and these persons, in particular they do not introduce the possibility of direct claims against the actual carrier by a person entitled to compensation. This does not mean that in any circumstances it is not possible to directly claim against the actual carrier (see comments expressed in part 4 of the study). The situation is different in other transport conventions.

For the first time, the situation of the actual carrier in relation to the original party to the contract of carriage was regulated by the Guadalajara Convention, which supplements the Warsaw Convention. That Convention, which is a model for subsequent analogous regulations, provides that in relation to the carriage performed by the actual carrier, an action for damages may be brought, at the option of the plaintiff, against actual carrier or the contracting carrier, or against both together or separately. If the action is brought against only one of those carriers, that carrier shall have the right to require the other carrier to be joined in the proceedings, the procedure and effects being governed by the law of the court seized of the case.

In addition, the Guadalajara Convention articulated a number of rules, including that:

- a) the acts and omissions of the actual carrier and of his servants and agents acting within the scope of their employment shall, in relation to the carriage performed by the actual carrier, be deemed to be also those of the contracting carrier;
- b) the acts and omissions of the contracting carrier and of his servants and agents acting within the scope of their employment shall, in relation to the carriage performed by the actual carrier, be deemed to be also those of the actual carrier; nevertheless, no such act or omission shall subject the actual carrier to liability exceeding the limits specified in Article 22 of the Warsaw Convention; any special agreement under which the contracting carrier assumes obligations not imposed by the Warsaw Convention or any waiver of rights conferred by that Convention or any special declaration of interest in delivery at destination contemplated in Article 22 of the said Convention, shall not affect the actual carrier unless agreed to by him;
- c) any complaint to be made or order to be given under the Warsaw Convention to the carrier shall have the same effect whether addressed to the contracting carrier or to the actual carrier;
- d) any contractual provision tending to relieve the contracting carrier or the actual carrier of liability under this Convention or to fix a lower limit than that which is applicable according to this Convention shall be null and void, but the nullity of any such provision does not involve the nullity of the whole agreement, which shall remain subject to the provisions of this Convention;
- e) in relation to the carriage performed by the actual carrier, the aggregate of the amounts recoverable from that carrier and the contracting carrier, and from their servants and agents acting within the scope of their employment, shall not exceed the highest amount which could be awarded against either the contracting carrier or the actual carrier under this Convention, but none of the persons mentioned shall be liable for a sum in excess of the limit applicable to him;
- f) any action for damages must be brought, at the option of the plaintiff, either before a court in which an action may be brought against the contracting carrier, as provided in Article 28 of the Warsaw Convention, or before the court having jurisdiction at the place where the actual carrier is ordinarily resident or has his principal place of business.

Similar solutions were adopted in the Montreal Convention (Articles 39 to 48), partly also in the revised railway conventions (Article 39 of the CIV, Article 27 of the CIM) and in the convention on inland waterway transport (see Article 4 (5) of the Budapest Convention). However, the accepted liability of both carriers is sometimes subject to

certain deviations from the model solutions. Thus, Article 45 (7) of the CIM provides that if the plaintiff has a choice between several carriers, his right of choice shall be extinguished as soon as he brings an action against any one of them; this shall also apply if the plaintiff has a choice between one or more carriers and a substitute carriers.

The solutions adopted under these conventions, which provide for the possibility of pursuing claims against the actual carriers, bring the carriage with subcontractors closer to successive carriage. In the latter case, the person entitled may also directly pursue claims against carriers other than the first carrier (although not, as a rule, against all participating carriers, but against the first carrier, the last carrier or the carrier who was performing that part of the carriage during which the event causing the loss, damage or delay occurred – cf. the different solutions contained in Article 34 of the CMR, Article 45 of the CIM, Article 36 of the Montreal Convention). In both situations there is also the question of mutual claims between carriers. In the case of claims between successive carriers, they are undoubtedly recourse claims. They arise on the basis of settled claims of entitled persons.

The legal nature of the claims between the contracting carrier and the actual carrier

The problem of the nature of the mutual claims between the contracting carrier and the actual carrier is more complicated. It is a consequence of the regulation on the possibility of direct claims against the actual carrier.

There should be no doubt as to the returnable (recourse) nature of claims between carriers in situations where the law provides for joint and several liability of the contracting carrier and the actual carrier, and thus – the possibility of direct enforcement of claims by a person entitled against the actual carrier. The CIM Convention, by regulating claims between carriers participating in the carriage, expressly gives such a character to these claims and applies this regulation to both successive carriage and sub-contracted carriage (Art. 49–50 of the CIM). This is confirmed by the rules of linguistic, purposeful and systemic interpretation (the issue is regulated in a separate title V – “Relations between carriers”. This title indicates, among other things, which of the carriers should ultimately bear the cost of compensation for damage (Article 50 of the CIM), and also regulates procedural issues (Article 51 of the CIM). Similar conclusions should be reached by examining the provisions of the CIV Convention (Article 61 in conjunction with Article 56 (6) of the CIM).

The Montreal Convention, like the previous Guadalajara Convention, contains a provision in Chapter V entitled ‘Carriage by Air Performed by a Person other than the Contracting Carrier’. However, these conventions do not contain rules on the “right of recourse or indemnification”. The provisions of domestic law must be applied thereto (cf. Polkowska, Szymajda, 2004, p. 124).

It would seem that under the CMR Convention, which did not introduce joint and several liability of the actual carrier with the contracting carrier, the claims must in each case be pursued in a chain of contractual relations, i.e. the entitled person towards the contracting carrier, and the latter towards the actual carrier (see Hill, 1976, p. 198; see also the judgments of the Court of Appeal of 15 March 1989 and the Bundesgerichtshof of 24 October 1991, as well as the Corte di Cassazione of 16 May 2006). This is not changed by the fact that the name of the actual carrier has been entered on the consignment note or that the consignment note was signed by the carrier (cf. judgment of the Cour d’Appel d’Anvers of 6 December 1999). Consequently, it should also be assumed that under these provisions, claims between carriers, contrary to the common nomenclature in practice (see e.g. judgment of Sąd Apelacyjny in Poznań of 16 September 2010) are not returnable (recourse) and arise already at the time of damage to the goods. They are independent of the fact whether or not the first carrier has compensated the damage (see

the Austrian Obersten Gerichtshof in the judgment of 20 June 2000, in which the court clarified that the damage in the relationship between the entitled person and the contracting carrier occurs at the same time as the damage in the relationship between that carrier and the actual carrier. The court expressly stressed that the contracting carrier may pursue claims for damages against the actual carrier, regardless of whether or not the carrier has paid for the compensation itself. These rules apply to relations between further sub-contractors).

This is connected with the problem of understanding the concept of damage of the contracting carrier. As in the case of any other sender, there is no need to examine whether the damage occurred in the goods concerns his property. The mere fact that the goods have been lost or damaged is a sufficient condition for the liability of the actual carrier. Introducing a further condition of liability of such a carrier in the form of payment of compensation to the entitled person has no justification. The presented view is a logical consequence of the traditional definition of damage to property according to which it may be expressed not only by a decrease in the assets, but also by an increase in liabilities (Dybowski, 1981, p. 197; Czachórski, 1978, p. 74).

It must be admitted, however, that the view presented here is not universally accepted in the science of law and jurisprudence. Usually only the fact of payment is treated as a damage (cf. Górski, 1993, p. 318; Kolarski, 2002, p. 14).

However, the issue is complicated by the fact that claims against the carrier may be submitted not only by the sender of the shipment as its party, but also by the consignee (see: Wesołowski, 2013, pp. 603–620; Ambrożuk, 2017, pp. 85–96). In both contracts of carriage (i.e. the contract concluded between the sender of the consignment and the contracting carrier and in the contract concluded between this carrier and the actual carrier), the consignee of the consignment is usually the same person (this is especially the case in situations where the actual carrier performs the entire carriage). The consignee, if entitled to claim, therefore has the right to claim against both the contracting carrier and the actual carrier (cf. judgment of Corte di Cassazione of 26 January 1995, judgment of Tribunale di Milano of 9 April 2001).

However, they are both liable for damage on a different basis. This is the non-performance or improper performance of different contracts (the first contract with the contracting carrier and the second contract between the carriers). It should be assumed that the liability of both carriers is not a joint and several liability (no legal basis), but a liability *in solidum*. However, this does not change the essence of the matter, i.e. the possibility to choose between pursuing claims against the contractual carrier and the actual carrier. Obtaining compensation by the entitled person from any of the carriers relieves the other carrier from liability in this respect as well. Of course, this does not resolve the issue of settlements between carriers. Such situation of the actual carrier with regard to the consignee under the CMR convention leads to the conclusion that also in the case of claims between the contractual carrier and the actual carrier under these provisions, these claims should be treated as recourse claims in a situation where the consignee is a person entitled to assert claims.

Conclusions

The above remarks point to a different situation for the actual carriers, depending not only on which convention applies but also on who claims (original consignor or consignee). In a situation where the actual carrier is directly liable to the entitled person and this liability has been formed as a joint and several liability or *in solidum* (together with the contracting carrier) the claim between the carriers is of a recourse nature with consequences thereof.

On the other hand, if, according to the provisions of law, the entitled person from the original contract of carriage cannot pursue claims against the actual carrier (which takes place in the case of claims brought by the sender on the basis of CMR), the claim of the contracting carrier against the subcontractor is of an independent nature.

Such a situation is certainly not desirable, especially in the absence of an explicit regulation of the right to pursue claims under the CMR Convention. In the light of the above, it seems justified to postulate the establishment of joint and several liability of the contracting carrier and the actual carrier for damages caused by the latter, and thus the possibility of direct claims against the latter, also in this convention. The introduction of such a possibility would significantly speed up the compensation of transport damages, reduce the number of proceedings and reduce the risk of different decisions in relation to the same facts. Such a solution would also remove doubts as to the nature of the contracting carrier's claim against the actual carrier as a claim for recourse, and thus prejudice that early compensation by the contractual carrier is a condition for pursuing its claims against the actual carrier.

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Cite this article as: Wesolowski, K. (2018). Legal situation on the so-called "actual carrier" in international conventions. *European Journal of Service Management*, 4 (28/2), 523–529. DOI: 10.18276/ejsm.2018.28/2-63.

ANALYSIS OF INVESTMENT LEVEL AND MARINA CERTIFICATION IN THE PROCESS OF RAISING SAFETY STANDARDS ON THE WEST POMERANIAN SAILING ROUTE

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RECEIVED
ACCEPTED

10 December 2018
28 December 2018

JEL
CLASSIFICATION

L83, R40, R41, Z30, Z31

KEYWORDS

management, yacht port, marina, safety, certification, EU funds, tourism

ABSTRACT

The aim of this article was a detailed analysis of the level of investment and certification of marinas in the process of raising safety standards on the West Pomeranian Sailing Route. The first chapter describes the sailing market in Poland and West Pomerania together with the justification of needs, which was the foundation for creating a program for the development of port infrastructure and marinas in the West Pomeranian region in the Oder, Szczecin Lagoon on the Baltic Sea coast areas. The list of investment amounts allowed to determine average indicators of investment effectiveness in berths. The next chapter describes the original certification system "Bursztynowe Kotwice" [Amber Anchors] implemented by the Union of Ports and Yachts, focusing on safety-related criteria and then analyzes the 13 marinas certification on the West Pomeranian Sailing Route in the context of the achieved certification level and comparison of the number of tourists visiting this marina in the years 2015–2016. It was found that marinas that underwent certification recorded an increase in the number of yacht visitors. The incurred investments allowed to meet the minimum standards for the quality of services and safety in marinas.

Introduction

Sailing is one of the most popular forms of tourism. It combines relaxation, challenge, sport and fun. Factors that allow the development of sailing are desirable and valued by regions that have a large amount of water resources, both inland waters and sea.

In Poland, the leaders among tourist regions, including those in which the sailing base is intensively developed, include the West Pomerania region. Among the 16 Polish regions, the largest number of overnight stays of Polish and foreign tourists is recorded in West Pomerania, which is the best confirmation of the above-average tourist attractiveness of the area (stat.gov.pl). An important element of the tourist offer of the West Pomerania are coastal and inland marinas and ports. The analysis of the quality of the tourist offer in this area is possible thanks to the system of evaluation during certification, which individual locations are subjected to in the region. Certification, in addition to the confirmation of the quality of services, also confirms that the facility meets high requirements in terms of marina access and berth. According to the researchers of the subject, safety is one of three factors (apart from nautical and sailing assets and available ports) that determine the attractiveness of a given water body (Butowski, 2010, pp. 95–114).

The need for safety is one of the most important and the most felt needs for every human being. It is also visible in those spaces in which the need to ensure safety concerns both the obligation to ensure safety for employees and special care for the life and health of recipients of services provided. Operators of marina understand this need and look for means to improve the quality of their facilities. Taking care of the comfort and safety of visitors results in increased confidence of domestic and foreign tourists proved by increased demand and obtaining significant economic effects.

The nautical market in Poland and West Pomeranian region

The Polish nautical market is a growing industry that is catching up in the development of both sailing infrastructure and services. The diversity of Polish reservoirs requires a separate approach to the minimum requirements for the equipment of marinas, harbors and ports in the inland (e.g. Masuria) and those that are located in the area of sea waters (Baltic Sea, Szczecin Lagoon). The West Pomeranian Voivodship belongs to the privileged regions in Poland in terms of both the natural layout of inland waterways exploited by shipping (Strategy for the development of the transport sector of the West Pomeranian Region until 2020, 2010) and access to the sea, from the land side, inter alia through the Szczecin Lagoon, where the shipping route is the beginning of an adventure with sea water due to large waves and frequent haze (Woś, 2005, p. 85).

The relatively easy access to sailing on the Masurian lakes and skills perfected in inland waters make sailing on sea waters a challenge. In addition to the popularity of the West Pomeranian voivodship as one of the five regions most willingly visited by tourists in Poland, it is easy to understand the need for investments with high expenditure to bring a new order and quality into the nautical tourism space in the West Pomeranian Voivodship.

The West Pomeranian Sailing Route is the only network-based tourism product in Poland that has a strong impact on the surrounding and economy of the entire region, the implementation of which is followed by specific economic effects, both measurable and unmeasurable. Among them, the security level of nautical infrastructure and waterfronts, treated comprehensively in the region, is clearly distinguished. In 2008, at the request of the Marshal's Office of the West Pomeranian Voivodship, a document entitled "Program for the development of port infrastructure and marinas in the West Pomeranian Voivodship in the Odra region, Szczecin Lagoon at the Baltic Sea coast" (www.turystyka.wzp.pl) was prepared, which was the basis for supporting infrastructure investments for typically sailing and accompanying infrastructure for locations forming the West Pomeranian Sailing Route. These locations are shown on Figure 1.



Figure 1. Marinas and ports on the West Pomeranian Sailing Route

Source: Association of Ports and Yachts – Local Tourist Organization of the West Pomeranian Sailing Route.

The importance and scale of the venture is demonstrated by the inclusion of some investments in the Individual Indicative List under RPO WZ 2007–2013 (rpo2007-2013.wzp.pl) and limiting the possibility of supporting projects participating in tenders announced in competition modes only to facilities that have been included in the document as necessary to strengthen the network structure of sailing ports in the region (rpo2007-2013.wzp.pl). The projects supported, among others, the infrastructure of marinas, harbors and ports, infrastructure of berths, access to utilities (e.g. water and electricity, etc.), hardening of stopping places for yachts, sanitary facilities and social rooms (laundries, kitchens, technical facilities for users), infrastructure enabling the collection of sewage and sewage, parking lots, communication routes, multimedia kiosks, port fencing, monitoring systems, equipment of facilities with wireless Internet, technical infrastructure – cranes for yachts and boats, recreational areas within ports and marinas (playgrounds, etc.), small architecture – benches, sheds, barbecues, etc., purchase of equipment to improve safety and technical equipment of ports and marinas of the West Pomeranian Sailing Route, improving the accessibility of marina ports infrastructure and marina on the water side. Some of these requirements meet the highest safety requirements for modern yacht ports. The amount of funds invested in the development of nautical infrastructure in the West Pomerania Province is presented in Table 1.

Thanks to the invested funds, 2,310 berths have been supplemented with new basic and accompanying infrastructure. By applying a simple cost-effectiveness ratio, understood as the number of berths created for all the funds invested, it can be stated that the creation of one berth consisting of all necessary infrastructure during berthing, is the cost of PLN 98,348.73. This value decreases as the number of berths increases.

Table 1. The amount of financial resources invested in the development of nautical infrastructure in the West Pomeranian Voivodship

Name/Location	Invested funds (PLN)
Marina Pogoń	4,551,370.30
Yacht Club AZS	2,112,291.56
Marina Wapnica – Międzyzdroje	9,517,910.13
Yacht Port in Nowe Warpno	9,675,981.27
Marina Wolin	5,197,818.00
Marina Kamień Pomorski	20,565,694.79
Marina at Wyspa Grodzka	62,453,534.56
Euroregional Center for Water Education and Sailing	36324639.98
Water nooks in the area of Lake Dąbie	1,362,515.28
Marina Solna in Kołobrzeg	11,432,247.10
Yacht Port in Dziwnów	10,552,292.18
Yacht Port in Darłowo	1,971,161.91
Basen Północny [North Basin]	12,721,944.54
Yacht Port in Stepnica (all localisations)	12,642,847.01
Yacht Port in Lubczyna	7,408,761.31
Passenger quay in Gryfino	14872331.26
Passenger quay at Jana z Kolna in Szczecin	1,118,017.27
Yacht Port in Police	1,962,296.21
Yacht Port in Dąbie – Marina Hotele	1,041,902.25
Total	227,185,556.91

Source: own study based on data obtained from the Marshal's Office of the West Pomeranian Voivodship and the West Pomeranian Regional Tourist Organization.

The “Amber Anchors” certification system

Trends in the market of sailing services indicate that the number of people owning their yachts in the coming years will remain relatively stable. The possible increase will be insignificant, which means that it is necessary to differentiate marketing methods and tools that attract sailors to a given destination, and later – to a specific port.

The promotion of the infrastructure, including the original certification program, supplemented the infrastructure of the West Pomeranian Sailing Route. Certification of marinas is a response to demand of recipient for independent confirmation that the facility meets certain quality requirements, assessed in various categories. The quality itself is feeling that something is good or bad. This is a subjective impression, depending on many factors, but professional, independent verification of standards considered universally important in feeling a sense of safety, allows to determine certain independent, objective requirements. Compliance with certain standards is a confirmation of quality, and safety plays a major role in quality. In the case of visiting seaports, the measure of safety, confirmed as a consequence of the certificate, is the measure of satisfaction of customers visiting a given port, reflected in the number of visitors.

Generally, the certificates confirm that the offered product or service meets the requirements defined by the standards – it is in accordance with the standards adopted for the given field. While no certification system has a problem in auditing goods or infrastructure, auditing services is a more complicated matter. The level of service

quality can usually be assessed only at the time of their performance. Hence, the examination of the quality of mystery client services is already becoming so important and increasingly popular at the audit stage. This method is the third stage of certification of marinas and sailing ports in the “Amber Anchors” system (www.marinas.pl/certification). Thanks to this, the visitor is sure that at any time he will receive the service at a certain level.

The “Amber Anchors” certification system is an original program of the Union of Ports and Yachts – the Local Tourist Organization of the West Pomeranian Sailing Route (ZPiPJ – LOT ZSŻ), which was developed after analyzing the most popular marina certification systems in the world. The success of using a given system lies in the possibility of implementing it to the conditions of a given country. Certification programs operating in the world could be too demanding, especially in relation to the price of obtaining a certificate and its later recertification, for the still-growing nautical market in Poland. “Amber Anchors” is a system that meets European standards and international customer requirements, adapted to Polish conditions. Its aim is to assess and classify the Westin Marine Route marinas and stimulate them for further development.

The certification process consists of four stages. Stage 1 is an objective evaluation, or classification of the marina, based on its infrastructure, into one of five categories. Evaluation takes place in 7 generic groups. Stage 2 is a subjective evaluation, consisting in checking the facility condition in terms of meeting the same criteria, which are evaluated by the zero-bin system in stage 1, by an independent inspector. After the evaluation, the results of stages 1 and 2 are compared. In the event of a difference in evaluation to the detriment of stage 1 (the results of the subjective evaluation indicate a lower category), the category indicated in step 2 is granted. In this case, the marina operator has the right to appeal against the decision of the certifying entity within 30 days from the receipt of the evaluation. Stage 3 is a mysterious client's visit. This stage concerns marinas that received at least two Amber Anchors. The visit takes place once a year and is aimed at checking the quality of services and cleanliness in the marina (including the quality of safety), in accordance with the requirements appropriate for the given category. Stage 4 is customer reviews. Marinas categorized with a minimum of 2 Amber Anchors are required to submit 10 anonymous surveys once a year, filled by sailors visiting the marina. The evaluation concerns marina's appearance, surroundings, conditions in the marina, including safety, sanitation, technical services, etc.

Marinas can receive from 1 to 5 Amber Anchors, with a certain number meaning meeting specific requirements. Safety issues have been precisely defined from level 1 of the Amber Anchor – all presented in Table 2.

Table 2. Safety issues in the “Amber Anchors” certification system

Requirement	Level – number of Amber Anchors				
	1	2	3	4	5
1	2	3	4	5	6
Marking the marina from the water side	x	x	x	x	x
Visibly marked: fire-fighting equipment, first-aid kits, emergency ladders from water, waste disposal point, information point, exits from buildings, marinas, rescue equipment, high voltage	x	x	x	x	x
Informational board: emergency numbers, person designated by the marina	x	x	x	x	x
Clear navigation markings	x	x	x	x	x
Fire equipment – serviced and deployed	x	x	x	x	x
Access to first aid kits in the marina	x	x	x	x	x
Fuels, oils, paints and all similar substances properly stored	x	x	x	x	x
Safe mooring (without temporary handles, etc.)	x	x	x	x	x
Free accessibility to land and marina infrastructure	x	x	x	x	x

1	2	3	4	5	6
A berth with access from the shore	x	x	x	x	x
Safety ladders on every platform	x	x	x	x	x
Lifebuoy on each platform	x	x	x	x	x
Marina's liability insurance		x	x	x	x
Night illumination of the marina		x	x	x	x
List of doctors placed on the information board		x	x	x	x
An electrical system certified every year		x	x	x	x
Night illumination of the marina and platforms			x	x	x
Keeping records of the boats and people responsible for them			x	x	x
Staff trained with first aid			x	x	x
Documented inspections to ensure safety of navigation/berthing: fire extinguishers, life-saving devices, electrical systems, devices for gray and black sewage, removal of hazardous substances, etc.			x	x	x
Preventive and emergency plan: fire protection, evacuation, medical assistance, fuel and oil leakage			x	x	x
A general marina and evacuation plan available at the office and the platform			x	x	x
Waterways of adequate width to navigate			x	x	x
A solid and properly maintained platform			x	x	x
The right length and width of the platforms			x	x	x
Fire equipment available on every platform			x	x	x
Notifying the owner, the person responsible for the yacht in case of irregularities				x	x
Facility protection					x
Defibrillator on site					x
Hospital within 12 minutes by car					x
The marina should have easy entry and exit from the wharf and platform					x

Source: own study based on a full inspection list.

Certification of marinas on the West Pomeranian Sailing Route

The "Amber Anchors" certification program was introduced in 2015 in ports and marinas, which form the West Pomeranian Sailing Route, are members of ZPiP – LOT ZSŻ and wanted to be audited. As a result of the audit, 13 marinas were granted certificates from 3 to 5 Amber Anchors. Table 3 presents the results of certification.

Table 3. Marinas of the West Pomeranian Sailing Route subject to certification

Water area	Name of marina	1 Amber Anchor	2 Amber Anchors	3 Amber Anchors	4 Amber Anchors	5 Amber Anchors
1	2	3	4	5	6	7
Odra river	Tourist Port, Gryfino			⚓		
	Dąbie lake Camping Marina PTTK, Szczecin					⚓
Dąbie lake	Marina Pogoń, Szczecin				⚓	
	Marina of the Sports and Recreation Center, Lubczyna					⚓
	Yacht Basin Wolin			⚓		
	Marina, Nowe Warpno			⚓		
Szczecin	Marina Wolin			⚓		
Lagoon	Yacht Marina on the Mill Channel, Stepnica			⚓		
	Yacht Marina in the Fisherman's Basin, Stepnica			⚓		

1	2	3	4	5	6	7
Baltic Sea	North Pool, Świnoujście					⚓
	Marina Solna, Kołobrzeg					⚓
	Marina, Kamień Pomorski					⚓
	The Yacht Port, Dziwnów					⚓

Source: own study based on ZPiPJ – LOT ZSŻ data.

The facilities indicated in Table 3 were subject to certification in 2015. The number of vessels that visited the marina within one year of obtaining the certificate is presented in Table 4.

Table 4. Number of yachts visiting certified marinas in 2016

Water area	Name of marina	Year 2016		
		3 Amber Anchors	4 Amber Anchors	5 Amber Anchors
Odra river	Tourist Port, Gryfino	258		
Dąbie lake	Marina Pogoń, Szczecin		349	
	Marina of the Sports and Recreation Center, Lubczyna			579
	Yacht Basin Wolin	720		
Szczecin	Marina, Nowe Warpno	8		
Lagoon	Yacht Marina on the Mill Channel, Stepnica	782		
	Yacht Marina in the Fisherman's Basin, Stepnica	544		
	Marina Solna, Kołobrzeg			1382
Baltic Sea	Marina, Kamień Pomorski			562
	The Yacht Port, Dziwnów			1324

Source: own study.

Compared to 2015 when no certification processes for marinas were carried out in the West Pomeranian region, the number of yachts moored in the West Pomeranian ports has grown. The comparison of 2015 and 2016 is shown in Figure 2.

Table 5 presents a summary of individual locations, including the amount of capital invested, the number of berths in the marina and the fact of undergoing certification. The data shows that the awareness of certification is independent of whether the facility is a newly built or modernized. The color in the horizontal lines is marked by those locations that were built "from scratch". In 2015, the certification was carried out in the form of a pilot, in the first place for ZPiPJ – LOT ZSŻ members. Adequate data aggregation allows us to state that the newly built marina needs a circulation of funds or one berth in the average amount of PLN 160,477.80. After rejection of the extreme data (Wharf in Gryfino, where most of the funds were directed to the reconstruction of Waterfront), this amount is PLN 144,711.30. The amount of investments for one berth for modernized marinas is PLN 68,266.03.

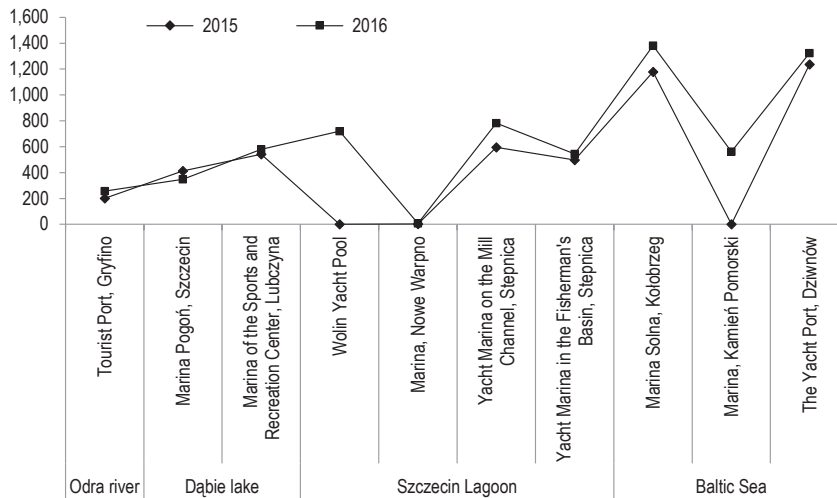


Figure 2. Comparison of the number of visitors – 2015 and 2016

Source: own study.

Table 5. Marinas forming the West Pomeranian Sailing Route divided into new and modernized

Name/location	Invested funds (PLN)	Number of berths	Marina's undergoing certification
Marina Pogoń	4,551,370.30	230	4 ⚓
Yacht Club AZS	2,112,291.56	110	–
Marina Wapnica – Międzyzdroje	9,517,910.13	52	–
Yacht Port in Nowe Warpno	9,675,981.27	52	3 ⚓
Marina Wolin	5,197,818.00	60	3 ⚓
Marina Kamień Pomorski	20,565,694.79	310	5 ⚓
Marina at Wyspa Grodzka	62,453,534.56	74	–
Euroregional Center for Water Education and Sailing	36,324,639.98	232	–
Water nooks in the area of Lake Dąbie	1,362,515.28	0	–
Marina Solna in Kołobrzeg	11,432,247.10	300	5 ⚓
Yacht Port in Dziwnów	10,552,292.18	60	5 ⚓
Yacht Port in Darłowo	1,971,161.91	67	–
Basen Północny [North Basin]	12,721,944.54	150	5 ⚓
Yacht Port in Stepnica (all localisations)	12,642,847.01	392	3 ⚓
Yacht Port in Lubczyna	7,408,761.31	96	5 ⚓
Passenger quay in Gryfino	14,872,331.26	25	3 ⚓
Passenger quay at Jana z Kolna in Szczecin	1,118,017.27	0	–
Yacht Port in Police	1,962,296.21	10	–
Yacht Port in Dąbie – Marina Hotele	1,041,902.25	90	–
Total	227,185,556.91	2310	

Source: own study based on data obtained from the Marshal's Office of West Pomeranian Voivodship, ZPiPJ – LOT ZSZ and West Pomeranian Regional Tourist Organization.

Summary

Sailing, like many other areas, is subject to constant change, in line with the rhythm imposed by progress, demographic changes and the dynamics of economy around the world. The changes are of quantitative and qualitative character. They are related to the opening and expansion of the European market, as well as the increase in its accessibility for new groups of customers which appeared along with the increase of income, elimination of administrative barriers, improvement of communication accessibility (Butowski, 2017, p. 19).

The growing need to confirm the quality of the services offered, and at the same time the basic need to feel safe made marina operators aware of the indispensability of categorizing marinas and ports. The level of assigned categories in the West Pomeranian region (from 3 to 5) confirms that the certification program is needed, and marina operators are aware of its value. This is also confirmed by investments and the funds involved in them. Regardless of the financial account, safety issues have priority.

Conclusions

1. The investments made it possible to meet the minimum standards for the quality of services and safety in marinas and have been prepared for the certification process.
2. The amount to be allocated for creating one berth at the marina is PLN 160,477.80, while the investment in one berth in the modernized marina is PLN 68,266.03.
3. Marinas that have been subject to certification experience an increase in the number of sailing visitors.

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Cite this article as: Zalewski, T., Bulikowska, M. (2018). Analysis of investment level and marina certification in the process of raising safety standards on the West Pomeranian Sailing Route. *European Journal of Service Management*, 4 (28/2), 531–539. DOI: 10.18276/ejsm.2018.28/2-64.

HUMAN CAPITAL AS A ESSENTIALS ELEMENT OF INTELLECTUAL CAPITAL

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RECEIVED
ACCEPTED

10 December 2018
28 December 2018

JEL
CLASSIFICATION

M2, M50, M53

KEYWORDS

intellectual capital, human capital, organizational capital, customer capital, investments, raising competence

ABSTRACT

On the basis of literature, the author presents the essence of human capital as a key component of intellectual capital and strategic resource of the organization. The paper demonstrates the role of human capital that it plays in today's turbulent reality. The first part presents the concept of human capital, with various shots and the characteristics of its components. In the second part focuses on the essence of human capital and actions needed for its development. The purpose of this paper is to characterize the concept of human capital, to indicate its role in relation to intellectual capital, and an attempt to answer the question, what actions can be taken to improve it. The research paper is of demonstration character and it uses a critical analysis of the national and foreign literature on the subject. The paper uses monographs, collective papers, websites, articles and reports. A critical analysis of literary shows that human capital is the foundation of competitive advantage organizations, and investments in its improvement are necessary.

Introduction

Human capital gives organizations the opportunity to create innovative goods and services, processes and technologies. It creates the right conditions for the development of information systems and databases. It is the source of maintaining good, difficult to reproduce relations with clients, based on mutual respect, patience and loyalty. It also allows organizations to gain new markets and acquire new business partners. Good quality of human

capital is ensured by the high quality of services, products and faster production. It brings benefits associated with a better knowledge flow in the organization and a more accurate understanding of the goals organization wants to achieve. Human capital is the real wealth of all organizations. That is why it is so important for organizations to take actions that will develop this capital and which at the same time can provide success to market players. Activities aimed at improving human capital can be undertaken both by employers and employees themselves. These activities should be carried out in a systematic way, and their capability should correspond to the needs of employees and organizational strategies. The purpose of this paper is to characterize the concept of human capital, to indicate its role in relation to intellectual capital, and to discuss the actions that can be taken to improve it.

Components of intellectual capital

Intellectual capital is one of the most important assets that create the value of an organization, and thus significantly affects the building of its competitive advantage. The elements of this capital include: loyal customers, talented employees, copyrights and all organizational knowledge related to the management method, its history and organizational culture.

Intellectual capital is understood as assets such as knowledge, collective competences, reputation of the organization, customers, brand value and patents that can not be measured by traditional accounting methods, but nevertheless bring benefits to the company. Market position, reputation and loyal clients, achievements, recognition, contacts, partners and support are different aspects of intellectual capital (Tiwana, 2003, p. 61). E. Skrzypek for the most important element of intellectual capital, assumes knowledge useful for the organization and distinguishes three of its components (Skrzypek, 1999, p. 5):

- employee capital including the knowledge of individual employees, which affects the ability to meet customer needs,
- structural capital including business processes and systems existing in the company,
- market capital including customer relations.

According to the definition of J. Fitz-Enz, intellectual capital includes two categories: intellectual property of the company and a complicated combination of processes and cultures, combined with a network of various types of relationships and human capital (Fitz-Enz, 2001, pp. 23–24). A. Brooking understands intellectual capital even more. According to her, intellectual capital is: marketable assets (e.g. market position, company name, distribution channels), intellectual property (assets protected by law) and human assets (knowledge and skills of people) and infrastructure assets (management philosophy, communication, information systems (Brooking, 1999, pp. 16–21). In the literature on the subject, there are many definitions of intellectual capital, but the most-recognized one seems to be presented by L. Edvinsson and M.S. Malone. They present intellectual capital as being based on two components: human capital and structural capital. According to them, human capital is the combined knowledge, innovation, skills and abilities of individual employees of the organization necessary for the efficient performance of tasks. Structural capital, on the other hand, is computer hardware, software, databases, patents and trademarks. It can be owned by the company and can be sold (Edvinsson, Malone, 2001, p. 17). L. Edvinsson is the creator of the intellectual capital development mission at Skandia, in which he focused mainly on the identification and distinction of intangible assets of the organization. Skandia was the first company that issued an annual report on intellectual capital and distinguished the director's position related to intellectual development in the organizational structure. A detailed division of intellectual capital is shown in Figure 1.

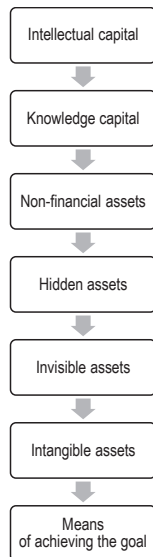


Figure 1. Section of intellectual capital

Source: Edvinsson, Malone (2001), p. 18.

According to the concept of Edvinsson and Malone, intellectual capital may take permanent form (e.g. patents), as well as a variable form (e.g. skills of employees). In addition, it is created through the co-operation of the knowledge process and can be the end product of the knowledge transformation process or the system for creating enterprise value. This last property is particularly important for building the competitive advantage of the organization. In the face of a reality in which the product plays a lesser and lesser role (its features can be copied), intellectual capital becomes the area of investment and the main source of enterprise development. The value of an organization is built as a result of interaction that occurs between all elements of intellectual capital, and does not result directly from the activity of one of them. It is not enough to build the value of an enterprise if one or two components of intellectual capital are well developed. If the remaining components are weak, then the organization won't be able to transform intellectual capital into value.

This interaction and mutual integration of intellectual capital elements is dynamic, continuous and expansive. The more the circles overlap each other (Figure 2), the higher value is created. Therefore, the organization's goal is to increase the number of interrelationships and relations between all elements of human capital, which leads to the maximization of the company's value (Kaczmarek, 2005, p. 321).

Organizational capital as an element of intellectual capital, also called structural, is a knowledge that has been acquired and implanted in the structure of the organization, its processes and culture (Petrash, 1996, p. 38). The components of this capital are:

1. Intellectual property, including:
 - patents,
 - copyrights,
 - design rights,

- trade secret,
 - trademark,
 - distinguishing services.
2. Infrastructural assets, including:
- management philosophy,
 - organizational culture,
 - management processes,
 - information system,
 - system of connections,
 - financial relations.

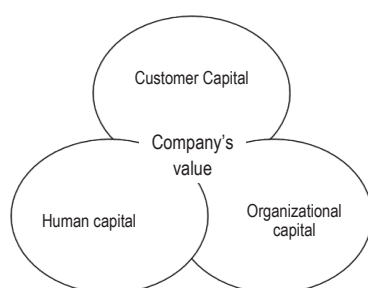


Figure 2. The relationship between intellectual capital and the value of the company

Source: Petrash (1996), p. 38.

The second element of intellectual capital – clients' capital is connected with the company's relations and contacts with its environment. The components of this capital include the image of the organization on the market, relations with suppliers, distribution channels and customer loyalty. According to the author, the most important element of intellectual capital is human capital, which enables building relationships with clients, strengthening the image, or creating relationships with other entities on the market.

The essence of human capital and its development

Due to the fact that the intellectual capital of the organization must change over time and must be multiplied, the necessary condition for this is human presence and human action, that is human capital. Thanks to the knowledge, skills and attitudes presented by people, it is possible to build a lasting competitive advantage of the organizations and societies. If the competitors of the organization are not able to duplicate or imitate employees, then they can develop and achieve success on the market. Therefore, human capital is perceived as the most important component of intellectual capital. It is the people and the skills and their features that allow them to "keep up with the times", and thus provide prosperity to all economies (Jamka, 2011, p. 143). The concept of human capital is explained and understood in various ways, including:

- a) a set of properties inherent in people, such as: knowledge, skills, psychological traits, health, behaviors with a certain value that can be a source of future income for both an employee and an organization (Leksykon zarządzania, 2004, p. 193);
- b) accumulated knowledge, education, qualifications, skills, abilities and readiness to increase the economic potential possessed by its owners and society as a whole (Marciniak, 2002, p. 7);
- c) a resource of knowledge and skills of a certain value being a source of future earnings or satisfaction, a renewable and constantly increasing human potential (Grodzicki, 2003, p. 46);
- d) the ability to generate new economic values, which is determined by many factors, including: knowledge and skills, health and vital energy, as well as recognized values, culture, tradition (Marciniak, 2002, pp. 12–13);
- e) overall human skills, but also his mental and intellectual abilities, which can be used by him in the process of active participation in business life (Domański, 1993, p. 32).

Human capital management focuses on researching employee attitudes and competences and developing those that are necessary to achieve the company's strategic goals. In addition, this management is also related to the development of a system of knowledge sharing among employees, as well as the creation of an appropriate motivating system that will stimulate them to acquire and develop knowledge and skills necessary for the enterprise's needs.

The quality of human capital at the macro level and at the organizational level is influenced by such investments as (Rutkowska, 2016, pp. 339–346):

- vocational education and training as well as experience gained during work,
- action in the field of lifelong learning of adults,
- health care services affecting life expectancy, physical fitness and people's inclination to work intensively,
- gathering information and scientific research, in particular relating to the creation of quality of human capital and the quality of life of the society,
- effort put into the education of the young generation by individuals,
- adequate free time necessary for the regeneration of work capacity,
- economic activity of households to create human capital of family members and society as a whole,
- ethical factors (social and individual value system) influencing pro-effective and prosocial attitudes of owners of human capital,
- factors of financial and structural depreciation of human capital for the economic development of the country.

High quality of human capital allows economies to absorb the modern technologies, thus ensuring economic and social growth. In addition, it contributes to the improvement of the quality of life of the society, increase of creativity and productivity of individuals, thus affecting the competitiveness of a given country. Therefore, investments in this type of capital seem necessary to deal with the rapidly changing environment and build modern societies. Also at the level of the organization, investments in human capital should be perceived as necessary for the company to be able to develop dynamically and build its position on the market.

Investing in a person should be treated by the employer with the same solicitude as investing in research and development. People have the ability to learn and constantly improve and more than other resources, contribute to

the creation of enterprise added value (Rybak, 2003, p. 40). The appropriate quality of human capital enables the organization of:

- improving employee efficiency,
- implementation of the strategy,
- the use of opportunities from the environment,
- recognition and defense against threats.

For the development of human capital in the organization, it is essential to recognize the current and strategic training needs of the employees. The study of employees' needs allows for selection and the preparation of appropriate training, and thus contributes to a better acquisition of knowledge conveyed during training and omitting what employees know from practice or what has been passed on to them in other training.

According to Industry Report, U.S. companies spent over \$ 90 billion dollars on training and development activities in 2017, a year-over-year increase of 32.5%. Average training expenditures for large companies increased from \$ 14.3 million in 2016 to \$ 17 million in 2017. Likewise, the number for small companies rose to \$ 1 million from \$ 376,251 in 2016. But midsize companies remained mostly flat at \$ 1.5 million (2017 *Training...*, 2017). In addition to spending more on training, companies provided more hours of training in 2017. On average, employees received 47.6 hours of training per year, nearly 4 hours more than last year. Midsize companies provided the most hours of training this year at 54.3. Midsize service providers had the highest average number of hours overall (75.5).

As can be seen in the Report on Human Capital (Turek, Worek, 2015, pp. 67–112) employers' awareness of the need to invest in human capital increases (Figure 3).

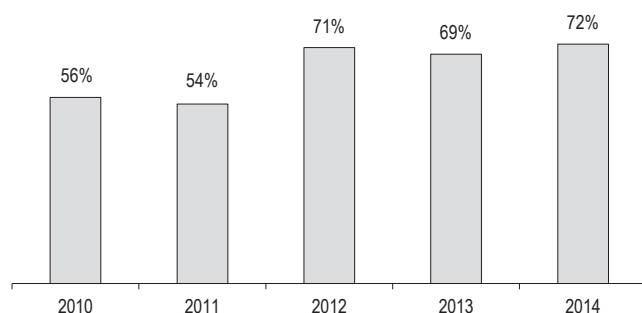


Figure 3. The percentage of employees declaring operate in the skills development for workers

Source: Turek, Worek (2015), pp. 67–112.

In 2014, 72% of Polish companies and institutions declared a way to invest in the development of their employees. In absolute terms, it was about 1.4 million entities, while in 2011 and in 2012, approx. 1.2 million. Not only courses and trainings were taken into account, but also co-financing of education in vocational and secondary schools (basic vocational schools, technical schools, high schools), in higher education institutions (e.g. post-graduate studies, MBA, extramural studies), participation in conferences, seminars, workshops, subsidizing self-education of employees (e.g. purchase of books, magazines), as well as the application of the employee competence assessment system and individual employee development plans (Turek, Worek, 2015, pp. 89–104).

In addition, more frequent investments in human capital were declared by larger entities – employing more than 250 employees (it was about 95% of all large entities). The smallest activity in the area of investments in employees was demonstrated by entities operating in trade, hotel and catering, as well as employers from the industry and mining sector, as well as construction and transport. Among various forms of improving competences, the most popular were the courses and optional training and self-education of employees. However, the least popular was the creation of individual development plans and co-financing of formal education. Unfortunately, there is no current data on this subject.

Conclusions

If the organization wants to face the challenges it faces, it should develop all the elements that make up intellectual capital. The component that requires the largest investment is human capital. Investing in this type of capital contributes not only to the development and success of the organization, but also has an impact on improving the quality of life of the society, increasing the competitiveness of economies and dynamic development of modern technologies. Employers have a large duty to improve the quality of human capital. Employees' competences and knowledge can then be increased through the participation of employees in training, courses, post-graduate studies or workshops. It is necessary to provide the employees with appropriate forms of development, tailored to their and organization's needs. The report quoted in the second part shows that not all employers perceive their role in building human capital. Many of them consider the skills of their employees as sufficient, and some assume that employees do not have time to participate in activities that raise their competences. Employers also prefer to invest in other related areas with the functioning of the organization and do not perceive that expenditures incurred for the improvement of employees can bring tangible benefits. Therefore, it is necessary to change the attitude of employers to invest in employees. To develop human capital, it is necessary to unleash employees' enthusiasm and openness to gain new experiences. It seems that the key to building human capital in society is the creation of attitude of activity and commitment to raising their potential.

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Cite this article as: Ziolo, K. (2018). Human capital as a essentials element of intellectual capital. *European Journal of Service Management*, 4 (28/2), 541–548. DOI: 10.18276/ejism.2018.28/2-65.