

ARRIVALS OF FOREIGN TOURISTS TO POLAND

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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 ≈ 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):

- a) Masurian lakes (the Masurian Lake District in north-eastern Poland counts around 2,000 lakes on an area of about 52,000 km²);
- b) 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);
- c) Tatra mountains (this is the highest mountain range of Carpathians; the most famous resort for skiing and hiking in the Tatras is Zakopane);
- d) 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);
- e) 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.

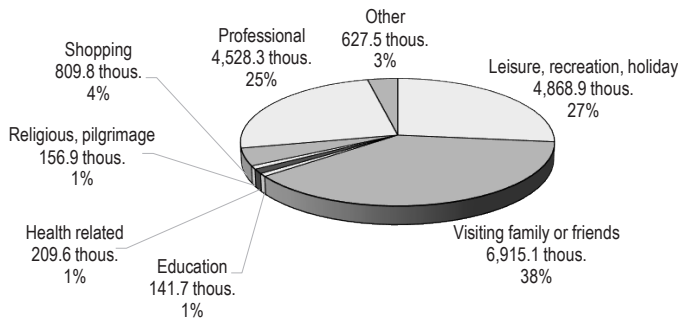


Figure 1. Trips of tourists to Poland by main purpose in 2017

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).

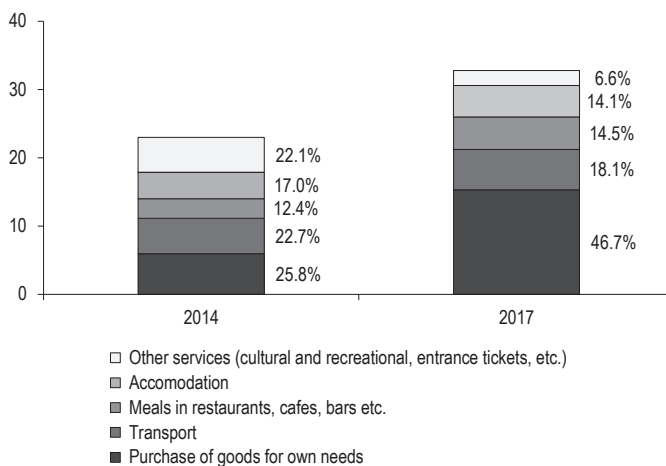


Figure 2. Expenses of tourists connected with travel to Poland in 2014 and 2017 (bn PLN)

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
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 × 1.451	(+277.7) = (-670.3) + (+947.8)
Ireland	1.067 = 0.939 × 1.135	(+25.3) = (-24.4) + (+49.6)
Belarus	1.042 = 0.941 × 1.107	(+30.2) = (-45.1) + (+75.0)
United Kingdom	0.868 = 0.747 × 1.161	(-241.7) = (-496.3) + (+254.1)
Russia	0.840 = 0.873 × 0.962	(-202.6) = (-158.0) + (-44.5)
Switzerland	0.833 = 0.820 × 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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