

# STATISTICAL ANALYSIS OF TOURISM FLOWS BETWEEN UKRAINE AND THE BALTIC SEA REGION COUNTRIES IN 2012–2019

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*This article explores the features and trends in inbound and outbound tourism flows between Ukraine and the Baltic Sea region (BSR) countries in 2012–2019. The research question is whether inbound or outbound tourism prevailed and how visa-free travel to the Schengen Area affected the number of Ukrainians travelling to the Baltic Sea Region. Two data sources were used in the study. These are the Travel and Tourism Competitiveness Index of the World Economic Forum and data from the State Border Guard Service of Ukraine on the number of foreign citizens visiting Ukraine and the number of Ukrainians travelling abroad. The study employs the statistical methods of structural shifts analysis, time series analysis, and graphical visualisation. The findings indicate that Ukrainian outbound tourism was growing steadily over the study period, whilst visa-free travel to the Schengen Area had no statistically significant impact on the number of outbound tourists from Ukraine to the BSR. Outbound tourism flow prevailed over inbound. The number of inbound tourists to Ukraine sharply declined after 2013 because of the socio-political situation in the country. The analysis reveals significant changes in inbound and outbound tourism flow structures. The COVID-19 pandemic is shown to be a critical factor influencing the current state and prospects of the tourism industry.*

**Keywords:**

inbound tourism, outbound tourism, international tourism, Travel and Tourism Competitiveness Index, Baltic Sea Region, Ukraine, COVID-19

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## **Introduction**

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Modern life is unthinkable without travelling. In recent decades, tourism flows have steadily increased, driven by globalisation [1–2] and advances in technology [3–10]. Journeys have become more affordable, and travel times have shortened.

Tourism is now a strategic area of the global economy [11–13]. Its share in world GDP was 10.4 per cent in 2018, which was comparable to the industry's contribution to employment that year.<sup>1</sup> The revenue generated by international tourism in 2018 totalled USD 1.649tn, compared to USD 485.178bn in 1995. It increased almost 3.4-fold, growing throughout the period except for 2009 and 2015.<sup>2</sup> The percentage of international tourism in total exports was the highest in 1995 (8.6 per cent) and the lowest in 2011 (5.6 per cent); a strong uptrend continued from 2011 to 2016 (6.8 per cent).<sup>3</sup>

The benefits of tourism have been described in the literature. Bogdan Sofronov points out that tourism '... drives economic growth, creates jobs, improves social development and promotes peace' [14, p. 123]. Elena Kropinova has a similar vision: '... tourism is the best way to achieve sustainable development' [15, p. 13].

It is hard to overestimate the importance of tourism in achieving the UN Sustainable Development Goals, namely Goal 8 'Decent work and economic growth'. Tourism has enormous potential as a sustainable development tool as it supports employment and generates financial flows sufficient to meet economic challenges. Sustainable tourism, in its turn, should take 'full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities'.<sup>4</sup>

One of the consequences of post-Soviet republics gaining independence was the ample travel opportunities opening up for their citizens. Amongst these countries were Ukraine and some states of the Baltic Sea region, namely

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<sup>1</sup> The Travel and Tourism Competitiveness Report 2019, 2019, *World Economic Forum*, Geneva, available at: <https://reports.weforum.org/travel-and-tourism-competitiveness-report-2019/> (accessed 20.08.2020).

<sup>2</sup> International tourism, receipts (current US\$), 2021, *The World Bank*, available at: <https://data.worldbank.org/indicator/ST.INT.RCPT.CD> (accessed 22.01.2021).

<sup>3</sup> International tourism, receipts (percentage of total exports), 2021, *The World Bank*, available at: <https://data.worldbank.org/indicator/ST.INT.RCPT.XP.ZS>, (accessed 22.01.2021).

<sup>4</sup> Tourism and the Sustainable Development Goals — Journey to 2030, 2017, *World Tourism Organization and United Nations Development Programme*, Madrid, available at: <https://www.e-unwto.org/doi/book/10.18111/9789284419401> (accessed 20.01.2021).

Russia, Estonia, Latvia, and Lithuania. The latter three were popular domestic destinations in the USSR, whilst visits to Western Europe were impossible for most Soviet citizens due to political reasons. Today, however, Ukrainian tourists can easily travel to Estonia, Latvia, Lithuania, and all other EU member states. European countries are amongst the most sought-after destinations by Ukrainians.

The Baltic Sea macroregion is ‘... the most advanced in terms of transnational tourism development’ in the EU [16, p. 128]. Moreover, it was the first in the Union to declare tourism development a strategic priority [16, p. 127]. Thus, a study of tourism flows between Ukraine and the Baltic Sea states is of practical value for understanding how Ukrainians have become integrated into international tourism flows and measuring Ukraine’s potential for inbound tourism, particularly for welcoming visitors from the BSR.

International and cross-border tourism in the Baltic Sea region has grown into an area of scientific research in its own right [15–24]. For instance, Kropinova urges BSR countries to consolidate their best practices in sustainable tourism development to promote a joint brand — Baltic Sustainable Tourism — as a model embracing all sustainable development elements [15, p. 14].

Nevertheless, Tara Freude conclusively shows that, as of today, tourism remains insufficiently sustainable [25, p. 10]. Sustainable tourism is still a niche in the tourism sector rather than a universal practice. Despite all the benefits of tourism development, increased tourism flows incur social and ecological risks.

Growing tourism flows have given rise to the overtourism phenomenon [26–28]. This term describes the negative influence of an excessive number of tourists on locals and visitors. In other words, it is ‘... the impact of tourism on a destination, or parts thereof, that excessively influences the perceived quality of life of citizens and/or quality of visitors experiences in a negative way’.<sup>5</sup>

According to Alberto Amore, Martin Falk, and Bailey Ashton Adie, Venice is the world’s most overtouristed city, with a museum visitor to resident ratio of 83:1 [29, p. 124]. It is followed by Florence, Seville, Lisbon, and Amsterdam [29, p. 126].

The causes of overtourism are low-cost airline tickets, accommodations made available by the Airbnb service, and the emergence of a tourist consumer culture.

An increase in tourist traffic in the most visited places means problems and inconveniences for both travellers and residents. Tourists have to wait in queues

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<sup>5</sup> ‘Overtourism’? Understanding and managing urban tourism growth beyond perceptions, 2018, Madrid, *UNWTO*, available at: <https://www.e-unwto.org/doi/pdf/10.18111/9789284420070> (accessed 01.01.2020). doi: 10.18111/9789284420070.

and experience overcrowded attractions, where visiting time is often limited. All this leads to disappointment with the trip. Host communities, in their turn, suffer from increased pressure on the infrastructure, rising costs of living, growing crime rates, threats to local ecosystems, and the interests of tourists put above their own.

Despite the economic benefits of tourism, the discomfort experienced by residents and the decline in the quality of life makes locals discontent with visitors. Social tension builds up, which is the exact opposite of what travellers and hosts expect.

An increase in tourism is also associated with carbon pollution [30]. Lenzen et al. estimate the industry's contribution to global greenhouse gas emissions at about 8 per cent [31, p. 522].

The carbon footprint of tourism adds to global warming and environmental pollution. It may lead to irreversible negative changes in the climate. The Paris Agreement was developed and signed in 2016 to tackle the climate change problem. The treaty aims to mitigate risks by keeping the rise in global average temperature to well below 2 °C above pre-industrial levels.

Gössling and Higham argue that the tourism industry should adopt destination management practices based on the low-carbon imperative to prevent irreversible climate change [32].

As Freude shows, even sustainable tourism and its contribution to the Sustainable Development Goals do not eliminate carbon pollution [25, p. 10]. In addition, there is a risk of transferring the responsibility for reducing emissions to the consumer. Thus, it is essential to unite the efforts of all stakeholders to reduce carbon emissions.

This state of affairs brings to the fore questions concerning corporate social responsibility in tourism, which are actively investigated now [33–37]. For instance, Oxenswärdh [38, p. 35] emphasises the importance of collective learning as a tool for corporate managers and other leaders to optimise the efforts of tourism organisations to promote sustainability in the industry.

COVID-19 restrictions have posed a radical challenge to tourism sustainability. As the UN WTO reported in May 2020, 100–120m direct tourism jobs might disappear in the wake of the pandemic.<sup>6</sup> This job displacement would be the worst in international tourism since 1950. In late January 2021, the UN WTO World Tourism Barometer estimated the 2020 decrease in international arrivals at 1bn or 74 per cent compared to 2019.<sup>7</sup> The collapse in the tourism industry meant an export revenues loss of USD 1.3tn. It is more than 11 times the industry's losses caused by the 2009 global economic crisis.

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<sup>6</sup> Impact assessment of the COVID-19 outbreak on international tourism, 2020, *UNWTO*, available at: <https://www.unwto.org/impact-assessment-of-the-covid-19-outbreak-on-international-tourism> (accessed 02.09.2020).

<sup>7</sup> 2020: worst year in tourism history with one billion fewer international arrivals, 2021, *UNWTO*, available at: <https://www.unwto.org/taxonomy/term/347> (accessed 24.02.2021).

This dramatic decline has encouraged many COVID-focused studies [39–41], which constitute the most relevant area of tourism research under current conditions.

## **Data and Methods**

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The Travel and Tourism Competitiveness Index (TTCI) is an effective tool to evaluate a country's attractiveness for visitors. The TTCI has been calculated since 2007 and published biennially since 2009 as part of the Travel and Tourism Competitiveness Report of the World Economic Forum.

This indicator uses a combination of sources — statistics from international organisations, which account for two-thirds of the data, and the annual Executive Opinion Survey. The latter is a poll of over 16,000 industry experts — business executives and business leaders.

The TTCI groups 90 individual indicators into 14 variables called pillars, which comprise four subindices — Enabling Environment, T&T Policy and Enabling Conditions, Infrastructure, and Natural and Cultural Resources. A national rank and score are computed for each economy included in the Travel and Tourism Competitiveness Report.

The Ukrainian statistics approach is similar to the European one in defining tourism as trips taken to a destination outside one's usual environment for less than a year. This definition covers private, leisure and business trips, as well as visits to see family and friends.<sup>8</sup> No matter the purpose of the visit, consumption patterns remain the same.

In Ukraine, statistics on outbound and inbound tourism flows can be obtained from two sources. Primary data on overseas residents' visits to Ukraine and Ukrainian residents' travel abroad are collected by the country's State Border Guard Service. The State Statistics Service of Ukraine uses this data to obtain statistics on the development of tourism as an economic sector.

There are several approaches to defining the BSR, and various criteria are used for this purpose. Klemeshev et al. [42, p. 10–11] distinguish geographical, historical, political, economic, sociological, and legal interdisciplinary criteria, which can be applied individually or in a combination to delineate the Baltic Sea Region. Thus, the BSR can be viewed from a narrow, extended, and broad perspective.

According to the narrow definition, the region includes Sweden, Denmark, Finland, Lithuania, Latvia, and Estonia and the coastal parts of Russia, Germany, and Poland. The rest of Poland, most Russian and German regions, Belarus,

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<sup>8</sup> Tourism statistics at regional level, 2019, *Eurostat*, available at: [https://ec.europa.eu/eurostat/statistics-explained/index.php/Tourism\\_statistics\\_at\\_regional\\_level](https://ec.europa.eu/eurostat/statistics-explained/index.php/Tourism_statistics_at_regional_level) (accessed 03.09. 2020).

and Norway are added within the extended definition. The broad definition also includes Iceland, some other territories of Russia, Germany, the Czech Republic, Slovakia, and Ukraine into the Baltic region.

Although this point of view seems valid in many respects, this study will define the BSR as comprising nine countries located along the coastline of the Baltic Sea — Denmark, Estonia, Latvia, Finland, Germany, Lithuania, Poland, Russia, and Sweden. Such an approach makes it possible to compensate for the lack of statistical information.

The Wilcoxon signed-rank test and the SPSS Statistics software were used to estimate the impact of visa-free travel to the Schengen Area on tourism flows from Ukraine to the BSR. This nonparametric test was chosen because of the need to compare data from two related samples (before and after the introduction of visa-free travel). The method helps overcome deficiencies such as the small size of samples and lack of normality in the data.

The null hypothesis holds that the median difference between pairs of observations is zero. In our case, the null hypothesis reads as follows: ‘There is no difference in the number of outbound tourists from Ukraine to the Baltic Sea Region before and after the introduction of visa-free travel’.

The linear coefficient of ‘absolute’ structural shifts for  $n$  periods was used to perform a summary assessment of structural changes in tourism flows between Ukraine and BSR countries. It was computed according to Formula 1:

$$\overline{\Delta_{d_1-d_0}^{(n)}} = \frac{\sum_{i=1}^k |d_{in} - d_{i1}|}{k(n-1)}, \quad (1)$$

where  $d_i$  is the share of a particular part of the structure, %;

$k$  is the total number of structural parts;

$n$  is the total number of periods.

Formula 2 was used to obtain the ratio (R) of outbound tourism flows to inbound ones:

$$R = \frac{\text{Number of outbound tourists}}{\text{Number of inbound tourists}} \quad (2)$$

R = 1 indicates that outbound and inbound tourism flows are balanced. If R exceeds 1, the outbound flow prevails, and vice versa.

## Results and Discussion

In 2019, the Travel and Tourism Competitiveness Index included 140 countries, which generated about 98 per cent of global travel and tourism GDP. The TTCI ranks all the selected nations, thus making it possible to perform cross-country analysis.

As Fig. 1 shows, Germany was the T&T leader in the BSR, having ranked third or higher throughout 2013–2019.

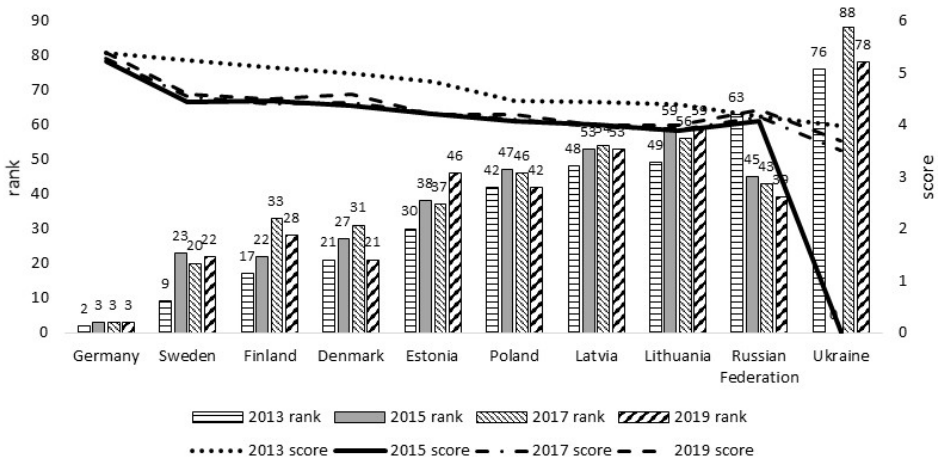


Fig. 1. The TTCI ranking and scores for Baltic Sea Region countries and Ukraine, 2013–2019

*Source:* prepared by the authors based on The Travel and Tourism Competitiveness Report 2013, 2015, 2017, 2019.

When analysing the chart, one has to remember that the lower the rank, the better the performance of the country.

Russia considerably improved its position, having moved up 24 places — from 63<sup>rd</sup> in 2013 to 39<sup>th</sup> in 2019.

Denmark and Poland returned to their 2013 positions in 2019 — 21<sup>st</sup> and 42<sup>nd</sup> respectively — after a decline in 2015–2017. The other countries of the region went down in the ranking. Estonia performed the worst — having ranked 30<sup>th</sup> in 2013, it was only 46<sup>th</sup> in 2019.

Sweden and Finland are in the top three most competitive countries in the region. Yet Sweden dropped 13 places in the ranking (9<sup>th</sup> in 2013 to 22<sup>nd</sup> in 2019) and Finland 11 (17<sup>th</sup> in 2013 to 28<sup>th</sup> in 2019).

Lithuania moved down ten places (from 49<sup>th</sup> to 59<sup>th</sup>), whilst Latvia's decline in the ranking was less dramatic (48<sup>th</sup> to 53<sup>rd</sup>).

Ukraine's position did not change fundamentally between 2013 (76<sup>th</sup>) and 2019 (78<sup>th</sup>). However, the country was not included in the global rankings in 2015 due to insufficient data.<sup>9</sup> In 2017, it dropped to 88<sup>th</sup> place, illustrating the high sensitivity of tourists to the socio-political situation in the country of destination.

Table 1 shows the number of Ukrainians who visited BSR countries. The region is popular amongst Ukrainians, having received 111,186 of the country's nationals in 2012–2019. Overall, 198,570 travelled internationally over the period.

The intensity of Ukrainian outbound tourism changed considerably in 2012–2019. Lithuania is the absolute leader in the BSR. The number of Ukrainian visitors to the country rose tenfold — from 8,079 in 2012 to 83,354 in 2019.

A steady, more than sevenfold, growth in the number of Ukrainian tourists was observed in Denmark (7.058 times) and Estonia (7.884 times). In 2019, Ukrainians visited Sweden 4.813 times and Latvia 4.419 times more often than in 2012.

Estonia, Latvia, and Lithuania were 'go-to' destinations in the USSR. And these countries remain appealing to Ukrainian citizens.

The total number of outbound tourists from Ukraine to BSR countries rose by 19.8 per cent over the study period. The increase in flows to Finland, Germany, and Poland was slightly above the regional average, reaching 47.9 per cent, 83.9 per cent, and 71.2 per cent respectively.

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<sup>9</sup> The Travel & Tourism Competitiveness Report 2015, 2015, *World Economic Forum*, Geneva, available at: [http://www3.weforum.org/docs/TT15/WEF\\_Global\\_Travel&Tourism\\_Report\\_2015](http://www3.weforum.org/docs/TT15/WEF_Global_Travel&Tourism_Report_2015) (accessed 20.08.2020).



Table 1

**Number of outbound tourists from Ukraine to BSR countries  
in 2012–2019, people**

	2012	2013	2014	2015	2016	2017	2018	2019	2019 to 2012
Denmark	10,117	60	5,619	66	100	6,351	58,556	71,402	7,058
Estonia	6,136	7,089	6,525	6,751	11,637	14,542	25,358	48,374	7,884
Finland	11,217	13,058	11,135	12,464	13,814	14,146	15,387	16,588	1,479
Germany	380,554	376,316	308,908	294,797	275,987	344,150	533,892	699,792	1,839
Latvia	22,895	21,335	21,620	29,534	39,235	54,831	78,791	101,184	4,419
Lithuania	8,079	16,767	22,611	28,559	57,639	54,867	64,094	83,354	10,317
Poland	5,765,184	6,991,778	7,657,021	9,505,713	10,111,086	9,990,978	10,000,507	9,871,675	1,712
Russia	5,941,305	6,140,406	4,671,321	4,080,414	3,859,820	4,376,423	4,162,697	3,622,715	0,610
Sweden	10,571	113	6,351	11,503	15,570	24,215	31,145	50,878	4,813
<b>BSR total</b>	<b>12,156,058</b>	<b>13,566,922</b>	<b>12,711,111</b>	<b>13,969,801</b>	<b>14,384,888</b>	<b>14,880,503</b>	<b>14,950,427</b>	<b>14,565,962</b>	<b>1,198</b>
Outbound total	21,432,836	23,761,287	22,437,671	23,141,646	24,668,233	26,437,413	27,810,892	28,879,972	1,347

Source: State Border Guard Service of Ukraine; State Statistics Service of Ukraine

Germany and Poland were in the top three countries by the number of Ukrainian tourists. Probably, that is why these states did not show impressive growth in 2012–2019.

Russia deviated from the general trend. The number of Ukrainian visitors to the country has been decreasing since 2014 when the year-on-year reduction was as much as 1,469,085 people or 23.9 per cent. The absolute minimum was observed in 2019 at 3,622,715 people. This number was 41.0 per cent below the 2013 value.

About 21.5m Ukrainians travelled internationally in 2012, and almost 28.9m in 2019, i. e. a 34.7 per cent increase occurred. As Fig. 2 shows, the time plots of the total number of outbound tourists and the number of visitors to the BSR are very similar.

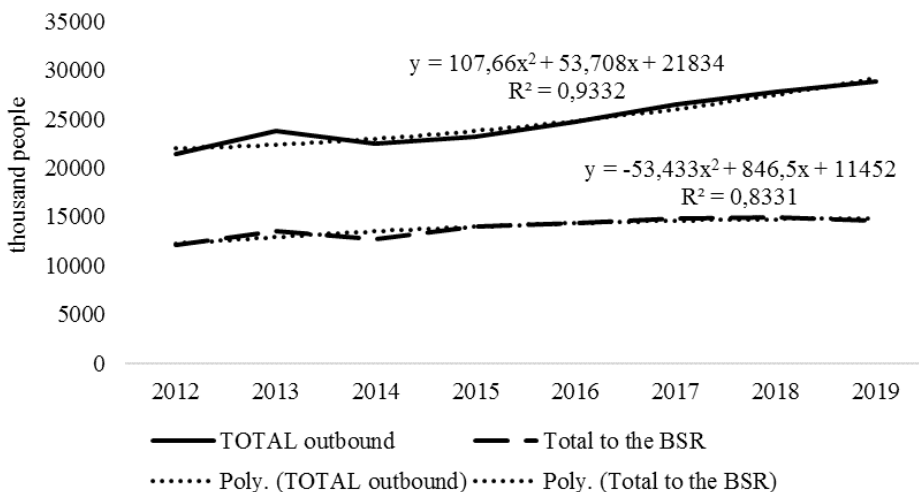


Fig. 2. Trends in outbound tourism flows from Ukraine, 2012–2019

Source: prepared by the authors based on Table 1

A second-degree polynomial function was used to describe the observed trends – for the total number of outbound tourists:

$$Y = 107.66x^2 + 53.708x + 21834,$$

(in 2012–2019, the total number of Ukrainians travelling abroad increased annually by an average of 53.708 thousand people, whilst the average growth acceleration rate was 107.66 thousand people);

– for the total number of tourists travelling to the BSR:

$$Y = -53.443x^2 + 846.5x + 11452,$$

(i. e., in 2012–2019, the total number of Ukrainians travelling to the BSR

was rising annually by an average of 846.5 thousand people, whilst the average growth deceleration rate was 53.443 thousand people).

The coefficient of determination ( $R^2$ ) was used to estimate the accuracy of the models. Fig. 2 shows the coefficients for each.

The theoretical value of the coefficient of determination  $R^2(2;5) = 0.699$  is below those calculated for the two equations. Thus, the obtained models are a good fit for the data. Nonetheless, these models cannot predict the future numbers of Ukrainian travellers because the trends were disrupted in 2020 by the COVID-19 pandemic.

The total number of Ukrainians travelling internationally and those visiting the BSR was increasing at different rates throughout 2012–2019. The total number of outbound Ukrainian tourists was rising more rapidly (by 4.4 per cent annually) than that of visitors to the BSR (2.6 per cent). This difference in growth rates changed the structure of travel: the proportion of visits to the BSR in all Ukrainian international travel dropped by 6.3 percentage points — from 56.7 per cent in 2012 to 50.4 per cent in 2019.

The maximum value was achieved in 2015 (60.4 per cent); about two-thirds of Ukrainians travelling abroad visited the region that year (Fig. 3). Then the proportion of visits to the BSR began to decline. In 2019, it was ten percentage points below the 2015 level.

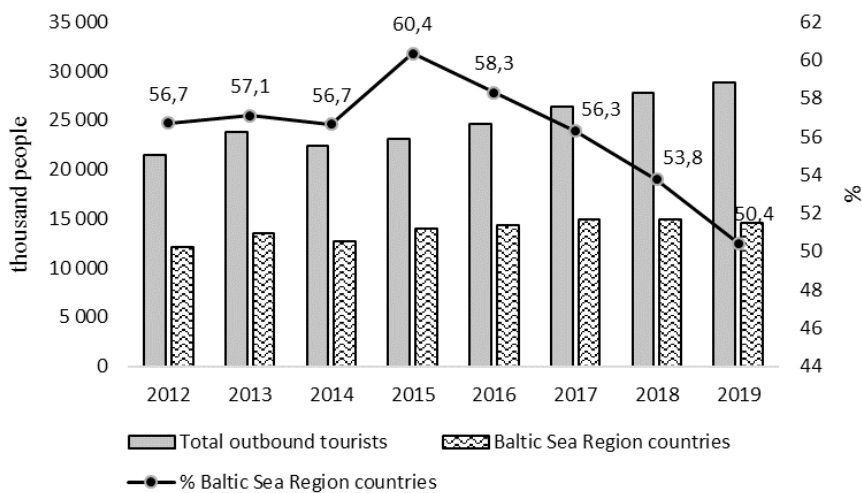


Fig. 3. Outbound tourism flows from Ukraine and the proportion of Ukrainian visits to the Baltic Sea Region countries, 2012–2019

Source: prepared by the authors based on Table 1

Ukrainian citizens were granted visa-free travel to the Schengen Area in summer 2017. All countries of the Baltic Sea region but for the Russian Federation are Schengen countries. Thus, it seemed appropriate to analyse whether visa-free travel affected tourism flows from Ukraine to the BSR.

The Wilcoxon signed-rank test demonstrated no statistically significant difference in the number of outbound tourists from Ukraine to the BSR before and after the introduction of visa-free travel. Previously we compared data for 2017 and 2016 (Table 2). The p-value (0.139) was considered under the null hypothesis.

*Table 2*

**p-value for the Wilcoxon signed-rank test**

	2017 to 2016	2018 to 2016	2019 to 2016	2018 to 2017
p-value	0.139	0.066	0.374	0.110

Then data for 2018 and 2016 were examined; 2017 was left out because visa-free travel was valid for only six months that year. The results were very similar. A p-value of 0.066 gave no reason to reject the null hypothesis. The same held for 2018 to 2017 and 2019 to 2016 comparisons.

Therefore, visa-free travel had no statistically significant impact on Ukrainian outbound tourism. As previously stated, there was an upward trend in the number of Ukrainian tourists visiting the BSR in 2012–2019.

The structure of outbound tourism to the BSR by country changed over that period (Fig. 4).

The main destinations for Ukrainian tourists were Russia and Poland. The share of visits to Russia dropped by 24 percentage points (from 48.9 per cent in 2012 to 24.9 per cent in 2019), and that of travel to other countries rose. Poland delivered the most impressive growth; its proportion increased by more than one-fifth (by 20.3 percentage points — from 47.4 per cent in 2012 to 67.8 per

cent in 2019). The share of Germany grew by 1.7 percentage points (from 3.1 per cent in 2012 to 4.8 per cent in 2019). The proportions of the other countries increased by not more than one percentage point.

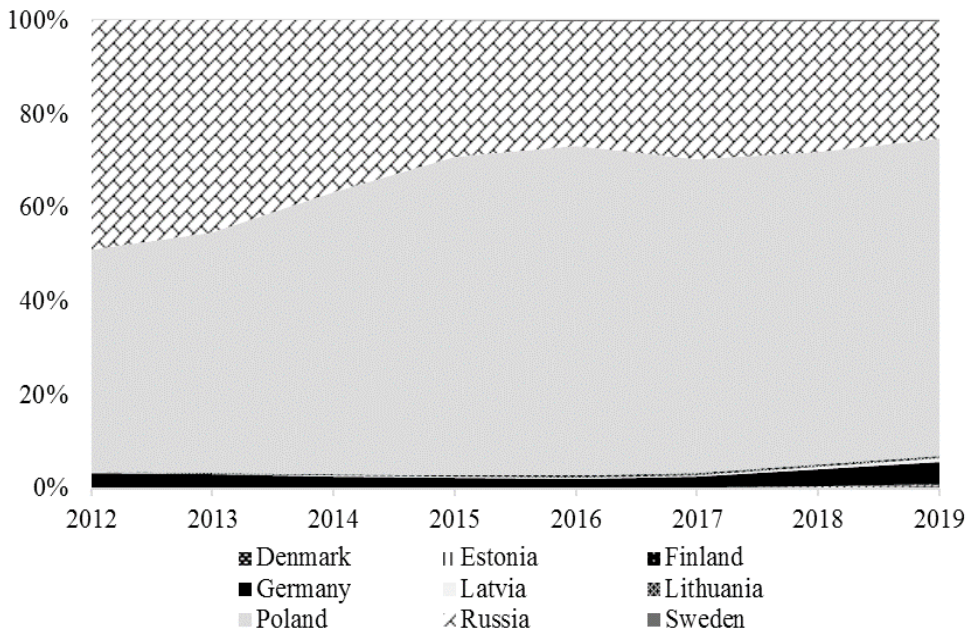


Fig. 4. The structure of outbound tourism flows from Ukraine to BSR countries in 2012–2019, %

Source: prepared by the authors based on Table 1

The main reason for structural changes was a reduction in the number of inbound tourists to Russia from Ukraine. It decreased by 2,318,590 people (or by 39.0 per cent) in 2019 compared to 2012. Simultaneously, the rest of BSR destinations welcomed more Ukrainian visitors in 2019 than in 2012. In particular, there was an increase in the number of Ukrainian tourists visiting Poland (by 4,106,491 people or 71.2 per cent) and Germany (by 319 238 people or 83.9 per cent). Thus, Russia's share was redistributed among other BSR countries.

The linear coefficient of ‘absolute’ structural changes over the study period equals 0.76 percentage points, i. e. the share of countries visited by Ukrainian tourists changed by 0.76 percentage points on average each year in 2012–2019.

Inbound tourism to Ukraine was less popular than outbound. The total number of international visitors reached 127,928,460 people in 2012–2019, including 41,781,149 from BSR countries (Table 3).

Unfortunately, the tourism flow to Ukraine has decreased sharply since 2013 (Fig. 5) due to the dramatic events that took place in Ukraine. The total number of tourists dropped by 48.5 per cent in 2014 compared to 2013, whilst that of tourists from the BSR declined by 69.1 per cent.

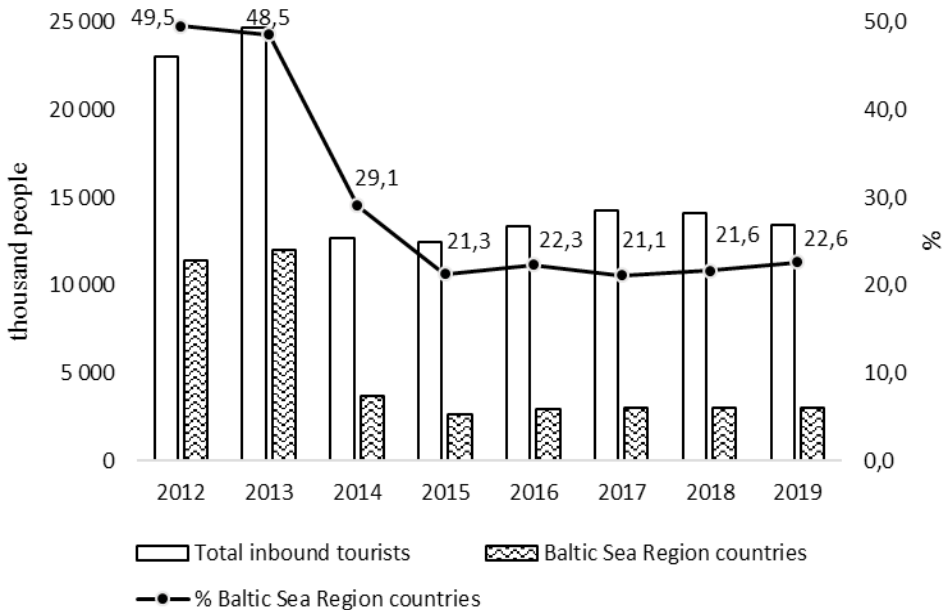


Fig. 5. Inbound tourism flows to Ukraine and the share of visits to Ukraine from the BSR countries, 2012–2019

Source: prepared by the authors based on Table 3

The number of tourists from Russia far outstripped that from the other BSR states in 2012: the country accounted for over 9,526,695 arrivals (83.6 per cent of the total number of international visitors). In 2019, only 1,386,643 Russians (45.6 per cent of the inbound tourism flow) visited Ukraine.

Table 3

**Inbound tourists from BSR countries to Ukraine  
in 2012–2019, people**

	2012	2013	2014	2015	2016	2017	2018	2019	2019 to 2012
Denmark	20,498	11,461	8,317	9,383	11,219	13,180	18,435	30,625	1.494
Estonia	19,812	19,456	8,731	10,865	15,759	21,313	26,196	27,782	1.402
Finland	10, 852	10,308	4,567	7,522	9,306	10,733	11,252	12,499	1.154
Germany	274,073	253,318	131,244	154,498	171,118	209,447	237,266	269,271	0.982
Latvia	39,840	37,478	18,118	22,187	29,881	37,591	42,979	48,855	1.226
Lithuania	54,636	85,355	29,466	34,996	52,187	75,622	93,230	117,792	2.156
Poland	1,404,086	1,259,209	1,123,945	1,156,011	1,195,163	1,144,249	1,096,887	1,114,427	0.794
Russian Federation	9,526,695	10,284,782	2,362,982	1,231,035	1,473,633	1,464,764	1,495,650	1,386,643	0.146
Sweden	40, 777	17,542	10,610	14,706	20,126	24,554	30,038	34,136	0.837
Total from the BSR	11,391,249	11,976,909	3,697,980	2,641,203	2,978,392	3,001,453	3,051,933	3,042,030	0.267
TOTAL inbound	23, 012, 823	24,671,227	12,711,507	12,428,286	13,333,096	14,229,642	14,104,087	13,437,792	0.584

Source: State Border Guard Service of Ukraine; State Statistics Service of Ukraine

The number of Russians visiting Ukraine fell by 86.5 per cent in 2012–2019. The most substantial year-on-year drop (by 77.0 per cent) occurred in 2014.

The number of Polish tourists varied the least during the study period: 1,404,086 Poles visited the country in 2012 and 1,114,427 in 2019. Poland invariably ranked second in terms of the number of visitors to Ukraine during the eight years.

However, the number of Russian travellers was 6.8 and 8.2 times that of their Polish counterparts in 2012 and 2013, whilst this ratio was only 1.2 in 2019. For the rest of the countries, except Germany and Sweden, the 2019/2012 difference ranged between 1.154 (Finland) and 2.156 times (Lithuania).

These changes led to a more than twofold reduction in the proportion of BSR residents in the total number of tourists arriving in Ukraine. It decreased from 49.5 per cent in 2012 to 29.1 per cent in 2014 and 22.6 per cent in 2019. Almost every second tourist arrived in Ukraine from the BSR at the beginning of the study period and only about every fifth at its end.

The structure of inbound tourism flows from BSR countries changed more dramatically than that of outbound tourism. The linear coefficient of ‘absolute’ structural changes in 2012–2019 was 1.21 percentage points. During the study period, the share of international visitors from the BSR to Ukraine increased by 1.21 percentage points on average annually.

The most substantial changes were as follows: the share of visitors from Russia decreased by 38.0 percentage points — from 83.6 per cent in 2012 to 45.6 per cent in 2019 (Fig. 6).

Poland accounted for the most marked increase — by 24.3 percentage points, from 12.3 to 36.6 per cent. The proportion of Germany rose by 6.5 percentage points — from 2.4 to 8.9 per cent. Lithuania’s share grew by 3.39 percentage points, which means that the share of visitors from this country in 2019 was 8.1 times that in 2012.



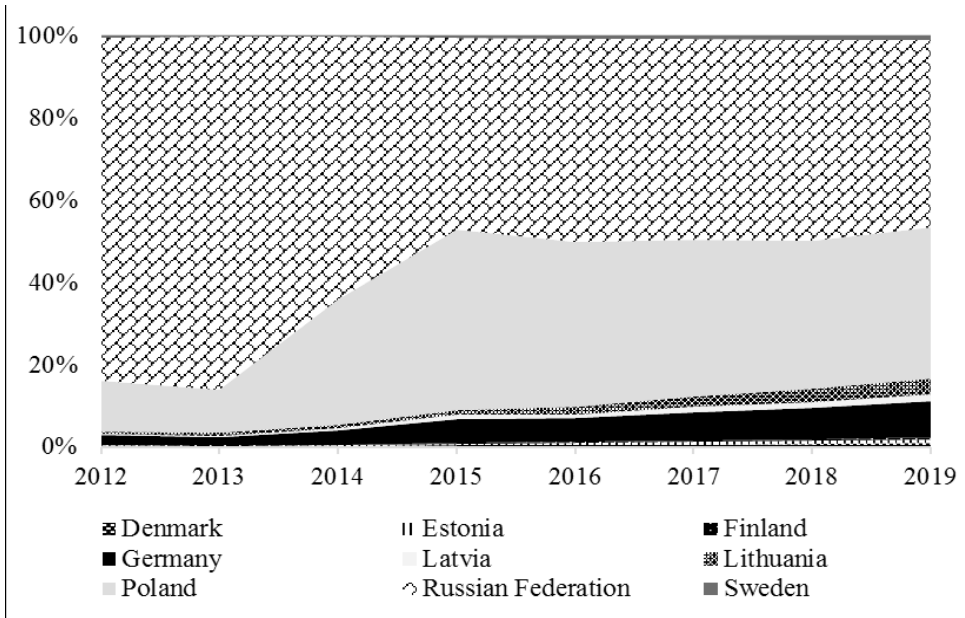


Fig. 6. The structure of inbound tourism flows to Ukraine from BSR countries in 2012–2019,%

Source: prepared by the authors based on Table 3

Changes in arrivals and departures affect the ratio between outbound and inbound tourism flows (Fig. 7).

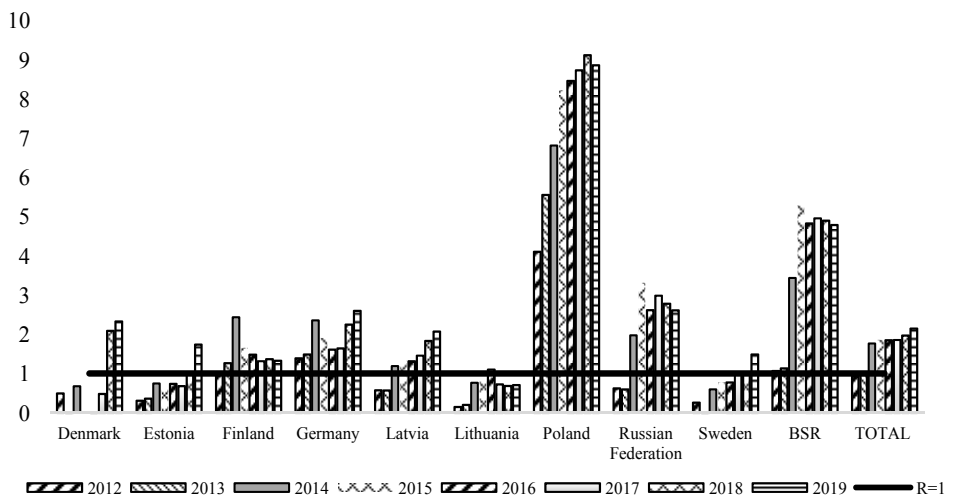


Fig. 7. Outbound to inbound tourism flow ratio in 2012–2019

Source: prepared by the authors based on Table 1 and Table 3

The flows of travellers arriving in Ukraine and departing from the country were well-balanced in 2012 ( $R = 0.931$ ) and 2013 ( $R = 0.963$ ). After 2014 ( $R = 1.765$ ), the ratio grew to achieve a more than twofold difference ( $R = 2.149$ ) in 2019.

A similar situation was typical of all BSR countries. But after 2015, outbound flows exceeded inbound ones almost fivefold. This increase proves that the region is an attractive destination for Ukrainian citizens. Fig. 7 shows that tourism flows were balanced between Ukraine and Lithuania in 2014–2019 ( $R$  varied from 0.767 in 2014 to 1.104 in 2016 and 0.708 in 2019); Ukraine and Estonia in 2014–2018 (from 0.747 in 2014 to 0.968 in 2018); Ukraine and Sweden in 2015–2018 (from 0.782 to 1.037).

Tourism flows between Ukraine and Germany follow the general trends of Ukrainian international travel.

The number of Ukrainians making trips to Russia dropped by 39 per cent in 2019 compared to 2012, and the number of Russians who visited Ukraine in 2019 was 85.4 per cent smaller than in 2012. Thus, the ratio between outbound and inbound tourism flows between these countries rose from 0.624 to 2.613. The maximum  $R$  value (3.315) was observed in 2015.

Poland stands out the most in terms of the tourism flow balance. It was the most visited country by Ukrainians from 2013 (see Table 3). In 2015–2019, Ukrainians visited Poland eight-nine times more often than Poles travelled to Ukraine.

Statistical data of the State Border Guard Service of Ukraine helped classify tourism flows by the purpose of visit. Purposes of travel are different for outbound and inbound tourists. The latter come to Ukraine on business trips, as part of tourist groups, and to make private visits (Fig. 8).

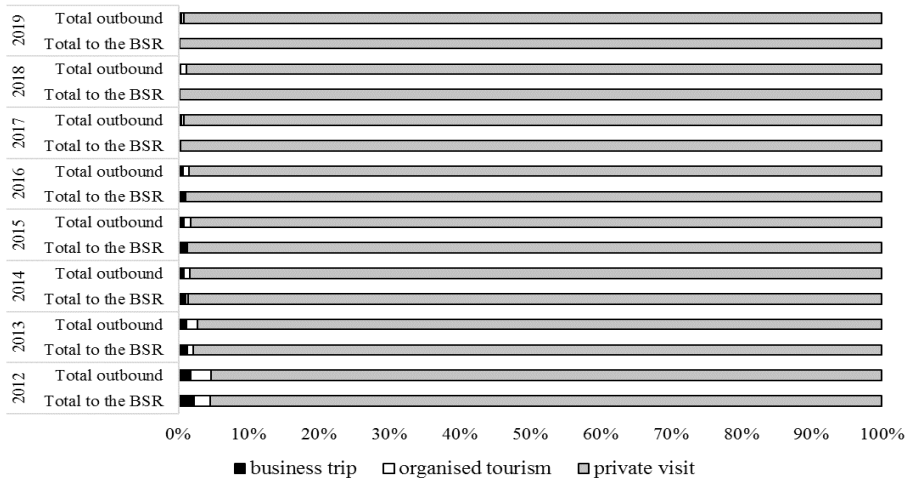


Fig. 8. The structure of outbound tourism flows from Ukraine to the BSR by the purpose of travel in 2012 – 2019, %

Source: State Border Guard Service of Ukraine; State Statistics Service of Ukraine

The complete list of inbound travel purposes is as follows: business trips; organised tourism; private visits; education; job placement; immigration; cultural events; sports events; religion; other (Fig. 9).

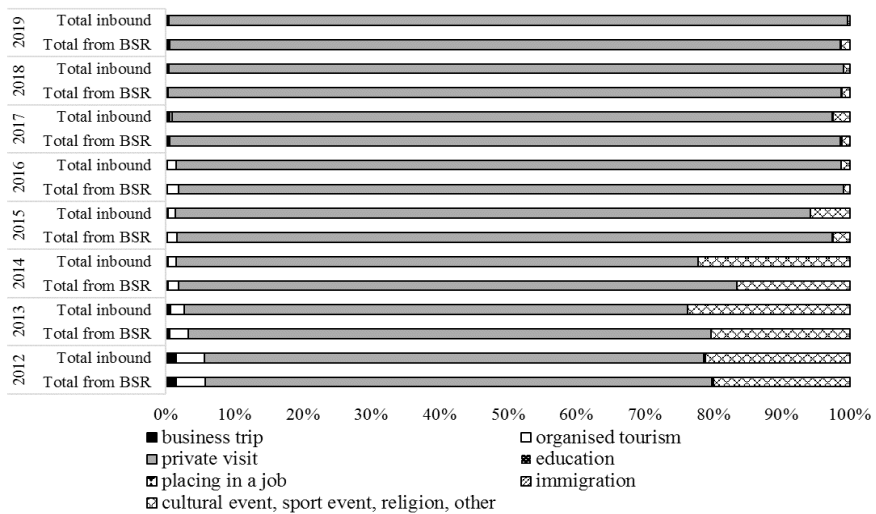


Fig. 9. The structure of inbound tourism flows to Ukraine from the BSR by the purpose of travel in 2012 – 2019, %

Source: State Border Guard Service of Ukraine; State Statistics Service of Ukraine.

Private visits are the most popular reason for travel for both Ukrainian and international tourists, whilst organised tourism is the least common purpose for visit. This situation was observed throughout the study period for outbound tourism. As for inbound flows, private visits accounted for the most substantial proportion of arrivals in 2014 and after 2016 (they made up 96 per cent of inbound travel).

Cultural and sports events, religion, and other purposes were visible in the structure of inbound tourism flows. Yet, after 2015, their significance drastically decreased. Visits for these purposes peaked in 2013 when they made up 23.7 per cent of all arrivals and 20.3 per cent of those from the BSR.

Tourism was burgeoning in previous years. Tourism flows were growing so rapidly that the term overtourism was coined to denote the industry's negative impact on destinations. The COVID-19 pandemic disrupted this long-term trend. Tourism has been affected the most amongst all sectors of the economy, and countries need to reorganise their industries to restore tourism flows in the new circumstances.

## **Conclusions**

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Tourism has contributed a lot to the economy, culture, and prosperity of society in recent decades. Yet tourism development is a controversial issue. On the one hand, it is a driver of economic growth and national competitiveness. And countries of the Baltic Sea region, which have adopted a strategic approach to tourism development, are competitive at the global and regional levels. On the other hand, tourism may adversely affect destinations.

According to the Travel and Tourism Competitiveness Index, Germany, Sweden and Finland performed the best in the Baltic Sea region in 2013–2019. Denmark and Poland held the same positions at the end of the period as they did in 2013.

Russia improved its position, having moved up 24 places. Whilst its rank was the lowest (63<sup>rd</sup>) in the region in 2013, in 2019, the country ranked 39<sup>th</sup>, above Estonia (46<sup>th</sup>), Poland (42<sup>nd</sup>), Latvia (53<sup>rd</sup>), and Lithuania (59<sup>th</sup>).

Analysis of inbound and outbound international tourism flows provides essential information for destination management by governments and businesses.

The Baltic Sea region attracts many Ukrainian tourists. The number of Ukrainians visiting it increased by almost 20 per cent in 2019 compared to 2012. Yet, there was no statistically significant evidence that the increase ensued visa-free travel to the Schengen Area.

Ukrainian outbound tourism is more developed than inbound. Poland is the most visited country by Ukrainians in the region. Nevertheless, Lithuania, Estonia, and Denmark markedly increased their visibility as destinations for Ukrainian tourists.

After 2013, tourism flows to Ukraine dwindled, especially that from the Russian Federation. This reduction affected the scope and structure of tourism flows between Ukraine and the Baltic Sea region. Nevertheless, Russia still accounts for most international arrivals in Ukraine. Poland and Germany rank second and third respectively.

Private visits are the most common purpose for travel for both Ukrainian and international tourists.

The COVID-19 pandemic disrupted all these trends in tourism flows in 2020. According to the UNWTO data, the year was the worst on record for international tourism.

Tourism has suffered severely during the pandemic. The industry is running the risk of delayed achievement of the Sustainable Development Goals, whilst falling tourism revenues pose threats to biodiversity. Heritage conservation may also be in danger. Tourism is expected to recover over the medium term.

Recovery and overcoming the negative effects of the pandemic will require Ukraine, Baltic Sea states and all countries in the world to pool their experience and potential for mutually beneficial cooperation in the future.

## **References**

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1. Song, H., Li, G., Cao, Z. 2018, Tourism and Economic Globalization: An Emerging Research Agenda, *Journal of Travel Research*, vol. 57, no. 8, p. 999—1011. doi:10.1177/0047287517734943.
2. Javid, E., Katircioglu, S. 2017, The globalization indicators-tourism development nexus: a dynamic panel-data analysis, *Asia Pacific Journal of Tourism Research*, vol. 22, no. 11, p. 1194—1205. doi: 10.1080/10941665.2017.1378240.
3. Chung, N., Han, H., Joun, Y. 2015, Tourists' intention to visit a destination: The role of augmented reality (AR) application for a heritage site, *Computers in Human Behavior*, no. 50, p. 588—599. doi: 10.1016/j.chb.2015.02.068. 3.

4. Chung, N., Lee, H., Kim, J.-Y., Koo, C. 2018, The Role of Augmented Reality for Experience-Influenced Environments: The Case of Cultural Heritage Tourism in Korea, *Journal of Travel Research*, vol. 57, no. 5, p. 627—643. doi: 10.1177/0047287517708255.4.

5. Trunfio, M., Campana, S. 2020, A visitors' experience model for mixed reality in the museum, *Current Issues in Tourism*, vol. 23, no. 9, p. 1053—1058. doi: 10.1080/13683500.2019.1586847.5.

6. Guttentag, D. A. 2010, Virtual reality: Applications and implications for tourism, *Tourism Management*, vol. 31, no. 5, p. 637—651. doi:10.1016/j.tourman.2009.07.003.

7. Navío-Marco, J., Ruiz-Gómez, L. M., Sevilla-Sevilla, C. 2018, Internet and Consumer behaviour in Travel and Tourism: A European Cross-National Analysis, *Journal of Reviews on Global Economics*, no. 7, p. 186—194. doi: 10.6000/1929-7092.2018.07.17.7.

8. Herdin, T., Egger, R. 2018, Beyond the Digital Divide: Tourism, ICTs and Culture — a highly promising alliance, *International Journal of Digital Culture and Electronic Tourism*, vol. 2, no. 4, p. 322—336. doi: 10.1504/IJDCET.2018.092182.

9. Nayyar, A., Mahapatra, B., Nhung Le, D., Suseendran, G. 2018, Virtual reality (VR) & augmented reality (AR) technologies for tourism and hospitality industry, *International Journal of Engineering & Technology*, vol. 7, no. 2.21, p. 156—160. doi: 10.14419/ijet.v7i2.21.11858.

10. Thees, H., Erschbamer, G., Pechlaner, H. 2020, The application of blockchain in tourism: use cases in the tourism value system, *European Journal of Tourism Research*, no. 26, 2602, available at: <https://ejtr.vumk.eu/index.php/about/article/view/1933> (Accessed 31 August 2020).

11. Magalhaes, A. L., Andreoni, B., Santos, E. J. dos and Cristina, Y. 2014, The economy of sustainable tourism, *International Journal of Environment and Sustainable Development*, vol. 13, no. 4, p. 395—407. doi: 10.1504/IJESD.2014.064964.

12. Suhel, S., Bashir, A. 2018, The role of tourism toward economic growth in the local economy, *Economic Journal of Emerging Markets*, vol. 10, no. 1, p. 32—39, doi: 10.20885/ejem.vol10.iss1.art4.

13. Du, D., Lew, A. A., Ng, P. T. 2016, Tourism and Economic Growth, *Journal of Travel Research*, vol. 55, no. 4, p. 454—464. doi: 10.1177/0047287514563167.

14. Sofronov, B. 2018, The Development of the Travel and Tourism Industry in the World, *Annals of Spiru Haret University. Economic Series*, vol. 18, no. 4, p. 123—137. doi: <https://doi.org/10.26458/1848>.

15. Kropinova, E. G. 2020, Tourism and the Sustainable Development of the Baltic Sea Region. In: Leal Filho, W., Azul, A., Brandli, L., Lange Salvia, A., Wall, T. (eds) *Decent Work and Economic Growth. Encyclopedia of the UN Sustainable Development Goals*, Springer, Cham. doi: [https://doi.org/10.1007/978-3-319-71058-7\\_84-1](https://doi.org/10.1007/978-3-319-71058-7_84-1).

16. Studzieniecki, T., Jakubowski, A., Meyer, B. 2020, Transnational tourist destination management: a case study of the Baltic Sea Region. *Balt. Reg.*, vol. 12, no. 3, p. 127—146. doi: 10.5922/2078-8555-2020-3-8.
17. Gorina, G., Barabanova, V. 2019, Marketing aspects of developing tourism services market in Ukraine & the Baltic countries, *Baltic Journal of Economic Studies*, vol. 5, no. 1, p. 39—47. doi: <https://doi.org/10.30525/2256-0742/2019-5-1-39-47>.
18. Zaitseva, N. A., Kropinova, E. G. 2016, Problems and Prospects of Cross-Border Cooperation in Tourism between Russia and Europe, *Balt. Reg.*, vol. 8, no. 3, p. 98—108. doi: 10.5922/2079-8555-2016-3-8.
19. Zaitseva, N. A., Korneevets, V. S., Kropinova, E. G., Kuznetsova, T. Yu., Semenova, L. V. 2016, Effect of cross-border movements and exchanges on the economic diversification of the cross-border cooperation regions (case for the Russian-Polish borderlands), *Regional studies*, vol. 3, no. 53, p. 94—101 (in Russ.).
20. Kropinova, E. G. 2013, Cooperation between Russia and the EU in the field of innovative development of tourism: the case of the Lithuania — Poland — Russia cross-border cooperation programme, *Balt. Reg.*, no. 4, p. 48—57. doi: 10.5922/2079-8555-2013-4-5.
21. Rakhmanov, A. B. 2019, Tourism and the structure of attractiveness of the Baltic region metropolises, *Balt. Reg.*, vol. 11, no. 2, p. 73—93. doi: 10.5922/2079-8555-2019-2-5.
22. Slyvenko, V. A. 2014, Influence of European integration processes on Baltic countries tourism market development, *The Bulletin of the Dnipropetrovsk University. Series: Management of Innovations*, no. 3, p. 93—99. doi: 10.15421/191414 (in Ukr.).
23. Korsak, R. V., Furtiy, V. V. 2017, The history of tourism in the Baltics (Estonia, Latvia, Lithuania), *Hilea: scientific journal*, no. 118, p. 159—163 (in Ukr.).
24. Chyr, N., Zhukov, S. 2015, Economic analyses of tourism industry in the Baltic region (on the example of Estonia), *Economic forum*, no. 4, p. 107—118 (in Ukr.).
25. Freude, T. 2019, Ecotourism and Sustainable Development. In: Leal Filho, W., Azul, A., Brandli, L., Özuyar, P., Wall, T. (eds) *Decent Work and Economic Growth. Encyclopedia of the UN Sustainable Development Goals*, Springer, Cham. doi: 10.1007/978-3-319-71058-7\_28-1.
26. Dodds, R. Butler, R. W. (eds.) 2019, *Overtourism: Issues, Realities and Solutions*, Berlin, De Gruyter Oldenbourg, doi: 10.1515/9783110607369.
27. Bouchon, F., Rauscher, M. 2019, Cities and tourism, a love and hate story; towards a conceptual framework for urban overtourism management, *International Journal of Tourism Cities*, vol. 5, no. 4, p. 598—619. doi: 10.1108/IJTC-06-2019-0080.
28. Gonzalez, V. M., Coromina, L., Galí, N. 2018, Overtourism: Residents' perceptions of tourism impact as an indicator of resident social carrying capacity — Case study of a Spanish heritage town, *Tourism Review*, vol. 73, no. 3, p. 277—296. doi: 10.1108/TR-08-2017-0138.

29. Amore, A., Falk, M., Adie, B. A. 2020, One visitor too many: assessing the degree of overtourism in established European urban destinations, *International Journal of Tourism Cities*, vol. 6, no. 1, p. 117–137. doi: 10.1108/IJTC-09-2019-0152.

30. Geneidy, S. E., Baumeister, S. 2019, The Carbon Footprint of Volunteer Tourism, *European Journal of Tourism, Hospitality and Recreation*, vol. 9, no. 2, p. 15–25. doi: 10.2478/ejthr-2019-0010.

31. Lenzen, M., Sun, Y., Faturay, F. et al. 2018, The carbon footprint of global tourism, *Nature Climate Change*, vol. 8, no. 6, p. 522–528. doi: 10.1038/s41558-018-0141-x.

32. Gössling, S., Higham, J. 2020, The Low-Carbon Imperative: Destination Management under Urgent Climate Change, *Journal of Travel Research*, available at: <https://journals.sagepub.com/doi/pdf/10.1177/0047287520933679> (accessed 30 August 2020).

33. Camilleri, M. 2014, Advancing the sustainable tourism agenda through strategic CSR perspectives, *Tourism Planning & Development*, vol. 11, no. 1, p. 42–56. doi: 10.1080/21568316.2013.839470.

34. Camilleri, M. A. 2016, Responsible tourism that creates shared value among stakeholders, *Tourism Planning & Development*, vol. 13, no. 2, p. 219–235. doi: 10.1080/21568316.2015.1074100.

1. Garay, L., Font, X. 2012, Doing good to do well? Corporate social responsibility reasons, practices and impacts in small and medium accommodation enterprises, *International Journal of Hospitality Management*, vol. 31, no. 2, p. 329–337. doi: <https://doi.org/10.1016/j.ijhm.2011.04.013.35>.

36. Coles, T., Fenclova, E., Dinan, C. 2013, Tourism and corporate social responsibility: A critical review and research agenda, *Tourism Management Perspectives*, no. 6, p. 122–141. doi: [dx.doi.org/10.1016/j.tmp.2013.02.001](https://doi.org/10.1016/j.tmp.2013.02.001).

37. Paskova, M., Zelenka, J. 2019, How crucial is the social responsibility for tourism sustainability? *Social Responsibility Journal*, vol. 15, no. 4, p. 534–552. doi: 10.1108/SRJ-03-2018-0057.

38. Oxenswärdh, A. 2017, Collective Learning towards Sustainable Tourism, *Studia Periegetica*, vol. 2, no. 2, p. 25–37.

39. Buckley, R. 2020, Pandemic Travel Restrictions Provide a Test of Net Ecological Effects of Ecotourism and New Research Opportunities, *Journal of Travel Research*. doi: 10.1177/0047287520947812.

40. Jamal, T., Budke, C. 2020, Tourism in a world with pandemics: local-global responsibility and action, *Journal of tourism futures*, vol. 6, no. 2, p. 181–188. doi: 10.1108/JTF-02-2020-0014.

41. Gössling, S., Scott, D., Hall, C. M. 2020, Pandemics, tourism and global change: a rapid assessment of COVID-19, *Journal of Sustainable Tourism*, vol. 29, no. doi: 10.1080/09669582.2020.1758708.

42. Klemeshev, A. P., Korneevets, V. S., Palmowski, T., Studzieniecki, T., Fedorov, G. M. 2017, Approaches to the Definition of the Baltic Sea Region, *Balt. Reg.*, vol. 9, no. 4, p. 4–20. doi: 10.5922/2079-8555-2017-4-1.



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