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**IMPACT OF TOURIST ARRIVALS' REDUCTION
ON THE TRAVEL SERVICES EXPORT IN MACEDONIA**

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***Abstract:** Tourism, as one of the leading service industries, has a significant contribution to the development of many national economies and thus to the world economy as well. Global tourist travels have a constant growth that implies a significant positive developmental impact on certain tourist regions. These global tendencies consider Europe and its all sub-regions, the most important tourist region in the world. However, the Republic of Macedonia, as a part of the European continent, does not continuously follow these global and regional tourism trends. The constant growth of tourist arrivals was interrupted by a sudden and destabilizing drop in the period of 1989-2018, despite the trend of persistent growth of tourist arrivals in southern Europe. This research aims to quantify the impact of declining tourist arrivals on tourism services export and its effect on Macedonian GDP. The reasons for declining of the tourist arrivals in the analyzed period will not be discussed in this research.*

***Keywords:** Tourism, Tourist arrivals, Travel services export, GDP, losses, Macedonia.*

1. Introduction

Tourism as one of the leading world industries has always been interesting for researchers. There are many indicators to analyze current issues in tourism, potential of its development and its impact on national and world economies. Many studies refer to economic impact of tourism. Certain types of economic analyze of tourism like economic fiscal and financial impact analysis, demand analysis, benefic cost analysis, environmental

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impact assessment etc., are given by Stynes D. (1997). The role of tourism in generating GDP is analyzed by World Tourism and Travel Council (2012), Vellas F. (2011), Trajkov and Karadzova (2007) etc. Some authors put an accent on the contribution of the recreation, leisure and tourism to gross national product as well as tourism impact on balance of payment (Tribe, 2006). There are also studies that measure impact of tourism on generating new jobs (WTTC, 2019).

Generally, as seen from many researches and papers, significant indicators for tourism analyze can be divided on non-economic (non-financial) indicators and economic (financial) indicators. First group of indicators refer to number of arrivals and nights spent, and other group refer to tourists expending and money flows related to tourism.

Both types of indicators will be used in this research paper for measuring the financial losses caused by the reduction of tourist arrivals in Republic of Macedonia in the 1989-2018 periods. Also, the impact of reduced tourist services export in the analyzed period on Macedonian GDP will be measured. Data used in this research are taken from official sources like World Tourism Organization (UNWTO), International Monetary Fund (IMF), Central Bank of Republic of Macedonia (CBRM), Macedonian State Statistical Office (SSO) etc.

2. Overview of tourist arrivals on global and regional level

The UNWTO data for the volume of tourist arrivals in the world indicate constant growth of tourism, especially in the period after the Second World War. Still, world tourist arrivals are not equally distributed. Highest share in total tourist arrivals has Europe, where the dynamic of tourist arrivals growth matches the global trends of growth (Table 1). Similar tendencies can be comprehended from the data for tourist arrivals in Southern Europe where according to the information and data methodology collection of UNWTO our country belongs (Fig. 1).

Table 1 Tourist arrivals (in millions), World, Europe and South-Mediterranean Europe

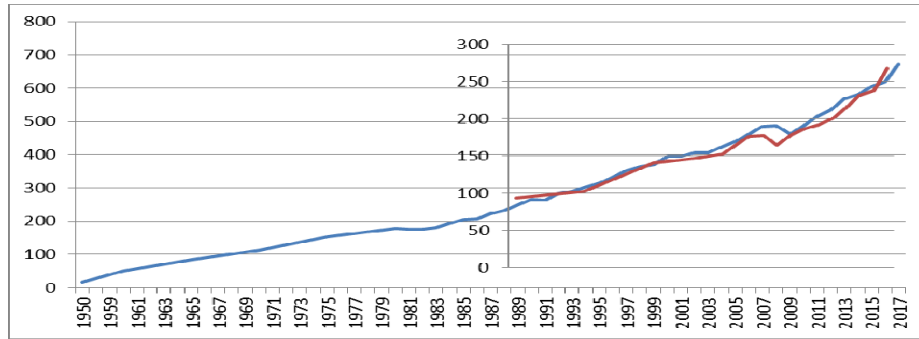
Year	World	Europe	SM Europe	Year	World	Europe	SM Europe	Year	World	Europe	SM Europe
1950	25.3	16.8	n.a	1990	439.5	265.6	93.907	2005	806.8	440.7	152.6
1960	69.3	50.4	n.a	1991	442.5	263.9	n.a	2006	n.a	n.a	n.a
1965	112.9	83.7	n.a	1992	479.8	282.2	n.a	2007	901	n.a	n.a
1970	165.8	113	n.a	1993	495.7	290.8	n.a	2008	919	n.a	n.a
1975	222.3	153.9	n.a	1994	519.8	303.1	n.a	2009	892	461.7	164.5
1980	278.1	178.5	n.a	1995	540.6	315	102.72	2010	949	474.8	173.5
1981	278.6	175.5	n.a	1996	575	332.1	n.a	2011	995	516.4	187
1982	276.9	175.3	n.a	1997	598.6	352.9	n.a	2012	1035	534.2	191.1
1983	281.8	179.6	n.a	1998	616.7	364.6	n.a	2013	1087	566.4	201
1984	306.8	193.4	n.a	1999	639.6	370.5	n.a	2014	1134	580.2	214.8
1985	320.1	204.3	n.a	2000	687	395.9	140.756	2015	1195	605.1	231.4
1986	330.2	206.2	n.a	2001	686.7	396.2	n.a	2016	1240	619.5	237.1
1987	359.7	223.9	n.a	2002	700	407	n.a	2017	1326	671.7	267.4
1988	385	231.6	n.a	2003	694.6	407.1	146.766	2018	1401	672.3	289.4
1989	410.1	250.7	n.a	2004	765.1	424.4	149.488	-	-	-	-

Source: (UNWTO, Tourism Market Trends, Anex 3 and Anex 7, 2006);
 (UNWTO, Tourism Highlights, 2013), (UNWTO, Tourism Highlights, 2009)
 (UNWTO, International Tourism Highlights, 2019)

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As seen from the data for tourist arrivals, tourism has a constant growth, especially after the World War 2. As expected, tourist distribution is not equal in all tourist regions. Europe as tourist region has the largest share of world tourism market where dynamics of growth of tourism arrivals in that region suits dynamic of growth of world tourist arrivals (Table 1). Related tendencies can be noticed from the data for tourist arrivals in the region of Southern Europe (Fig. 1).

Figure 1 Tourist arrivals in Europe (blue) and South and Mediterranean Europe (red) (in millions)



Source: own interpretation of table 1 data

3. Overview of tourist arrivals in Macedonia

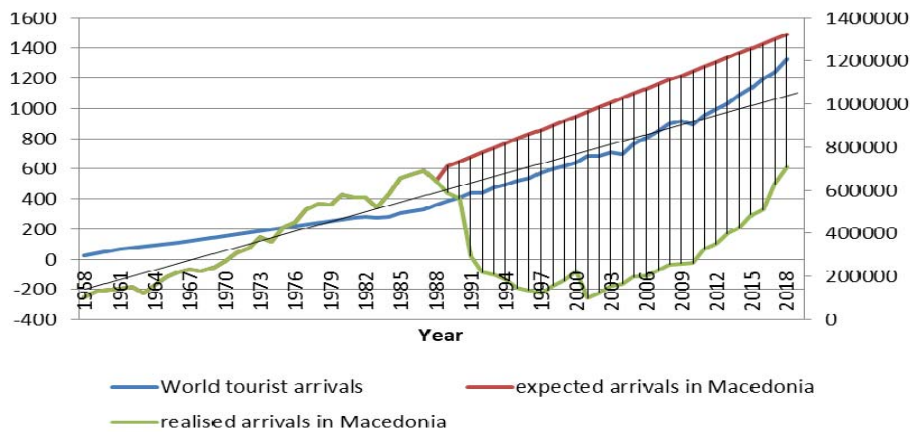
There are data for the number of tourist arrivals in Macedonia starting from 1958. Analyzing these data it can be noted that, following world tourism trends, Macedonian tourism has a constant growth from the beginning of the measurements up to 1987. Starting from 1988, and particularly from 1989, there is a sudden and rapid decline of the number of tourist arrivals in our country (fig. 2). The reasons of this decline can not be seen in the world tourism tendencies as tourism arrivals in the world continued to growth. In a same time, there is a continuous and even higher growth of tourist arrivals in Europe and South Europe, the region where our country belong according territorial classification of UNWTO (fig. 1). That way it can be concluded that tourist arrivals are redirected from Macedonia in the other countries in the region.

Tourist arrivals in Macedonia have reached their pic in the late 80's right before Macedonia claimed its independence. Until then, tourist arrivals in our country followed World, European and regional trends. After this period, there is a high drop of Macedonian tourism and it has not reached full recovery since then. The factors that led to downfall of Macedonian tourism are not subject of interest in this research. Only the economic consequences of tourist arrivals decline will be measured through the analysis of tourism services export and their impact on Macedonian GDP.

For that purpose, statistical model of time series forecasting will be used. Seeing the long term trends of the annual data of the number of tourist arrivals in the world and Europe it can be noticed a linear progression (fig. 2). The same linear trend is observed when analyzing the data of the number of tourist arrivals in Macedonia in the long period of

40 years (1958 – 1988). We already concluded that the sudden drop of tourist arrivals in the period after 1988/89 does not correspond with the logical and expected trend of tourist arrivals in Macedonia in the following period, as well as the continuous and linear growth of tourist arrivals in the South European region. Using statistical model for time series analysis of annual data – Least squares trend fitting and forecasting, and the annual data of tourist arrivals in Macedonia in 1958-1988 period from State statistical office (SSO, June 2014), the expected number of tourist arrivals in Macedonia in the period 1989-2019 can be calculated.

Figure 2 World tourist arrivals, expected and realized foreign tourist arrivals in Macedonia



Source: own interpretation from the selected data in table 1 and 2 and (SSO, June 2019)

When time series indicate linear tendencies, the linear trend can be shown with the following function:

$$y_t = a + bx_t \quad (1)$$

y_t = predicted values of the observation in a given period of time

a (the “y” intercept), b (slope) = coefficients

x_t = time variable

The “y intercept” can be calculated as: $a = \frac{\sum y}{n}$ or $a = \bar{y}$. This coefficient indicates the average value of time series data in the analyzed period (in this case average number of tourist arrivals in the period 1958-1988). The slope “b” can be calculated as $b = \frac{\sum xy}{\sum x^2}$. This coefficient indicates the average annual changes of the observation (in this case it shows average annual changes in the number of tourist arrivals in Macedonia in the period 1958-1988).

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Calculating the “y intercept” and the slope of the function from the given data of tourist arrivals in Macedonia in the period (1958-1988), the following linear function can be shown:

$$y_t = 654,77 + 34,51x_t \quad (2)$$

The average annual volume of total tourist arrivals in Macedonia in 1958-1988 period is 654,77 thousands and average annual changes are 34,51 thousands tourist arrivals. Having this formula, allows us to calculate the number of expected total tourist arrivals in Macedonia in the period 1989-2018. As illustrated in fig. 2, certain factors that are not subject of analyze in this paper lead to high drop of tourist arrivals in Macedonia in the analyzed period. Calculations showed that the country has registered near 21.7 million tourist arrivals less than it was expected in the analyzed period.

Visualizing data for expected tourist arrivals in the analyzed period and the data for realized tourist arrivals in the same period, it can be easily noticed that expected tourist arrivals fit the world, European and regional tendencies, but for some reasons, this arrivals did not occur in Macedonia. The difference between expected and realized tourist arrivals indicates the unused tourist potential of Macedonia.

Calculations have shown that Macedonian tourism has suffered hard period in last 30 years and needs to provide really high growth rate in the following period to neutralize all the negative impact caused in the analyzed period.

4. Analyzing loses in the tourist balance of Republic of Macedonia in the period 1989-2018

Tourism revenues from foreign tourist arrivals in Macedonia are registered in the country's balance of payment as tourist and travel services export. Tourism and travel – related services are clearly explained and determined by World Tourism Organization (WTO, 2014).

The following methodology for calculating loses in tourist balance of Macedonia is used:

First, loses in foreign tourist arrivals in Macedonia are needed to be determined. Same statistical model for time series analysis of annual data – Least squares trend fitting and forecasting, is used to calculate expected foreign tourist arrivals in Macedonia in the analyzed period. Calculating the “y intercept” and the slope of the function from the given data of foreign tourist arrivals in Macedonia in the period (1958-1988) (SSO, June 2014), the following linear function can be revealed:

$$y_t = 376519 + 2108x_t \quad (3)$$

The average annual volume of foreign tourist arrivals in Macedonia in 1958-1988 period is 376,52 thousands and average annual changes are over 2,1 thousands foreign tourist arrivals. Calculations showed that our country has registered near 17.3 million foreign tourist arrivals less than it was expected in the analyzed period (table 2).

Table 2. Calculating loses in tourist balance and tourism export share in GDP in Republic of Macedonia (1989-2018)

Year	Foreign tourist arrivals			Travel services Inflow		Lost income	GDP Macedonia mil USD ²⁾	Tourism export share in GDP	Potential tourism export share in GDP
	Realized -r- ¹⁾	Expected -e-	E-R	mil. USD ²⁾	per arrival (USD)	mil USD			
1989	590230	712807	122577		30	3.7			
1990	562411	733825	171414		30	5.1	4472		0.1%
1991	294323	754843	460520	9.0	31	14.1	4695	0.2%	0.5%
1992	219062	775861	556799	11.2	51	28.5	2317	0.5%	1.7%
1993	208191	796879	588688	13.0	62	36.8	2550	0.5%	1.9%
1994	185414	817897	632483	29.0	156	98.9	3381	0.9%	3.7%
1995	147007	838915	691908	19.5	132	91.5	4449	0.4%	2.4%
1996	136137	859933	723796	20.6	151	109.6	4422	0.5%	2.9%
1997	121337	880951	759614	15.2	125	94.9	3735	0.4%	2.9%
1998	156670	901969	745299	16.7	107	79.4	3571	0.5%	2.6%
1999	180788	922987	742199	39.9	221	163.8	3673	1.1%	5.3%
2000	224016	944005	719989	37.9	169	121.8	3587	1.1%	4.3%
2001	98946	965023	866077	25.9	262	226.7	3437	0.8%	6.9%
2002	122861	986041	863180	39.0	317	274.0	3791	1.0%	7.7%
2003	157692	1007059	849367	56.7	360	305.4	4756	1.2%	7.2%
2004	165306	1028077	862771	71.9	435	375.3	5514	1.3%	7.6%
2005	197216	1049095	851879	89.5	454	386.6	5986	1.5%	7.5%
2006	202357	1070113	867756	129.2	638	554.0	6561	2.0%	9.6%
2007	230080	1091131	861051	185.8	808	695.3	8160	2.3%	10.0%
2008	254957	1112148	857191	228.5	896	768.2	9834	2.3%	9.4%
2009	259204	1133166	873962	217.8	840	734.4	9314	2.3%	9.5%
2010	261696	1154184	892488	197.3	754	672.9	9339	2.1%	8.7%
2011	327 471	1175202	847731	240.5	734	622.6	10439	2.3%	7.8%
2012	351 359	1196220	844861	233.7	665	561.9	9613	2.4%	7.8%
2013	399 680	1217238	817558	266.6	667	545.3	10818	2.5%	7.1%
2014	425 314	1238256	812942	294.7	693	563.3	11362	2.6%	7.2%
2015	485 530	1259274	773744	264.7	545	421.8	10052	2.6%	6.6%
2016	510 484	1280292	769808	279.8	548	421.9	10746	2.6%	6.3%
2017	630 594	1301310	670716	327.0	519	347.8	11338	2.9%	5.8%
2018	707345	1322328	614983	381.6	539	331.8	12374	3.1%	5.6%
Total			21713347			9657.5			

Source: own calculations, (SSO, 2019)¹⁾, (CBRM, 2019)²⁾

As the losses in foreign tourist arrivals are calculated, the next step is to determine the travel services inflow per foreign tourist arrival for each individual year in the analyzed period (1989-2018). The following ratio is used to calculate annual inflow per arrival

$$I_{y \text{ per arrival}} = I_y / N_y, \quad (4)$$

where I_y = value of travel services export for certain year, y = year and N_y = number of realized foreign tourist arrivals in certain year.

Next step is to calculate loses in travel services export in Macedonia in the analyzed period. Difference of expected (e) and realized (r) foreign tourist arrivals in certain year indicates unrealized arrivals in that particular year. Loses in travel services sector in a specific year (L_y) can be calculated by multiplying the number of unrealized arrivals (e-r) with the value of inflow per foreign tourist arrival ($I_{y \text{ per arrival}}$).

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$$L_y = I_y \text{ per arrival } (e - r) \quad (5)$$

Total loses in tourist balance in Macedonia in the analyzed period can be calculated by summarizing the annual loses in tourist services export in Republic of Macedonia for the whole period of interest (1989-2018) (table 2).

As seen in table 2, total loses of foreign tourist income in Macedonia in the past 30 years are estimated over 9.6 billion USD. This indicates that tourism stagnation is one of the reasons of the low performance of Macedonian national economy. Excluding cumulative impact of the growth of tourism services export on country's GDP it can be calculated potential tourism export share in GDP if expected foreign tourist arrivals were realized.

Following formula can be used for more precise calculation of potential share of travel services export in country's GDP

$$\text{SSTE in GDP} = \frac{(I_e + I_r)}{\text{GDP } (I_e)} \quad (6)$$

where I_e = expected income on foreign travel services in certain year, I_r = realized income on foreign travel services in certain year and GDP is countries Gross Domestic Product. STSE in GDP = Share of travel services export in countries GDP in certain year

Table 2 data illustrate that share of tourist export in Macedonian GDP until 2013 was persistently fewer than 2.5%. In the past few years (2014-2018) slight increase of the share was calculated. The largest share was recorded in 2018 by 3.1%. Calculations however indicate that share of tourism export in GDP would be much higher if the growing tendency of foreign tourist arrivals in the period 1958-1988 was preserved in the analyzed period. In that case, the share in certain years would be in the range of 7% to 10%.

5. Conclusion

Tourist arrivals in Macedonia have been unpredictable and unstable in the last 30 years. Macedonian tourism has a constant growth up to 1987, but starting from 1988, and particularly from 1989, there is a sudden and rapid decline. This situation does not correspond with global tendencies of growth of tourist arrivals. There is a continuous and even higher growth of tourist arrivals in Europe and South Europe, the region where the country belong according territorial classification of UNWTO. Considering that, it can be concluded that tourist arrivals are redirected from Macedonia to the other countries in the region.

Total loses of foreign tourist income in Macedonia in the past 30 years is estimated is nearly 10 billion USD which had a negative impact on the whole national economy. Macedonian tourism has unused potential to contribute to the overall economic performance of the country as the current share of tourism export in country's GDP is much lower than potential share of tourism export in GDP.

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UTICAJ SMANJENJA BROJA DOLAZAKA TURISTA NA IZVOZ TURISTIČKIH USLUGA U REPUBLICI MAKEDONIJI

Apstrakt: Turizam, kao jedna od vodećih uslužnih grana industrije, ima značajan doprinos u razvoju brojnih nacionalnih ekonomija, kao i svetske privrede uopšte. Globalno kretanje turizma je u konstantnom porastu i samim tim pozitivno utiče na razvoj određenih turističkih regija. Ovakve globalne tendencije, Evropu i njene podregije smatraju najvažnijom turističkom regijom na svetu. Ipak, Republika Makedonija, kao deo evropskog kontinenta, ne prati dosledno pomenute globalne i regionalne trendove u turizmu. Konstantan rast dolazaka turista naglo je prekinut i destabilizovan u periodu od 1989. do 2018, uprkos trendu neprekidnog povećanja dolazaka turista u jugoistočnoj Evropi. Ovaj rad ima za cilj da odredi kako smanjenje broja dolazaka turista utiče na izvoz turističkih usluga, kao i na BDP u Republici Makedoniji. Rad se neće baviti razlozima smanjenja broja dolazaka u datom periodu.

Ključne reči: turizam, dolasci turista, izvoz turističkih usluga, BDP, gubici, Makedonija