

**INTERNATIONAL THEMATIC MONOGRAPH
– THEMATIC PROCEEDINGS –**

***MODERN MANAGEMENT TOOLS AND
ECONOMY OF TOURISM SECTOR
IN PRESENT ERA***

BELGRADE, 2016

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Modern Management Tools and Economy of Tourism Sector in Present Era

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P R E F A C E

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- Univerzitet u Kosovskoj Mitrovici
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- Žilinská univerzita v Žiline, Slovakia
- Ekonomski fakultet Niš
- Ekonomski fakultet u Prištini
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- Ekonomsko-poslovna fakulteta, Maribor
- Faculty of Agriculture and Life Sciences Hoče, Slovenia
- Faculty of European Studies and Regional Development, Nitra, Slovakia
- Faculty of Management in Zajecar
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- Faculty of Tourism and Business Logistics Štip
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IMPACT OF TOURISM ON THE EMPLOYMENT IN THE REPUBLIC OF MACEDONIA

Tatjana Dimoska²⁸

Abstract: *The tourism has great importance for the economy of all countries in the world. The aim of this paper is to point out his impact on the total employment and on the employment in the sector of accommodation and food service activities in Macedonia. For this purpose, in the paper will be used methods of linear regression and correlation to determine the strength and the direction of the relationship between the number of tourist and the total number of employees as well as the number of employees in the sector of accommodation and food service activities in Macedonia.*

Key words: *tourism, employment, Republic of Macedonia.*

1. INTRODUCTION

The tourism has great importance for the economy and for economic development of all developed and developing countries in the world. Tourism generates income from consumption of goods and services by tourists as well as taxes of businesses in the tourism industry, provides employment in services related to tourism, but also creates jobs in the tertiary sector; also, tourism generates growth of primary and secondary sectors of the industry as a result of multiplicative effects of tourism spending. Since tourism sector is labor absorbing sector, it is relatively more effective in creating jobs than other sectors. Tourists' expenditure provides direct, indirect and induced employment opportunities in the receptive tourism countries. Consequently, tourism affects total employment in these countries.

The sector of Travel & Tourism grows with a faster rate than both the wider economy and other significant sectors such as automotive, financial services and health care. As a worldwide export category, tourism ranks third after fuels and chemicals and a head of food and automotive products. In many developing countries, tourism ranks as the first export sector. This sector generates US\$ 7,2 bn. or 9.8 % of the global GDP for 2015, and 284 million jobs in 2015 are in tourism, that means 1 in 11 jobs are in tourism on a global scale. The foreign tourists spending in 2015 generates US\$ 1,308.9 bn. or 6.1% of the total export value in the World, and investment numbers for Travel & Tourism in 2015 were US\$ 774.6 bn. or 4.3 % of the total investment in the world. Tourism is today a major category of international trade in services and it represents 30% of total world services exports. [9]

2. TOURISM IN THE REPUBLIC OF MACEDONIA

Republic of Macedonia is a recognized tourism destination rich with natural and cultural-historical attractive values which has always attracted tourists from all the countries in the world. The number of tourists and their overnight stays in the country note continuously increasing over the years. Macedonia is ranked 82nd out of 141 countries in the Travel & Tourism Competitiveness Index 2015.

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The direct contribution of Travel & Tourism to GDP was MKD 8.4 bn. (1.5% of total GDP) in 2015, the total contribution to GDP was MKD 31.0 bn. (5.5% of GDP), domestic travel spending generated 39.9% of direct Travel & Tourism GDP compared with 60.1% for visitor exports, Travel & Tourism investment was MKD 3.7 bn. (2.3% of total investment in Macedonia in 2015), visitor exports generated MKD 14.7 bn. (5.4% of total exports in 2015). [10]

<i>Year</i>	<i>Tourists</i>			<i>Nights spent</i>		
	<i>Total</i>	<i>Domestic</i>	<i>Foreign</i>	<i>Total</i>	<i>Domestic</i>	<i>Foreign</i>
2002	441 712	318 851	122 861	1 850 384	1 575 664	274 720
2003	483 151	325 459	157 692	2 006 867	1 660 667	346 200
2004	465 015	299 709	165 306	1 865 434	1 504 845	360 589
2005	509 706	312 490	197 216	1 970 041	1 527 053	442 988
2006	499 473	297 116	202 357	1 917 395	1 474 550	442 845
2007	536 212	306 132	230 080	2 019 712	1 501 624	518 088
2008	605 320	350 363	254 957	2 235 520	1 648 073	587 447
2009	587 770	328 566	259 204	2 101 606	1 517 810	583 796
2010	586 241	324 545	261 696	2 020 217	1 461 185	559 032
2011	647 568	320 097	327 471	2 173 034	1 417 868	755 166
2012	663 633	312 274	351 359	2 151 692	1 339 946	811 746
2013	701 764	302 114	399 680	2 157 175	1 275 800	881 375
2014	735 650	310 336	425 314	2 195 883	1 273 370	922 513
2015	816 067	330 537	485 530	2 394 205	1 357 822	1 036 383

Table 1: Tourist arrivals and nights spent in Macedonia, 2002-2015.

Source: State Statistical Office of the Republic of Macedonia

According to the State Statistical Office of the Republic of Macedonia, the number of tourists and the number of nights spent in the country are growing year by year. The total number of tourists in Macedonia for 2015 was 816 067 and the total number of nights spent was 2 394 205. The total number of tourists in Macedonia in 2015 increased by 84.75% compared to 2002, while the number of nights spent increased by 29.39% compared to the previous year. In 2015, Macedonia was visited by 485 530 foreign tourists that is an increase of 295.19% compared to the number of foreign tourists in 2002. The number of nights spent by foreign tourists in 2015 was 1 036 383 i.e. notes an increase by 277.25% compared to 2002. The number of domestic tourists in 2015 was 330 537 and is increased only by 3.66% compared to 2002, while the number of nights spent of domestic tourists is decreased by 13.82% compared to 2002 and it is 1 357 822 (Table 1). [7]



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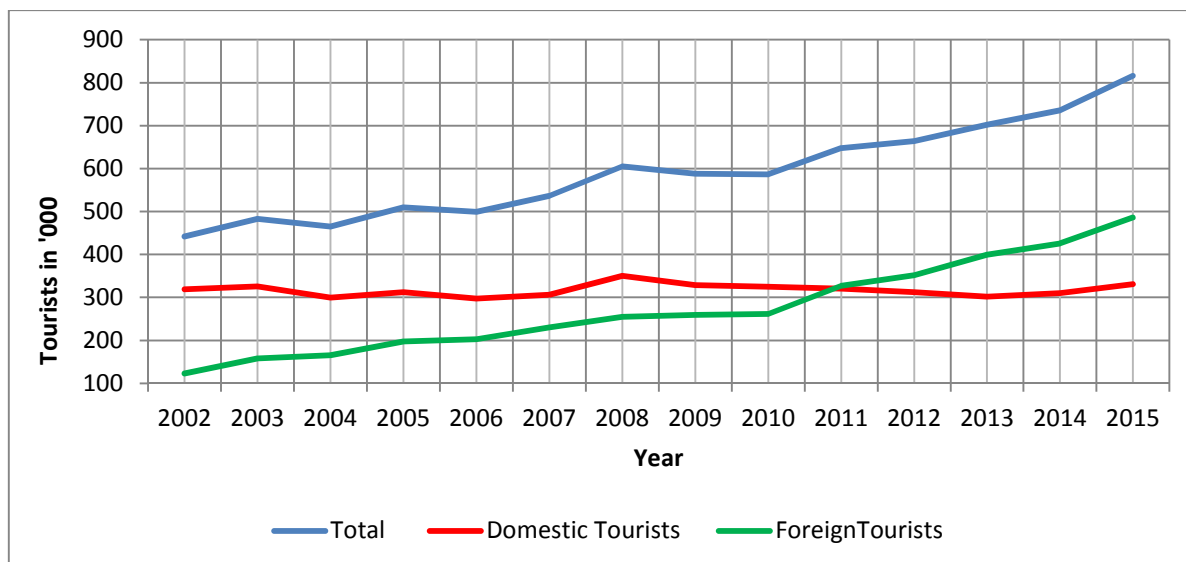


Chart 1: Graphical presentation of the number of tourists in the Republic of Macedonia 2002-2015 according to the data of Table 1

In the Chart 1 are presented: the number of domestic tourists, the number of foreign tourists and the total number of tourists in the Republic of Macedonia from 2002 to 2015. The number of foreign tourists and the total number of tourists in Macedonia continuously grow for the analyzed period 2002-2015, while the number of domestic tourists is almost invariant.

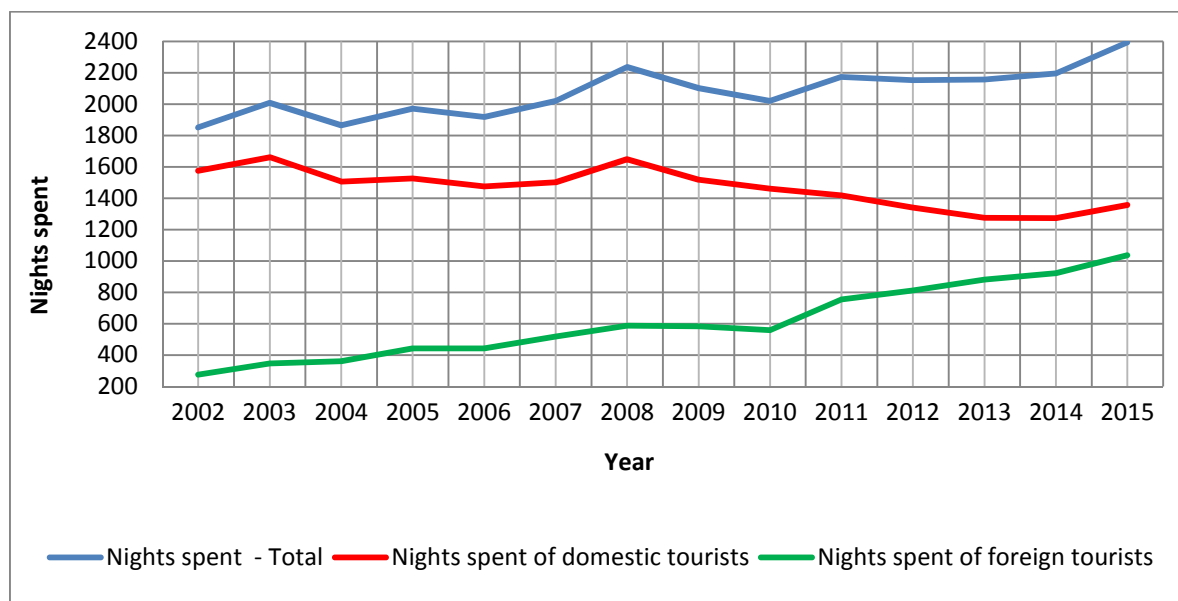


Chart 2: Graphical presentation of the nights spent of the tourists in the Republic of Macedonia 2002-2015 according to the data of Table 1

In the Chart 2 are presented: the nights spent of domestic tourists, the nights spent of foreign tourists and the total nights spent of tourists in the Republic of Macedonia from 2002 to 2015. From the chart can be clearly seen that the nights spent of domestic tourists declined in the analyzed period 2002-2015, while the nights spent of foreign tourists as well as the total nights spent of tourists in Macedonia increased.

<i>Year</i>	<i>Export</i>	<i>Import</i>	<i>Net</i>
2002	41.4	47.3	-5.8
2003	49.9	42.3	7.6
2004	57.9	43.9	14.0
2005	72.3	49.9	22.4
2006	102.4	56.2	46.3
2007	134.9	73.9	61.0
2008	155.2	92.4	62.7
2009	156.2	72.2	84.0
2010	149.6	69.9	79.9
2011	172.0	80.8	91.2
2012	183.1	87.0	96.1
2013	200.8	98.3	102.5
2014	221.9	111.9	110.1
2015	240.4	143.6	96.7
Total	1938.0	1069.6	854.7

Table 2: Balance of payment in the Republic of Macedonia – Tourism services (mil. EUR)
Source: National Bank of the Republic of Macedonia

The importance of tourism for the economy of the Republic of Macedonia can be seen from the segment of international balance of payments concerning to the inflow and outflow of foreign currency based of the international tourism, which may be called tourism balance of payments. International tourism directly affects the balance of payments as an invisible export entry. In this context, with exception of 2002 when is noted negative balance of tourism income due to higher outflow and lower inflow of foreign currency on the basis of international tourism, in the remaining period from 2003 to 2015 was noted a positive balance of tourism balance of payments of the Republic of Macedonia as a result of the higher inflow and lower outflow on the basis of international tourism. In 2015 was noted an increase in export based on international tourism even for 480.68% compared to 2002. Import meanwhile was increased by 203.59% over the same year. For the examined period 2002 – 2015 in the Republic of Macedonia was noted a surplus of 854.7 million euros on the basis of international tourism. (Table 2)

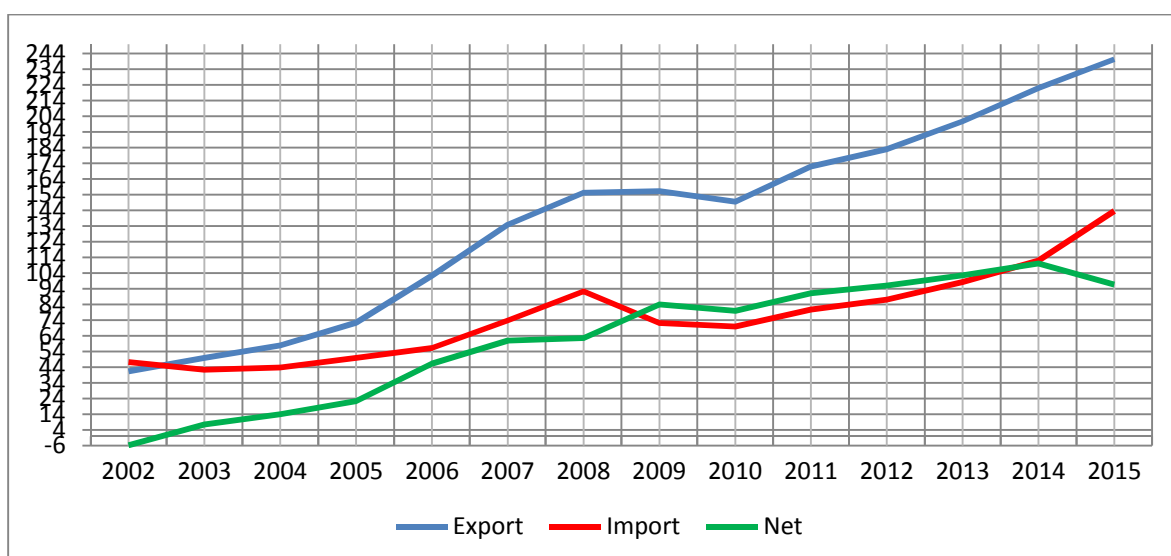


Chart 3: Graphical presentation of balance of payments in the Republic of Macedonia – Tourism services (mil. EUR) according to the data of Table 2

Export, import and net revenues from international tourism in the analyzed period 2002-2015 in the Republic of Macedonia clearly can be displayed in the Chart 3.

3. EMPLOYMENT IN THE REPUBLIC OF MACEDONIA

Tourism has great positive effects on the direct, induced and total employment in the Republic of Macedonia as well as in all receptive tourist countries.

<i>Year</i>	<i>All Sectors</i>			<i>Sector of Accommodation and food service activities</i>		
	<i>Employees</i>	<i>Growth rate (%)</i>	<i>Employment rate</i>	<i>Employees</i>	<i>Share in total employment (%)</i>	<i>Growth rate (%)</i>
2002	561 341	-----	40.4	11 230	2.0	-----
2003	545 108	- 2.892	38.5	12 766	2.34	13.678
2004	522 995	- 4.057	36.8	12 720	2.43	-0.736
2005	545 253	4.255	37.9	13 558	2.49	6.992
2006	570 404	4.612	39.6	19 034	3.34	40.389
2007	590 234	3.476	40.7	17 486	2.96	-8.133
2008	609 015	3.181	41.9	19 117	3.14	9.327
2009	629 601	3.380	43.3	21 117	3.35	10.462
2010	637 855	1.311	43.5	21 522	3.74	1.918
2011	645 085	1.133	43.9	23 574	3.65	9.534
2012	650 554	0.848	44.0	23 507	3.61	-0.284
2013	678 838	4.348	46.0	23 986	3.53	2.038
2014	690 188	1.672	46.0	24 722	3.58	3.068
2015	705 991	2.290	47.8	26 944	3.82	8.988

Table 3: Employment in the Republic of Macedonia, 2002-2015

Source: State Statistical Office of the Republic of Macedonia

Table 3 shows the total number of employees in the Republic of Macedonia as well as the number of employees in the sector of accommodation and food service activities, their average annual growth rates and the share of tourism employees in the total employment in Macedonia for the period 2002-2015. It can be noted that with the exception of 2003 and 2004, throughout the residuary period there is a tendency of continuous increase in the total number of employees in Macedonia. Moreover, in 2015 the total number of employees has increased by 139.93 % compared to 2002 when is noted a growth rate of employment in Macedonia by 47.8%. When analyzing employment in the sector of accommodation and food service activities, it can be noted increasing of 25.77 % in 2015 compared to the initial period 2002). The share of total tourism in total employment in the Republic of Macedonia is the highest in 2015 and make contribution of 3.82%.

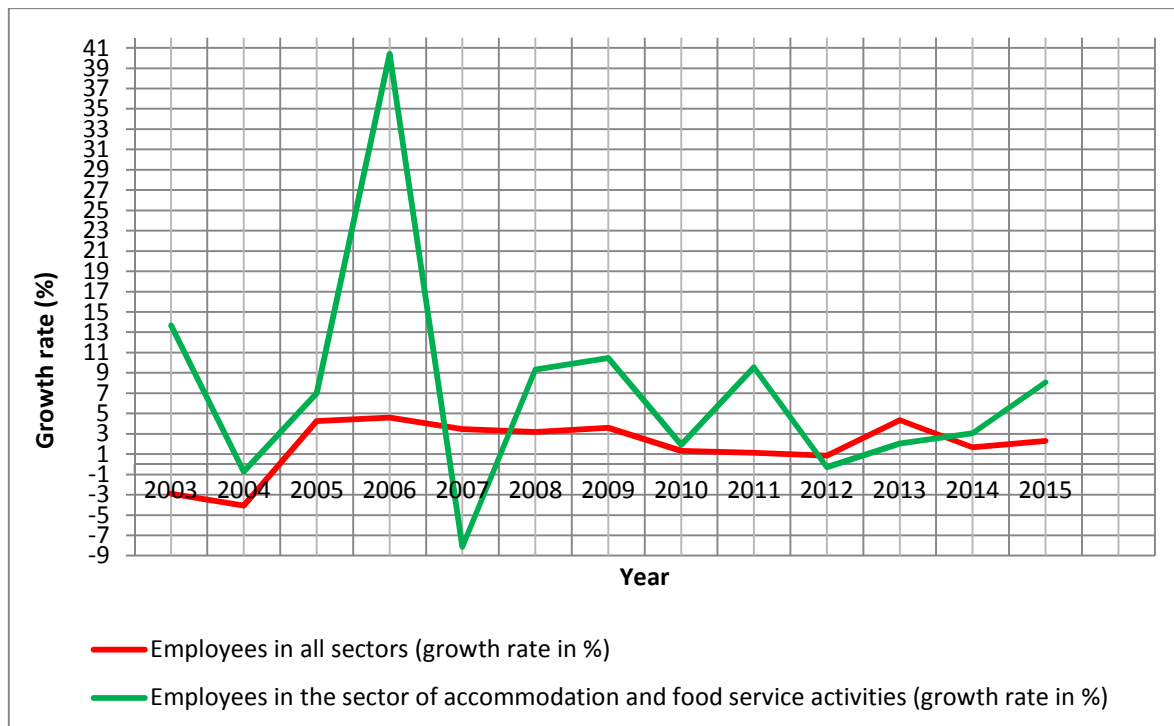


Chart 4: Graphical presentation of the growth rate of employment in the Republic of Macedonia 2002-2015 according to the data of Table 3

In the Chart 4 are presented the growth rates of total employment and of employment in the sector of accommodation and food service activities in the Republic of Macedonia. From the chart can be noted that the growth rate of the total employment in the Republic of Macedonia in the period from 2002 to 2015 is the lowest in 2004 and amount -4.058 %, and the higher growth rate from 4.612 % in the same period is noted in 2006. Analyzing the sector of accommodation and food service activities, the higher growth rate is noted in 2006 (40.389 %) and the lowest in 2007 (-8.133 %).

4. TOURISM IMPACT ON THE EMPLOYMENT IN THE REPUBLIC MACEDONIA

To determine the impact of tourism to the total employment in the Republic of Macedonia i.e. the strength and the direction of the relationship between the tourist arrivals and the total number of employees in Macedonia will be used the method of linear regression, the correlation coefficient and the coefficient of determination. The tourist arrivals in this case represent independent variable and the total number of employees is dependent variable.

Step 1 in this analysis is to construct the scatter diagram for the given data set to see any correlation between the two sets of data (the tourist arrivals and the total number of employees in Macedonia). The scatter diagram is used to graphically represent and compare these two sets of data. The independent variable (the tourist arrivals) is plotted on the X axis. The dependent variable (the total number of employees) is plotted on the Y axis. Looking by the scatter diagram, we can see whether there is any connection (correlation) between the two sets of data. A scatter plot is a useful summary of a set of bivariate data, usually drawn before working out a linear correlation coefficient or fitting a regression line. It gives a good visual picture of the relationship between the two variables, and aids the interpretation of the correlation coefficient or regression model.

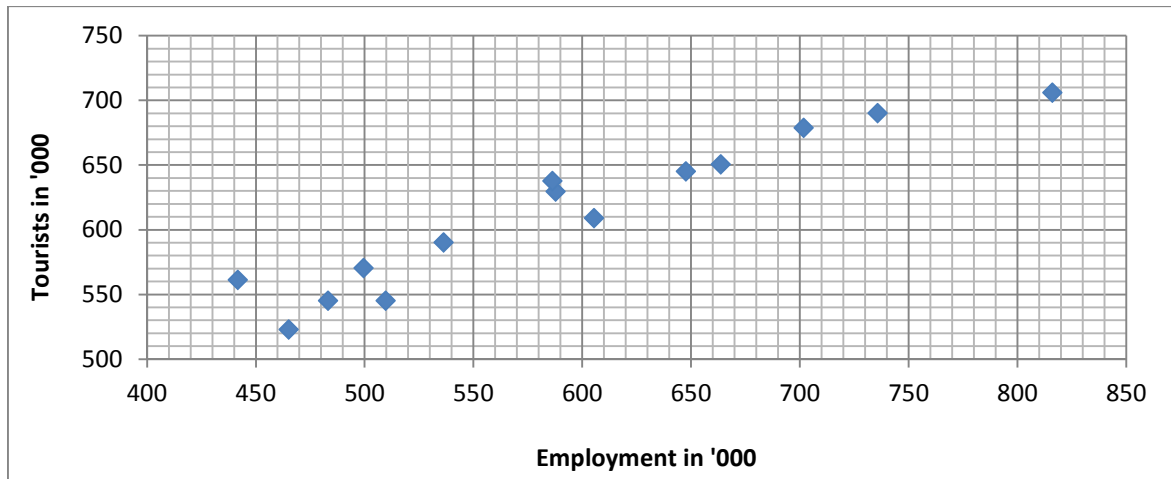


Chart 5: Scatterplot for $y = 315.286 + 0.50348x$ according to the data of Table 4

These results suggest a linear relationship between these two variables (the tourist arrival and the total employees) i.e. that the more points tend to cluster around a straight line and a higher correlation (stronger linear relationship between these two variables).

Step 2: Set out a table and calculate all required values $\sum x$, $\sum y$, $\sum x^2$, $\sum xy$ and $\sum y^2$ as it is done in the Table 7.

Step 3: Calculate the correlation coefficient using this equation:

$$r = \frac{n\sum xy - \sum x \sum y}{\sqrt{\{\sum x^2 - (\sum x)^2\} x \{n\sum y^2 - (\sum y)^2\}}} \quad (1)$$

$$r = \frac{(14 \times 5\,256\,200.35575) - (8\,279.282 \times 8\,582.462)}{\sqrt{\{14 \times 5\,056.564458 - (8\,279.282)^2\} x \{14 \times 5\,305\,922.604212 - (8\,582.462)^2\}}}$$

$$r = \frac{72\,186\,804.980626 - 71\,056\,623.152284}{\sqrt{\{70\,791\,231.902412 - 68\,546\,510.435524\} x \{74\,282\,916.458969 - 73\,658\,653.981444\}}}$$

$$r = \frac{1\,130\,181.828342}{\sqrt{2\,244\,721.466888 \times 624\,262.477524}}$$

$$r = \frac{1\,130\,181.828342}{\sqrt{1\,401\,295\,384\,270.810410225312}}$$

$$r = \frac{1\,130\,181.828342}{1\,183\,763.2298187}$$

$$r = 0.9547$$

The correlation coefficient in this case is: $r = 0.9547$

<i>Year</i>	<i>Tourists in '000</i> <i>X</i>	<i>Employees in '000</i> <i>Y</i>	<i>x²</i>	<i>x y</i>	<i>y²</i>	<i>Regression values</i>
2002	441.712	561.341	195 109.490944	247 951.055792	315 103.718281	537.679
2003	483.151	545.108	233 434.888801	263 369.475308	297 142.731664	558.543
2004	465.015	522.995	216 238.950225	243 200.519925	273 523.770025	549.412
2005	509.706	545.253	259 800.206436	277 918.725618	297 300.834009	571.913
2006	499.473	570.404	249 473.277729	284 901.397092	325 360.723216	566.761
2007	536.212	590.234	287 523.308944	316 490.553608	348 376.174756	585.258
2008	605.320	609.015	366 412.3024	368 648.9598	370 899.270225	620.053
2009	587.770	629.601	345 473.5729	370 060.57977	396 397.419201	611.216
2010	586.241	637.855	343 678.510081	373 936.753055	406 859.001025	610.447
2011	647.568	645.085	419 344.314624	417 736.40328	416 134.657225	641.324
2012	663.633	650.554	440 408.758689	431 729.103682	423 220.506916	649.412
2013	701.764	678.838	492 472.711696	476 384.070232	460 821.030244	668.610
2014	735.650	690.188	541 180.9225	507 736.8022	476 359.475344	685.671
2015	816.067	705.991	665 965.348489	576 135.957397	498 423.292081	726.159
N=14	∑ x =8 279.282	∑ y = 8 582.462	∑x² = 5 056 516.564458	∑ xy =5 156 200.355759	∑y²=5 305 922,604212	

Table 4: Calculation of $\sum x$, $\sum y$, $\sum x^2$, $\sum xy$, $\sum y^2$ and regression values for $y = 315.286 + 0.50348x$

Source: Author's own calculations

<i>Value of r</i>	<i>Interpretation</i>
-1.0	A perfect downhill (negative) linear relationship
(-0.80) - (-1.0)	A very strong downhill (negative) linear relationship
(-0.60) - (-0.79)	A strong downhill (negative) linear relationship
(-0.40) - (-0.59)	A moderate downhill (negative) linear relationship
(-0.20) - (-0.39)	A weak downhill (negative) linear relationship
(0.00) - (-0.19)	A very weak downhill (negative) linear relationship
0	No linear relationship
(0.00) - (0.19)	A very weak uphill (positive) linear relationship
(0.20) - (0.39)	A weak uphill (positive) linear relationship
(0.40) - (0.59)	A moderate uphill (positive) linear relationship
(0.60) - (0.79)	A strong uphill (positive) linear relationship
(0.80) - (1.0)	A very strong uphill (positive) linear relationship
+1.0	A perfect uphill (positive) linear relationship

Table 5: Interpretation of the value of correlation coefficient

The value of r is such that $-1 \leq r \leq 1$. The strength of the correlation according to Evans (1996) is presented in Table 5. The value of correlation coefficient of -1.0 represent a perfect downhill (negative) linear relationship, 0 means no linear relationship and $+1.0$ means a perfect uphill (positive) linear relationship.

The correlation coefficient in this example is close to 1 ($r = 0.9547$) that means there is a very strong uphill (positive) linear relationship between the tourist arrivals and the total employment in the Republic of Macedonia for the analyzed period 2002-2015.

The coefficient of determination R^2 is the square of the correlation coefficient r . (2)

The coefficient of determination is a measure of how much of the variability in one variable (how much of the variability in the dependent variable y) can be “explained by” variation in the other (by variation in the independent variable x). The coefficient of determination represents the percent of the data that is the closest to the line of best fit i.e. coefficient of determination is a measure of how well the regression line represent the data.

<i>Value of R^2</i>	<i>Interpretation</i>
0	No correlation
0.00 – 0.25	A weak correlation
0.25 – 0.64	A moderate correlation
0.64 – 1	A strong correlation
1	A perfect correlation

Table 6: Interpretation of the value of coefficient of determination

The coefficient of determination is such $0 \leq r \leq 1$ (Table 6) and it may be defined either as ratio or a percentage. A value of R^2 near 0 indicates no linear relationship between X and Y while a value near 1 indicates a perfect linear fit i.e. all of the data point and the line will be a perfect fit.

The coefficient in the example is: $R^2 = (0.9547)^2$
 $R^2 = 0.91145 \approx 0.9115$

The value of R^2 of 0.9115 indicates a very strong correlation between the tourist arrivals and the total employment in the Republic of Macedonia i.e. 91.15% of the variability in the total employment in Macedonia is the result of the variation in the tourist arrivals.

Step 4: Now we want to use regression analysis to find the line of best fit to the data. The regression equation for Y on X is: $y = a + bx$ where:

a = The intercept point of the regression line and the y axis

b = The slope of the regression line

N = Number of values or elements

x = First score

y = Second score

We use the following equations to find a and b:

$$b = \frac{\{(N\Sigma xy) - (\Sigma x)(\Sigma y)\}}{\{(N\Sigma x^2) - (\Sigma x)^2\}} \quad (3)$$

$$b = \frac{\{(14 \times 5\ 156\ 200.355759) - (8\ 279.282) \times (8\ 582.462)\}}{\{(14 \times 5\ 056\ 516.564458) - (8\ 279.282)^2\}}$$

$$b = \frac{72\ 186\ 804.980626 - 71\ 056\ 623.152284}{70\ 791\ 231.902412 - 68\ 546\ 510.435524}$$

$$b = \frac{1\ 130\ 181.828342}{2\ 244\ 721.466888}$$

$$b = 0.50348 \approx 0.5035$$

$$a = \frac{\{(\Sigma y) - b(\Sigma x)\}}{N} \quad (4)$$

$$a = \frac{\{(8\ 582.462) - (0.50348) \times (8\ 279.282)\}}{14}$$

$$a = \frac{(8\ 582.462 - 4\ 168.45290136)}{14}$$

$$a = \frac{4\ 414.00909864}{14}$$

$$a = 315.286364 \approx 315.286$$

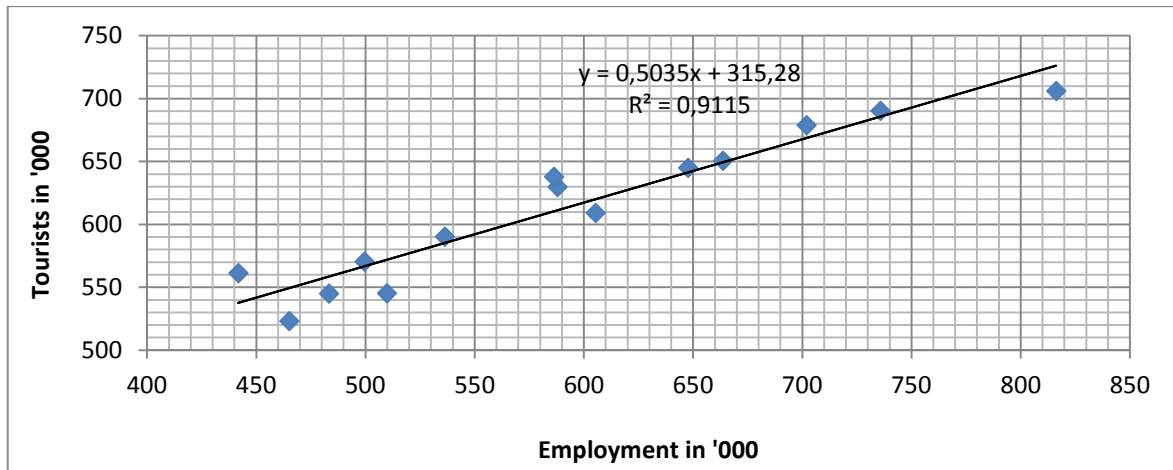


Chart 6: Regression line and the coefficient of determination for $y = 315.286 + 0.50348x$

Step 5: Substitute a and b in the regression equation formula $y = a + bx$ (5)
 $y = 315.286 + 0.50348x$

So, the equation of the regression line in the example is: $y = 315.286 + 0.50348x$. The graph of the regression line is: $y = 315.286 + 0.50348x$. (Chart 6)

We can conclude that there is a very highly significant positive correlation between the tourist arrivals and the total employment in the Republic of Macedonia. When a scatter plot indicates that there is a strong linear relationship between these two variables (confirmed by high correlation coefficient and high coefficient of determination), we can fit a straight line to this data which may be used to predict a value of the dependent variable (the total number of employees in Macedonia), with giving the value of the independent variable (the tourist arrivals in the Republic of Macedonia).

When analyzing the impact of tourism on the employment in the sector of accommodation and food service activities in the Republic of Macedonia using the same methodology, the calculations are as follows:

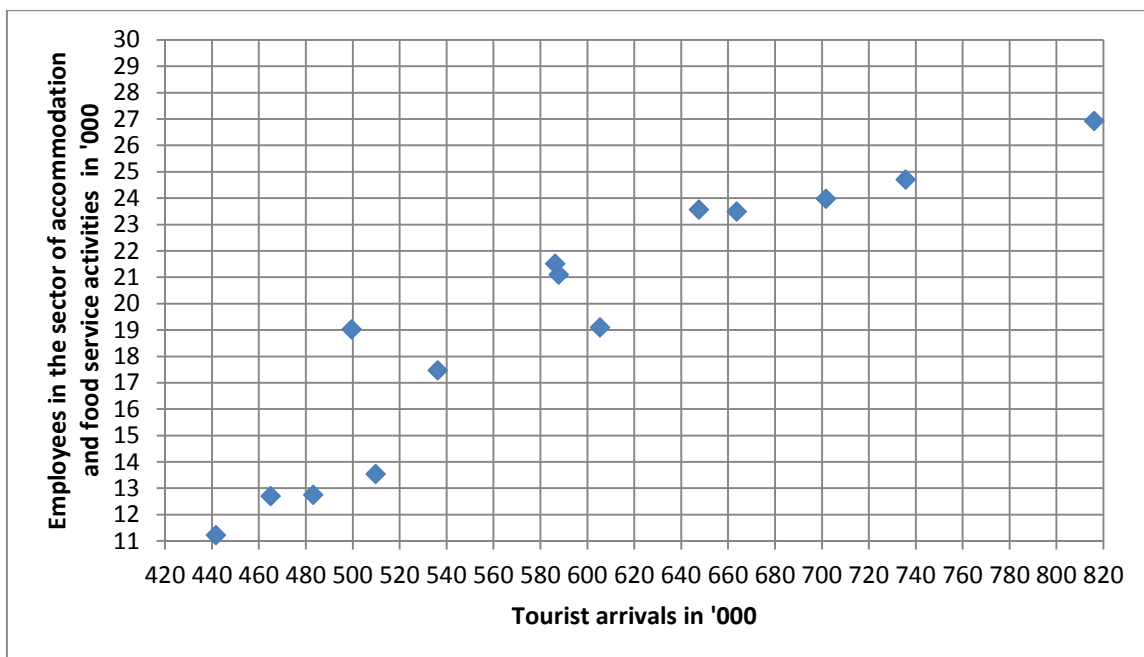


Chart 7: Scatterplot for the $y = - 600 + 0.0429x$ according to the data of Table 7

$$r = \frac{n\sum xy - \sum x \sum y}{\sqrt{\{\sum x^2 - (\sum x)^2\} \{n\sum y^2 - (\sum y)^2\}}} \quad (1)$$

$$r = \frac{(14 \times 167\,311.157) - (8\,279.282 \times 271.283)}{\sqrt{\{14 \times 5\,056.564458 - (8\,279.282)^2\} \times \{14 \times 5\,598.135769 - (271.283)^2\}}}$$

$$r = \frac{2\,342\,356.196 - 2\,246\,028.458806}{\sqrt{\{70\,791\,231.902412 - 68\,546\,540.435524\} \{78\,373.900766 - 73\,594.466089\}}}$$

$$r = \frac{96\,327.737194}{\sqrt{2\,244\,721.466888 \times 4\,779.434677}}$$

$$r = \frac{96\,327.737194}{\sqrt{10\,728\,499\,619.050814475176}}$$

$$r = \frac{96\,327.737194}{103\,578.4708279}$$

$$r = 0.929997 \approx 0.93$$

The correlation coefficient is: $r = 0.93$

$$R^2 = (0.929997)^2 \quad (2)$$

$$R^2 = 0.864895 \approx 0.8649$$

The coefficient of determination is: $R^2 = 0.8649$

$$b = \frac{\{(N\sum xy) - (\sum x)(\sum y)\}}{\{(N\sum x^2) - (\sum x)^2\}} \quad (3)$$

$$b = \frac{\{(14 \times 167\,311.157) - (8\,279.282) \times (271.283)\}}{\{(14 \times 5\,056\,516.564458) - (8\,279.282)^2\}}$$

$$b = \frac{2\,342\,356.198 - 2\,246\,028.458806}{70\,791\,231.902412 - 68\,546\,510.435524}$$

$$b = \frac{96\,327.739194}{2\,244\,721.466888}$$

$$b = 0.0429$$

$$a = \frac{\{(\sum y) - b(\sum x)\}}{N} \quad (4)$$

$$a = \frac{\{(271.283) - (0.0429) \times (8\,079.282)\}}{14}$$

$$a = \frac{(271.283 - 355.1811978)}{14}$$

$$a = \frac{-83.8981978}{14}$$

$$a = -5.99273 \approx -6.00$$

$$y = a + bx$$

$$y = -6.00 + 0.0429 x$$

(5)

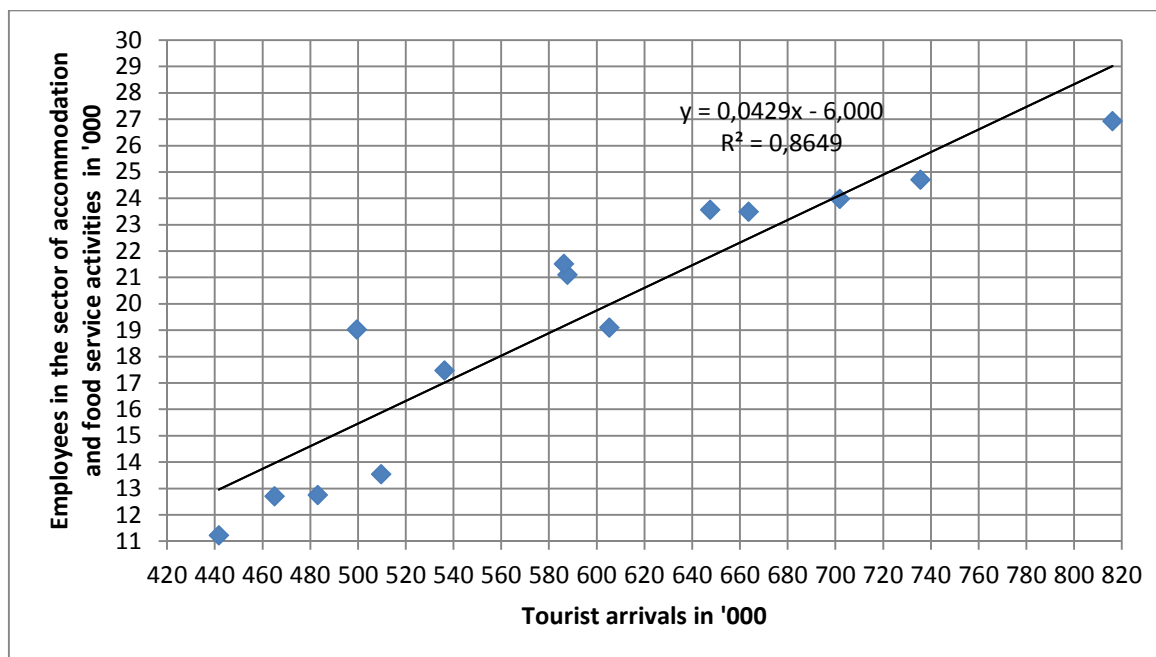


Chart 8: Regression line and the coefficient of determination for $y = -6.00 + 0.049 x$

According to the calculations: The correlation coefficient is: $r = 0.93$

The coefficient of determination is: $R^2 = 0.8649$ or 86.49%

The intercept point of the regression line and the y axis is: $a = -6.00$

The slope of the regression line is: $b = 0.0429$

$$y = -6.00 + 0.0429 x$$

The results of this calculation clearly shows that the increase of the tourist arrivals in the Republic of Macedonia contributes in increasing the total employment as well as in increasing the employment in the sector of accommodation and food service activities in the Republic of Macedonia.

<i>Year</i>	<i>Tourists in '000</i> X	<i>Employees in the tourism sector in '000</i> Y	x^2	$x y$	y^2	Regression values
2002	441.712	11.230	195 109.490944	4 960.42576	126.1129	12.949
2003	483.151	12.766	233 434.888801	6 167.90567	162.97075	14.727
2004	465.015	12.720	216 238.950225	5 914.9908	161.7984	13.949
2005	509.706	13.558	259 800.206436	6 910.59395	183.819364	15.866
2006	499.473	19.034	249 473.277729	9 506.96908	362.293156	15.427
2007	536.212	17.486	287 523.308944	9 376.20303	305.760196	17.003
2008	605.320	19.117	366 412.3024	11 571.90244	365.459689	19.968
2009	587.770	21.117	345 473.5729	12 411.93909	445.927689	19.215
2010	586.241	21.522	343 678.510081	12 617.078802	463.196484	19.150
2011	647.568	23.574	419 344.314624	15 265.768032	555.733476	21.781
2012	663.633	23.507	440 408.758689	15 600.020931	552.579049	22.470
2013	701.764	23.986	492 472.711696	16 832.511304	575.328196	24.106
2014	735.650	24.722	541 180.9225	18 186.7393	611.177284	25.559
2015	816.067	26.944	665 965.348489	21 988.109248	725.979136	29.009
N=14	$\sum x = 8 279.282$	$\sum y = 271.283$	$\sum x^2 = 5 056 516.564458$	$\sum xy = 167 311.157$	$\sum y^2 = 5 598.135769$	

Table 7: Calculation of $\sum x$, $\sum y$, $\sum x^2$, $\sum xy$, $\sum y^2$ and regression values for $y = - 6.00 + 0.0429 x$

Source: Author's own calculations

<i>Year</i>	<i>Direct contribution of tourism to employment</i>			<i>Total contribution of tourism to employment</i>		
	<i>Thousands of jobs</i>	<i>% share</i>	<i>Real growth %</i>	<i>Thousands of jobs</i>	<i>% share</i>	<i>Real growth %</i>
2002	5.8	1.0	- 6.5	22.2	3.9	-4.8
2003	6.0	1.1	4.4	23.0	4.2	3.5
2004	5.9	1.1	- 2.5	22.2	4.2	-3.5
2005	6.3	1.1	7.9	23.5	4.3	6.1
2006	7.2	1.2	14.1	26.4	4.6	12.4
2007	7.5	1.2	3.9	27.4	4.6	3.6
2008	7.8	1.2	3.9	28.7	4.7	4.6
2009	7.6	1.2	-3.4	28.7	4.5	0.0
2010	7.1	1.2	-6.4	26.7	4.2	-6.8
2011	7.4	1.2	4.0	27.2	4.2	1.7
2012	7.8	1.2	5.9	28.7	4.3	5.2
2013	8.1	1.2	3.2	29.8	4.5	4.0
2014	8.1	1.2	0.1	30.0	4.5	0.5
2015	8.3	1.2	2.4	30.7	4.6	2.4
2016	8.4	1.2	1.1	31.1	4.6	1.3
2017	8.4	1.2	0.8	31.4	4.7	0.9
2018	8.5	1.2	0.7	31.7	4.7	0.8
2019	8.5	1.2	0.6	31.9	4.7	0.7
2020	8.6	1.2	0.1	32.0	4.8	0.3
2021	8.6	1.3	0.3	32.2	4.8	0.3
2022	8.6	1.3	0.4	32.4	4.9	0.7
2023	8.7	1.3	0.7	32.7	4.9	0.9
2024	8.7	1.3	0.2	32.9	5.0	0.6
2025	8.8	1.3	0.4	33.2	5.0	0.7
2026	9.5	1.4	8.5	35.7	5.4	7.5
2027	10.1	1.5	5.8	37.6	5.8	5.4
2028	10.5	1.6	4.3	39.2	6.1	4.1
2029	10.9	1.7	3.5	40.5	6.3	3.4
2030	11.3	1.7	3.3	41.8	6.5	3.1
2031	11.6	1.8	3.3	43.1	6.8	3.2
2032	12.1	1.9	3.7	44.7	7.1	3.5
2033	12.5	2.0	3.7	46.2	7.4	3.4
2034	12.9	2.0	3.0	47.6	7.6	2.9
2035	13.0	2.1	0.8	48.8	7.9	2.4

Table 8: Direct and Total Contribution of Tourism to Employment in Macedonia

Source: World Travel and Tourism Council Data, 2016

Direct and total effects of tourism towards the employment in Macedonia in absolute and relative terms from 2002 to 2015 are given in Table 8 [10]. The travel and the tourism in 2015 directly create 8 300 jobs in the Republic of Macedonia, which represents 1.2% of the total employment in the country. This number is expected to rise year by year with a presumption that in the year of 2035 the number of direct jobs in the field of tourism will be 13 000 jobs i.e. 2.1% of the total employment in Macedonia. The total contribution of tourism to employment in Macedonia including indirect employment in the year of 2015 was 30 700 jobs (4.6% of total employment in Macedonia). The estimated direct contribution of tourism to employment in

2035 will be 13 000 jobs i.e. 2.1% of the total employment in Macedonia, and estimated total contribution of tourism to employment will be 48 800 jobs i.e. 7.9% of the total employment.

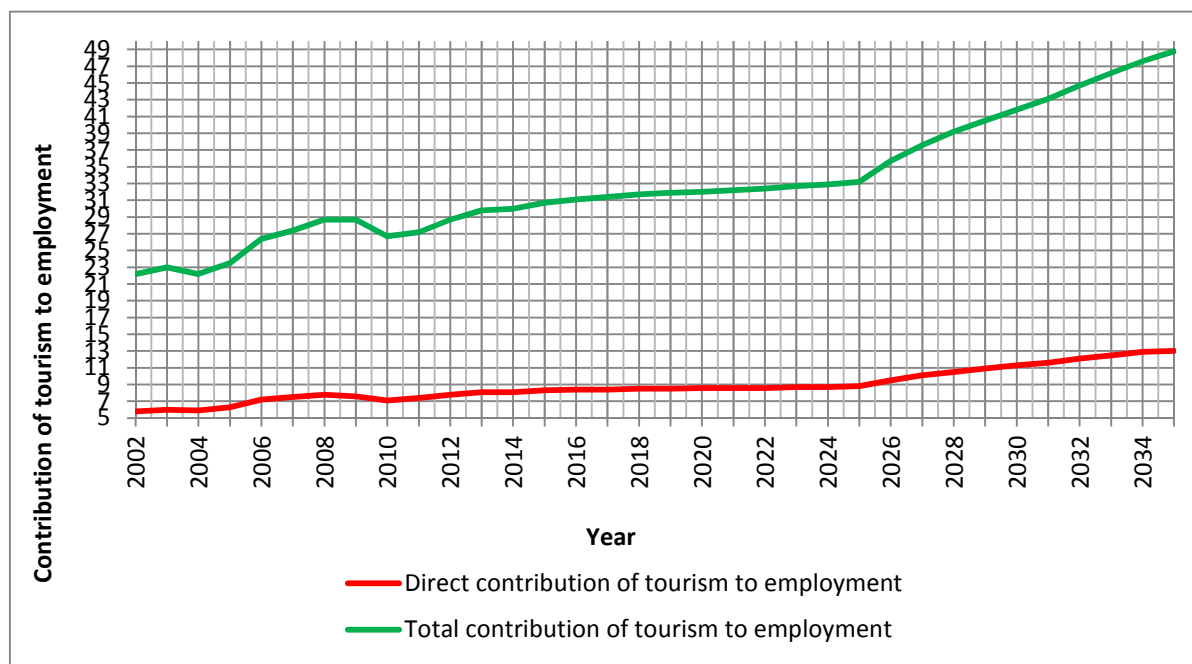


Chart 9: Graphical presentation of direct and total contribution of tourism to employment in the Republic of Macedonia 2002-2015 according to the Table 8

According to the World Travel & Tourism Council, Republic of Macedonia is ranked on the 160th place out of 184 countries in the world in 2015 by the direct absolute contribution of travel and tourism on employment, and on the 152nd place by the total absolute contribution of travel and tourism on employment. According to the direct relative contribution of the travel and tourism on employment, the Republic of Macedonia is ranked on the 172nd place in 2015, and according to the total relative contribution on the 152nd place (relative contribution is presented in percentage). Long term data analysis by World Travel & Tourism Council (2016-2026) of direct contribution of the travel and tourism to the employment shows that Republic of Macedonia is ranked on the 120th place with the yearly growth rate of 1.7%. The long term yearly growth rate of the total contribution of the travel and tourism on employment in the Republic of Macedonia for the period 2016-2026 is 1.6%. According to this growth rate, the Republic of Macedonia is ranked on the 124th place. [10]

5. CONCLUSION

Republic of Macedonia is a destination which has always attracted tourists with its natural and cultural-historical monuments. According to the data of the State Statistical Office of the Republic of Macedonia, the number of tourists and the number of nights spent in the country are growing year by year. The results of this paper clearly shows that the increase of the tourism visits in the Republic of Macedonia results with increased total employment as well as increased employment in the sector of accommodation and food service activities (the correlation coefficients of 0.947 and 0.935 and the coefficients of determination of 0.9115 and 0.8649 show very strong and positive linear relationships between the tourist arrivals by one side and the total employment in the Republic of Macedonia as well as the employment in the sector of accommodation and food service activities by other side.

Seeing the fact that the tourism sector is labor absorbing sector, it is relatively more effective in creating jobs than other sectors, it can be concluded that it has great importance for the economy and for economic development of the Republic of Macedonia.

Therefore, it is necessary to take measures and actions for further development of tourism industry such as: improve the awareness of Macedonia as a tourism destination, improve the organizational structures in tourism, improve the investment climate for Macedonian entrepreneurs regarding the development of additional accommodation facilities, improve the quantity and quality of available data in tourism, improve the framework conditions for tourism development, improve tourism know-how and service quality and improve the tourism awareness of the local populations. [3]

LITTERATURE

- [1] Ardahaey, T. F. (2011) *Economic Impact of Tourism Industry*, International Journal of Busines and Management, vol.6, no.8, Canadian Center of Science and Education, pp. 209.
- [2] Dimoska, T., Nikolovski, B., Tuntev, Z. (2016) *Tourism and small and medium-sized enterprises impact on the employment in the Republic of Macedonia and in the Municipality of Ohrid*, Horizons, University of Bitola, Bitola.
- [3] Kohl & Partner Hotel & Tourism Consulting (2016) *National Tourism Strategy: Republic of Macedonia*, Skopje, pp. 85.
- [4] National Bank of the Republic of Macedonia (2002-2015) *Balance of payments – goods and services*, Skopje
- [5] Önder, K., Durgun, A. (2008) *Effects of tourism sector on the employment in Turkey: An Econometric Application*, pp.366.
- [6] Pavlic, I., Tolic, S. M., Svilokos, T. (2013) *Impact of tourism on the employment in Croatia*, Recent Advances in Business management and Marketing, pp.220.
- [7] State Statistical Office of the Republic of Macedonia (2004-2015) *Statistical Yearbook of the Republic of Macedonia*, Skopje
- [8] Turner, R., Sears Z. (2013) *Travel & Tourism as a Driver of Employment Growth*, World Economic Forum: The Travel & Tourism Competitiveness Report 2013.
- [9] World Travel & Tourism Council (WTTC). (2016) *Travel & Tourism Economic Impact 2016 World*, London, pp. 3-4.
- [10] World Travel & Tourism Council (WTTC). (2016) *Travel & Tourism Economic Impact 2016- Macedonia*, London, pp. 5-14.