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CONTRIBUTION OF TOURISM TO ECONOMY IN EUROPEAN UNION AND TURKEY

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Abstract

Tourism sector and tourism expenditures are of high importance for every country and it can be good support for them, especially the ones with higher current account deficits. In this study, European Union countries as well as the candidates were investigated through cluster analysis using data on International Tourist Arrivals, International Tourism Inbound Receipts, Tourism and Travel industry in GDP and Tourism and Travel Industry in Employment. Findings show that the upper cluster was consisted of Spain and France. Meanwhile the second best cluster was of Italy, England, Germany and Turkey. Coming after, Greece, Croatia, Poland, Holland, Austria and Hungary. Other countries were found to be belonging to the bottom cluster. The position of Turkey in the clusters can be interpreted as pretty good. Further, the position of her is the best among the candidates. According to discriminant analysis the clusters were separated at a high level of 94.1% and the lengths were normally distributed.

Keywords: European Union, Cluster Analysis, Discriminant Analysis

Introduction

Tourism has become a monetary and social concept and it creates economic, social, cultural and political outcomes. Thus, tourism is an important concept and an increasing fund expense not only in developed countries but also in emerging markets.

Investments on tourism has increased and reached to a great extent both nationally and internationally. This led to increases in job opportunities, higher income values, a different social and cultural structure and social achievements.

Main contributions of tourism to economy are seen on national income, employment and balance of payments. On the other hand, tourism helps societies in reaching a higher level of socio-economic position by introducing new perspectives from different places on earth. While starting and increasing the capacity of tourism does not need any special skills or high-tech inputs, and thus relying mainly on labour, it causes a remarkable drop in unemployment rates, at least seasonally. Touristic businesses also create other job opportunities depending on their demands, which at the end ensure the birth and development of

regional industries. Meanwhile, there is the fact that touristic expenditures may attract sectors other than tourism. (Berberoğlu, 1988).

The Importance of Tourism in the Economy

Tourism provides wealth and a platform for development. Tourists, as being only a consumer, creates additional autonomous consumption. That additional consumption increases the money flow in economies and acts as a stamina. That flow indirectly causes both regional and overall developments in the sectors of economy and infrastructure, causing other sectors to employ more and gain higher returns (Kozak et al. 2000; Aktaş, 2005).

Increased rates of touristic expenditures may be reviewed as a solution for unemployment without the need of higher technology. While creating jobs, tourism also creates an inflow of exchange, causing the real exchange rate to decrease and helping countries with foreign currency scarcity, which causes balance of payments deficits to decrease (Berberoğlu, 1988). That can be considered to be "exports" made in the country with retail prices. As automation and mechanization techniques are practically impossible to apply to the sector, tourism is of high employment/investment rate.

Yıldırım and Öcal (2004) found that especially in the long run, tourism is an important driver for economic growth in Turkey. Similarly, Çetintaş and Bektaş (2008) investigated the short and long-run relations between tourism and economics growth in Turkey for the period 1964-2006. They concluded that there was no connection in the short run but a strong tie in the long-run. Zortuk (2009) studied the sector after 1980, the period it thrived in Turkey, for whether it significantly helped the economic growth or not and found that the effect was positive and significant. Hepaktan and Çınar (2010) put that while tourism helps the Turkish economy directly by increasing the total revenue in the economy, enhancing balance of payments and creating job opportunities, it actually helps economic growth indirectly.

Tourism in European Union and Turkey

Tourism has been historically important in Europe and European Countries. In other words, the most tourists and touristic attractions are European People and Europe itself. Thus, European countries play a key role in shaping the development of tourism. 12 of 40 top leading countries for tourism are European. While Spain, Italy, Greece, France, Portugal have been specialized in sea-sand-sun tourism, middle European countries have done the same for winter and thermal tourism. Large cities in the western Europe are shiny for fashion, congress, business and festivals (Türsab, 1999).

European Union aims to produce mutual policies on economies and socio-cultural structures. This can be seen especially in tourism policies. Tourism is an important factor for Europe to promote multicultural characteristics of the Europe and society and to encourage intimacy (Şen, 1998).

European Union follows a mutual protocol for protecting environmental and cultural values. Rural, social and youth tourism are to be developed and covering as many parts of the society is targeted. Thus especially in in the areas that lag behind are handled as priorities. Promoting local authorities, which undoubtedly have more and better ideas on local issues, helps increasing economic productivity for tourism. As in many economic activities, tourism also needs product ranges like sea tourism, cultural tourism, nature tourism, gastronomy tourism etc. This strengthens the idea of local management for touristic activities.

For creating and sustaining touristic activity relations, a set of World-standard services is a must. As there are quality policies in exported goods, all labour intensive products, including tourism, have to offer some quality criteria including but not limited to hygiene in rooms, comfort, healthy and well produced food. With the expected implementation of EU standards in Turkish tourism, Turkey will be a stronger touristic place for all the World. In addition to those facts, tourism is of high importance for Turkey, especially considering the fact that inflow of foreign currency is regarded as a vital source for economic performance (Doğan, 2015; Genç, 2018).

European standards for tourism are especially important for Turkey considering the fact that according to the chart, a large share of tourists visiting Turkey originates from the Europe itself. Thus, increases in the quality of touristic services in Europe should be watched closely by Turkish authorities due to its possible effects on the demand to Turkish tourism (Emekli, 2005). It is actually a great opportunity for Turkish tourism sector that EU regards tourism as a locomotive for decreasing regional development differences and supports Mediterranean countries with project-based financial programs (Aydın, 2005).

Figure 1: Value Increase of Euro Against Turkish Lira
Source: https://kur.doviz.com/serbest-piyasa/euro, (Accessed: 08.29.2018)

Value loss of TRY against EUR especially lately may be turned into an opportunity of creating high quality yet cheap tourism option for Europeans. This way it seems possible to effectively reach the full capacity in tourism in Turkey. Approaching this issue with the help of government authorities is of the highest importance to strengthen macroeconomic stability in Turkey. In this context, European standards seems extremely valuable (Genç, 2018).

Table 1: 2016-2018 Comparison Chart for Tourist Arrivals from Different Countries (January-June) (Source: https://tuik.gov.tr)

Origin	Years 2016	2017	2018*	Share (%) 2016	2017	2018*
Germany	1 502 949	1 246 744	1 560 251	13,99	10,18	9,77
Austria	108 244	86 038	110 066	1,01	0,70	0,69
Belgium	150 167	138 046	175 947	1,40	1,13	1,10
Czech Republic	33 314	36 561	69 245	0,31	0,30	0,43
Denmark	141 917	96 765	117 610	1,32	0,79	0,74
Finland	65 902	40 465	58 148	0,61	0,33	0,36
France	218 950	188 857	254 942	2,04	1,54	1,60
Holland	364 466	263 370	370 887	3,39	2,15	2,32
UK	693 081	607 272	858 055	6,45	4,96	5,37
Ireland	25 533	19 654	28 779	0,24	0,16	0,18
Spain	52 447	41 118	68 488	0,49	0,34	0,43
Sweden	153 236	112 137	159 334	1,43	0,92	1,00
Switzerland	88 110	69 306	92 150	0,82	0,57	0,58
Italy	109 207	82 150	114 490	1,02	0,67	0,72
Iceland	1 985	1 029	1 280	0,02	0,01	0,01
Luxemburg	2 122	1 753	2 596	0,02	0,01	0,02
Hungary	28 438	26 172	38 431	0,26	0,21	0,24
Norway	74 674	46 281	65 712	0,70	0,38	0,41
Poland	85 969	98 773	235 471	0,80	0,81	1,47
Portugal	13 491	10 002	15 607	0,13	0,08	0,10
Slovakia	19 748	25 572	42 608	0,18	0,21	0,27
Greece	283 415	251 327	247 076	2,64	2,05	1,55
TOTAL EUROPE OECD	**4 217 365**	**3 489 393**	**4 687 173**	**39,27**	**28,49**	**29,35**
Albania	33 448	36 799	48 695	0,31	0,30	0,30
Bosnia-Herzegovina	29 066	32 883	48 368	0,27	0,27	0,30
Bulgaria	783 429	799 279	987 957	7,29	6,53	6,19
Estonia	18 907	18 826	27 660	0,18	0,15	0,17
Southern Cyprus	3 404	3 410	3 689	0,03	0,03	0,02
Croatia	11 744	9 900	18 948	0,11	0,08	0,12
Montenegro	8 585	8 216	11 069	0,08	0,07	0,07
Kosovo	45 722	46 431	58 591	0,43	0,38	0,37
Letonia	15 844	16 214	26 903	0,15	0,13	0,17
Lithuania	49 980	54 427	91 701	0,47	0,44	0,57
Macedonia	65 905	68 010	87 267	0,61	0,56	0,55
Malta	2 628	1 861	3 120	0,02	0,02	0,02
Romania	163 309	160 305	253 485	1,52	1,31	1,59
Serbia	52 917	55 487	86 245	0,49	0,45	0,54
Slovenia	9 851	8 040	16 449	0,09	0,07	0,10
Other European Non-OECD	578	510	664	0,01	0,00	0,00
Total Europe Non-OECD	**1 295 317**	**1 320 598**	**1 770 811**	**12,06**	**10,78**	**11,09**
Total Europe	**5 512 682**	**4 809 991**	**6 457 984**	**51,33**	**39,27**	**40,44**

Variables and Sample

In this study, following variables from World Economic Forum (WEF) The Travel & Tourism Competitiveness Report 2017 were used:

International Tourist Arrivals (x1): Arrival headcount for tourists. It can be used as a measure for naming a country "popular". However, it is weak variable for measuring tourism effect as it lacks origins and average incomes of the tourists.

International Tourism Inbound Receipts (x2): Touristic foreign currency inflow to the subject country. By dividing this value to the international tourist arrivals, average touristic expenditures can be calculated.

Average Receipts per Arrival (x3): International Tourist Arrivals / International Tourism Inbound Receipts (x1/x2) ratio. Displays average tourist spending and useful for comparing countries.

Tourism and Travel (T&T) Industry GDP (x4): GDP produced in tourism and travel sectors. It can be used by itself as a good comparison gauge for tourism performance of different countries. Another good use of the variable includes time series techniques. A higher TT(GDP) ratio in the whole GDP of a country generally indicates a well-performing tourism sector. It is also an important variable for decreasing current account deficits.

T&T Industry Employment (x5): Employment created by tourism and travel sectors. Increased values of the variable show the extent of the sector. Increased share in the total employment in a country considered to be negative as tourism is mainly seasonal (WEF, 2017).

As x1 and x2 are used to calculate x3, both of them are excluded from the analysis as they would create multi-collinearity problem.

There are 34 countries in our analysis. These are Turkey and the EU member states. Hence, countries that were included in the analysis were put in order as follows: Belgium (BE), Bulgaria (BG), Czech Republic (CZ), Denmark (DK), Germany (DE), Estonia (EE), Ireland (IE), Greece (EL), Spain (ES), France (FR), Italy (IT), Cyprus (CY), Latvia (LV), Lithuania (LT), Luxembourg (LU), Hungary (HU), Malta (MT), Netherlands (NL), Austria (AT), Poland (PL), Portugal (PT), Romania (RO), Slovenia (SI), Slovakia (SK), Finland (FI), Sweden (SE), United Kingdom (UK), Albania (AL), Bosnia and Herzegovina (BA), Montenegro (ME), Former Yugoslav Republic of Macedonia (MK), Serbia (RS) and Turkey (TR). The values of the variables used in our analysis are the values calculated for the year 2016.

Methodology and Application

In our study, non-hierarchical k-means cluster analysis, which are among the multivariate statistical analysis techniques, were used. Cluster analysis is an objective method developed to evaluate the structural features of the observations (Kalaycı, 2008).

k-Means Technique: Mac Quenn used the term of the k-means technique in order to define the algorithm that can divide each element with close values into clusters. This technique follows the following steps:
1.   It divides the units into k clusters.
2.   It is continued by gathering the units under the closest cluster in terms of the value. The distance is generally determined by using the "Euclidean distance." Then, the new value of the cluster is found by

calculating the units. Thereafter, the new value of the cluster is found by calculating the mean value for the units.

3.   Step 2 is repeated until there are no more allocations left (Norusis, 1993; Atamer, 1992).

4 variables related to tourism, which were obtained from the website of WEF and constitute the data set including 34 European countries and Turkey, were subjected to an analysis with the non-hierarchical k-means technique. In this analysis, cluster number was determined as k=2, 3, 4 and repeated 3 times. The fact that the number of clusters needed to be 4 was identified with the formula k = $(n/2)^{1/2}$ = $(34/2)^{1/2}$ = 4.123. Therefore, the European Countries table within the analysis conducted with k=4 is given below:

Table 2: Countries and Number of Cases in each Cluster

Cluster (k=4)	Number of Cases in Each Cluster and Countries	
1	6	EL, HR, PL, NL, AT, HU
2	2	ES, FR
3	4	IT, UK, DE, **TR**
4	22	MT, CY, SI, SK, RO, SE, BE, BG, CZ, DK, EE, IE, FI, LV, LT, LU, PT, AL, BA, ME, MK, RS.

The second cluster indicates the highest group. The highest cluster includes Spain and France. They are followed by Italy, United Kingdom, Germany and Turkey which is proceeding towards candidateship for the European Union.

Table 3: Distances between Final Cluster Centres

Cluster	1	2	3	4
1		58317034,563	21774751,519	13546563,296
2	58317034,563		36586714,914	71863514,354
3	21774751,519	36586714,914		35308927,370
4	13546563,296	71863514,354	35308927,370	

The fourth cluster indicates the lowest group. The lowest cluster includes 17 EU countries and 5 Candidate countries: Belgium, Bulgaria, Czech Republic, Denmark, Estonia, Ireland, Cyprus, Latvia, Lithuania, Luxembourg, Malta, Romania, Slovenia, Slovakia, Finland, Sweden and Albania, Bornia and Herzegovina, Montenegro, Former Yugoslav Republic of Macedonia, Serbia.

ANOVA table is shown as follows in the analysis performed with the cluster number k=4:

Table 4: ANOVA table that belongs to Significant Variables

	Cluster		Error		F	Sig.
	Mean Square	df	Mean Square	df		
x1	4154395845501846,500	3	25240358641458,535	30	164,593	,000
x2	2366592611,720	3	21777799,193	30	108,670	,000
x4	10485547635,610	3	188284434,177	30	55,690	,000
x5	3093758742194,295	3	117824886819,468	30	26,257	,000

It is seen when above-stated Table 4 ANOVA table is checked that the variables x1, x2, x4, and x5 were significant by 5%.

Table 5: One-Sample Kolmogorov-Smirnov Test

		Distance of Case from its Classification Cluster Center
N		34
Normal Parameters[a,b]	Mean	4130535,1179880
	Std. Deviation	2339819,44035089
Most Extreme Differences	Absolute	,119
	Positive	,119
	Negative	-,080
Test Statistic		,119
Asymp. Sig. (2-tailed)		,200

a. Test distribution is Normal.
b. Calculated from data.

That the distances from the centre of the clusters are normally distributed is another condition that must be taken into consideration in the clustering analysis (Tatlıdil, 2002). Accordingly, the Kolmogorov-Smirnov test was performed, and it was understood that the normality assumption was fulfilled in Table 5. We find 0.200>0.05 when we apply the Kolmogorov-Smirnov test to the distance values in order to understand whether the cluster distances were distributed normally.

We use the discriminant analysis in order to realize whether the correct discrimination has been obtained according to the non-hierarchical k-means technique, that is, whether the clusters have been formed correctly.

Table 6: Classification Success of the Clusters

Classification Results[a]

		Cluster Number of Case	Predicted Group Membership				Total
			1	2	3	4	
Original	Count	1	6	0	0	0	6
		2	0	2	0	0	2
		3	0	0	4	0	4
		4	2	0	0	20	22
	%	1	100,0	,0	,0	,0	100,0
		2	,0	100,0	,0	,0	100,0
		3	,0	,0	100,0	,0	100,0
		4	9,1	,0	,0	90,9	100,0

a. 94.1% of original grouped cases correctly classified.

According to Table 6, the clusters are classified 94.1% correctly. This is quite a high clustering success. Czech Republic and Portugal was included in Cluster 1 according to the discriminant analysis, while this country was located in Cluster 4 in the clustering analysis.

Conclusions

According to these variables (International Tourist Arrivals, International Tourism Inbound Receipts, Tourism and Travel Industry GDP and Tourism &Travel Industry Employment), the European Union members that have the best position in our analysis are the Spain and France. We realize it from the

cluster distances in Table 3. The third cluster indicates second high group. The second high group includes Italy, United Kingdom, Germany and Turkey .

Turkey is in the best position compared to candidateship for the European Union in respect of the discussed variables.

International Tourist Arrivals (x1)

International Tourism Inbound Receipts (x2)

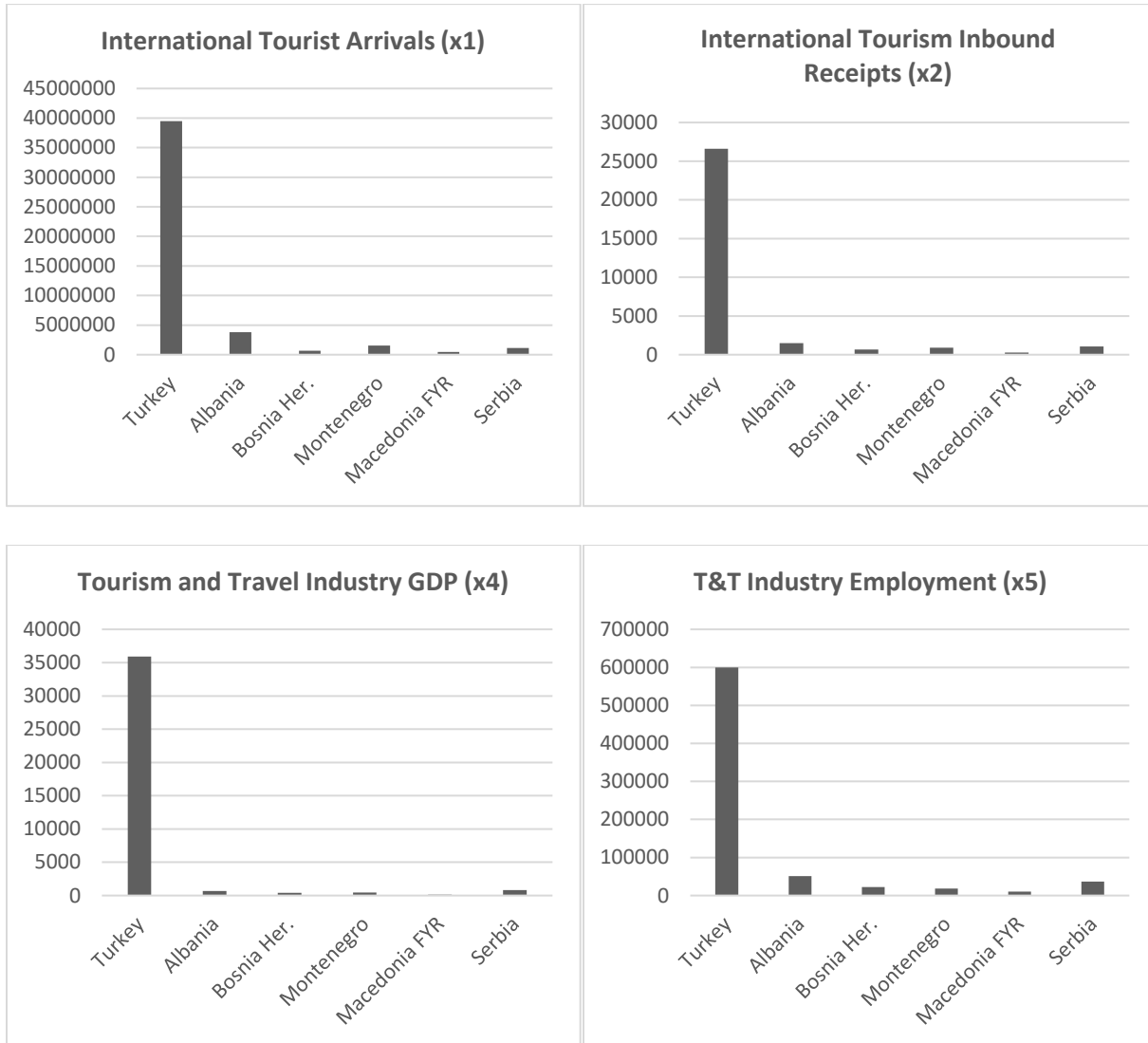**Tourism and Travel Industry GDP (x4)**

T&T Industry Employment (x5)

Figure 2: Status of Turkey in Candidate Countries

According to the results of our analysis, Turkey is found to be in a better position than 23 members of European Union. For this reason, as a successful candidate of European Union tourism must be considered as any other sector, but a leading sector in Turkey.

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