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Analyzing Coastal Development Pattern of Tourism in Turkey

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Abstract

The coastal concentration of tourism activities has been the main characteristics of the Mediterranean Countries. However, they are working on new approaches and solutions for the problems of coastal areas since they have faced a decrease in their high shares of the world tourism market. Although Turkey, as one of the Mediterranean Countries, is endowed with a variety of tourist attractions, it still does not receive the expected revenue from the tourism industry. Since the beginning of tourism planning in Turkey, the coastal regions have taken priority for tourism investments and not only the spatial pattern but also the socio-economic life of these regions have been transformed. According to the studies of the State Planning Organization (SPO) on socio-economic development level, coastal provinces along the Aegean and Mediterranean Seas, which have concentrated on tourism activities, indicate positive socio-economic development index values. In this paper, coastal-led development pattern of tourism is analyzed in Turkey based on the main indicators (tourism and economic development indicators). However, it seems that coastal tourism development pattern is similar for all the provinces, it will be examined if there are some clusters and typologies among them in terms of tourism development. After putting forward a historical perspective and descriptive frame for the coastal regions and provinces, the principal component analysis will be conducted in order to see the impact of main components considering 26 coastal districts. The relationship between the trends of supply and demand side of tourism and the development level will be put forward in order to realize the significance of economic sustainability of tourism areas. As a second step, the macro economic impacts of tourism are analyzed in the case of Bodrum as one of the main destinations in Turkey. Furthermore, the results will be evaluated considering tourism policy of Turkey and experiences of other Mediterranean Countries.

1. Introduction

Basically tourism activities have been concentrated into the areas which have natural or/and cultural attractions. Therefore, tourism has been a powerful engine for economic growth by transferring capital, income and employment from industrial, urban and developed regions to the non-industrial and relatively less-developed regions. There has been a common aspect that tourism brings socio-economic transformation in the region and encourages development.

The coastal areas have been major attractive destinations since people started to travel for leisure in the world. Tourism movements were based on increasing level of income and the northwestern countries of Europe, therefore Mediterranean countries became attractive for their accessibility as a hinterland of northwest Europe, and their climate and the trio of sea-sun-sand. One-third of international tourism revenue is in the Mediterranean basin, while four Mediterranean countries (Spain, France, Italy and Turkey) are among the top 15 tourism destinations¹ based on international arrivals in 2004 (WTO 2005; EU Parliamentary Assembly 2003). The concentration of tourism activities on coastal areas, especially in the Mediterranean countries, has accelerated population increase and urbanization in these areas and has also increased regional-spatial economic disparities (WTO, 2002).

Despite its natural, historical and cultural appeal for tourism potential, Turkey has not been able to get the share it deserves from the Mediterranean basin. It is observed that the tourism income of Spain is 26% of the Mediterranean basin while the tourism income of Turkey is 7%. Tourism demand and revenue is especially concentrated in three major destination countries (Spain, France, Italy) in the Mediterranean. Moreover, the population concentration in coastal areas is more than the share of the coastal land; therefore the density is much higher than inland areas. In Turkey, Mediterranean coastal lands cover 16% of the country's and the population of these lands is 20% of the total population (Blue Plan 2004).

Since 1963 tourism investments and incentives have primarily been directed to coastal areas during the planning periods. Seeking alternatives for coastal tourism, establishing new tourism centers in the interior regions and attempting to distribute tourism in a more

¹ France: first rank, Spain: second rank, Italy: fifth rank, Turkey: 12th rank

balanced manner within the country were observed in 1990s. However, the concept of the coast has been the driving force of tourism in Turkey.

The following part of the paper explains the intensification of tourism activities in certain geographical regions and coastal areas of Turkey. The third section analyzed the relationship between tourism activities and socio-economic development on two steps by using a principal components analysis. In the first step, the impact of intense tourism activities on coastal areas on the level of development of coastal districts was inspected and the performance of the coastal districts were compared. As a second step, the macro-economic effects of tourism were put forward in the model of the Bodrum peninsula. The conclusion discusses the analytical results obtained in both levels in order to give some policy recommendations.

2. Coastal Concentration of Tourism Activities in Turkey

To view in detail the large share of the coastal provinces that are received from tourism investments and touristic demand, we made use of the data from the Ministry of Culture and Tourism (2003) showing the rates of occupation of hotels, the number of tourists, the number of nights spent, and data from the development index of the SPO (2003).

Tourism has realized a significant sector in national economy and supported by government since the first five-year development planning period (1963-67) in Turkey. Three priority regions and 11 centers, mainly located in Marmara, Aegean and Mediterranean Region, were defined for tourism development. In 1969, the coastal regions from the north (Çanakkale province) to the south (İçel province) were declared as priority region in tourism. During the 1970s, the efforts on the physical planning of tourism have been emphasized.

Tourism investments have noticeably increased since the enactment of the Law for Encouragement of Tourism in 1982. Increasing investment incentives have been also

oriented on coastal regions, especially the Mediterranean and Aegean coasts which already have adequate infrastructure and potential for tourism development by encouraging large-scale tourism complexes. The credits by Tourism Bank have been concentrated on the tourism centers which are located in developed regions such as İstanbul, İzmir, Antalya, Muğla and Aydın (TKB, 1995). In the 1990's, there has been a changing policy in order to distribute tourism benefits to other regions and utilize tourism for development of backward regions considering alternative tourism activities; however, coastal regions still have the major part of tourism demand and investments.

The length of the coastal line of Turkey is 8000 km. including Black Sea, Marmara, Aegean and Mediterranean, however the differences of climate and coastal features have not allowed tourism development especially in the coast of Black Sea. 77.24% of the incoming tourists visit a coastal province; the rate escalates to 89.32% for those who spend the night in a coastal province in 2003. Coastal provinces get a larger share of Turkish tourism shown by the statistics of foreign tourists' nights spent. 95.96% of foreign tourists spend the night in a coastal province. This can be explained by the fact that they stay longer in coastal provinces than other regions.

Mediterranean and Aegean Regions are weightier when looking at the concentration and differentiation among coastal provinces in terms of geographical regions (Figure 1). 55.10% of the nights spent in coastal provinces take place in the Mediterranean, while 25.39% take place in the Aegean Region. The share of provinces in the Black Sea Region is only 1.42%. Both in number of arrivals and number of nights spent, the Mediterranean ranks first for foreign tourists, while the Marmara ranks first for domestic tourism.

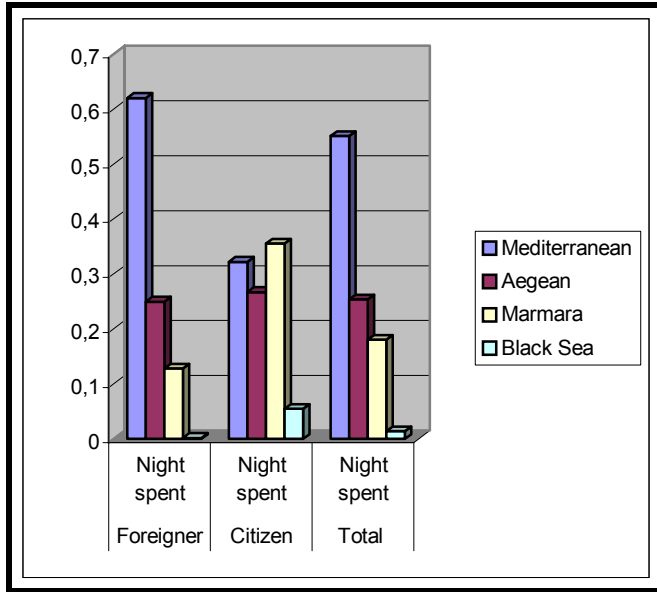


Figure 1- Distribution of nights spent among coastal regions (Ministry of Culture and Tourism, 2003)

When we analyze the situation in terms of provinces, the first five (Antalya, İstanbul, Muğla, Aydın, Izmir) receive 83.56% of arrivals, and they receive 92.39% of nights spent in a total of 28 coastal provinces (Figure 2).

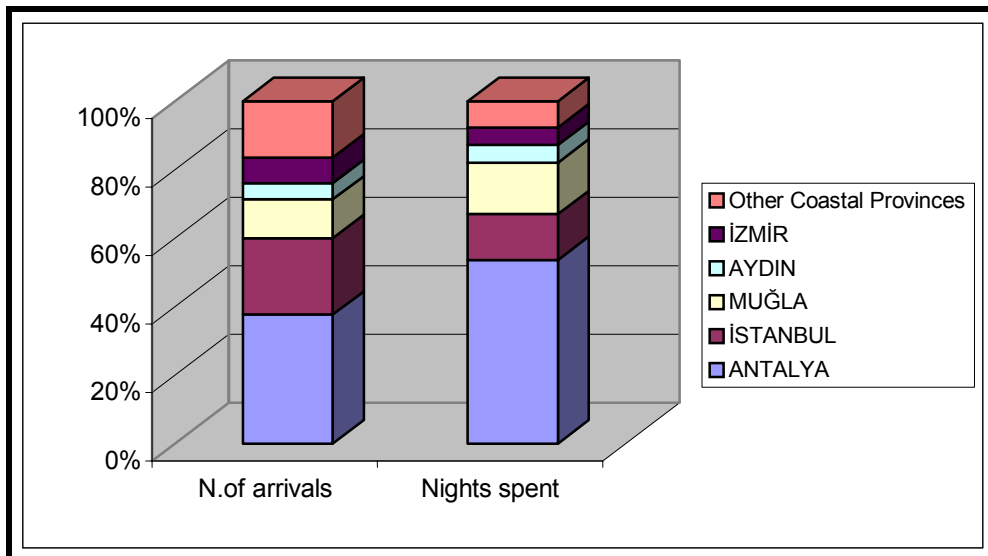


Figure 2- The share of tourist arrivals and nights spent among coastal provinces (Ministry of Culture and Tourism, 2003)

According to socio-economic development listing by the SPO, published in 2003, provinces fall into 5 categories according to their level of development. 18 out of 28 coastal provinces are in the development categories at the first and second levels. It is seen that the provinces in the third and fourth levels of development are provinces from the Black Sea Region. Antalya, which is in the top 5 cities in terms of touristic demand, is 10th out of 81 provinces; Muğla is 13th, and Aydın 22nd. Evaluating tourism development process in Turkey, puts forward that tourism activities have concentrated on relatively developed coastal provinces and accelerated the development of these regions (Gezici,1998).

3. The Analysis of Tourism Impacts on Socio-Economic Development Among Coastal Districts

3.1. The Purpose Of The Research, Methodology and Data Set

The purpose of the research is to determine the effect of “tourism” on the indicators that make up socio-economic development in coastal settlements. It is examined if there are any differentiations and typologies among the coastal districts which are defined relatively developed within urban-regional system of Turkey. Typologies of coastal destinations are expected to provide a perspective for tourism policies.

The scope of the research: The research covers 26 coastal districts in the Marmara, Aegean and Mediterranean Regions in Turkey.² These 26 districts are districts where the data for social, economic and tourism indicators can be obtained. For the purpose of the study, the analysis was made in two steps. The first step dealt with the 26 districts located along the coastlines of the Marmara, Aegean and Mediterranean Seas. The impact of tourism on the socio-economic development of these districts was determined.

² As mentioned before, although there are 4 regions which are geographically located on the coast, this study covers 3 regions due to the low share of the Black Sea Region in tourism.

In the second step, the effect of tourism on the macro-economic structure was analyzed by taking Bodrum (one of the 26 districts) as a case study.

Data set and variables employed: Data related to variables were taken from two different sources. For the first step, data were obtained from “Research on Socio-economic Development Listing of Districts” done by the State Planning Organization (SPO) in 2004, and data from the Ministry of Culture and Tourism in 2003 for the 26 coastal districts. For the second step of the analysis, data were obtained from the questionnaire conducted in 2004 as a part of the research project in the Bodrum peninsula called “Testing Sustainable Tourism Criteria with Alternative Development Models in Tourism Planning of Coastal Provinces”. Since the analysis is focusing on a certain period it is conducted as a cross-section study.

Research Method: As defined in the scope of the study, indicators chosen from social and economic fields were used to determine the socio-economic development levels of the districts. 13 variables (population, rate of urbanization, population growth rate, population density, population dependence rate, average household size, rate of agricultural employment, rate of industrial employment, rate of service employment, rate of unemployment, rate of literacy, infant mortality, per capita income) were chosen among 58 variables from the SPO’s “Research on Socio-economic Development Ranking of Districts” in 2004 as indicators of socio-economic development. Since, it is essential to establish the impact of tourism on the level of development for the purpose of this study, five variables (the number of arrivals, the number of nights spent, average length of stay, occupation rate, bed capacity) for tourism demand and supply were added by obtaining the data from the Ministry of Culture and Tourism in 2003. Two different levels of development were calculated. The first calculation was made without

tourism variables (with 13 variables). The second calculation included tourism variables (with 18 variables).

In the calculation of development indexes of districts “The Principal Components Analysis” was employed as an objective technique. The principal components analysis is a statistical technique that analyzes the set of variables linearly in horizontal components and defines independent dimensions of the data in terms of observed variables. This technique is adopted because it lends itself to abolishing the dependent structure between variables, to separately showing the dimensions that affect changeability in a data set, to numerical determining differences in the levels of development of districts by weighting, and determining the independent dimensions of development. Before the application of the principal components analysis technique, variables that have different units of measurement and size were standardized.

3.2. The Analysis of Coastal Districts

In the statistical analysis two data matrices were used respectively: 26×13 (26 districts and 13 variables) and 26×18. The variances and rates of explanation of the principal components which were obtained upon analysis are given in Table 1 and Table 2 without and with tourism variables, respectively.

Table 1. The principal component variance and explanation rates (without tourism variables)

Component	Total	% of Variance	Cumulative %
1	5,590821288	43,0063176	43,0063176
2	2,379105694	18,30081303	61,30713062
3	1,552330545	11,94100419	73,24813482
4	1,068289454	8,217611188	81,46574601
5	0,661517131	5,088593312	86,55433932
6	0,454826009	3,498661604	90,05300092
7	0,376762601	2,898173853	92,95117478
8	0,330959582	2,54584294	95,49701772
9	0,214468339	1,649756453	97,14677417
10	0,192805794	1,483121491	98,62989566
11	0,150184509	1,155265455	99,78516111
12	0,027659251	0,212763468	99,99792458
13	0,000269804	0,002075417	100

Table 2. The principal component variance and explanation rates (with tourism variables)

Component	Total	% of Variance	Cumulative %
1	7,217913146	40,09951748	40,09951748
2	3,780455919	21,00253288	61,10205036
3	1,660490749	9,224948608	70,32699897
4	1,440157774	8,000876524	78,32787549
5	1,068199736	5,934442979	84,26231847
6	0,584821248	3,249006936	87,5113254
7	0,502558908	2,791993933	90,30331934
8	0,423401721	2,352231784	92,65555112
9	0,344157864	1,911988131	94,56753925
10	0,2725885	1,514380558	96,08191981
11	0,263722006	1,465122256	97,54704207
12	0,209663962	1,164799787	98,71184185
13	0,107442564	0,596903131	99,30874498
14	0,062876368	0,349313157	99,65805814
15	0,036095882	0,20053268	99,85859082
16	0,023235331	0,12908517	99,98767599
17	0,002123474	0,01179708	99,99947307
18	9,48473 ^E -05	0,00052693	100

Upon inspection of both tables, it was seen that the variances in 4 out of 13 principal components in Table 1, and variances in 5 out of 18 principal components in Table 2 were greater than “1”. This means four principal components with a variance greater than “1” are sufficient to determine the basic dimensions of the data and contain an important amount of information. For instance, while the 4 components in Table 1 explain 81.46% of the total variance, the 5 components in Table 2 explain 84.26%. It is seen that the first principal components have the highest explanative power for both analyses. For instance, while the first principal component in Table 1 explains 43% of the total variance on its own, the first principal component in Table 2 explains 40%. The weights of variables in each principal component (basic weights) are given in Table 3 and 4. The columns of principal component matrices in the tables reflect the weights of each variable in the principal components. Its rows reflect the weights of a variable in a different principal component. The principal components were evaluated with their high explanation rates, and again were evaluated as “causal factors of development” which can define the socio-economic development of districts depending both on the weights and the correlation coefficients the variables received in the first principal components. In this context, “causal factor of development” can be named as the basic factor that reflects the major part of the relations among the variables.

Table 3. The principal component weights matrix (without tourism variables).

Variables	Components			
	1	2	3	4
Population	0,048227	-0,26466	0,349095	-0,16952
Urbanization rate	0,101995	0,249278	0,155859	-0,11967
Population growth rate	0,13037	-0,20533	0,02488	0,238947
Population density	0,131201	0,035165	0,057648	-0,22104
Population dependence rate	-0,13576	0,14623	0,282307	-0,11638
Average household size	-0,02684	-0,13311	0,42329	0,508325
Rate of agricultural employment	-0,1717	-0,0158	0,11972	0,040074
Rate of industrial employment	0,058435	0,294542	0,19893	-0,27007
Rate of service employment	0,168856	-0,02427	-0,1491	-0,01063
Unemployment rate	0,129923	0,156818	0,266643	0,166071
Rate of literacy	0,15131	-0,03477	-0,14038	0,18551
Infant mortality	0,043553	0,254871	0,029636	0,523039
Per capita income	0,098469	-0,1652	0,25961	-0,32389

Table 4. The principal component weights matrix (with tourism variables).

Variables	Components				
	1	2	3	4	5
Population	0,075713	0,131735	0,142657	0,249226	-0,11155
Urbanization rate	0,04039	-0,19131	0,236195	-0,02313	-0,2421
Population growth rate	0,12095	0,036636	-0,02016	-0,14872	0,106396
Population density	0,087336	-0,10255	-0,0015	0,206242	0,008481
Population dependence rate	-0,1068	0,030754	0,282263	0,19101	-0,05388
Average household size	0,01015	0,132377	0,400999	-0,15404	0,249627
Rate of agricultural employment	-0,11247	0,132257	0,099855	0,09051	0,061173
Rate of industrial employment	0,006951	-0,18316	0,25484	0,139787	-0,27123
Rate of service employment	0,114698	-0,11141	-0,13583	-0,1158	-0,03623
Unemployment rate	0,07502	-0,1468	0,293497	0,025785	0,154597
Rate of literacy	0,105769	-0,09045	-0,11963	-0,14201	0,116156
Infant mortality	0,003412	-0,14622	0,14372	-0,00768	0,645429
Per capita income	0,09995	0,048263	0,087325	0,300786	-0,20041
Number of arrivals	0,116871	0,115176	0,012846	0,148337	0,089932
Number of nights spent	0,115957	0,118618	-0,00359	0,075064	0,129313
Average period of stay	0,046179	0,142215	0,197385	-0,34278	0,034811
Occupation rate	0,057555	0,051503	0,150339	-0,40808	-0,43544
Bed capacity	0,110436	0,11457	-0,03708	0,206598	0,010332

Table 4 indicates that weights of tourism variables are positive for the first principal component, which explains the level of socio-economic development. To obtain the development rank for districts, the variable weights in the first principal component were inverted and multiplied with the standardized data matrix. The obtained values were accepted as the index of socio-economic development for the districts (Table 5, Figure 3)

Table 5. Ranking of Socio-economic Development Index (DI) in Coastal Districts.

Districts	DI (without tourism)	DI (with tourism)
Kuşadası	1,74265529	1,297218578
Kemer	1,531901784	2,236681426
Çeşme	1,300795538	0,529931317
Marmaris	1,290537077	1,414253498
Alanya	0,959698001	2,234600223
Bodrum	0,853474497	1,293830441
Urla	0,789475834	0,268997595
Foça	0,674753632	0,377398758
Didim	0,636823742	0,31112974
Ayvalık	0,406288938	-0,080445555
Seferihisar	0,406280989	0,034387631
Manavgat	0,237330029	0,67296105
Edremit	0,124394953	-0,191215304
Çınarcık	-0,022329868	-0,455873527
Gelibolu	-0,072305352	-0,390626805
Dalaman	-0,129656099	-0,392434851
Datça	-0,3779917	-0,498056853
Karaburun	-0,552746844	-0,591723788
Erdek	-0,584535044	-0,681530139
Dikili	-0,699976618	-0,861594873
Fethiye	-0,881503221	-0,375044776
Finike	-1,423774643	-0,92333854
Lapseki	-1,44187836	-1,49071457
Köyceğiz	-1,510563133	-1,088303716
Ayvacık	-1,678538305	-1,429898025
Kaş	-1,937808399	-1,362829935

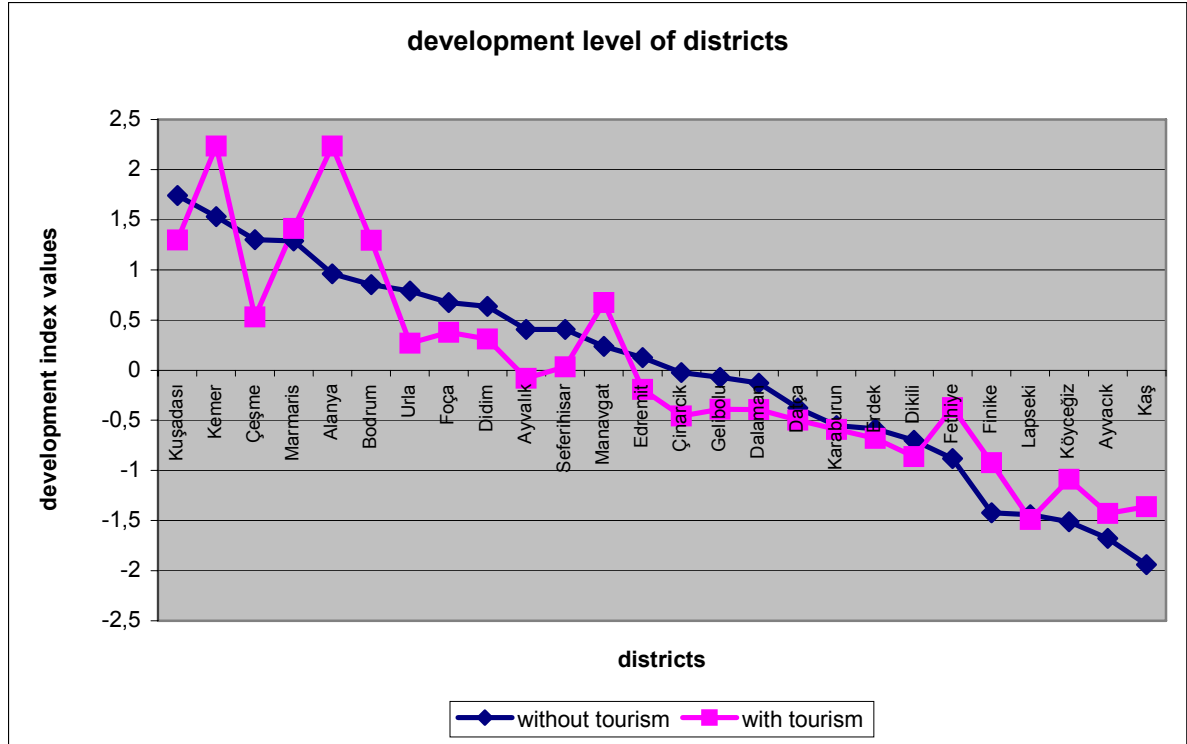


Figure 3. Socio-economic Development Ranking for Coastal Districts.

The ranks of the districts display the relationship between socio-economic development and tourism development (Figure 3). Further it would be pointed out locational differentiations. 26 coastal districts are the districts of seven provinces. Excluding the dominant effect of İstanbul as the most developed metropolitan area, Antalya, İzmir, Aydın, Muğla, Çanakkale, Balıkesir and Yalova are defined as the provinces of Marmara, Aegean and Mediterranean Regions. In order to determine and explain the features of typologies of different tourism destinations, it is constructed an evaluation matrix using demographic profile (population and population increase) and the significant tourism indicators (see in appendix)³. Number of arrivals, number of night spent (the percentage in its own province and in Turkey), the ratio of foreign tourist, average length of stay (more than average of Turkey), occupancy rate (more than average of Turkey),

³ The data is obtained from State Statistic Institute and Ministry of Culture and Tourism for 2004.

type of accommodation, the intensity of summer houses, type of tourism development (tourism development projects, tourism centers) and proximity to the airport are the indicators for evaluation. Development index values of 13 districts indicate greater values than zero, while the others have the negative index values (Figure 3). The variables related to tourism have changed the development level of districts either positively or negatively.

Index values point out four main (different) groups among coastal districts (Figure 3, Figure 4 and Figure 5). *First group (Typology 1)*: In the districts of Kemer, Marmaris, Alanya, Bodrum and Manavgat which are relatively developed ones, the level of socio-economic development is increasing when tourism parameters are added. These districts are located in the provinces of Antalya (Kemer, Alanya, Manavgat) and Muğla (Marmaris, Bodrum) which are the most significant destinations in Turkey. They are the places where tourism demand is the most intense and periods of stay are the longest. It might be explained that the longer the period of stay by the tourists the greater the increase in the contribution to the economy. Kemer and Manavgat (Side) are the destinations which were developed based on mass tourism and large-scale accommodation facilities by Tourism Development Projects, while Bodrum and Marmaris were developing spontaneously with their diversification of accommodation facilities (5 star hotels and small hotels and pensions) (Figure 6, Table 6). These districts are in the first six in terms of number of arrivals and nights spent in the listing among coastal districts. Moreover, these districts are the main destinations for the foreign tourists. They have high accessibility with the advantages of proximity to the airports (Antalya, Bodrum, Dalaman). Besides sharing the top ranks in terms of socio-economic development without tourism variables, these districts support the assumption that socio-economically developed regions are more attractive for tourism, and develop more from the effects of tourism. *Second group (Typology 2)*: Although

development index values of Kaş, Ayvacık, Köyceğiz, Finike and Fethiye are negative, there is an increase in their level of socio-economic development when tourism parameters are added (Figure 3, Figure 4 and Figure 5). They are relatively small districts of Antalya (Kaş, Finike), Muğla (Fethiye, Köyceğiz) and Çanakkale (Ayvacık) provinces. They have the advantages of proximity to important centers of tourism and cultural attractiveness such as Troya for Ayvacık, Kale for Kaş. However Finike, Kaş and Ayvacık are relatively far from the regional airports or highway accessibility has some difficulties. The most significant reason for the positive impact of tourism is that, periods of stay are longer in these districts, even though the number of foreign tourists is not very high. They provide accommodation facilities rather than large-scale hotels. The indicators of these districts exemplify the positive impact of tourism on small settlements with a low level of development, which depends on tourism income. 12 districts of the third *group (Typology 3)*, namely Kuşadası, Çeşme, Urla, Foça, Didim, Seferihisar, Ayvalık, Edremit, Çınarcık, Gelibolu, Dalaman and Dikili show a decrease in their level of socio-economic development when tourism parameters are added (Figure 3, and Figure 5). They are located in the coast of Marmara and north Aegean (see figure 4), and mostly in the hinterlands of metropolises and preferred for short-term holidays or summer houses. Especially the high density of buildings and intensity of summer houses in Kuşadası, are the main causes for environmental degradation and decreasing popularity. Among these districts the number of nights spent is low except for Kuşadası, Çeşme, Didim, Foça and Ayvalık. The common feature of most of them is that the occupation rate of hotels is relatively low and they are predominantly visited by domestic tourists except Kuşadası, Didim, Foça and Çeşme. Five districts (Kuşadası, Çeşme, Didim, Foça and Ayvalık) are differentiated from the others in the same group and they have relatively high development level (Figure 6 and Table 6). *Fourth group (Typology 4)*: Datça, Karaburun, Erdek and Lapseki are the districts that indicate low level of development and tourism does not have any significant impact on socio-economic development index. These districts are relatively

small ones, however they do not have any other common characteristics (Figure 6 and Table 6). While Karaburun is located in the hinterland of İzmir, Datça has accessibility problems. Erdek was a popular vacation place of Marmara region in the past, while it became overloaded and lost its popularity. Lapseki is a district of Çanakkale and does not indicate any noticeable tourism potential.



Figure 4. Locations of Districts and Groups of Districts

These typologies of districts point out the impact of tourism on development based on different cases, therefore tourism policies should be established according to these specific dynamics and trends rather than a general policy. Further, it is determined some typologies within the main four typologies as well (Table 6) (Figure 6).

(-) (+)	(+) (+)
Fethiye Finike Lapseki Köyceğiz Ayvacık Kaş	Kemer Marmaris Alanya Bodrum Manavgat
Gelibolu Dalaman Datça Karaburun Erdek Dikili	Kuşadası Çeşme Urla Foça Didim Ayvalık Seferihisar Edremit Çınarcık
(-) (-)	(+) (-)

Figure 5. Four Main Typologies.

Table 6 - Typologies of Districts and Their Features

Typology	Districts	Main differentiations	Common features
TYP 1A	Kemer Manavgat (Side)	Tourism Development Projects	Developed regions Foreign tourist concentration Long stay High accessibility
TYP 1B	Alanya	Mediterranean, Intensity of second home	
TYP 1C	Bodrum Marmaris	Aegean, diversity of accommodation, Intensity of second home	
TYP 2A	Kaş Finike	Mediterranean, Accessibility limitations, low ratio of foreign tourist	Low level of development Small settlements Long stay Low level of second homes Small scale accommodation
TYP 2B	Fethiye Köyceğiz	Aegean, high ratio of foreign tourist	
TYP 2C	Ayvacık	Aegean, Accessibility limitations, high ratio of local tourist,	
TYP 3A	Kuşadası Çeşme Foça Didim Ayvalık	North Aegean, hinterland of İzmir, high level of development, high ratio of foreign tourist, long stay	
TYP 3B	Seferihisar Edremit Urla Dalaman Dikili Gelibolu Çınarcık	North Aegean and Marmara, High ratio of local tourist, low level of occupancy rate, short stay, small scale accommodation	
TYP 4	Datça Karaburun Erdek Lapseki	No common features	

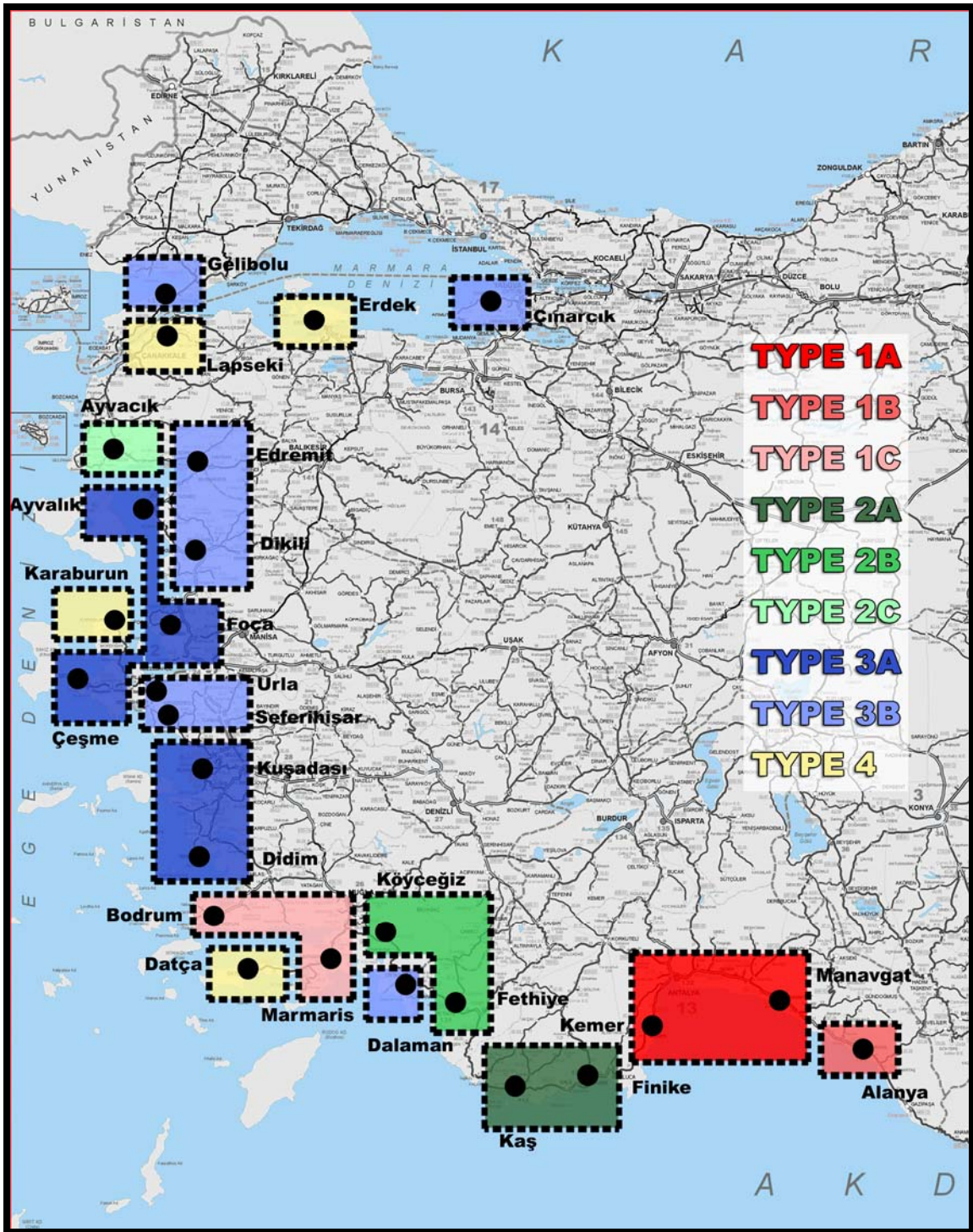


Figure..6- Geographical Locations of Typologies

3.3. The Analysis of the Bodrum Peninsula

In the second phase of the study we analyzed the impact of tourism on the macro-economic structure, in the specific case of the Bodrum Peninsula as one of the main coastal destinations of Turkey. The principal components analysis are applied to determine the impact of tourism on the macro-economic structure in Bodrum for the second step of the paper. The variables were chosen from the questionnaire of the research (359 questionnaires) which is already mentioned in the methodology section. 21 variables are determined with respect to the purpose of the paper, as perceptual and profile of the residents on the one hand, further demographic and social structure, urban macro-economy, urban values and economic welfare on the other hand (Table 7). The hypotheses are determined; tourism has some positive economic impact such as income increase, job creation, multiple effect to the other sectors, while the increasing value of land and housing price might be threats for future of region and tourism.

The statistical analysis employed a standardized data matrix of 359×21 (359 questionnaires-observations, 21 variables). The variances of principal components and their rate of explanation obtained upon analyses are given in Table 8.

Table 7. The Variables in the Analysis of the Impact of Tourism on the Macro-economic Structure in Bodrum

VARIABLES		CONDITIONS REFLECTED BY VARIABLES
AGE	Age	Demographic and social structure
SEX	Sex	
EDUCAT	Level of education	
FLANG	Speaking a foreign language	
HSIZE	Household size	
PLBIRTH	Place of birth (natives of Bodrum-outsiders)	
WHEN	Date of settling in Bodrum	
INCOME	Income level	Urban macro-economics
WORKING	Number of working people in the family	
SECTOR	Sectoral distribution of workers	
AGRTR	Tourism-dependent economic boom in agriculture	
CONSTR	Tourism-dependent economic boom in construction sector	
SHOUSE	Economic contribution by summer houses	
TRFACIL	Contribution of touristic facilities to Bodrum's development	
LAND	Land ownership	Rise in urban values
ALLOCAT	Allocation of land to urban functions	
FUNCTION	Type of allocated urban functions	
HPRICES	Tourism-dependent rise in housing prices	
LVALUES	Tourism-dependent rise in land values	Welfare
TREMP	Tourism-dependent rise in employment opportunities	
TRINCOME	Tourism-dependent rise in income	

Table 8 indicates that 8 out of the 21 principal components have a variance greater than "1". The weights of variables in each of the principal components (basic component weights) are given in a sequence in Table 9.

Table 8. The principal component rates of variance and explanation

Component	Total	% of Variance	Cumulative %
1	2,330606846	11,09812784	11,09812784
2	2,101156778	10,00550847	21,10363631
3	1,804138406	8,591135266	29,69477157
4	1,376340455	6,554002166	36,24877374
5	1,295737723	6,170179635	42,41895337
6	1,218466469	5,802221282	48,22117466
7	1,153173373	5,491301775	53,71247643
8	1,091849236	5,199282078	58,91175851
9	0,933650259	4,445953614	63,35771212
10	0,924491168	4,402338897	67,76005102
11	0,830287695	3,953750928	71,71380195
12	0,801121699	3,814865233	75,52866718
13	0,778560124	3,707429163	79,23609634
14	0,734918399	3,499611425	82,73570777
15	0,707927181	3,371081816	86,10678958
16	0,637608852	3,036232629	89,14302221
17	0,581743414	2,770206731	91,91322894
18	0,526806627	2,508602984	94,42183193
19	0,493953967	2,352161748	96,77399368
20	0,419873715	1,999398641	98,77339232
21	0,257587613	1,226607683	100

Table 9. The principal component weights

VARIABLES	Components							
	1	2	3	4	5	6	7	8
AGE	-0,15792	0,015851	-0,02643	-0,24913	0,161137	0,357494	0,174233	-0,23484
SEX	-0,02273	-0,06476	-0,0417	-0,30924	-0,28847	-0,0046	0,335585	-0,29577
EDUCAT	0,296629	-0,09337	0,125612	0,051476	-0,09254	-0,08097	-0,13459	-0,09549
FLANG	-0,26513	0,094663	-0,1601	0,016233	0,207277	0,216015	-0,0357	0,073546
HSIZE	-0,14752	0,006478	0,023504	0,487862	0,012181	0,00425	0,268032	0,058098
PLBIRTH	-0,13961	0,078113	-0,02158	-0,05224	0,132348	-0,33986	0,021637	0,126647
WHEN	0,144899	-0,1242	-0,01636	0,172482	-0,03323	0,499581	0,079096	0,075834
INCOME	0,025785	-0,04405	0,18552	0,072574	-0,33206	-0,02924	0,325082	-0,04281
WORKING	-0,04741	-0,0257	0,140732	0,434759	0,040777	-0,1634	0,15465	-0,1526
SECTOR	0,115529	-0,10225	0,12051	-0,06735	-0,07147	0,317335	0,089432	0,467881
LAND	0,093641	-0,10443	-0,37855	0,098846	-0,03617	-0,03983	-0,03994	-0,01993
ALLOCAT	-0,17903	0,053481	0,346591	-0,15975	-0,05037	-0,02715	0,105694	0,029381
FUNCTION	-0,09422	0,079905	0,302589	0,055892	0,069518	0,116009	-0,18999	0,198814
HPRICES	0,009048	0,357897	-0,08175	0,039493	-0,36805	0,043537	-0,081	0,058388
LVALUES	0,010629	0,362514	-0,10908	0,050165	-0,33375	0,049109	-0,00431	0,07614
TREMP	0,170892	0,153779	0,177815	-0,13414	0,188913	-0,09131	-0,08886	-0,11707
TRINCOME	0,199728	0,159985	0,066802	0,046444	0,244074	-0,01377	-0,02445	-0,25249
AGRTR	0,113562	0,017439	-0,01568	-0,17438	0,092223	-0,23564	0,392247	0,466847
CONSTR	0,104431	0,212942	0,114666	0,047825	0,110274	0,246752	0,011601	-0,14728
SHOUSE	0,122839	0,169353	-0,11777	0,003519	0,247052	-0,00291	0,145999	0,287359
TRFACIL	0,094594	0,126296	-0,05908	0,036088	0,206799	0,035568	0,499406	-0,19964

The columns of the principal component matrices in the table show the weight of each variable in the principal components. Their rows reflect the weight of a variable in different principal components.

It is possible to obtain one development index for each component since the analysis is applied to the case of Bodrum. Therefore the index values of 8 variables are calculated and ranked. Fifth Principal Component indicates the highest value of development index (Table 10).

Table 10. Development Index Values Based on the Principal Components

Components	Index values
Index value of 5.Principal Component	0,368737
Index value of 7.Principal Component	0,138936
Index value of 1.Principal Component	0,099767
Index value of 2.Principal Component	-0,10979
Index value of 8.Principal Component	-0,20771
Index value of 4.Principal Component	-0,21415
Index value of 3.Principal Component	-0,47324
Index value of 6.Principal Component	-0,73951

Studying the fifth principal component, we see that in defining the impact, some variables have effects in the positive and some in the negative direction. Seven of 11 perceptual variables among urban macro-economy and welfare indicate positive impacts on development level index: “Tourism-dependent rise in income”, “contribution of tourism facilities to development”, “tourism-dependent rise in employment opportunities”, “tourism-dependent economic boom in construction sector”, “tourism dependent economic boom in agriculture”, “type of allocated urban functions” and “economic contribution by summer houses”. Further, five variables of 11 which are defined the demographic profile of the settlement such as “age”, “foreign language”, “household size”, “place of birth”, “number of employment” have a positive oriented relations. On the other hand, it is seen that variables that are deemed to reflect the rise in urban values such as “land ownership”, “tourism-dependent rise in housing prices”,

“tourism-dependent rise in land values”, “allocation of land to urban functions” have negative effect.

Tourism increases land values and this leads to an appetite for natural resources (like coast, forest areas, etc.) resulting in development permits on areas that should be preserved. Thus the population values of the settlement become denser and force development thresholds. Hence this observation was mathematically proven to be one of the negative impacts of tourism on the economic structure.

To summarize the findings related to the hypotheses:

- Tourism is effective in increasing the possibilities of employment and the level of income.
- The impact of tourism on the economy is positive in places where demographic potential is favorable and where this potential is used.
- The contribution of tourism to the economic structure of the settlement is predominantly through means of enlivening the construction sector.
- The rise in housing prices and land values has a negative impact on development since the cost of life is increasing and becoming a major threat for sustainability.

4. Conclusion

In this study, which questions at two levels the relation between the intensification of tourism activities and the spatial economic structure, it is seen that the valid assumptions in the literature are similar for the case in Turkey. Coastal concentration in terms of both supply and demand in the development of a tourism policy has different results in coastal settlements. It is known that tourism prefers relatively developed regions and increases the level of socio-economic development in these regions. However, tourism

may have different impacts on regions with different features depending on various dynamics.

The analysis of district level demonstrates four different typologies in terms of the relation between tourism and socio-economic development. The first group consists of important tourist destinations in Turkey, which are relatively developed and developing further with the effect of tourism. Kemer and Manavgat encompass Side, are chosen as tourism centers where vast tourism complexes have developed. However, compared to these two examples, Bodrum, Marmaris and Alanya have developed on their own. In the second group, districts are differentiated based on their locational features. They should be considered as small destinations and maintain the contribution to the economy by conserving and improving their values and characteristics in tourism market. In the third group of settlements, the negative impact of tourism is considerable. Most of these settlements in this group are located in the hinterlands of metropolises. This result denotes the necessity to inspect in greater detail the development of tourism and its impacts on the settlements. Therefore, strategies should be developed in order to increase the contribution to the local economy with the advantages being close to the metropolitan regions. Although the districts of TYP 3 are differentiated as TYP 3A and TYP 3B, there should be a focus on either maintaining and improving the quality of their existing markets in national level, or develop marketing strategies for international tourism. According to analysis results, the provinces, Antalya, which is in the Mediterranean basin, and the coastal line of Muğla, in the Aegean, reap the best fruits of tourism. The results point out climatic advantages as well, while the districts of south coast are getting more benefits than the ones in north.

As a second step of the study, the macro-economic impacts of tourism were inspected in greater detail depending on the analysis of the Bodrum peninsula. In the case of

Bodrum, the continuity of the economic contribution of tourism is dependent on the strategies to be developed against the threats posed by tourism's mode of development.

The results of the analysis proved the main hypotheses on the economic impact of tourism. A consensus has been formed on the view that tourism has a crucial effect on the economic welfare. However the effects of tourism are questionable in terms of macro-economics and a rise in urban values. It is striking that the enlivening effect of tourism on other sectors should focus on the construction sector. This condition leads to the increase in real estate prices in the region and results in the covering of coastal areas with buildings. Bodrum is currently an important tourist destination and has perceived positive effects of tourism on its level of socio-economic development on a district basis, but needs tourism strategies that could be developed with a view to utilize its heretofore unused or misused attractions and characteristics as a peninsula.

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Appendix: Evaluation Matrix to define typologies (dots indicate the intensity and importance of each variable for each district)

Districts	Province	Region	Population	Population increase	% in Province			% in Turkey			Average Length of Stays			Occupancy			Type of Accommodation			Summer Houses		Tourism Centers	Tourism Develop. Pro.	Proximity to Airport			
					Number of Arrivals		Number of Nights Spent	Number of Arrivals		Number of Nights Spent	Foreigner	Citizen	Total	Foreigner	Citizen	Total	Foreigner	Citizen	Total	5-4*	Resorts				other	High Density	Low Density
					Foreigner	Citizen	Total	Foreigner	Citizen	Total																	
Alanya	Antalya	Mediterranean	257.671	68,86	•		•		•		•		•	•	•	•		•		•		•					
Finike	Antalya	Mediterranean	42.087	19,65	•		•		•		•		•	•	•	•		•		•		•		•			
Kaş	Antalya	Mediterranean	47.519	16,61		•		•		•		•		•	•	•		•		•		•		•			
Kemer	Antalya	Mediterranean	55.092	86,17	•		•		•		•		•	•	•	•		•		•		•		•		•	
Manavgat	Antalya	Mediterranean	199.385	51,68	•		•		•		•		•	•	•	•		•		•		•		•		•	
Didim	Aydın	Aegean	37.395	41,01	•		•		•		•		•	•	•	•		•		•		•		•			
Kuşadası	Aydın	Aegean	65.765	56,58	•		•		•		•		•	•	•	•		•		•		•		•		•	
Ayvalık	Balıkesir	Marmara	58.738	22,66	•		•		•		•		•	•	•	•		•		•		•		•			
Edremit	Balıkesir	Marmara	93.351	38,63		•		•		•		•		•	•	•		•		•		•		•			
Erdek	Balıkesir	Marmara	32.020	18,74		•		•		•		•		•	•	•		•		•		•		•			
Ayvacık	Çanakkale	Marmara	30.502	-0,10	•		•		•		•		•	•	•	•		•		•		•		•			
Gelibolu	Çanakkale	Marmara	46.226	14,41		•		•		•		•		•	•	•		•		•		•		•			
Lapseki	Çanakkale	Marmara	26.034	5,89		•		•		•		•		•	•	•		•		•		•		•			
Çeşme	İzmir	Aegean	37.372	23,77		•		•		•		•		•	•	•		•		•		•		•			
Dikili	İzmir	Aegean	30.115	26,00		•		•		•		•		•	•	•		•		•		•		•			
Foça	İzmir	Aegean	36.107	35,87	•		•		•		•		•	•	•	•		•		•		•		•			
Karaburun	İzmir	Aegean	13.446	39,91		•		•		•		•		•	•	•		•		•		•		•		•	
Seferihisar	İzmir	Aegean	34.761	50,42		•		•		•		•		•	•	•		•		•		•		•		•	
Urla	İzmir	Aegean	49.269	32,86		•		•		•		•		•	•	•		•		•		•		•			
Bodrum	Muğla	Aegean	97.826	54,31		•	•		•		•		•	•	•	•		•		•		•		•		•	
Dalaman	Muğla	Aegean	28.148	6,38		•		•		•		•		•	•	•		•		•		•		•		•	
Datça	Muğla	Aegean	13.914	25,88		•		•		•		•		•	•	•		•		•		•		•			
Fethiye	Muğla	Aegean	154.209	18,92	•		•		•		•		•	•	•	•		•		•		•		•		•	
Köyceğiz	Muğla	Aegean	29.196	12,22	•		•		•		•		•	•	•	•		•		•		•		•		•	
Marmaris	Muğla	Aegean	79.302	63,92	•		•		•		•		•	•	•	•		•		•		•		•		•	
Çınarcık	Yalova	Marmara	21.650	22,48		•		•		•		•		•	•	•		•		•		•		•			