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Spatial Distribution of International Tourist Movement to Turkey in 2017

ABSTRACT:

This research aims to analyse the movement of international tourists who come to Turkey in 2017. ArcGIS 10.1 software was used to create maps in the study. The created maps have contributed to more rapid analysis of international tourism movement towards Turkey. According to the findings of the research; 72% of visitors coming to Turkey is European. Russia, Germany, the UK and Netherlands were especially important sources for Turkey tourism market. Simple regression analysis was applied with IBM SPSS Statistics 21 software. Regression analysis showed the nexus between the distance and the amount of the tourist flow was strong. According to obtained result, the variance of 53% of the number of foreign visitors depends on the distance.

PAROLE CHIAVE: tourist flows, tourist movement, spatial distribution, international tourism, Turkey

1. *Introduction*

Tourism is the first or second source of export earnings in 20 of the world's 48 Least Developed Countries (LDCs) and, in the past 20 years, the industry has grown more quickly in LDC economies than in OECD countries. This growth has brought increasing interaction between the industry and indigenous peoples, many of whom are impoverished and hold traditional land rights on or near tourism sites². International tourism is one of the most important economic activities in an open economy. It enables a country or region to earn

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² UNWTO, *Yearbook of tourism Statistics*, 2016, United Nations World Tourism Organization, Madrid.

substantial foreign exchange, generate employment for local residents and stimulate local economic growth. Thus, the United Nations World Tourism Organization (UNWTO) constantly describes tourism as the key to development, prosperity and well-being³.

Many major actors in international tourism are both top destinations and top source markets, for example, France, USA, Spain, China and Turkey. The key players are widely spread across different continents. Turkey is one of the major players in the tourism sector. Turkey completes the top 10 in arrivals, moving down an estimated four places (data still pending for 2016) following the security incidents and failed coup last year. In terms of receipts, Turkey moved down five places to 17th position⁴.

The large majority of international travel takes place within travellers' own regions (intraregional tourism), with about four out of five arrivals worldwide originating in the same region. Traditionally the advanced economies of Europe, the Americas and Asia and the Pacific have been the world's major source markets for international tourism. Europe currently still remains the world's largest source region for outbound tourism, generating almost half of the world's international arrivals (48%)⁵.

In terms of international tourist arrivals Turkey ranked as 10th place in 2016. Travel & Tourism is an important economic activity for Turkey. Tourism sector generated 495.000 jobs directly in 2016. This includes employment by hotels, travel agents, airlines and other passenger transportation services. It also includes, for example, the activities of the restaurant and leisure industries directly supported by tourists. By 2027, Travel & Tourism will account for 797.000 jobs directly, an increase of 5.1% pa over the next ten years. The direct contribution of Travel & Tourism to GDP in 2016 was TRY87.9bn (4.1% of GDP). The direct contribution of Travel & Tourism to GDP is expected to grow by 4.9% pa to TRY144.3bn (4.8% of GDP) by 2027. In 2016, Turkey generated TRY80.0bn in visitor exports. By 2027, international tourist arrivals are forecast to total 69.432.000

³ Z. CAO, G. LI & H. SONG, *Modelling the Interdependence of Tourism Demand: The Global Vector Autoregressive Approach*, in «Annals of Tourism Research», 67, 2017, p. 1.

⁴ UNWTO, *Tourism Highlights*, 2017 <<http://mkt.unwto.org/publication/unwto-tourism-highlights>> (last access 12.05. 2017).

⁵ *Ibid.*

generating expenditure of TRY150.7bn, an increase of 6.5% pa. Travel & Tourism is expected to have attracted capital investment of TRY50.3bn in 2016. Travel & Tourism's share of total national investment will rise from 12.5% in 2017 to 12.9% in 2027⁶.

Tourism is a rapidly growing and developing sector in Turkey. For this reason, understanding the geographical preferences of tourists is important in terms of developing new strategies for Turkish tourism. It is important to know the socio-economic profile of consumers in the marketing of recreation and tourism services. Therefore, this study aims to determine the spatial distribution of international tourist movement to Turkey in 2017.

2. Method

Geographical Information Systems (GIS) are important tools since they have the ability to represent, store, manage, analyse, update and visualize spatial and non-spatial data in an integrated platform⁷. Tourism sector is a spatial phenomenon that requires spatial data collection and processing namely to identify features relationships and to analyse those relationships in a spatial context. Therefore, GIS can be considered as important business tools for tourism⁸. Most tourism planning problems can be shown to have spatial or geographical characteristics. GIS is an important tool for tourism resources inventories. Identifying most suitable locations for development, measuring tourism impacts, visitor management and visitor flows, analysing relationships associated with resources use, and assessing potential impacts of tourism development are main issues for GIS and tourism related

⁶ WTTC, 2017, *Travel& Tourism Economic Impact 2017 Turkey* <<https://www.wttc.org/-/media/files/reports/economic-impact-research/countries-2017/turkey2017.pdf>> (last access 12.05. 2017).

⁷ H., ALBUQUERQUE, C. COSTA, F. MARTINS, *The use of Geographical Information Systems for Tourism Marketing purposes in Aveiro region (Portugal)*, in «Tourism Management Perspectives», 26, 2018, p. 173.

⁸ B. BOERS & S. COTTRELL, *Sustainable Tourism Infrastructure Planning: A GIS-Supported Approach*, in «Tourism Geographies: An International Journal of Tourism Space, Place and Environment», 9(1), 2007, p. 2 <<http://dx.doi.org/10.1080/14616680601092824>> (last access 12.05. 2017).

studies⁹.

In this study, existing data are used. Data on international tourist arrivals by country of origin, who arrived in Turkey in 2017, obtained from the Republic of Turkey Ministry of Culture and Tourism. Data obtained in the form of Microsoft Office Excel for the whole country in the world. ArcGIS 10.1 software is used to produce maps of international tourists who come to Turkey and it maps the distribution of tourists. IBM SPSS Statistics 21 software was used to examine the relationship between the distances of countries from Turkey and the total number of foreign visitors in 2017. In order to show this relationship, simple regression analysis was conducted.

3. Results

3.1. *Tourism Development in Turkey*

Turkey has an exceptional wealth of tourism assets which compare favourably with those of competing countries in the Mediterranean region and elsewhere. Its natural attractions include a vast, varied and unspoiled landscape with forests, rivers and mountains as well as an extensive selection along its 8333 km of coastline (2753 km of land-line) extending on three sides. Turkey's geographical location forms a bridge between Europe and Asia, giving it the role of a transition culture between East and West. Turkey, owing to her position as a Mediterranean, Middle Eastern and Balkan country, is situated on the most important main development axis of international tourism activities. Turkey is at the juncture of the Asian, European and African continents. Because of this geographical position, it is a prime site for major international tourism development¹⁰.

There has been a great increase in the number of visitors to the Turkey in the last three decades. This increase has been realized, thanks

⁹ T. BAHAIRE & M. ELLIOTT-WHITE, *The Application of Geographical Information Systems (GIS) in Sustainable Tourism Planning: A review*, in «Journal of Sustainable Tourism», 7(2), 1999, p. 161 <<http://dx.doi.org/10.1080/09669589908667333>> (last access 12.05.2017).

¹⁰ H. ALIPOR, *Tourism Development Within Planning Paradigms: The case of Turkey*, in «Tourism Management», 17(5), 1996, p. 369.

to the tourism investments that it has made since the early 1980s. The number of visitors, which was 1.3 million in 1980, reached 5.4 million in 1990 and reached 31.4 million in 2016 (Table 1).

Especially in the last fifteen years, Turkey has begun to take place within the first ten countries in international tourist arrivals. Turkey was ranked 9th in international tourist arrivals in 2005. In 2016 Turkey climbed further, up from 9th place to 6th in terms of international tourist arrivals. In 2016 international tourist arrivals to Turkey decreased because of coup attempt and dropping the Russian military plane by Turkey. But in 2017 Turkey still completes the Top 10 in arrivals¹¹.

Table 1 – *Tourism movement towards to Turkey*

Years	Total number of foreign tourists	Tourism revenues billion (\$)	Spending per tourist (\$)
1980	1.288.060	326.654	253.6
1985	2.614.924	1.482.000	566.7
1990	5.389.308	3.225.000	621.3
1995	7.726.886	4.957.000	684.0
2000	10.428.153	7.636.000	764.3
2005	21.124.886	20.322.112	842
2010	28.632.204	24.930.997	755
2015	36.244.632	31.464.777	756
2016	31.365.330	22.107.440	705
2017	32.410.034	26.283.656	681

Source: The Ministry of Culture and Tourism, 2017¹²

Developments in the accommodation sector is one of the most important factors in the development of tourism in Turkey. In 2015 there have been 12.496 accommodation facilities in Turkey. 3.309 of them are certified by Ministry of Culture and Tourism and 9.187 of

¹¹ UNWTO, *Tourism Highlights*, cit.

¹² MCT, 2017, *Tourism receipts and expenditures* <<http://yigm.kulturturizm.gov.tr/TR,9851/turizm-istatistikleri.html>> (last access 10.06.2017).

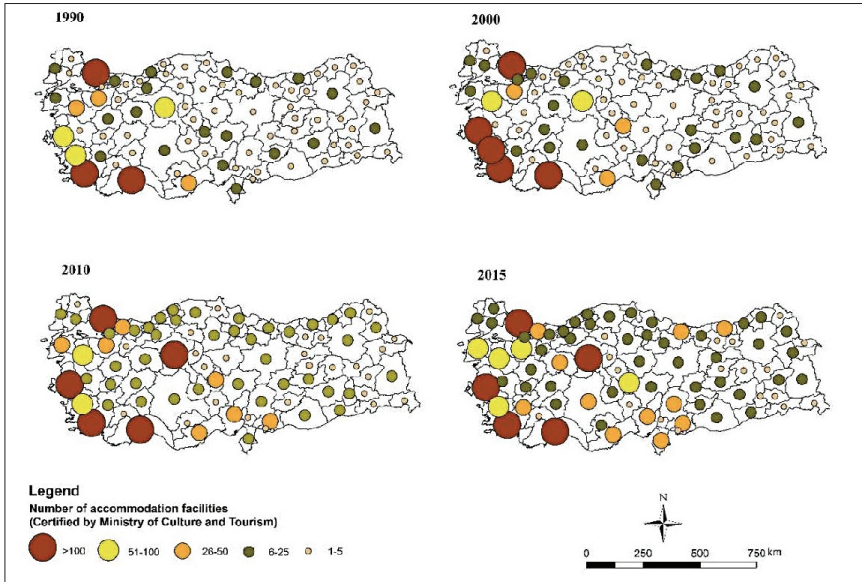


Figure 1 – *The change of accommodation facility certificated by Ministry of Culture and Tourism*

them are certified by the municipality. The total number of rooms was 628.619 in 2015. The total number of beds was 1.346.663 in 2015. Accommodation facilities are distributed unequally in Turkey. In 2015, 62% of the total accommodation facilities were located in the provinces of Antalya, Muğla, Istanbul, İzmir, Aydın and Ankara (Figure 1). These provinces are Turkey's most important mass tourism (sea-sun-sand) destinations except Ankara. Ankara is the capital city of Turkey and it is not located at the seaside. Urban hotels flourish in Ankara.

3.2. *The spatial spread of international tourism of Turkey*

Historically (and indeed at present), international tourism has been dominated by Europe, both as a receiving and as a generating region¹³. Historically and at present, international tourism of Turkey also has been dominated by Europe. This predominance reflects a number of factors including: close distance to OECD countries, transportation

¹³ S. WILLIAMS, *Tourism Geography A New Synthesis* (2nd ed.), Routledge, London and New York 2009, p. 58.

links, extensive provision of tourist accommodation and organisational frameworks such as travel agency. However a wealth of touristic attractions such as diverse coastal environments, major mountain zones, as well as historic or cultural heritage sites attract tourist from Europe to Turkey. In terms of international visitor arrivals in 2017, Turkey attracted 32.410.034 visitor arrivals. However there are marked spatial variations in the levels of international tourism. Figure 2 illustrates the pattern of international visitor arrivals in Turkey in 2017. This figure reflects the predominant tourist flow from Europe. Turkey also attracts foreign visitors from neighboring countries. Turkey attracted the highest tourists from Russia in 2017. 4.715.438 Russian tourists visited Turkey in 2017. Germany was the second tourist-sending country to Turkey in 2017. Iranian was the third and Georgia was the fourth tourist-sending country to Turkey in 2017. Bulgaria, United Kingdom and Ukraine sent more than 1.000.000 tourists in 2017. Iraq, Azerbaijan, Saudi Arabia, Greece and France sent over 500.000 tourists in 2017. Other European countries, Central Asian countries and Northern African countries sent over 200.000 in 2017 (Figure 2).

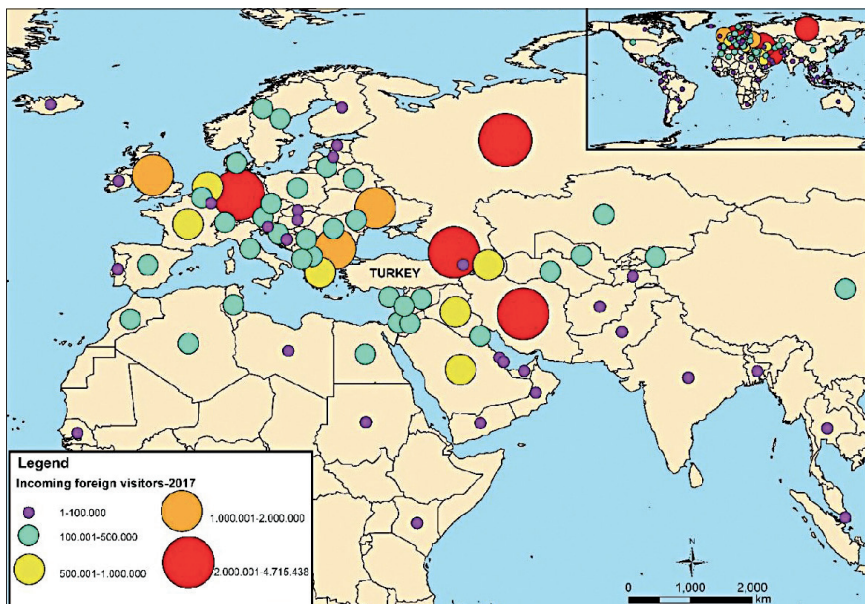


Figure 2 – The geography of international visitor arrivals in Turkey, 2017

In the 1980s, package-based coastal tourism reached Turkey¹⁴. In the 1990s tourism infrastructure, especially the accommodation sector improved in Turkey. Thus Turkey developed additional destinations as new markets for packaged tourism for Europe. Germany is the country that sent the most visitors in the last 25 years in Turkey. United Kingdom was the second tourists-sending country to Turkey. After the collapse of the Soviet Union in 1991, Turkey attracted more tourists from Russia and other old Soviet countries such as Georgia, Azerbaijan, Ukraine. Russia for the first time in 1998 was the third country sending tourists to Turkey. Since then, Russia has always been in the top three at tourist-sending countries rank. Turkey dropped the Russian plane which was violating the airspace of Turkey in 2016. Due to the tensions between Turkey and Russia, the Russian Government sent very few tourists in 2016. The government laid an embargo on citizens traveling to Turkey. After the improvement of the relations between the two governments, Russia sent 4,715,438 tourists in 2017. So in 2017, Russia climbed further, up from 8th place to 1st in terms of international tourist arrivals in Turkey (Table 2).

3.3. *The Impact of Distance International Tourist Movement to Turkey*

Tourism involves the movement of people through time and space. People move between their home and destinations. An understanding of tourist flows, and the spatial patterns of tourist movements between destinations and within a destination, can help tourism policy-makers, transport geographers, and the tourism industry itself provide better services and facilities to cater for the needs of tourists. Understanding the factors that affect tourist movement, such as distance decay, can help the industry to determine the optimum location of tourism attractions¹⁵.

Distance decay plays such an important role in understanding spatial interactions. The concept suggests that demand for activities varies inversely with the distance traveled or with increased time, money, or effort. Assuming that tourists are rational consumers and tourism supply is distributed evenly in space around a tourist generating area,

¹⁴ Ivi, p. 58.

¹⁵ B. MCKERCHER, A.A. LEW, *Tourist Flows and the Spatial Distribution of Tourists*, in A.A. LEW, C.M. HALL, and A.M. WILLIAMS (eds.), *A Companion to Tourism*, Blackwell Publishing, USA 2004, p. 36.

Table 2 – *Distribution of foreign visitors arriving in Turkey by country of nationality*

Nationality	1990	Nationality	2015	Nationality	2016	Nationality	2017
Germany	1.079.026	Germany	4.243.584	Germany	3.890.074	Russian Fed.	4.715.438
Romania	377.275	Russian Fed.	1.864.682	Georgia	2.206.266	Germany	3.584.653
U.Kingdom	351.458	U. Kingdom	1.757.843	U.Kingdom	1.711.481	Iranian	2.501.948
France	310.809	Georgia	367.338	Bulgaria	1.690.766	Georgia	2.438.730
Iranian	253.452	Bulgaria	1.621.918	Iranian	1.665.160	Bulgaria	1.852.867
Greece	227.709	Iranian	957.244	Ukraine	1.045.043	U.Kingdom	1.658.715
Poland	206.682	Netherlands	1.254.153	Netherlands	906.336	Ukraine	1.284.735
U.S.A	205.831	Iraq	107.968	Russian Fed.	866.256	Iraq	896.876
Austria	196.561	France	701.190	Azerbaijan	606.223	Netherlands	799.006
Hungary	172.357	U.S.A	434.991	Greece	593.150	Azerbaijan	765.514
Italy	156.342	Greece	584.840	France	555.151	Saudi Arabia	651.170
Netherlands	150.337	Ukraine	380.397	Saudi Arabia	530.410	Greece	623.705
Syria	112.716	Swedish	405.956	U.S.A	459.493	France	578.524
Swedish	110.204	Belgium	503.821	Iraq	420.831	Romania	423.868
Finland	104.321	Azerbaijan	411.652	Belgium	413.614	Belgium	419.998
Total Foreign Visitors	5.389.308	Total Foreign Visitors	36.244.632	Total Foreign Visitors	31.365.330	Total Foreign Visitors	32.410.034

 Source: MCT, 2018¹⁶

tourist demand declines with increasing distance. In this context, increasing distance is considered as a barrier to spatial interaction; overcoming distance requires access to time and often to economic means. Hence, the rational consumer is expected to choose the more proximate supply usually requiring least input of time and money.

¹⁶ MCT 2018, *Distrubition of Foreign Visitors Arriving in Turkey by Nationalities*, <<http://yigm.kulturturizm.gov.tr/TR-9854/sinir-giris-cikis-istatistikleri.html>> (last access 12.05. 2017).

The notion of this relationship is of course central to geography and thus, is sometimes labelled as the first law of geography. Accordingly, the number of interactions between two places decreases with an increasing distance, an effect known as the distance decay effect¹⁷. On the other hand distance is usually regarded as a disutility in most economic transactions but in the case of tourism there is often an interest in going the extra mile to see something new or exotic. Clearly, not all tourists are distance minimizers¹⁸. In this study simple linear regression is used to understand relationships between tourist demand and distance. The simple linear regression analysis was carried out using IBM SPSS Statistics 21 software. Countries sending tourists to Turkey in 2017 were evaluated in simple linear regression. The dependent variable is the number of tourists coming to Turkey in 2017. The independent variable is the distance from Turkey to each country which was sending tourists in 2017.

H_0 = Distance does not affect the number of tourists.

H_1 = Distance affects the number of tourists.

A scatter plot was made to show the relationships between distance and total foreign visitors in 2017 (Figure 3). According to SPSS output for scatterplot there is an inverse relationship between distance and number of visitors. As the distance increases, the number of foreign visitors decreases.

A simple linear regression analysis was performed to determine how the distance affected the number of foreign visitors. Regression analysis results are statistically significant [$F_{1,97}=5.406$, $p<0.05$). According to the analysis results The R^2 value is 0.053 (Table 3). According to this value, the variance of 53% of the number of foreign visitors depends on the distance. H_1 hypothesis is recognized, according to this: distance affects the number of tourists.

¹⁷ D.K. MÜLLER, *The Attractiveness of Second Home Areas in Sweden: A Quantitative Analysis*, in «Current Issues in Tourism», 9(4-5), 2006, p. 336.

¹⁸ G. WALL, G. MATHIESON, *Tourism: Change, Impacts and Opportunities*, Pearson/Prentice Hall, Harlow 2006, p. 42.

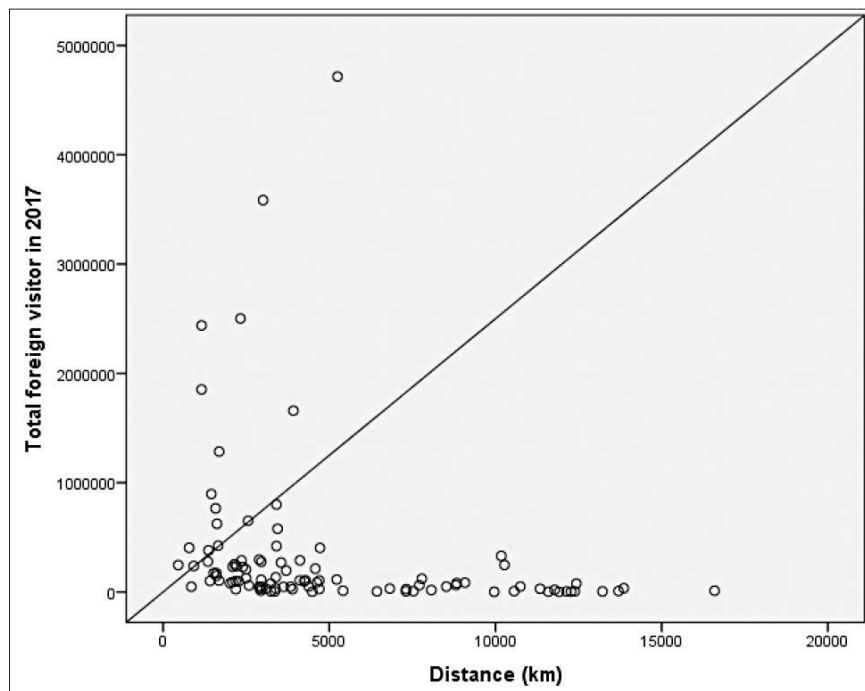


Figure 3 – Scatterplot
Dependent Variable: Total foreign visitors in 2017

Table 3 – Regression Analysis Results

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.230 ^a	.053	.043	699461.102
a. Predictors: (Constant), Distance (km)				
b. Dependent Variable: Foreign visitors in 2017				

4. *Conclusion*

Turkey is a much newer international destination. Tourism began to grow in the 1980s in Turkey. Levels of international tourism were minimal in the 1980s. The number of visitors, which was 1.3 million in 1980, reached 5.4 million in 1990 and reached 38.6 million in 2017. In the Top 10 in arrivals Turkey moved down to tenth place (data still pending for 2016) following the security incidents and failed coup last year. In terms of receipts, Turkey moved down five places to 17th position. The majority of tourists in Turkey originated in Western Europe, with as many as 60 per cent of arrivals coming from these countries. Russia, Germany, the UK, the Netherlands, Austria and Ukraine were especially important sources. European nations (led by the Germany, UK, and Netherlands) contributed a further 6.042.374 visitors in 2017. Russia contributed 4.715.438 visitors in 2017. Neighboring countries (led by the Iran, Georgia and Bulgaria) contributed a further 13.587.090 visitors. But the rates of use of accommodation facilities of neighboring countries are low. For this reason neighboring countries provide less contribution to tourism. Second, Turkey tourism illustrates both sectoral and spatial imbalances. In 2017, just over 25,6 per cent of foreign visitors to Turkey came from just two countries (Russia and Germany) and they revealed a clear preference for a particular style of low-cost holiday centred on sun, sea and sand. In Turkish tourism there are significant concentrations of international visitors in the Mediterranean coastal regions and the two off-shore regions (the Mediterranean and the Aegean), but, with the exception of Ankara, significant levels of under-development in the Turkish interior and northern regions.

Simple linear regression is used to understand the factors that affect tourist movement towards Turkey. The results of linear regression analysis show that distance affects the number of tourists in Turkey, so the distance and the number tourist flows have a strong relationship.

The demand for tourism in a particular destination is one of the key factors that determine the destination's competitiveness and accurately assessing the future tourism. This study shows us that distance decay affects Turkey's tourism demand. Today, distance decay is largely forgotten in the tourism literature. But it should receive more attention than it does, for the underlying assumption of decaying demand over time still holds true. Spatial movement of tourists affects tourism development, policy, and transport planning.

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