SATISFACTION MAPS FOR THE EUROPEAN AIRPORTS

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Abstract  
It is known that air transport provides shorter duration of transportation. The shortening of the transport time increases the average time in destination where tourists spend time. Besides, distant points on earth are connected to each other by airway transport and thus tourism market has expanded in the world. Airports provide the physical and social environment in which all parties come together in the production of air transport services. On the other hand, airports represent the prestige of the country. Passenger satisfaction on airport services is an important first step for holiday satisfaction of holidaymakers because airports are the start and the end points of journeys. Therefore, airports may have a significant influence on the passengers in order to support future tourism and commercial activities in the country concerned. For this reason, it is important for airport management to assess the level of passenger satisfaction in terms of airport services. In this study, maps are driven according to the general, terminal settings, queuing and cleaning satisfaction factors in airports in European countries. Spatial correlations between some airports are observed in terms of four satisfaction types at airport. Since there is a lot of airports in European countries, the first 100 airports receiving the highest number of passengers is chosen for this study. Passengers’ satisfaction data were obtained from Skytrax. In conclusion, a spatial review of satisfaction observed at airports will contribute to the evaluation and comparison of airports in Europe.  

Key words: European Airports, Satisfaction Maps, Skytrax, Terminal Cleaning, Queuing Times, Terminal Seating Facilities.
Introduction
Transportation is a system that makes a significant contribution to the development of societies in terms of social, cultural and economic. Also, transportation is one of the most important factors affecting tourism phenomenon (Yavuz, 2018) since it makes the bridge to the tourism demand between the points of origin and destination (Sarılgan, 2016). Therefore, transportation enterprises are the most important component of the tourism sector. Air transportation is one of the most preferred types of transportation and it provides the most important contribution to the development of tourism. An important innovation is the time saving factor that air transport has brought. The shortening of transportation time increases the average time spent by tourists in destination. In addition, since long-distance points on the world can be connected to each other by air transportation, thus, tourism market are expanded in the world (Tan, 2008). At the same time, air transportation has created the development of the third age tourism (Saatçioğlu, 2016). Khan and et al. (2017) concluded that air transportation has a significant impact in creating tourism demand. Bieger et al. (2006) and Dimitriou (2018) underline the relationship between tourism and air transport and they conclude that any changes in aviation efficiency are closely linked to tourism development. Also, Dimitriou and Aparicio (2018) state that new forms of tourism and new destinations influence air transport demand. On the other hand, airports provide the physical and social environment in which all parties come together to produce air transport services (Kuyucak, 2007). Today, airports are considered as multifaceted service units and they are constructed to serve this purpose (Tan, 2008). Due to the rapid increase in the number of passengers traveling internationally in recent years and also increase in private and public sector investments in air transport in many countries, airports have gained huge importance in the 21st century.

The airports according to services consist of two parts: flight line (air side) and terminal line (land side) in order to ensure relation between air and ground modes. Passenger terminals, as a gateway to the country, provide places for check in, security and customs checks as well as baggage procedures, waiting and transfer facilities, shopping and other facilities between flights. Technically, terminals are areas where the physical and routine needs of the visitors are addressed. In the communicative context, the terminals are usually the first point where the first or the last impression of the passenger arriving in that country or city. As the result of air transport liberalization, airports are no longer a simple transportation terminal and they have become a centre fulfilled the most basic needs of tourists (car rental, shopping, restaurant, cafeteria, bar, bank, exchange offices, support services, etc.) (Tan, 2008). The desirability of increasing commercial income at airports brings about the quality of service that constitutes the basis of tourism (Tan, 2008). On the other hand, since airports are the starting and ending point of travel of tourists, it is the first place where tourists will get their first impression of the holiday experience in the relevant destination and thus the satisfaction of airport services is an important part of the satisfaction of holiday experiences. Moreover, airports represent the prestige of countries (Douglas et al. 2001). Contemporary airport terminals should be user-oriented, functional and renewable (Demir and Terzi, 2012). For these reasons, some basic functions in airport such as passport and security checks, baggage claims and other shopping and entertainment services should be effectively and efficiently planned. Thus, effective planning of basic function for basic and compulsory services will minimize the time spent by tourists and it increases the amount of spending per person (Rendeiro and Cesar 2006).

With the impact of globalization, the most important developments in airline transportation can be divided into two groups and these are technological and structural changes. As a result of structural changes taking place in particular differs expectations for the quality of service of passengers. Therefore, passengers’ perceived quality of service and satisfaction with airport operations are also significantly affected (Okumuş and Asıl, 2007). On the other hand, rapid improvements in travel comfort and technology increased passenger expectations for airport experience (Chen and Chang, 2005). The passengers make a choice between airports taking into account the airport service which
includes all activities from departure to arrival. For this reason, many studies have been conducted in this area to understand the general satisfaction level of passengers at different airports and also the degree of loyalty of the tourists to the destination. For example, İşıldak and Tunca (2018) identified factors affecting customer satisfaction in airport services. These are the factors that affect customer satisfaction: terminal staff, terminal environment and finding their way, terminal facilities, reliable and accurate service, terminal conditions, demand and instant service, advantage and convenience, internet access and terminal physical functionality. Chao, Lin and Chen (2013) emphasized the importance of the physical properties of the terminal to improve service quality in the Kaohsiung International Airport. Bogicevic et al. (2013) conducted research at 33 airports. The findings show that airport cleaning is key to passenger satisfaction. Park and Jung (2011) have done a research on airport service quality perceptions of transfer passengers in Incheon International Airport, and they found that passengers who are satisfied with the quality of airport service are more likely to use the airport again and recommend to other passengers.

Satisfaction and dissatisfaction perceived by passengers or tourists are correlated to the service quality and customer satisfaction in the airport. Therefore, making necessary plans and strategies by knowing which services affect customer satisfaction is an important step in ensuring customer satisfaction (Çolak and Doğan, 2015). In addition, overall satisfaction has a positive effect on intention to recommend the airport to others. For airport management, it is necessary to develop various strategies by considering services of the airport where passengers are not satisfied (Kim et al. 2016).

Aviation is one of Europe's most competitive sectors. Airports are a vital part of European aviation system and airports are increasingly important to economy. Europe has a strategic position as a “hub” for the world for historical and geographical reasons. European airports faced with intense global competition nowadays. Over the next 20 years, half of the world's new air traffic is expected to be located either in or out of the Asia Pacific region. And also over the next five years, air transport growth will be driven mainly by regions like Asia Pacific, the Middle East and Latin America. Air transport growth for the next five years will be driven mainly by regions such as Asia Pacific, the Middle East and Latin America. Moreover, European airports facing two major challenges: these are capacity and quality (Euro.Com., 2011).

Considering these realities, the aim of the study is to investigate the passenger satisfaction in the European Airports. As a sample, the first 100 airports receiving the highest number of passengers in Europe is chosen. In this context, maps are drawn for terminal seating, terminal cleaning, queuing times and overall satisfaction of passengers in European Airports. Passengers’s satisfaction data were taken from Skytrax. Skytrax has been conducting an airport survey since 1999. Skytrax collects passenger reviews of international airports and airline services via the website (www.airlinequality.com/skytrax-research/). The results of this study are thought to contribute to the evaluation and comparison of all airports together.

**Method: Mapping**

Mapping is a graphic representation of the considered variable to gain information. In this study, we use MapInfo program to draw maps. Inverse Distance Weighted algorithm was used for interpolation. Low levels are demonstrated by dark blue and soft blue colors. High levels are shown bright red and orange tones; medium level is marked in yellow.

**Findings**

Maps for terminal cleaning, terminal seating, queuing times and overall satisfaction according to the data obtained from passengers’s vote in airports, are given Figure 1, 2, 3 and 4. It is seen form Figure
1 for terminal cleaning satisfaction that only four airports, Porto International, Zürich, Gothenburg-Landwetter and Stavanger, with highest level of satisfaction for terminal cleaning are observed in the Europe. It is known that the number of passenger and also total air transport in these four airports are generally less than the others. On the other hand, the lowest satisfaction for terminal cleaning is observed in Heraklion Airport which is second busiest airport in Greece, serving over 5 million international passengers annually making it Crete’s main gateway (Papatheodorou and Arvanitis, 2009).

Figure 1. The terminal cleaning satisfaction in the European Airports receiving the highest number of passengers

The other satisfaction factor is the terminal seating capacity, its map given Figure 2. Almost all Europe airports exhibit inadequate satisfaction in terms of terminal seating capacity. Bordeaux, Heraklion, Nantes Atlantique, Luton, Pisa, Berlin Schoenefeld and Berlin Tegel airports have the lowest seat capacity. Only Izmir Adnan Menderes Airport is seen as the highest satisfaction according to terminal seating capacity.
Figure 2. Terminal seating capacity satisfaction of the European Airports receiving the highest number of passengers

At the most of European Airports, passengers’ queuing times satisfaction level is not high (see Figure 3). While passengers are not satisfied at Gran Canaria, Lyon and Paris Beavuvals, the highest satisfaction in terms of queuing times are observed in the Ekaterinburg Koltsovo and Gothenburg Landvetter Airports.

Figure 3. Queuing times satisfaction of the European Airports receiving the highest number of passengers
Overall satisfaction depends on many factors as stated in Paramonovs et al. (2015) and Geng et al. (2016) and it also includes terminal cleaning, terminal seating capacity and queuing times satisfactions. In terms of overall satisfactions, Ankara Esenboğa, Bilbao and Porto airports are the most satisficed airports as seen in Figure 4.

According to all satisfactions types, two airports in Berlin have remarkable worst scores. Generally, overall satisfaction of the European biggest airports is low in west and south of the continent. As seen in Figure 1, 2, 3 and 4, overall satisfaction map is similar to the terminal seating capacity and the queuing times satisfaction maps. Passengers in Airports of France, Italy and England are not satisfied in terms of cleaning, terminal seating capacity and queuing time factors and thus, these airports are needed to improve services. Satisfaction depends on many factors. Thus, these factors should be studied in detail.

Conclusion

In order to achieve high levels of passenger satisfaction, many performance indicators are to take into account by airport management. Among these indicators, cleaning, terminal seating capacity and queening are every important factors. Additionally, baggage access time is an important issue that can increase passenger satisfaction levels at airports (Ofiac and Yumurtaci, 2014). Park and Jung (2011) observed that airport service quality would raise the level of passengers’ satisfaction, value perceptions, and airport image formation. Also, Al-Refaie et al. (2014) examine various factors that affect passenger’s overall satisfaction and loyalty in Jordan Airport. Fuchs and Weiermair (2004) explain that, many tourism destinations regard tourist satisfaction as one of the most important sources of competitive advantages. According to the Buhalis (2000), One of the important strategic management goals for destinations is to maximize tourist satisfaction. Considering the fact that European air transport system is facing with global competition, the importance of increasing passenger satisfaction in European airports is understood.
In this paper, overall satisfactions level of the European Airports receiving the highest number of passengers is studied with maps. It is found that all satisfactions are correlated. In Europe, the airports in Berlin are unsatisfied in terms of terminal cleaning, terminal seating capacity and queuing time factors. Airports in France, Italy and England, which all receive more tourist than the others, present low levels of passenger satisfaction. Therefore, there is need for further research to increase the level of satisfactions of these airports. In light of the findings, managerial implications and recommendation for further research are provided.

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