INVESTIGATING WHICH SERVICES ARE EFFECTIVE ON RECOMMENDATION OF THE AIRLINE COMPANIES

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ABSTRACT

This study aimed to determine which services provided by airlines had an influence on recommendations. The authors collected passenger scores from the years between 2014 to 2019 concerning the top 10 airline companies of 2019 from the website www.AirlineQuality.com, which is the site most commonly used by passengers to evaluate airline companies and airports worldwide. In total, we analyzed 5512 ratings. Binary logistic regression was applied to test the hypothesis. According to the results, the most influential criterion is value for money. The second most important criterion is customer relations. Seat and cabin space and meals and beverages follow customer relations. The least important criterion related to recommendations is in-flight entertainment. Previous studies were conducted using surveys. The present study used online ratings to determine airline attributes with the most and least influence on recommendations.

INTRODUCTION

Businesses operating in the airline industry, which has accelerated with the introduction of private airlines since the early 1980s (Kos Koklic et al., 2017), are now facing difficulties such as increasing costs, fluctuations in demand, and quality expectations (Baker, 2013). In addition to these difficulties, the

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intense competition in the sector reveals the importance of passengers' perception of service quality. Understanding the factors that affect passengers' preference for an airline is an indicator that enables companies to take advantage of the competition (Lin & Huang, 2015; Namukasa, 2013). The companies that understand these factors may provide more suitable goods and services to satisfy passengers and make them loyal. Eventually, loyal passengers will be an important advantage in terms of competition. Although price is one of the most important of these factors, research shows that service quality is also a vital factor (Bubalo & Gaggero, 2015; Kim & Lee, 2011; Suki, 2014). Tangible features such as furnishing and seat comfort and intangible features such as security, cleaning, and customer service, are also important in quality perception of the provided service.

The authors observed that the academic research about the products and services offered by the airline companies was mostly conducted with SERVQUAL-based surveys (Aydın & Yıldırım, 2012; Başfırıncı & Mitra, 2015; Chou et al., 2011; Du et al., 2012; Farooq et al., 2018; Ganiyu, 2017; Hapsari et al., 2016; Huang, 2009; Hussain et al., 2015; Hussain, 2016; Jiang & Zhang, 2016; Kağnıcıoğlu & Özdemir, 2016; Leong et al., 2015; Pakdil & Aydın, 2007). As another observation, travel review and rating sites focus mostly on accommodation businesses (Banerjee & Chua, 2016; Bayram, 2017; Cezar & Öğüt, 2016; Doğan, 2017; Hu & Chen, 2016; Min et al., 2014; Neirotti et al., 2016; Pacheco, 2016; Raguseo et al., 2017; Sparks et al., 2016) and food and beverage businesses (Bertan, 2016; Cheng & Ho, 2015; Dalgıç et al., 2016; Doğan et al., 2016; Erdem & Yay, 2017; Eren & Çelik, 2017; Kim et al., 2016; Taştan & Kızılcık, 2017; Zhu et al., 2018). More people use these types of websites to share their experiences and opinions about companies by writing reviews or scoring different criteria. The influence and the importance of other people's opinions on purchase, re-purchase, and recommendation behavior have been investigated and proved by many scholars (Chakraborty & Bhat, 2018; Cheong et al., 2020; Filieri et al., 2018; Jalilvand & Samiei, 2012; Jimenez & Mendoza, 2013; Kudeshia & Kumar, 2017; Lin et al., 2011; Thomas et al., 2019; Zhang et al., 2014).

It was seen that research related to online reviews and ratings for airlines was very limited (Bogicevic et al., 2017; Brochado et al., 2019; Güngör et al., 2019; İbiş & Batman, 2016; Lacic et al., 2016; Siering et al., 2018a; Stamolampros et al., 2018; Yao et al., 2015). Using online reviews and ratings as data might help us to understand passengers' general overview regarding the airlines' services. It also might be possible to determine the most important factor(s) influencing passengers' airline recommendations. In this context, the purpose of the present study was to determine the effect

of airlines' ratings according to five criteria on recommendations for the top 10 airlines in 2019 selected by the website www.WorldAirlineAwards.com, which has been announcing the top 100 airlines of the year based on the passengers' votes since 2012 (World Airline Awards, 2020). Even though the website asks the users if they recommend the airline to others, scores given to the specific criteria may have a significant effect on the recommendation, because these scores represent the level of satisfaction. The authors claim that if the passengers are satisfied with the specific criteria related to the goods and services provided by the airlines, they will recommend the airline.

LITERATURE REVIEW

Online Customer Reviews and Ratings

According to the report entitled "Digital in 2020" prepared by the research company *We Are Social*, as of January 2020 the number of Internet users worldwide reached 4.54 billion. This figure corresponds to more than half of the world's population (59%). In the same report, it is stated that the number of social media users worldwide constitutes 3.8 billion people which is equal to 49% of the world's population (We Are Social, 2020). Consumers share their experiences with any product or service on the Internet. These sharing platforms, where word-of-mouth communication takes place electronically, are online customer commenting and rating websites (Siering et al., 2018a). These online customer comments and evaluations make up the content of the website, consisting of the opinions and ideas of the customer experiencing any goods or services. These comments and assessments are considered a reliable source of data and provide information and recommendations on goods and services from a customer perspective (Rose & Blodgett, 2016). These comments and assessments give consumers insight into real users' experiences but are also seen as an important monitoring tool for businesses (Lee et al., 2011). Research reveals that 24,000 new comments or ratings per minute are found on these sites. Some 85% of Internet users rely on these comments and scores. One-third of travelers write reviews, score goods and services on these websites, and regularly visit them. At this point, it is seen that these websites are the most effective source of information for the purchasing decision (Eslami et al., 2018; Gretzel & Yoo, 2017; Guo et al., 2017; Hong et al., 2017; Siering et al., 2018b; Stringam & Gerdes, 2010).

Online consumer reviews and ratings are particularly important because the quality of tourist goods or services cannot be understood

without experiencing them (Book et al., 2018; Doğan et al., 2016; Güngör et al., 2019; Park & Nicolau, 2015; Xie et al., 2017). According to the "Travel Consumption Report" published by Deloitte (2015) based on a survey of 40509 people, 42% of consumer review commentary sites, 31% review the website of the travel company, and 21% review the website of online travel companies. Travelers tend to prefer high-rated accommodation, transport, travel, and food and beverage businesses (Schuckert et al., 2016). On the other hand, it is stated that the comments and scores on these websites contain more up to date, more detailed, and more accurate information (Stringam et al., 2010). These reviews and ratings can be more helpful and insightful compared to traditional information sources (Mellinas et al., 2019), and they are recognized as the second most frequently used information source by Internet users (Bigne et al., 2020). Moreover, scholars claim that online ratings are relatively objective, considered numerical evidence of different attributes of a service or product, and reflect the extent of consumers' satisfaction (Hong & Pittman, 2020; Zhu et al., 2019). These ratings, which are scored on a scale between one and five, represent a summary of a consumer's opinion about a product or service that might encourage other consumers to make a purchase decision (Hong & Pittman, 2020), help them to gather information about different attributes in a utilitarian nature, and are used to evaluate companies' products and services (Thuy Tran et al., 2019a). Thuy Tran et al. (2019b) also found that online ratings have a significant effect on continuance intention and presented *"the positive perceived usefulness and attitude towards the continuous usage of the relevant company"* (p. 315). Moreover, the reviews and ratings on these websites provide various types and amounts of data for scholars. These data can be used with either quantitative or qualitative techniques to gain insights into consumers' decision-making process and companies' performance (Phillips et al., 2020).

The main websites that include travelers' reviews and ratings on travel are TripAdvisor, Yahoo Travel, Igougo, HolidayCheck, and Lonely Planet (Browning et al., 2013). The websites where airlines are evaluated include Airline Ratings, Airline Quality, TripAdvisor, Flight-Report, and Trust Pilot.

Airline Services and Recommendation

According to the product classification formulated by the United Nations, the transportation sector within the service industry is based on the displacement of humans or human belongings. It is defined as the sector that enables the transportation of people and manufactured goods or

services from one place to another (Doğan & Beller Dikmen, 2018a, p. 758; 2018b, p. 25).

Air transportation, which took on a commercial dimension after World War II, is the realization of transportation, as mentioned above, by air vehicles. Apart from revenue-based transport, flights for individual purposes are also considered within this scope. Air transport is considered a sector that is influenced by national security and public interests and that has an international aspect compared to other sectors. Globalization, technological developments, prosperity, the development of international trade, the development of airline transport networks, and increased tourism opportunities led to rapid growth in air transport in the 20th century (Bahar, 2018, p. 26).

The Service Quality Scale (SERVQUAL), developed by Parasuraman et al. (1991, 1994a, 1994b), has been used by many researchers to date. In the research conducted on airline companies, it was determined that the dimensions of the scale were concrete features, interest/relevance, reliability, intervention to problems, and safety (Wang et al., 2011, p. 433). The tangibles among these dimensions are physical assets such as footrests, the distance between seats, magazines, food and beverage types, pillows, blankets, sleeping goggles, cleaning of airplanes and toilets, in-flight entertainment (such as film, music, and game facilities), employee behavior as a measure of service quality, the technical components of the aircraft, and the offices of the airline company (Kim & Lee, 2011; Nadiri et al., 2008; Suki, 2014). Ali et al. (2015) specified the general condition of the aircraft, the quality of food and beverage services, seat comfort, and general cleaning factors among the physical features of the airline.

Furthermore, different factors have been identified in studies conducted by various researchers to determine passenger satisfaction with airlines. Gourdin (1988) stated that price, security, and punctuality are the three dimensions of airline service quality. Ostrowski et al. (1993) noted the comfort of seats, food and drink, and the punctuality of flights. Truitt and Haynes (1994) stated that the cleanliness of seats, flight procedure, punctuality of flights, handling of food and beverages, and dealing with passenger complaints are essential factors. Nadiri et al. (2008) determined that the physical characteristics of the airline are essential factors for passenger satisfaction and intention to buy again. Ng et al. (2011) mentioned flight services such as the attendants and cabin supervisor, while Kim and Lee (2011) stated that creating fast solutions with particular features has an impact on passenger satisfaction. Wu and Cheng (2013)

highlighted the importance of eleven factors: cleanliness, problem-solving skills, general management, personnel expertise, comfort, safety and security, physical features, waiting time, convenience, value, and access to information. Suki (2014) determined that the particular characteristics of the airline had a positive and direct significant effect on passenger satisfaction, while Farooq et al. (2018) listed the service provided by the staff and the particular characteristics of the airline.

Additionally, if the concrete features of the airline and value for money are sufficient to ensure passenger satisfaction, the passenger will continue to choose the airline and recommend it through social networks even if the ticket prices of another company are more favorable (Ali et al., 2015; An & Noh, 2009; Bejou & Palmer, 1998; Chiou & Chen, 2010; Kos Koklic et al., 2017; Mohsan et al., 2011; Namukasa, 2013; Park et al., 2004; Suki, 2014). Brochado et al. (2019) conducted content analysis on a total of 1200 reviews for six different airline companies on TripAdvisor and concluded that the essential services are those offered by the airline during the flight (in-flight entertainment, food, drinks, etc.) in terms of value for money.

On the other hand, loyalty, which is defined as "the continuous repurchase and use of a product or service in the future with deep commitment" and which has a direct positive relationship with customer satisfaction, is examined as behavioral loyalty and attitude loyalty. Behavioral loyalty includes not the only repurchase but also less price sensitivity, a better alternative, and recommending it to others (Akamavi et al., 2015; Amin et al., 2012; Jahanshahi et al., 2011; Kasiri et al., 2017; Kim et al., 2013; Liu et al., 2011, Noyan & Gölbaşı Şimşek, 2014; Nyadzayo & Khajehzadeh, 2016; Pan et al., 2012; Rahman & Ramli, 2016; Srivastava & Kaul, 2016; Zakaria et al., 2014). An important indicator of behavioral loyalty is recommending a satisfactory good or service (Bandyopadhyay & Martell, 2007; Cheng, 2011). Passengers who are satisfied with the airline's services are more likely to spread positive opinions about the airline company and recommend it (Shah et al., 2020; Suki, 2014).

As mentioned above, different factors can impact passengers' satisfaction leading to behavioral loyalty, which is their recommendation of the airline company. The authors aimed to identify the level of the impact of the factors that are provided on the Airline Quality website by using passengers' online scores. In this context, the hypotheses were determined as follows:

H$_{1a}$: The scores that show the satisfaction level of the passenger given for *the overall value-for-money criterion* have an impact on their recommendation of the airline.

H$_{1b}$: The scores that show the satisfaction level of the passenger given for *the seat space and cabin space criterion* have an impact on their recommendation of the airline.

H$_{1c}$: The scores that show the satisfaction level of the passenger given for *the customer services criterion* have an impact on their recommendation of the airline.

H$_{1d}$: The scores that show the satisfaction level of the passenger given for *the in-flight entertainment criterion* have an impact on their recommendation of the airline.

H$_{1e}$: The scores that show the satisfaction level of the passenger given for *the meals and beverages criterion* have an impact on their recommendation of the airline.

The effect of independent variables on recommendation was analyzed within this scope.

METHODOLOGY

The research question was determined as "What is the level of effect of the scores given to various criteria on the same website for the recommendation of the airline for the top 10 airlines of 2019 on www.AirlineQuality.com?" The passengers create a profile for themselves on this website to evaluate the airline companies' attributes and services by writing detailed reviews or by giving scores between 1 and 5 for different criteria provided by the website. These criteria were overall value for money paid, seat space and cabin space, customer services, in-flight entertainment, meals and beverages, ground services, and Wi-Fi connectivity. Because there were too many missing values for the last two criteria, which means many users did not rate them, these criteria were excluded from the analysis.

Sample of the Study

There are different airline review and rating websites on the Internet such as AirlineRatings.com, AirlineQuality.com, and Flight-Report.com. AirlineRatings.com contains limited numbers of ratings and Flight-Report.com does not provide users' ratings; it provides only reviews. In this case, AirlineQuality.com was used as the data source because it is the sub-

initiative of Skytrax, the oldest airline evaluation system, established in 1989. The website provides reviews and ratings regarding the services of airlines, airports, and lounges. Passengers have been sharing their opinions about airlines and scoring the services since 2010.

Since all the scores on that website are difficult to collect due to time constraints, we chose convenience sampling as a non-random sampling method. In convenience sampling it is the researcher's judgments that determine a non-random sampling method in which the sample is to be selected from the universe. With inconvenience sampling, data are collected from the universe in the easiest, fastest, and most economical way. In this respect, the authors determined the scores given to various criteria between January 1, 2014 and December 31, 2019, for the top 10 airlines in 2019. The airlines are listed below (World Airline Awards, 2019):

1. Qatar Airways
2. Cathay Pacific
3. Singapore Airlines
4. Emirates
5. All Nippon Airways
6. Lufthansa
7. Qantas
8. Thai Airways
9. Ethiad Airways
10. EVA Air

Data Collection Method and Tool

The data were collected manually between August 25 and September 5, 2020. The oldest score for the criteria of the above airlines was given in 2014. An evaluation form was created to collect the data manually. Information about the user's year of travel, month, class of travel, and ratings for the criteria were recorded on these forms. In total, 5784 scores for ten airline companies were collected, but some users did not score one or more criteria, so missing data were excluded from the analysis and a total of 5512 scores were analyzed.

Variables

Accordingly, the dependent variable was whether users recommend the airline or not, and the independent variables were value for money, seat and cabin space, customer service, in-flight entertainment, meals, and beverages. The dependent variable was identified as recommended and not

recommended. In this context, the non-referral behavior, which is no recommendation, was coded as 0 (zero) and the referral behavior, which is recommendation, as 1 (one). The independent variables value for money, seat space and in-cabin space, customer service, in-flight entertainment, and food and beverages were scored between 1 and 5.

Data Analysis

Binary logistic regression analysis was used to test the hypotheses determined for the study since the dependent variable had two categories as "yes" and "no". Logistic regression analysis, also known as the logit model, is used in studies in the field of medicine. However, it is an advanced regression method that has been used in social sciences in recent years. Logistic regression analysis is used when the dependent variable consists of two- or multi-level categorical data, and the cause-and-effect relationships between the dependent variable and independent variables are examined (Arabameri et al., 2019).

Logistic regression analysis is a type of regression analysis, but also it is a differential analysis technique. In this context, there are three important differences from regression analysis:

- While the dependent variable is numerical in regression analysis, it is a discrete value in logistic regression analysis.

- In regression analysis, the value of the dependent variable is estimated and, in logistic regression, the probability of one of the dependent variables is estimated.

- In regression analysis, it is necessary to have multiple normal distributions of independent variables. At the same time, no conditions are required for the distribution of independent variables in order to apply logistic regression.

Binary logistic regression analysis is based on the probability ratio. The probability ratio compares the likelihood that an event will occur and the likelihood that it will not. In the present study, the non-referral behavior was 0 (null) and the referral behavior was 1 (one). The binary logistic regression model describes the relationship between a binary outcome variable and one or more predictor variables (Fagerland & Hosmer, 2012:447).

RESULTS

As mentioned above, binary logistic regression analysis was performed to test the hypotheses of the study. The first test to be performed when performing this analysis is the Hosmer–Lemeshow test. The goodness of fit of the model is a measure of the effectiveness of the model created to explain the dependent variable. The Hosmer–Lemeshow test was used as a measure of goodness of fit of the model. Chi-square was 17.902 and the p-value was 0.472. The significance level of the Hosmer–Lemeshow test was higher than 0.05, indicating that the model is appropriate for the data (Cavagnaro et al., 2016, p. 139; Force et al., 2018, p. 436; Zaidan, 2017, p. 257). The p-value is significant since it is 0.295> 0.05. Thus, the model is suitable for performing logistic regression analysis.

Table 1. *Classification Table*

Observed		Estimated		
		Recommendation Behavior		Accurate
		Recommendation	Non-recommendation	Estimate %
Recommendation Behavior	Recommendation	1582	0	100.0
	Non-recommendation	3930	0	0.0
General %				73.1

According to Table 2, 100% of the model was able to predict the recommendation behavior of the users correctly. In general, the correct classification rate of the model is 73.1%. After determining the suitability of the proposed model for logistic regression analysis according to the data obtained from the participants, it was necessary to look at whether the independent variables were significant in explaining the dependent variable. The omnibus test, which measures the significance of model coefficients, was performed to test the difference of parameters from zero.

Table 2. *Omnibus Test of Model Coefficients (Significance of Coefficients)*

Step 1		Chi-Square	sd	Significance (p)
	Step	4318.098	5	0.000
	Block	4318.098	5	0.000
	Model	4318.098	5	0.000

Significance values are less than 1%; logistic regression coefficients are not equal to zero at the same time. Thus, the model is statistically significant at 1% level (Wan Daud et al., 2011, p. 211).

After finding the model coefficients were significant, it was necessary to look at the percentage of changes in the dependent variable

explained by the independent variables proposed in the model. According to Table 4, the increase or decrease in the dependent variable in the model is 54.3% according to Cox–Snell and 77.8% according to Nagelkerke. In other words, 77.8% of users' behavior regarding their recommendation of the airline can be explained by the independent variables in the model (value for money, seat space and cabin space, customer service, in-flight entertainment, and meals and beverages). Therefore, it can be concluded that 22.2% of different independent variables affect the recommendation or non-recommendation behavior.

Table 3. *Model Summary Table*

Step	-2 Log Likelihood	Cox and Snell R Square	Nagelkerke R Square
1	2290.271	0.543	0.778

The last table to look at in logistic regression analysis is the parameter estimation table. Table 4 shows the parameter estimation obtained from the model proposed to measure the effects of independent variables on the behavior of recommending or not recommending the airline as a dependent variable.

Table 4. *Parameter Estimation Table*

	(β) (Reg. Coef.)	S.E. (Standard Error)	Wald Statistics	sd	Significance (p)	Odds Ratio Exp (β)
Overall Value for Money	1.408	0.062	507.552	1	0.000	4.087
Seat and Cabin Space	0.481	0.052	84.499	1	0.000	1.617
Customer Relations	0.558	0.049	130.324	1	0.000	1.747
In-flight Entertainment	0.257	0.052	24.647	1	0.000	1.292
Meals and Beverages	0.368	0.051	51.802	1	0.000	1.446
Constant	-9.677	0.307	991.138	1	0.000	0.000

The β values (regression coefficient) in Table 4 show the effective coefficient of each independent variable. Wald statistics are used to test whether each independent variable is significant in the model. If the Wald statistic exceeds 2, it is an indication that the variable is significant. The values in the Exp column in the table show the odds ratios of the independent variables. Exp shows the change in the level of superiority if the other variables in the model are kept constant, and the relevant variable will be increased by 1 unit. To summarize the interpretation of the odds ratio briefly: if the odds ratio is greater than 1, then A and B are associated (correlated); conversely, if the odds ratio is less than 1, then A and B are negatively correlated, and the presence of one event reduces the odds of the other event (Park, 2013, p. 161; Sarkar & Midi, 2010, p. 481; Tessema Zewude & Meskele Ashine, 2016, p. 6; Zhang et al., 2013, p. 124).

According to Table 4, the independent variables (value for money, seat space and cabin space, customer service, in-flight entertainment, and meals and beverages) have an impact on whether the airline is recommended. At this point, the hypotheses H_{1a}, H_{1b}, H_{1c}, H_{1d}, and H_{1e} determined within the scope of the study were supported.

According to the table, overall value for money is the most important criterion for recommendation. The second most important criterion is customer relations. Seat and cabin space and meals and beverages follow customer relations. The least effective criterion influencing the recommendation is in-flight entertainment. According to these results, overall value for money had the most significant impact on recommending the airline among the five criteria and the in-flight entertainment had the lowest impact. This result supports the literature, which is discussed below.

DISCUSSION AND CONCLUSION

In the present study, we evaluated the services offered by airline companies through online consumer ratings. For this assessment, we used data from www.AirlineQuality.com and analyzed the companies selected as the 10 best airlines. Attempts were made to answer the question of whether they affect the airline's recommendation given according to different criteria. The criteria included in the hypotheses developed according to the theoretical background are value for money, space for the seat area and cabin, customer service, in-flight entertainment services, and food and beverages.

As a result of the logistic regression analysis, the developed hypotheses were supported. In other words, when in-flight entertainment and food and beverage facilities are not satisfactory, when there is a high price compared to the service received, when the seat space and in-cabin facilities cannot be raised to the desired level, and when customer service is insufficient passengers tend not to recommend the airline. As a result of the study, we determined that overall value for money was the criterion with the most significant impact on the recommendation of the airline. This result supports Gures et al.'s (2014) research, as they found that the price and value for money were the most critical factors influencing recommendations. In our study, 73% percent of the passengers flew in economy class. Economy class ticket rates are cheaper than other flight classes. It seems that other services are more important than the price for the passengers who rated the attributes and services provided by flight companies that were the sample of the present study. Similarly, Forgas et

al. (2010) found that value for money for the airline is a factor that affects satisfaction and recommendation behavior, especially for low-priced airlines.

The second more effective criterion was customer relations. This result also supports the previous literature. Kos Koklic et al. (2017) found that quality of customer service positively affected customer satisfaction and hence the recommendation of the firm. Calisir et al. (2016) determined that the passengers who were satisfied with the quality of the service offered by the airline made positive comments about the company and recommended the company to others as a result of their research with 237 passengers that participated on the Frankfurt–Istanbul flight. Milioti et al. (2015) found that the essential factors for passengers were the reliability and ready-to-help personnel during the flight and the in-flight entertainment facilities were relatively less important. Vlachos and Lin (2014) found that in-flight and out-of-flight personnel services were influential on the recommendation of the airline company in their survey of airlines operating in China. Archana and Subha (2012) surveyed 270 passengers flying with Indian Airlines and determined that the most critical factor affecting the perceived service quality was in-flight entertainment. Al-Refaie et al. (2014) and Kim and Lee (2011) emphasized that the staff's ability to deal with problems and complaints has an impact on passenger satisfaction and recommendation behavior.

The third factor influencing recommendations is seat and cabin space. The fourth important factor for the passengers is meals and beverages, and the least influential criterion for recommendation is in-flight entertainment. These results also support the previous research referred to above.

Theoretically, the present study showed that the data obtained from an online rating website could be used as a source to analyze passengers' satisfaction level and behavioral loyalty. These ratings might be more reliable that the surveys conducted by airline companies themselves because the passengers are more comfortable as they might choose to rate anonymously. The results supported several previous studies mentioned above. If the passengers are satisfied with the goods and services provided by the airline company, they are more likely give higher ratings on the related websites and recommend the company to others.

Individuals may prefer to express their opinions, feelings, and experiences on the Internet and social media platforms rather than calling the company and talking to an employee, because they might be more

comfortable writing a review than talking to an employee. In addition, they can do it whenever and wherever they want. There will be no pressure, no concern about time, and no inconvenience of going to the company's office or making a phone call. In this sense, these online posts by passengers must be regarded as a valuable source by companies and they must monitor the comments and ratings shared on the Internet. It should be helpful to reach out to those who write negative comments and give low ratings and to strive to ensure their satisfaction. Airline companies can send feedback directly to their passengers by sending an online questionnaire after the flight. This might help to prevent online complaints and negative electronic word-of-mouth.

The present study was carried out by considering the data on the Internet. The number of websites providing these data is enormous, there is no standard evaluation form offered to consumers on these websites, and the data are updated frequently due to the nature of the Internet. The authors assumed that since the users who comment on airline companies on the relevant website and score various criteria differ in terms of demographic characteristics, the status of evaluating the airline companies was also different. Users who prefer any airline for transportation take their flight before commenting on the airline or rating various criteria and use the website www.AirlineQuality.com to comment and rate the various criteria. Comments and ratings on the website are published as they are, without any corrections or changes.

As with many other studies, this one also had limitations. First, the authors included only the ratings on the website www.AirlineQuality.com in the study and for the airlines selected as the top 10 airlines of the years between 2014 and 2019. Second, the scores given to various criteria on the same website were included in the study. Additionally, with COVID-19, which started with the report on December 31, 2019 and spread rapidly in 2020, air travel has decreased significantly. According to IATA reports, RPKs (revenue passenger kilometers, where the number of passengers and wages are calculated) were expected to decrease by approximately 40% with a revenue loss of US$ 252 billion in 2020 (Gössling et al., 2020; IATA, 2020). The decisions to be taken by the World Health Organization and the World Tourism Organization and tourism countries on this issue remain uncertain. COVID-19 was not mentioned during the period (2014-2019) when the data related to this research were collected. Therefore, the researchers chose the variables in the study independently from this pandemic.

Future studies may investigate some other variables' impacts. Moreover, it is predicted that the policies or practices such as eco-friendliness, green business, and sustainability implemented by airline companies will affect the evaluation criteria of studies to be carried out. More data can be obtained from different online rating websites for the same airline companies and comparative studies can be conducted. Furthermore, demographical differences can be included in the analyses and passengers who have different demographical characteristics can be compared as well.

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