INVESTIGATING EFFECTS OF PERCEIVED SERVICE QUALITY ON OVERALL SERVICE QUALITY AND CUSTOMER SATISFACTION: CASE OF SAUDI AIRLINES

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ABSTRACT

An increase in information readiness and intense competition between service organizations leads to more challenges in the business environment. On top of these service characteristics and need for a human touch are additional challenges for airline companies, not only to be successful but also to survive. Thus, knowing what airline customers think about an airline and gauging their satisfaction levels are of utmost importance. The aim of this study is to analyse the perceptions of service quality and levels of satisfaction among customers of the national airline of Saudi Arabia. To do so, it adopts the Airline Quality (AIRQUAL) scale. This scale comprises 44 items on seven distinct dimensions, namely; airline tangibles, terminal tangibles, personnel, empathy, image, perceived service quality, and customer satisfaction. Results of extensive data analysis support significant relationships with these study dimensions. Most notably, 'Airline Tangibles' are found to be the most influential factor creating a pool of satisfied airline customers. The text discusses the findings and implications of the survey.

Keywords: Perceptions, Overall Service Quality, Customer Satisfaction, AIRQUAL.

JEL Classification: M10, M31, L83

1. INTRODUCTION AND BACKGROUND

At a time of intense competition, all service organizations are desperate to survive, not just to be successful. This is vital in-service organizations in general but especially the airline industry (Nadiri *et al.*, 2008; Alotaibi, 2015; Nwaogbe *et al.*, 2017). One sure way of doing this is to provide a high quality of overall service, which increases customers' satisfaction, makes them more likely to return, and promotes recommendations to other potential customers (Bogicevic *et al.*, 2017). Keeping customers satisfied increases profits, market share, and return on investment (Sultan & Simpson, 2000). Thus, aviation managers must devise ways to distinguish their services from others (Al-Refaie, Fouad & Eteiwi, 2013; Hussain, Al-Nasser & Hussain, 2015; Wanke, Barros & Nwaogbe, 2016). To do so, they first need to understand what their customers' need, before they can attempt to meet and preferably surpass them. To improve the quality of service and customer satisfaction, managers need a way to reliably assess and measure these factors. Several researchers have attempted to define and evaluate the concept of service quality (Parasuraman, Zeithamal & Berry, 1988; 1991).

A synthesis of the related literature reveals that the SERVQUAL model (Parasuraman, Zeithamal & Berry, 1988) has been one of the most influential models in service quality literature for more than three decades (Jiang *et al.*, 2017; Subramanian, Suresh

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& Balachandaran, 2017; Ceylan & Ozcelik, 2016). According to Parasuraman and his colleagues, service quality has five key dimensions (Parasuraman, Zeithamal & Berry, 1988; 1991):

- *Tangibles* - the physical surroundings in terms of objects (for example, interior design) and subjects (for example, employees' appearance);
- *Reliability* - the service provider's ability to provide appropriate and consistent services;
- *Responsiveness* - a company's readiness to help its customers by performing its services quickly and efficiently.
- *Assurance* - various features that give customers confidence (such as the firm's service knowledge, or polite and trust-worthy behaviour from employees);
- *Empathy* - the service provider's willingness to give personal service to each customer. The authors called on other researchers to replicate SERVQUAL in different industries and settings. Since then, hundreds of replication studies have been conducted (Asubonteng, McCleary & Swan, 1996) with varying degrees of success. In addition, SERVQUAL has been adapted as a basis for several other scales, for instance, AIRQUAL (Ekiz, Bavik & Arasli, 2009), E-S-QUAL (Rafiq, Lu & Fulford, 2012), HiEduQual (Annamdevula & Bellamkonda, 2016), RENTQUAL (Ekiz, Hussain & Bavik, 2006; Ekiz, Bavik & Arasli, 2009), etc.

Churchill and Surprenant (1982) assert that satisfaction is determined by overall quality perception, which in turn is affected by several factors. In the case of the present study, these factors are; airline tangibles (ATANG), terminal tangibles (TTANG), personnel (PER), empathy (EMP), and an image (IMG). There is overwhelming support in the literature to back these relationships. For instance, Parasuraman, Zeithamal and Berry (1988; 1991) stressed the importance of tangible factors in creating a strong perception of quality, which leads to customer satisfaction. Westbrook and Oliver (1991) investigated the interrelationships among empathy, perceived quality and satisfaction and concluded that empathy displayed by the staff of the service provider created satisfaction. Bowen (2001) conducted research to consider the antecedents of customer satisfaction and found a substantial relationship between positive perceptions of the firm's employees and customers' overall satisfaction and impressions of quality. Finally, Annamdevula and Bellamkonda (2016) stressed the importance of image on the quality perception that leads to pre-decided satisfaction (where the customers make up their minds to be happy with the product/service even before they purchase it).

This is a much-needed study, because of a) it targets the perceived service quality of the national airline of Saudi Arabia, which has been little studied previously, except for Alotaibi (2015); and b) most tourists coming to Saudi Arabia use air transportation, predominantly Saudi Airlines. Thus, knowing how Saudi Airlines services are perceived and whether their customers are satisfied is of the utmost importance. Moreover, measuring airline service quality is vital to increase competitiveness in the Middle East market and in international tourism (Šebjan, Tominc & Širec, 2017).

1.1 Tested Hypotheses and Model

Considering the above-mentioned literature review as well as the research models of Ekiz, Bavik and Arasli (2009) and Nadiri *et al.* (2008), the following hypotheses were developed to assess the interaction between perceived quality factors/dimensions and overall quality perception and customer satisfaction with Saudi Airlines:

H_1: A high level of perceived personnel-related quality will have a significant positive effect on overall service quality.
H_2: A high level of perceived airline tangibles related quality will have a significant positive effect on overall service quality.
H_3: A high level of perceived empathy related quality will have a significant positive effect on overall service quality.
H_4: A high level of perceived terminal tangibles related quality will have a significant positive effect on overall service quality.
H_5: A high level of perceived image related quality will have a significant positive effect on overall service quality.
H_6: A high level of overall service quality will have a significant positive effect on customer satisfaction.

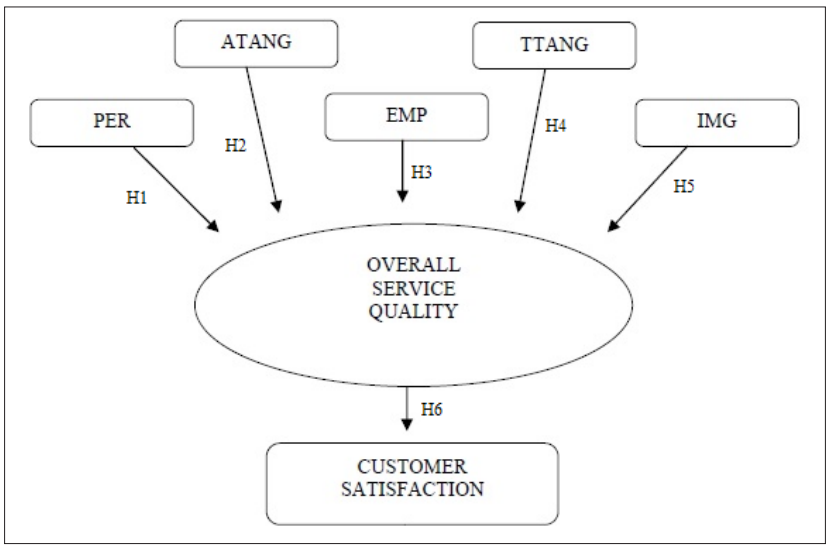
2. METHODOLOGY

2.1 Research Approach in Brief

The study sample comprised customers of the national airline of Saudi Arabia between February and May 2016, using a non-probability convenient sampling method. 800 questionnaires were distributed to airline passengers, both in Arabic and English language, after using the back-translation method for translation. 740 questionnaires were returned, of which 712 were suitable for analysis, representing 89% response rate. The adopted survey instrument was first developed by Ekiz, Hussain and Bavik (2006) and Ekiz, Bavik and Arasli (2009), then tested and confirmed by Nadiri *et al.* (2008).

There were 42 items measuring the perceived service quality of airline services. The instrument can be broken down as follows: Airline tangibles (ATANG): 6-items, Terminal tangibles (TTANG): 12-items, Personnel (PER): 8-items, Empathy (EMP): 7-items, Image (IMG): 3-items, Overall service quality (OSQ): 3-items, Customer satisfaction (CSAT): 3 items.

Figure 1. Tested Hypotheses and Model



Source: Ekiz, Hussain & Bavik (2006)

Data collection was by means of a five-point Likert scale (Likert, 1932); with '1' being 'strongly disagree' and '5' being 'strongly agree'. The analysis was carried out with SPSS 20.0 and Lisrel 8.70 software for Windows. Descriptive analyses including means, standard deviation and frequencies were calculated. Reliability issues were tested. The hypotheses of the study were tested by Path Analysis and Exploratory and Confirmatory Factor Analyses were carried out.

3. FINDINGS

3.1 Demographic Breakdown of the Sample

Descriptive analyses results show that many of the respondents (596 respondents, 87.3%) were men. Over sixty-four percent were between the ages of 18 and 37 (457 respondents, 64.2%). More than half of the respondents had higher education, either undergraduate or graduate level (371 respondents, 52.1%). On income, more than seventy-two percent of the respondents reported an income range between 10.000 and 20.000 SAR (516 respondents, 72.5%). Many of the respondents (495 respondents, 69.5%) identified their reason for visiting Saudi Arabia as fulfilling their religious responsibilities and performing Umrah.

3.2 Psychometric Properties of the Instrument

To evaluate the psychometric properties of the survey instrument, issues of reliability, dimensionality, convergent and discriminant validity were examined. In order assess convergent validity, corrected item-total correlations were calculated. Inter-item correlations were equal to or exceeding 0.32, supporting the convergent validity of the scale.

After establishing corrected item-total correlations, reliability coefficients were computed for each study variable individually and in aggregate. The alpha coefficient was determined to be 0.89 at the aggregate level and individual reliability coefficients were all established to be within the acceptable range, falling between 0.70 and 0.91. Each coefficient exceeded the cut-off value of 0.70 and all t-values were significant (>2.00) as recommended by Nunnally (1978), as was the case in studies by Ekiz, Bavik and Arasli (2009) and Nadiri *et al.* (2008).

Convergent and discriminant validity and dimensionality were rigorously tested. Composite scores for each study variable were calculated by averaging scores across items representing that dimension. Results indicate significant correlations at the 0.01 level for all the study variables. These correlations range from 0.34 (image and terminal tangibles) to 0.54 (perceived service quality and customer satisfaction). Moreover, the confirmatory factor analysis demonstrated a reasonable fit of the data to the seven-factor measurement model on several criteria ($\chi 2$ = 821.33, df = 210, GFI = 0.94, AGFI = 0.95, NFI = 0.92, NNFI = 0.94, CFI = 0.91, RMR = 0.027) as recommended by Nunnally (1978). Overall, these results were consistent with those of Ekiz, Bavik and Arasli (2009) and Nadiri *et al.* (2008), providing further support for the reliability and validity of the scale.

3.3 Tests of Research Hypotheses

The six hypothesized relationships were tested using LISREL 8.54 through path analysis (Jöreskog & Sörbom, 1996). The first group of hypotheses refer to the effects of service quality dimensions on overall perceptions of quality. Specifically, the first group hypotheses refer to the effects of *airline tangibles*, *terminal tangibles*, *personnel*, *empathy*, and *image* on overall service quality level. The second group of hypotheses related to the effect of overall quality perceptions on customer satisfaction.

Table 1 shows that all the hypothesized relationships were supported. A careful examination reveals that *airline tangibles* have the most significant positive effect on overall service quality (β = 0.43, T = 7.28). Thus, hypothesis 2 is supported. Table 1 also shows that *personnel* factors exert a significant positive effect on perceived service quality (β = 0.31, T = 5.63). Thus, hypothesis 1 is accepted. As for the remaining hypotheses (3, 4 and 5), they were all statistically significant and had the following values respectively: H3 (β = 0.24, T = 3.54), H4 (β = 0.36, T = 6.21), and H5 (β = 0.19, T = 3.17). These findings suggest that *terminal tangibles*, *empathy* and *image* have a significant positive impact on overall service quality. The first five dimensions jointly explain 89% of the variance in overall service quality. Finally, overall service quality has a very strong positive impact on customer satisfaction (β = 0.47, T = 8.93). Thus, hypothesis 6 is accepted. Overall service quality explained 61% of the variance in customer satisfaction.

Table 1. Path Analysis Results

	Standard Parameter Estimates (ML)	T-values	Significance
Impact on Overall Service Quality			
H_1: Personnel (PER)	0.36	6.21	0.0001
H_2: Airline Tangibles (ATANG)	0.43	7.28	0.0001
H_3: Empathy (EMP)	0.24	3.54	0.0001
H_4: Terminal Tangibles (TTANG)	0.31	5.86	0.0001
H_5: Image (IMG)	0.19	3.17	0.0001
Explained Variance R^2=0.89			
Impact on Customer Satisfaction			
H_6: Overall Service Quality (OSQ)	0.47	8.93	0.0001
Explained Variance R^2=0.61			

Note: Results obtained in July 2017
Source: Own Elaboration

4. CONCLUSION

The airline is one of the most important parts of every tourist trip and, hence, affects their view of the destination, regardless of the type of tourism. As more and more customers seek better, if not the best, quality for the money they pay, airlines should provide the best possible service to satisfy their customers. To achieve success, it is essential to create and maintain service quality. However, to do so, they need to know what customers think, how they perceive the airline's service quality: are they satisfied with it? The present study aimed to shed light on these questions in the case of Saudia, the national airline of Saudi Arabia.

The presented results of a survey of 712 respondents reflect a positive picture of Saudi Airlines. More precisely, mean scores show that all the perceived quality dimensions - *airline tangibles*, *terminal tangibles*, *personnel*, *empathy*, *image* - are positive and tend towards 'satisfied and/or delighted'. This means customers who used Saudi Airlines were happy with these factors. Moreover, all the hypothesized relationships were found to be statistically significant and had the expected effects on the overall service quality dimension, with varying strength. For instance, consistent with Ekiz, Hussain and Bavik (2006), Ekiz, Bavik and Arasli (2009) and Nadiri *et al.* (2008) *airline tangibles* had the most significant relationship with overall service quality. This means airlines should pay extra attention to keeping their

aircraft updated and well looked-after. Given that most of the service - transportation from one point to the other - takes place inside the aircraft, this result is expected. The *airline tangibles* dimension is followed by the *personnel* dimension. This is a unique finding since the *terminal tangibles* dimension is usually the next significant one (see Ekiz, Bavik & Arasli, 2009). The importance given to personnel can be linked to Saudi Arabia's culture, which is characterized by being friendly and hospitable. Given this cultural context, one may expect the same level of satisfactory personal service, friendliness and positive attitude towards guests. Thus, airline managers should focus on selecting crew with the right interpersonal skills, and continuously monitor and train their interactions with customers.

The *terminal tangibles* and *empathy* dimensions also had statistically significant relationships with perceptions of overall quality. As such, airlines should invest not only in the improvement of their aircraft but also the facilities at the terminal. Passengers spend considerable time waiting to board their planes, which is part of the overall travel experience. For this reason, airline companies should consider providing clean, well air-conditioned and comfortable terminal facilities. Although the measured impact of the *image* was the lowest among the other dimensions, it was still positive. This might be because low airline ticket prices are not so important to many Saudis. Earnings from a strong oil-based economy are shared among the citizens; thus, many Saudis have an income well above the world average. Finally, overall service quality perception has a strong and positive impact on customer satisfaction. This is consistent with previous research findings (Parasuraman, Zeithamal & Berry, 1988; Ekiz, Hussain & Bavik, 2006; Ceylan & Ozcelik, 2016). Airline companies should consider spending more resources on the overall quality of their offerings. Failure to do so may lead to a fall in customer satisfaction levels, which in turn will result in financial losses. Nowadays, the line between success and failure in the airline industry is thinner than ever. Paying attention to what airline customers think and feel, therefore, can tip the scales towards success.

4.1 Limitations of the Study

This study has several limitations. First, t study used a non-probability sampling technique (convenience). Although it used a large sample, future studies should consider using a probabilistic sampling technique. Secondly, most of the respondents were educated young males. The difficulty of reaching out to female respondents is a limitation in Saudi Arabia. Future studies may consider using a market research company that can provide an evenly distributed pool of respondents. In addition, this study focused only on Saudia Airlines, but there are more and more carriers, both public and private, entering the market. Thus, future studies may consider comparing public and private airlines. Moreover, this study utilized only five independent variables, as dimensions of perceived service quality. Future studies should consider adding more dimensions to increase representation and coverage. Finally, there are only a handful of studies focusing on perceived service quality and customer/tourist dis/satisfaction in Saudi Arabia. Such studies, based on service industries in general and tourism and hospitality, are needed to assess and improve the current situation.

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