AN ASSESSMENT OF SERVICE QUALITY IN INTERNATIONAL AIRLINES

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ABSTRACT

In spite of an abundant research on service quality, the paucity of research on airlines service quality is a growing concern. The main purpose of the research is to examine the international airlines service quality in Korea. Further, service discrepancy is identified between domestic international airliners and foreign international airliners. Questionnaires for the survey are developed through in-depth analyses of SERVQUAL by experienced flight attendants. Some statistical techniques such as factor analyses and ANOVA were applied. From the research results, some significant variables on airline service quality are identified, and some international airliners showed better service than others in some specific variables.

KEYWORDS: airlines, service quality, servqual

INTRODUCTION

Quality is a continuing subject in manufacturing, and abundant research has been conducted on that subject. With the fast growing service industry, service quality has become a significant concern for service practitioners, researchers, and government officials in Korea. As people have experienced the importance of quality, as a strategic variable, in manufacturing industry, many view that service quality is a key to survival in competitive market and long-term profitability.

Research on service quality has been conducted in several different service areas such as hotels, restaurants, hospitals, banks, and retail stores. However, one business segment that has been slow to adopt the research on quality is the airline industry in Korea. The
main reason is that data collection for quality measurement is very restricted in this industry. In general, airline and airport employees only are permitted to access airline travelers in restricted departure and arrival areas. These restricted research environments, with some other adverse reasons, hinder research on the airline service quality by independent scholars.

Individual airliner has sometimes examined travelers’ satisfaction in its management purpose, specifically marketing purpose. However, the survey conducted for internal management is usually lack of the solid theoretical backgrounds, and even far from providing comparative perspectives with other airliners.

Recently, with rapidly changing air transportation environments, airline service quality is getting more attention from the diverse parties such as airliners, government, and researchers in Korea. The opening of Incheon International Airport, starting of Korea Train Express (KTX) services, the September 11 terrorist attack in the United States changed the traditional assumptions of Korean transportation systems. Specifically, international airliners must observe new security regulations, and the service elements of airlines are accordingly changing. New transportation environments require airliners to redefine their service quality.

The purpose of this research is to identify the service quality factors in international airline service, and further examine the service difference for the quality variables between domestic international airliners and foreign ones. The conceptual backgrounds of this research are the Service Quality Model proposed by Parasuraman, Zeithaml, and Berry (1985). Since the airline service is a typical example of service industry, this model can be applied. The following sections describe orderly theoretical backgrounds, research methodology, statistical analyses and results, and some conclusions.

THEORETICAL BACKGROUNDS

In spite of dynamic environments in airline industry, scant research on service quality in airlines has been performed in Korea. Only a few scholarly papers are founded in major academic databases in Korea. Some representative studies are the works of Chang (2002, 2003), Chang et. al. (2002), Chang, Kim, and Jun (2001), Cho, Rhim, and Lee (2001), Kim and Kim (1997), and Kim (1996).
One of major reasons of this scant research is relevant to the technical problem in conducting the research. Specifically, data collection from travelers is usually very difficult, because the right place for data collection is security area, which is not accessible without official permission. Further, the cost, in terms of time and efforts, may hinder the research on airline service quality in the academic society.

Different from scholarly purposes, domestic airliners, in practical purpose, utilized consulting services on customer satisfaction from consulting firms. In some other way, they used some word-wide airline evaluation systems such as Skytrax (www.airlinequality.com) and AQR (Airline Quality Rating) from the U.S. Department of Transportation, by that the Air Travel Consumer Report is published.

Chang, Kim, and Jun (2001) first used SERVQUAL in measuring service quality in airline industry. Chang et. al. (2002) compared service quality of two domestic airliners by using SERVQUAL. Chang (2003) also compares the two measurements, SERVQUAL and SERVPERF, concerning the service quality in the airline industry. Kim (1997) examined travelers’ decision factors in choosing airliners. While the research mentioned above is based on the empirical study, Cho, Rhim, and Lee (2001) developed the analytic decision model for evaluating airliners’ service quality.

Similar to the studies performed in Korea, studies on airline service quality have been performed by using SERVQUAL in world wide academic society. Some of the examples are Gourdin and Kloppenborg (1991), Young, Cunningham, and Lee (1994), Truitt and Haynes (1994), Sultan and Simpson (2000), and Robledo (2001). All of them applied SERVQUAL instrument to the airline industry.

The theoretical backgrounds of this research is the service quality gap model proposed by Parasuraman, Zeithaml, and Berry (1985) as shown in figure 1. According to this model, customer satisfaction with a service can be defined by comparing perception of service received with expectations of service desired. In addition, five principal dimensions that customers use to judge service quality are reliability, responsiveness, assurance, empathy, and tangibles, which are listed in order of declining relative importance to customers. Customers use these five dimensions to form their judgments of service quality, which are based on a comparison between expected and perceived service. The gap between expected and perceived service is a measure of service
quality; satisfaction is either negative or positive. Leading service companies measure the gap between expected service and perceived service as a routine customer feedback process.

SERVQUAL is a multiple item scale for measuring the five dimensions of service quality. This instrument has been designed and validated for use in a variety of service encounters. Therefore, like other service industries, airline service quality is an applicable domain of SERVQUAL research.

Although SERVQUAL usually provides five dimensions of service quality, this research encompassed additional two dimensions, safety and airline meals. These two variables were derived through in-depth discussion rounds among four experienced flight attendants. All of the experienced flight attendants have worked in the first class as well as the business and economy classes. Based on their experiences and prior research by Chang (2003), it is identified travelers (airline customers) are much interested in these variables. Specifically, the September 11 terrorist attack in the United States and epidemics including SARS might stress the variables.

Figure 1. Perceived Service Quality (PZB, 1985)
RESEARCH METHODOLOGY

As mentioned earlier, the main purpose of this research is to examine quality factors in international airline service, and further identify the service difference for quality variables between domestic international airliners and foreign ones. For the research purposes, research was conducted as followings.

Questionnaire Development

Based on SERVQUAL and additional modification by experienced flight attendants, a set of questionnaires was developed. One is for measuring travelers’ expectation; the other is for their perception. The questionnaire consists of 30 items of 7 points scale each, measuring airline service quality through seven dimensions as mentioned earlier.

Sampling and Data Collection

According to the research purpose, the level of analysis is an individual. Data were collected from the international travelers in Incheon International Airport. Specifically, according to the time and budget limitation the sample was restricted to the travelers of North America lines by using domestic and foreign airliners. Data collection from boarding areas inside the immigration line is seldom permitted, because of the security purposes. However, for this research, data collection is specially permitted with the strong support of officers in Incheon International Airport.

The questionnaires were distributed to individual traveler in person. Total of 570 questionnaires was collected, but after deleting 23 insufficient questionnaires, finally 547 questionnaires were used for the statistical analyses.

STATISTICAL ANALYSES

Characteristics of Respondents

The demographic characteristics of respondents are shown in table 1. The respondents were classified according to some criteria such as genders, ages, travel purposes, occupations, and their frequent airliners. Any possible problems for further analyses
Reliability and Validity Tests for Measurements

The measurement in this research was verified by Nunnally (1978)’s measure validation processes. For the reliability verification, internal consistency method, measuring Cronbach Alpha, was applied. According to Nunnally’s suggestion (1978), more than 0.7 is generally acceptable for the reliability test. Moreover, above 0.5 is acceptable in the preliminary research.

This research is based on the Nunnally’s suggestion of the value of 0.7. After deleting the items less than 0.7, the variables were tested for reliability as shown in table 2. All of the variables have more than 0.8, sufficient to go further to the validity verification. The construct validity is based on the discriminant validity by a factor analysis. The rationale of this validity is that a valid measure has to show good convergence with other measures of the same thing, and should also fail to correlate with measures that are suppose to tap basically different constructs (Campbell and Fiske, 1959). In this research, principal component analysis was applied, which minimize information loss with minimal factors. Moreover, Varimax rotation is applied for maintaining independence among factors. The validity results are shown in table 3. According to the validity results, Eingen values for individual independent variable are greater than 1.0, and factor loadings are acceptable. In addition commonality is more than 73%, which is good for research in social sciences.

Even though some items were deleted through the analysis processes, the identified factors are generally similar with the initial planned factors. This fact may mean that initial service quality measure (SERVQUAL) and further in-depth analyses by the professionals in this industry are valid. Empathy and assurance in service quality are reflected on human friendliness (named in this research). As shown other service quality research, it may be concluded that the industry specialty has been reflected on these analyses.

Hypothesis Tests

Prior to hypothesis tests, mean and standard deviations values for model variables, and the correlations between those variables were presented in table 4. As shown in the
correlation matrix, the independent variables are significantly related to the variable of customer satisfaction.

For the comparison between domestic and foreign airlines, t-tests were conducted for each of the model variables. As shown in table 5, domestic airlines exhibited higher values of human friendliness, essential services, reliability, tangible, and customer satisfaction than foreign airlines at the significance level of 0.1. However, for safety and responsiveness, the statistical difference between domestic and foreign airlines was not identified at the significance level of 0.1. Because safety is a qualifier in airline industry (Fitzsimmons and Fitzsimmons 2004), the indifference among airliners was expected before the research. Based on these results, it could be concluded that travelers generally evaluate more positively for domestic airlines services than foreign airlines services.

Further analyses were conducted to compare traveler’s perceived service quality among airlines regardless of nationality. First, ANOVA was applied to examine the difference among airliners for the variable of human friendliness. As shown in table 6, while mean value of S airliner is the highest, 5.58 that of N airliner is only 4.75, the lowest among 5 airliners. Statistical difference was identified at the significance level of 0.05. Post hoc analyses by Scheffe test (Scheffe, 1953) showed that human friendliness of A airliner and S airliner is higher than that of N airliner at the significance level of 0.05.

Any differences of essential services among airliners were examined through ANOVA and further analyses. According to the analysis results, while S airliners showed the highest value of 5.64 for essential services, N airliner showed 4.29, the lowest among 5 airliners. (see table 7). According to the results of post hoc analyses by Scheffe test, S, A, & K airliners showed higher than U and N airliners at the significance level of 0.05.

ANOVA was applied to test the differences for service reliability among the airliners. As shown in table 8, S airliner showed highest mean value of 5.45, while N airliner was the lowest value of 4.77. Especially, A airliner also showed higher than N airliner at the significance level of 0.05.

For the safety feature of airline services, S airliner showed higher than N airliner at the significance level of 0.05. However, Scheffe’s post hoc analyses could not find any difference in pair-wised comparisons (contrasts) among airliners, except between S
airliner and N airliner. This result may mean that safety is perceived as a qualifier, it cannot be a distinctive factor among the airliners. (see table 9) Therefore, it cannot be a strategic management variable for gaining a competitive advantage.

As shown in table 10, statistical analyses were performed for the tangible feature of airline services. Different from the previous results, A airline showed the highest value of 5.30, while N airline did the lowest value of 4.23. The pair-wised comparisons by post hoc analysis revealed diverse results among 5 airliners. One of the prominent characteristics is that domestic airliners showed higher value than foreign airliners at the significance level of 0.05. It may come from the fact that domestic airliners have the airplanes of the newest type.

For the responsiveness of services, S & A airliners showed higher than N airliner at the significance level of 0.05. (see table 11) For other airliners, any significant differences in service responsiveness were not identified.

Any difference of customer satisfaction is tested through ANOVA and post hoc analyses. S airliner showed the highest mean value of 5.25, while N airliner did only 4.16 as shown in table 12. Scheffe tests revealed that travelers in A, K, U, & S airliners showed more satisfaction on flight service than N airliner.

**CONCLUSIONS**

With the rapidly changing and growing airline industry, the quality of airline service is a crucial factor of airliners’ success. The research found the quality variables of international airline service. Traditional five dimensions of SERVQUAL and some other variables were grouped as management variables through factor analysis.

For the identified variables, service quality of airliners, flying from Incheon to North America back and forth, was compared between domestic international airliners and foreign international airliners. Significant quality difference was not found between the two groups by nationality. While domestic international airliners showed higher quality in some variable than foreign ones, for the other variables the result showed vice versa.
However, S airliner consistently showed higher quality for all of the variables than N airliner. In addition, S airliner showed higher quality than other airliners in some variables. We may call S airliner a world-class leading airliner. Competing with S airliner, domestic airliners should take steps to improve service quality, because for some variables, domestic airliners showed lower quality than S airliner.

As S airliner has shown, achieving high quality in most service dimensions can provide a competitive edge. The research results provide some lessons for international airliners. Quality has diverse dimensions, and weak points should be identified first. Further, airliners need more strong deployment of quality programs for recovering the weak points. Overall service quality of domestic international airliners is acceptable in the market; the variables for management emphasis are also identified. Especially, it is also identified that N foreign international airliner need to improve service quality for most of the variables.

This research provides research framework of airline service quality and management implications for the practitioners in airline industry as well as academic researchers. It may need a longitudinal study for examining the trend of airline service for each airliner as well as airliner groups by nationality in the future.

REFERENCES


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www.airlinequality.com

* Tables of statistical results will be available upon request.