Research on Evaluation and Promotion Strategies of Service Quality of Airports in Mongolian

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Abstract. The competitiveness of airlines is mainly reflected in the quality of service provided at airports. Assessing the adequacy of airport services can effectively help airport decision-makers to tap into market demand and identify the shortcomings of current management practices and the causes of differences in passenger satisfaction. The study evaluates and assesses the quality of airport services in Mongolia by using a combination of qualitative and quantitative methods to aid decision-making to improve the competitiveness of airlines. This study created a series of questionnaires for Mongolian consumers and polled 320 passengers to understand better how airport service quality is perceived by Mongolian customers and the factors that affect it. In order to comprehend the deficiencies of airline services and to suggest solutions, the data was statistically analyzed. The study additionally investigates two factors that influence the standard of airport services and how consumers in Mongolia see those services, and made recommendations to enhance their competitiveness.

Keywords: Airport service quality · Genghis Khan international airport · Mongolian airport · Passenger service

1 Introduction

Between the People's Republic of China and the Russian Federation, Genghis Khan is a landlocked nation that heavily depends on air transport for both local and international trade. Model for the difference in service quality put forth by Parasuraman et al. [1] It is proposed that variations in expectations and performance are related to service quality. Customer expectations are a conviction in service delivery that can be used as a benchmark for evaluating customer service, whereas customer perception is a subjective evaluation of the real service experience [2]. According to Graham [3], it is now more crucial than ever to manage the standard of airport services.

In a similar vein, Francis et al. [4] addressed the significance of top-notch airport operations in the cutthroat air transport industry. Airports are compelled to lower costs while raising service quality due to the significance of commerce [5]. The growth of

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service quality is significantly impacted by the relationship between the service environment and the service personnel, according to Mansor and Syed Redhwan [6]. One of the most important elements influencing airport attractiveness, according to Fodness and Murray [7], is service excellence. Yeh and Kuo [8] noted that the airport's service quality could have a substantial impact on subsequent commercial and tourist activities in the city, making service quality maintenance a challenging task.

Chu et al. [9] contend that preserving quality is a crucial responsibility for a company facing intense competition.

The elements of airport service quality, overall passenger evaluations, sample demographic information, and pertinent descriptive analyses were all completed. We employed software for statistical data sets to remove any potentially relevant findings. It was applied to figure out the number of passengers and the data proportion at an airport. Then, using Qualtrics, the measures for airport service and service performance mean, median, and standard deviation were determined.

2 Methodology

Qualitative research and an in-depth literature scan were matched in order to understand passengers' experiences in the three main service domains. The goal of this paper is to present a practical application to measure passengers' non-critical services. We made the decision to expand the research using the directed areas in order to accomplish this [10]. We determined that the interaction between airport travelers and airport passenger services would be the study's primary emphasis [11, 12] in order to gauge how well airport travelers' perceive the quality of their services.

2.1 Questionnaire

Studying gaps in the standard of airport services requires careful consideration of the service items chosen for the questionnaire [13]. In 2006, the Airports Council International (A.C.I.) launched the Airport Service Quality (ASQ) Benchmarking Programmed to monitor air passenger opinion at departure gates. The questionnaire for this study is broken down into three sections based on prior research and the survey questions used by the A.C.I. The first section asks about respondents' sociodemographic traits, such as age, gender, education, nationality, and income; the second section gathers data about passengers' flights, such as the purpose of travel, frequency of travel, and accommodations; and the third section contains 53 questions about airport service [14–18]. Respondents were asked to provide their "expectations" and "perceptions" of the services and amenities at Genghis Khan International Airport and regional terminals over the course of the previous 12 months. The ratings for each item ranged from "1 = strongly dissatisfied" to "5 = strongly content" on a five-point Likert scale [19]. There were two copies of the questionnaire: one in English and one in Mongolian. Those who responded had to fill out a two-page survey. The survey is entirely voluntary and anonymous, and it takes about 10 min to complete.

2.2 Sample Size

The researchers used the Churchill [20] five-point survey to measure the difference in the response party of passengers. The 135 complete responses of pilot research show that the difference in overall evaluation is d = 0.534. The calculation of the sample amount is shown in Eq. (1).

$$n = \frac{z}{H^2} d^2 \tag{1}$$

n denotes the sample size, z denotes the Z-value at the 95% confidence level, and H denotes the required precision at 0.085. The sample estimation value (n) produced by this algorithm is 284. However, the sample was cautiously entered at around 320 to account for investigation errors and incompletes. Therefore, determining the sample of 320 respondents is the required sample amount.

3 Results

All statistics were calculated on Microsoft Office Excel 2022 Professional running on a 3.80 GHz Intel Core i7-10700 processor with 64 GB of RAM running 64-bit Windows 10 after a predetermined amount of questionnaires were collected.

We first integrated the statements of the parties as service providers and service users. Secondly, we compared the views of four groups of airport services, excluding several service variables that passengers attributed to services provided by airlines or other private and independent businesses, such as transfers from city centers and valet parking.

The targeted number of survey participants for this study was 320, while the actual number of participants was 305. 75% respondents fell within the 25–56 age range, according to a study of the respondents' demographic information. The high proportion of respondents in the 25–56 age bracket can be attributed to the fact that the majority of those in that age range had jobs that needed them to travel far for work. As shown in Table 1, of these respondents, 58% had a four-year degree or higher from a tertiary institution, and many had worked in managerial or professional occupations. Most respondents resided in Ulaanbaatar (26%). Of the 305 people who participated in the survey, 135 gave complete answers.

Table 1. Visitors' Categories

	Genghis Khan International airport	**Khuwsgul airport**	**Oyu-Tolgoi airport**	**Bayan-Ulgii airport**
Business	50	51	29	31
Casual	11	8	3	6
Both	44	49	12	11
Total	105	108	44	48

Table 2. Measures of airport service and service performance that are average, median, and standard deviations

Variables	Genghis Khan (n = 105)		Oyu-Tolgoi (n = 108)		Khuwsgul (n = 44)		Bayan-Ulgii (n = 48)	
	M	SD	M	SD	M	SD	M	SD
Access Rights	3.12	0.64	2.69	0.92	3.02	0.71	2.82	0.71
Amenities & Services	3.05	0.73	2.48	0.95	2.86	0.64	2.73	0.74
Dining Amenities	4.03	0.73	2.63	1.02	3.02	0.83	3.01	0.63
Complete Purchasing	2.76	0.88	2.44	1.12	2.74	0.78	2.79	0.70
General staff & Protection	3.00	0.81	2.42	1.11	3.01	0.74	2.53	1.07
Environmental	3.17	0.72	2.61	1.18	3.12	0.75	3.11	0.66
Migrants generally	3.01	0.93	2.32	1.14	3.21	0.72	3.12	0.81
Overall evaluation	2.94	0.78	2.41	0.91	2.89	0.55	2.76	0.74

Note. M = Mean; Mdn = Median; SD = Standard Deviation; Scale for Variables (0 = Did Not Use, 1 = Poor, 2 = Fair, 3 = Average, 4 = Good, 5 = Excellent)

Oyu-Tolgoi Airport had the most respondents (n = 108) out of the four airports included in this poll, followed by Genghis Khan International Airport (n = 105), Bayan-Ulgii Airport (n = 48), and Khuwsgul Airport (n = 44). The seven independent variables for this study were access, services and facilities, restaurant/dining, shopping, service people and security, environment, and immigration and services. The dependent variable known as Overall Evaluation was used to represent the level of passenger experiences and views of the general quality of airport services.

The statistics on each service indicator obtained from the survey results are illustrated in Table 2. It should be noted that Oyu-tolgoi airport received the lowest overall score across all seven airport service parameters among the four airports considered for this research, with sample averages of 3.69 and a standard variation of 0.9. The following service elements are included in airport amenities and services: 44 Check-in time, Internet and Wi-Fi accessibility, the comfort of seats in the waiting area by the door, a variety of franchise stores, and baggage claim. After that, take one of the local 4.01 or 0.6 Bayan-Ulgii trips. Bayan-Ulgii local flights receive the highest ranking for shopping services despite coming in second for catering; the sample average is 3.79, and the standard deviation is 0.7. Oyu-Tolgoi local flight received the lowest overall ranking for airport environment, 3.61 and 1.1.

The results demonstrated that the measures could provide an accurate representation of each idea. According to the study's results, some airport service components are

more crucial than others in determining the overall level of service quality. A regression analysis of all seven independent variables and the dependent variable revealed that only four of the seven independent variables were significant and had a favorable relationship with the passengers' perception of overall service quality. These four variables were access, environment, food, and immigration services.

The findings indicated that there are other factors besides service quality that have a major impact on customer happiness.

4 Conclusions

The primary contribution of this research is the development of a questionnaire based on literature on service quality, technology, and evolving passenger needs to identify customer needs and service variability in four major Mongolian airports. This study takes the current research to show that non-airline services are important to passengers. The four major airlines in Mongolia should make effective strategic enhancements to address the areas of service they are lacking. This is an innovation in the survey and study of service quality at Mongolian airports. The specific recommendations of this study, based on the findings of the survey, are as follows.

The author of the study considers that the development path has the following features. To ensure that the corresponding measures can be fully implemented, it is first important to further improve the corresponding management and supervision systems. In addition, these systems should be combined with the actual development situation and needs to create a sound corresponding assessment system. Separate supervision departments should also be established, and an intensive accountability system must be established as well. Thirdly, military members should receive more training to project a more refined image. Fourth, in order to improve passenger service, it is important to support the development and construction of pertinent infrastructure while removing and modernizing existing infrastructure. Fifth, to further increase the effectiveness of the airport's operations, the business procedures at the airport should be properly optimized.

The outcome, though, is only applicable to the study's primary locations. The study only takes four big airports into account (Genghis Khan International Airport, Oyu-Tolgoi Airport and Bayan-Ulgii Airport and Khuwsgul Airport). In order to increase the support proposed in the research, future research can be different International airports use the same method. Future studies may want to look into variables that affect how passengers perceive the airport surroundings.

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