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Examining Service Gaps and Passengers' Perceived Service Performance of Thailand's Regional Airports: A Comparative Analysis of Different Characteristics

Abstract

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School of Liberal Arts, King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand, Email, supaporn.wi@kmitl.ac.th This study aims to identify the significant differences between passengers' perceived importance and performance of service attributes of regional airports in Thailand. The current study also intends to examine how passengers' characteristics and travel behaviours affect the perceived service performances of regional airports. Questionnaires were used to collect data from Thai passengers at three regional airports in different regions of Thailand. A total of 886 cases were examined using gap analysis and pair-sample t-test. The result reveals significant differences between the importance and performance of all service attributes of regional airports. One-way ANOVA was also used to investigate the effects of passengers' characteristics (gender, age range, educational level, occupation, and income) and travel behaviours (travel frequency and main travel purpose) on perceived airport service performance. The result indicates significant differences in perceived airport service performance across educational levels, occupations, monthly income ranges, and travel frequencies. This empirical study provides insights for airport managers to prioritise service attributes for improvement. The results of this study can also be used as a guideline for providing customised services for passengers in different segments.

Keywords: regional airport, service attributes, gap analysis, passenger characteristics, service performance

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Introduction

Prior to the COVID-19 pandemic, the tourism sector emerged as a significant economic driver for numerous countries. In 2019, its contribution to global GDP reached 10.3% while generating over 300 million jobs worldwide (World Travel & Tourism Council, 2022). In the case of Thailand, its tourism sector generated approximately 61 billion USD in 2019, contributing to 20% of its GDP (Asian Development Bank, 2020; UNWTO, 2020). In 2019, Thailand was also ranked as the world's eighth most-visited country, with 40 million tourists (UNWTO, 2020), indicating its success in demand attraction. Nonetheless, Thailand still has several major issues to address as it has been facing a challenge in the distribution of revenue and tourist flow. Bank of Thailand (2019) reported that around 65% of Thailand's tourism revenue is derived from only three major cities: Bangkok, Phuket, and Chonburi (Fakfare et al., 2020). In 2022, these three cities received over 25% of tourist arrivals in Thailand (Ministry of Tourism and Sports, 2023). The tourist density in major cities results in an overcapacity issue at the tourist attractions and major airports, inevitably affecting tourist satisfaction and the sustainability of the tourism sector (Bank of Thailand, 2019). To address this issue, the Thai government implemented a policy to promote a cluster of 55 secondary tourist cities to reduce tourist congestion in major cities and to distribute income to local communities in secondary cities (Tourism Authority of Thailand, 2018a).

To achieve such a policy, the transport system should be much considered as it is one of the essential components of tourism activities and plays a crucial role in supporting the accessibility and success of a tourism destination. Additionally, transport infrastructure and availability of transport modes are important factors that attract target tourists to visit the destination and facilitate them in choosing their preferred transport mode with affordable fares (Dickman, 1997). An efficient transport system and adequate transport services within the destination can help create efficient tourism flow between the tourist-generating region and destination and also influence the growth and popularity of the destination (Costa & Brandão, 2018; Lumsdon & Page, 2004). Thus, a transport system is required to increase tourist arrivals and enhance the quality of inbound tourism (Zhang et al., 2019). More importantly, the attractive terminals (e.g., airports) and their convenient facilities are involved in the success of the tourism destination (Page, 2009). Air transport is the primary mode of international tourism, which entails travel over long distances (Rodrigue, 2020). Accordingly, the airport is a vital air transport component that becomes the gateway to a tourism destination, influencing the tourism experience (Chao et al., 2013; Wattanacharoensil et al., 2016). Hence, scholars, related government bodies, and practitioners should not overpass the development of airport services, especially those located in secondary cities.

In the case of Thailand, there are 39 commercial airports across the country, and 29 of them are considered regional airports located in secondary tourist cities. Given that regional airport is important in supporting the government's campaign to boost visitors to secondary tourist cities and helping the recovery of Thailand's air transport and tourism sector. Regional airports are also essential in providing efficient tourism flow and the linkage between the airport and tourist attractions. Past studies indicate a close association between passenger satisfaction toward airport services and tourism experience (Jiang & Liang, 2019; Jiang & Zhang, 2016; Lumsdon & Page, 2004; Wattanacharoensil et al., 2017). Accordingly, the airport manager should put more effort into developing airport services in various dimensions by assessing passengers' perception of regional airports' service performance.

This study, therefore, aims to identify the differences between passengers' perceived importance and performance of regional airport services in Thailand. This study also intends to provide a better understanding of domestic passengers' perception of airport service performances and a guideline for airport operators and related bodies to improve services of regional airports in a way that responds to passengers' needs effectively.

Literature review

Regional airports of Thailand

The regional airport is crucial in linking major and secondary tourist destinations (Carballo-Cruz & Costa, 2014; Postorino, 2010; Tourism Authority of Thailand, 2018b). In Thailand, there are 39 commercial airports. Twenty-nine of them are owned by the Department of Airport (DOA) (Civil Aviation Authority of Thailand, 2017) and are classified as regional airports (serving 1-5 million passengers per year). Six privatised airports are owned by the Airport of Thailand Plc. Three airports are owned and operated by a private company, Bangkok Airways Plc. One airport is run by a management committee of the Royal Thai Navy. As most of DOA's airports are situated in secondary cities, they are essential to support air travel to the secondary cities and tourism demands, especially high-value tourists. Nakhon Si Thammarat, Udon Thani, Lopburi, Suphanburi, and Phitsanulok provinces received 3.84, 3.56, 3.48, 3.31, and 3.10 million tourists, respectively, ranked in the top five of most-visited secondary cities (Ministry of Tourism and Sports, 2020). However, only Nakhon Si Thammarat, Udon Thani, and Phitsanulok have regional airports in service (Department of Airports, 2020). The statistics of air passenger traffic of the three airports are displayed in Figure 1.



Figure 1: Air Passenger Traffic of Three Regional Airports in Thailand Source: Department of Airports (2023).

Regional airports in Thailand provide various facilities and essential services for passengers. For example, information centres, passenger lounges, first aid rooms, postal services, ATMs, well-known and local restaurants, souvenir shops, car rental services, and car parking services (Department of Airports, 2020). Although regional airports are usually not in a competitive setting, it is still necessary to analyse passengers' expectations and perception of airport service as it relates to their financial performances (Bezerra & Gomes, 2015; Fodness & Murray, 2007; Jiang & Zhang, 2016; Merkert & Assaf, 2015). Moreover, to provide memorable experiences for passengers and sustain business performance, it is compulsory for airport operators to profoundly understand how passengers perceive the quality of airport services and which service attributes can satisfy them.

Attributes of airport services

Airport operators have become more concerned about understanding the passenger experience at the airport nowadays (Bezerra & Gomes, 2020). Empirical studies revealed the influences of passengers' experience toward regional airports on destination image and total tourist experience (Prentice & Kadan, 2019; Wattanacharoensil et al., 2016). Chao et al. (2013) found that the tourists' first and last impressions of the airport affect their impression of the particular destination because the airport is also considered the gateway of the tourism destination. In addition, the gap between passengers' perceived importance (expectation) and the performance of the airport services influences how they evaluate the airport service quality (Parasuraman et al., 1985; Tsai et al., 2011). So, many airports frequently conduct passenger satisfaction surveys to gain insights into passengers' perceptions of airport services and improve their services to match passengers' expectations and needs (Bogicevic et al., 2013; Jiang & Liang, 2019; Usman et al., 2023). Fodness & Murray (2007) conducted mixed methods research to identify airport service attributes and proposed the dimensions for measuring passengers' expectations of airport service quality. They consist of six dimensions (22 service attributes): effectiveness of airport function, efficiency, the interaction of airport employees, maintenance in the airport, airport décor, and productivity (facilities). These dimensions have been employed by past studies to assess airport service quality in various contexts (George et al., 2013; Jiang & Zhang, 2016; Lubbe et al., 2011; Suwannakul et al., 2023). In this study, three regional airports from different regions of Thailand (Nakorn Si Thammarat, Udon Thani, and Phisanulok airports) were selected as case studies to examine levels of passengers' perceptions of the service attributes and to identify the areas that needed to be focused for improvement. Hence, the first research hypothesis is posited as follows:

H1. There are significant differences between the perceived importance and performances of regional airports' service attributes.

The results of past studies indicated that the degrees of individuals' perceptions depend on their demographic characteristics in different cultures (Gilbert & Wong, 2003; Jiang & Liang, 2019; Pantouvakis & Renzi, 2016; Suwannakul, 2021). Gilbert &

Wong (2003) also found significant differences in airline service expectations between passengers with different travel purposes. Accordingly, the second research hypothesis is formulated as follows:

H2. Passengers with different characteristics and travel purposes perceive service performances of regional airports differently.

Methodology

Service attributes (under six dimensions) of Fodness & Murray (2007) were applied in this quantitative study. The questionnaire was used as the research tool. A five-point semantic differential scale between polar adjectives was employed as a survey rating scaling. Some attributes were slightly adjusted during the research tool development process to fit the research context better. The validity of questions was assessed by five experts and analysed with the index of item-objective congruence (Creswell, 2014). All indexes were higher than the cutoff value of 0.750 (Turner & Carlson, 2003). However, some wording was slightly modified. One attribute (out of 22 attributes) was removed ("I should be able to easily reach my connecting flight") because it was not relevant to the context of a regional airport. To evaluate the reliability of the questionnaire, 30 pilot questionnaires were distributed to respondents. The result showed that Cronbach's α coefficient values of all items were above 0.700, indicating acceptable internal consistency (Hair et al., 2010). This research was submitted to the Human Research Ethics Committee of King Mongkut's Institute of Technology Ladkrabang for ethical approval. The committee approved the ethical standard of this study in July 2020 (No. EC KMITL 63 032). The data was collected between August-September 2021 at three DOA airports located in different regions of Thailand, namely, Nakorn Si Thammarat Airport (NST), Udon Thani Airport (UTH), and Phitsanulok Airport (PHS). For this study, the samples were Thai passengers who had experienced using services of the DOA's regional airports at least once in 12 months and were willing to participate in the study. In 2019, the total number of air passengers using the DOA airports (N) was 17,921,877 (Department of Airports, 2019). Non-probability sampling methods were used in this study, including quota and accidental sampling. At least 300 samples were required from each target airport. The sample size (n) was estimated using G*Power version 3.1.9.6 (Faul et al., 2009). The F-test was set as a test family. ANOVA was chosen as the statistical test based on an effect size of 0.050, an error probability of $\alpha = 0.050$, a power level of 0.800 (Hair et al., 2010) and the number of groups was six. The program suggested that the sample size for this study should not be less than 216. The questionnaires were distributed to the samples at the airport departure halls. Before distributing a questionnaire, each sample was verbally informed that their participation was voluntary and that their data was anonymous and confidential. Written informed consent was received from every respondent. Finally, 320, 301, and 303 questionnaires were collected from NST, UTH, and PHS airports (a total of 924 questionnaires). However, 38 incomplete questionnaires were removed during this stage. The 886 final cases (n) were sufficient for data analysis. As suggested by Parasuraman et al. (1985), a service firm should identify and narrow the gap between the expectations and perceptions of customers in order to build longterm relationships with customers. Therefore, gap analysis and paired-sample t-test have been used to examine the differences between the perceived importance and performance of the airport service attributes from passengers' perspectives. One-way ANOVA was also employed to analyse the effects of respondents' characteristics and travel behaviours on their perceptions of airport service performance.

Results and discussion

Sample characteristics

The total number of respondents was 886. Most of them were obtained from NST airport (35.3%), followed by UTH airport (33.8%) and PHS airport (30.9%). 60% of respondents were female. Approximately half of the respondents were aged 20–30 years old (46.2%), followed by 31–40 (27.2%), 41–50 (16.0%), over 50 (8.8%), and less than 20 years old (1.8%), respectively. Regarding education level, 68% of respondents possessed a bachelor's degree, and 16.3% earned a master's degree or higher. Most of them were private corporate employees (31.5%), some of them were merchants or business owners (26.7%), public servants (14.1%), students (13.2%), and others (14.5%). Around 50% of them earned 10,001–30,000 THB monthly, followed by 30,001–50,000 (21.3%), lower than 10,000 (13.4%), more than 70,000 (8.2%), and 50,001–70,000 THB per month (7.1%). In the past 12 months, 43.7% of respondents travelled 2–4 times, followed by 5–7 times (16.3%), more than ten times (14.9%), one time (11.4%), and less than once a year (1.1%). Respondents mostly travelled for leisure (44.8%), and the rest of them travelled for work or business (21.9%), visiting relatives or friends (10.8%), and others (13.5%).

Mean and service gap analysis

Table 1 displays 21 service attributes of regional airports used in this study, their average scores, and the standard deviation of the importance and performance under the six dimensions. As rated by respondents, all of the importance scores were higher than the corresponding performance scores. Overall, respondents rated the efficiency of airport function to be the highest importance among the six dimensions ($\bar{x}=4.374$), followed by the interaction of airport employees ($\bar{x}=4.346$), the effectiveness of airport function ($\bar{x}=4.341$), productivity or airport facilities ($\bar{x}=4.001$), airport decor ($\bar{x}=3.846$), and maintenance in the airport ($\bar{x}=3.846$). When considering individual attributes, the five highest levels of importance were visible external direction signs to airport services ($\bar{x}=4.405$), visible direction signs to airport facilities ($\bar{x}=4.404$), the readiness of airport employees to promptly respond to passengers' requests ($\bar{x}=4.396$), waiting time for the check-in process ($\bar{x}=4.394$), the airport's physical layout ($\bar{x}=4.383$), and waiting time for baggage claim ($\bar{x}=4.383$). The lowest level of importance was the art display ($\bar{x}=3.757$). According to the average performance scores, overall, respondents rated the efficiency of airport function to be the highest performance among the six dimensions ($\bar{x}=4.068$), followed by the interaction of airport employees

 $(\bar{x}=4.054)$, the effectiveness of airport function $(\bar{x}=4.000)$, productivity or airport facilities $(\bar{x}=3.660)$, airport decor $(\bar{x}=3.632)$, and maintenance in the airport $(\bar{x}=3.562)$. When considering individual attributes, the five highest levels were the airport's physical layout $(\bar{x}=4.229)$, airport employees offering individualised attention $(\bar{x}=4.137)$, waiting time for the checkin process $(\bar{x}=4.117)$, the readiness of airport employees to promptly respond to passengers' requests $(\bar{x}=4.112)$, and visible direction signs to airport facilities $(\bar{x}=4.097)$. The service attribute of availability of national chain restaurants (3.511) was rated as the lowest level of performance.

Table 1: Average performance and importance scores of regional airport's service attributes

| | S | Importance (I) | | Performance (P) | | Gap (P-I) | t value |
|-------------------------|--|----------------|-------|-----------------|-------|--------------|----------|
| | Service attributes | x S.D. | | x S.D. | | | |
| Effectiveness | | 4.341 | 0.653 | 4.000 | 0.649 | -0.341 | 13.610** |
| 1. A var | riety of ground transportation options to the nearest city | 4.317 | 0.834 | 3.845 | 0.896 | -0.472 | 12.345* |
| Visib | le external direction signs to airport services | 4.405 | 0.806 | 4.024 | 0.818 | -0.381 | 12.011* |
| Conv | renient location of baggage carts | 4.197 | 0.812 | 3.827 | 0.879 | -0.370 | 10.450* |
| Visib | le direction signs to airport facilities | 4.404 | 0.785 | 4.097 | 0.813 | -0.307 | 9.867* |
| An ai | irport's physical layout | 4.383 | 0.786 | 4.229 | 0.768 | -0.154 | 5.247* |
| Efficiency | | 4.374 | 0.671 | 4.068 | 0.622 | -0.306 | 11.861° |
| Waiti | ing time for baggage claim | 4.383 | 0.745 | 4.028 | 0.710 | -0.355 | 11.746* |
| Waiti | ing time for exiting the airplane after landing | 4.354 | 0.781 | 4.059 | 0.736 | -0.295 | 9.323* |
| Waiti | ing time for the check-in process | 4.394 | 0.751 | 4.117 | 0.751 | -0.277 | 8.942* |
| Interaction | | 4.346 | 0.669 | 4.054 | 0.647 | -0.292 | 11.336° |
| Quicl | k complaint responsiveness at an airport | 4.274 | 0.800 | 3.914 | 0.774 | -0.360 | 11.123* |
| Read | iness of airport employees to promptly respond to passengers' requests | 4.396 | 0.756 | 4.112 | 0.759 | -0.284 | 9.703* |
| 11. Avail | lability of airport employees to offer individualised attention | 4.369 | 0.768 | 4.137 | 0.758 | -0.232 | 7.622* |
| Productivity | | 4.001 | 0.811 | 3.660 | 0.805 | -0.341 | 11.154° |
| Busin | ness center services | 4.019 | 0.892 | 3.612 | 0.926 | -0.407 | 11.085° |
| Quiet | t areas for taking rest, reading, and doing business | 4.017 | 0.937 | 3.617 | 0.960 | -0.400 | 10.479* |
| 14. Avail | lability of conference facilities | 3.993 | 0.916 | 3.750 | 0.880 | -0.243 | 7.024* |
| Décor | | 3.846 | 0.770 | 3.632 | 0.792 | -0.214 | 7.388* |
| 15. Curre | ent décor of an airport | 3.924 | 0.808 | 3.670 | 0.865 | -0.254 | 7.393* |
| Déco | r that matches the local culture of the city | 3.857 | 0.897 | 3.657 | 0.854 | -0.200 | 6.086* |
| 17. Art d | isplay | 3.757 | 0.872 | 3.568 | 0.899 | -0.189 | 5.707° |
| Maintenance | | 3.846 | 0.796 | 3.562 | 0.845 | -0.284 | 9.681° |
| | lability of national chain restaurants | 3.800 | 0.895 | 3.511 | 0.928 | -0.289 | 8.266* |
| | lability of local cuisine | 3.840 | 0.936 | 3.556 | 0.937 | -0.284 | 8.335° |
| Avail | lability of nationally known retail outlets | 3.843 | 0.881 | 3.560 | 0.913 | -0.283 | 8.381° |
| 21. A vai | riety of speciality retail stores that portray the local culture | 3.900 | 0.900 | 3.621 | 0.984 | -0.279 | 8.118* |

**p < 0.001

Table 1 also displays the service gaps in average performance and importance scores. The five largest gaps were the service attributes of a variety of ground transportation options to the nearest city (gap of -0.472), business centres services (gap of -0.407), quiet areas (gap of -0.400), visible external direction signs to airport services (gap of -0.381), and convenient location of baggage carts (gap of -0.370). The smallest gaps were the service attributes of an airport's physical layout (gap of -0.154), art display (gap of -0.189), décor incorporating the local culture (gap of -0.200), availability of airport employees to offer individualised attention (gap of -0.232), and availability of conference facilities (gap of -0.243). A paired-sample t-test was used to test whether there are significant differences between perceived performances and the importance of service attributes (H1). As shown in Table 1, the result reveals significant differences between the importance and performances for all service attributes of airport services (p-values < 0.001), as also found in past studies (Allen et al., 2020; Jiang & Liang, 2019; Lubbe et al., 2011). Therefore, hypothesis H1 is supported. The result indicates that the respondents of this study were least satisfied with the regional airport's ground transportation to the city. The result aligns with several studies (Jiang & Zhang, 2016; Du Plessis et al., 2014; Pandey, 2016; Tsai et al., 2011) that reported the significance of ground transportation services to/from the airport. Past studies also indicated that business centres services (Fodness & Murray, 2007; Lubbe et al., 2011), quiet areas for resting and working (Fodness & Murray, 2007; Lubbe et al., 2011), visible external direction signs to airport services (Allen et al., 2020; Lubbe et al., 2011), and convenient location of baggage carts (Eboli & Mazzulla, 2009; Fodness & Murray, 2007; Lubbe et al., 2011) were among the most crucial airport's service attributes, which is consistent with this study. Therefore, regional airport operators should prioritise those service attributes that should be firstly invested in improving their performances.

One-way ANOVA results

One-way ANOVA was employed to analyse the effects of gender, age, educational level, occupation, income, travel frequency, and main travel purpose on perceived airport service performances (H2 testing). Before conducting one-way ANOVA tests, the homogeneity of variance assumptions was assessed using the Levene statistic (LS). The results showed that the assumption was met (Levene's test (2,883) = 2.507, p-value = 0.082), indicating that independent groups have equal variances. As shown in Table 2, one-way ANOVA results reveal that there were no significant differences between genders (F = 0.819, p-value = 0.366), age ranges (F = 1.440, p-value = 0.219) and main travel purposes (F = 2.130, p-value = 0.075) on perceived service performances of regional airports. Statistically significant differences were found in the perceived service performances of regional airports between educational levels (F = 12.467, p-value < 0.001), occupations (F = 2.871, p-value = 0.009), income ranges (F = 8.019, p-value < 0.001), and travel frequencies (F = 9.671, p-value < 0.001). The post hoc comparisons using the Turkey HSD test (displayed in Table 2) showed that the mean score for below bachelor's degree holders (\bar{x} = 3.980, SD = 0.644) was significantly different from bachelor's degree holders (\bar{x} = 3.841, SD = 0.552) and above bachelor's degree holders (\bar{x} = 3.642, SD = 0.584). For respondents' occupations, the mean score for respondents who were merchants or business owners (\bar{x} = 3.899, SD = 0.566) was significantly different from private corporate employees (\bar{x} = 3.729, SD = 0.539). There are also differences between the mean scores for respondents' who monthly earned less than 10,000 THB (\bar{x} = 3.890, SD = 0.607),

10,001-30,000 THB ($\bar{x}=3.889,$ SD = 0.583), 30,001-50,000 THB ($\bar{x}=3.856,$ SD = 0.550), 50,001-70,000 THB ($\bar{x}=3.570,$ SD = 0.534), 70,001-90,000 THB ($\bar{x}=3.498,$ SD = 0.74), and more than 90,000 THB ($\bar{x}=3.550,$ SD = 0.488). However, differences between the mean scores for tourists earning less than 10,000 THB, 10,001-30,000 THB, and 30,001-50,000 THB monthly were not revealed. Moreover, the post hoc comparisons showed significant differences between mean scores for respondents who travelled one time ($\bar{x}=4.008,$ SD = 0.618), 2–4 times ($\bar{x}=3.901,$ SD = 0.584), more than ten times in the past 12 months ($\bar{x}=3.672,$ SD = 0.553), and 8–10 times ($\bar{x}=3.647,$ SD = 0.462). However, significant differences were not found between respondents who travelled once in the past 12 months and those who travelled 2–4 times, nor between respondents who travelled 8–10 times and those who travelled more than ten times in the past 12 months. Additionally, respondents who travelled 5–7 times ($\bar{x}=3.812,$ SD = 0.581) did not significantly differ from other groups of respondents. Accordingly, H₂ was partially supported.

Table 2: One-Way ANOVA Results of respondents' characteristics on perceived airport service performance

| Variables | Source of variance | Sum of squares | df | Mean square | F | <i>p</i> -value | Comparison (Turkey HSD) |
|---------------------|--------------------|-------------------|-----|----------------|----------|-----------------|---|
| Gender | Between Groups | .275 | 1 | 0.275 | 0.819 | 0.366 | |
| | Within Groups | 297.109 | 884 | 0.336 | | | _ |
| | Total | 297.384 | 885 | | | | |
| Age | Between Groups | 1.931 | 4 | 0.483 | 1.440 | 0.219 | |
| - | Within Groups | 295.453 | 881 | 0.335 | | | = |
| | Total | 297.384 | 885 | | | | |
| Educational level | Between Groups | 8.167 | 2 | 4.084 | 12.467** | 0.000 | below bachelor's degree > bachelor's degree > above bachelor's |
| | Within Groups | 289.217 | 883 | 0.328 | | | degree |
| | Total | 297.384 | 885 | | | | |
| Occupation | Between Groups | 5.715 | 6 | 0.953 | 2.871* | 0.009 | merchant/business owner > private corporate employees |
| | Within Groups | 291.669 | 879 | 0.332 | | | |
| | Total | 297.384 | 885 | | | | |
| Monthly income | Between Groups | 12.959 | 5 | 2.592 | 8.019** | 0.000 | - less than 10,000 > 50,001–70,000 > |
| (THB) | Within Groups | 284.426 | 880 | 0.323 | | | 70,001–90,000 > more than 90,000 |
| | Total | 297.384 | 885 | | | | - 10,001–30,000 > 50,001–70,000 > |
| | | | | | | | 70,001–90,000 > more than 90,000 |
| | | | | | | | - 30,001–50,000 > 50,001–70,000 > |
| | | | | | | | 70,001–90,000) > more than 90,000 |
| Travel frequency | Between Groups | 12.509 | 4 | 3.127 | 9.671°° | 0.000 | - 1 time > more than 10 times > 8-10 times |
| (in the past | Within Groups | 284.876 | 881 | 0.323 | | | 2-4 times > more than 10 times > 8-10 times |
| 12 months) | Total | 297.384 | 885 | | | | |
| Main travel purpose | Between Groups | 2.848 | 4 | 0.712 | 2.130 | 0.075 | · |
| | Within Groups | 294.536 | 881 | 0.334 | | | = |
| | Total | 297.384 | 885 | | | | |

p < 0.050, p < 0.001

The one-way ANOVA results affirmed that passengers with master's degrees or higher seem less satisfied with regional airports' service attributes than other groups, which is consistent with past studies. Chen et al. (2011) found that tourists with master's and PhD degrees were less satisfied with the interpretation service of a national park in Taiwan than those with bachelor's degrees. Shanka & Phau (2008) also found that postgraduates had less perceived emotional values of tourism destinations than undergraduates. Moreover, passengers who owned a business were more satisfied than those who worked for private companies. Seiler et al. (2013) also found that self-employed persons and freelancers, likely to enjoy greater freedom and independence in their day-to-day jobs, exhibited higher customer satisfaction than salaried employees. The result also demonstrates that passengers with higher monthly incomes were likely to have a lower perception of the regional airports' service performances, which aligns with a past study. Spoerr (2021) revealed that hotel guests with higher monthly incomes perceived the importance of some of the hotel's service attributes (e.g., food and beverage and parking facilities) at lower levels. For travel frequency, the result indicates that the more frequently tourists travel (over four times a year), the fewer levels of airport service performance the tourists perceive. This result is consistent with past studies. Lubbe et al. (2011) found that frequent travellers (who travelled more than three times in the previous year) perceived the performance of O.R. Tambo International Airport of Johannesburg, South Africa, at a lower level.

Conclusion

Airport service is among the most significant factors affecting passengers' perceived service performances. The gap between passengers' perceived importance of the services (expectation) and perceived services indicates the service provider's performance (Martilla & James, 1977; Parasuraman et al., 1985). As passenger satisfaction with airport services can further benefit the airport's financial performance, regional airport operators should narrow the service gaps by delivering a service at least an expected level of service to a passenger, which can then make them satisfied. Regional airport operators need to understand passengers' characteristics and provide appropriate marketing strategies for supporting the accessibility and success of a tourism destination. This study, therefore, employed service attributes of Fodness & Murray (2007) to examine differences between passengers' perceptions of the importance and performance of Thailand's regional airport services and the effects of passengers' characteristics and travel behaviours on the perceived service performance of the airports. By considering such results with the gap analysis, the result indicates that the respondents of this study were likely to feel most satisfied with the airport's layout. On the contrary, they were least satisfied with the regional airport's ground transportation to the city. Accordingly, the regional airport operator should first focus on developing the local intermodal transport system (e.g., airport bus, taxi service, airport van) to link the airport, city centre, and major tourist attractions. It can be done by coordinating with local public transport operators to establish the routes linking the airport, cities, and popular tourist destinations. Airport

authorities and related government bodies can also consider granting public transport concessions to offer airport shuttles for specific routes or areas.

According to the results of this study, the regional airport operators should improve their facilities (productivity dimension) in the terminal area, particularly business centre services and quiet areas, to facilitate business travellers to rest, read, and do business while waiting for their flights. In addition, providing clear, visible direction signs and convenient location of baggage carts should not be neglected as they are considered the effectiveness of airport function. The empirical result also affirms that passengers' perception of airport service performance varies across their characteristics and travel behaviours, including education level, occupation, monthly income, and travel frequency. It indicates that passengers with higher education levels, monthly incomes, and more travel experiences are likely to have higher levels of expectation of airport service performance. Hence, airport operators should conduct further market research to profoundly understand passengers' expectations, attitudes and behaviours of different segments because using a one-size-fits-all marketing approach may not be able to deliver service values and respond to all passengers' needs effectively. Moreover, this study can benefit regional airport operators, government agencies, and tourism-related bodies by using these results as a guideline for developing strategies to provide efficient tourism flow and the linkage between the regional airport and local attractions.

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