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A Study on Passenger Satisfaction of Kaohsiung International Airport

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Abstract

This study aimed to investigate travelers' perception of the importance of airport services and facilities and travelers' satisfaction of Kaohsiung International Airport in terms of its services and facilities. The research was conducted by using a modified questionnaire to examine participants' satisfaction of Kaohsiung International Airport and the importance of airport services and facilities from participants' perspectives. The finding of this research indicates that most of the participants were satisfied with the services and facilities provided in Kaohsiung International Airport. Participants believed that efficiency of airport circulation and availability of flight information were the most important elements when evaluating an airport, and most of the participants were satisfied with these two elements in Kaohsiung International Airport. Nevertheless, participants were relatively unsatisfied with the service provided in the shopping section. Moreover, the result also shows that participants' age influences their decision when evaluating their satisfaction of Kaohsiung International Airport. The findings of the study would be significant in that they might help Kaohsiung International Airport to strengthen its services and upgrade its facilities.

A Study on Passenger Satisfaction of Kaohsiung International Airport

Airport is doubtless an important infrastructure in every country. However, airports were not viewed as an industry that required marketing when it was first established. Atalık(2009) states that since after the 1980s, marketing in the management of airports, such as offering a free public services or utility, has become more important. Since then, travelers have become more sophisticated and demanding on the services at the airport. As a result, managers of airports valued them as a form of business. They have imported the concept of marketing into airport management and paid more attention to customers' satisfaction in order to be competitive in the world.

In Taiwan there are two International airports which contribute greatly to the economy in Taiwan. Although passengers tend to arrive and depart from Taiwan through Taoyuan International Airport, there are still many travelers who choose to enter Taiwan through Kaohsiung International Airport. According to the statistics released from the Civil Aeronautics Administration [CAA], in 2012 1,542,767 passengers arrived and departed from Taiwan through Kaohsiung International Airport. In addition, Kaohsiung International Airport has further strengths in terms of geographical advantages of being close to Southeastern Asia. Thus, Kaohsiung International Airport appears to play an important role for the image of Kaohsiung City, for the first stop of passengers to enter Kaohsiung is the airport. What passengers perceive would directly influence their perception of Kaohsiung. Consequently, the satisfaction of passengers traveling through Kaohsiung International Airport becomes worth studying in building up the image of Kaohsiung City.

Purpose of the Study

Kaohsiung International Airport has become more important since 1997 when

Kaohsiung Airport started to operate International affairs. Chao and Chu (2012) claim that because of its location of being near downtown, Kaohsiung Harbor, and also Southeastern Asia, more and more passengers started to travel through Kaohsiung International Airport. In order to help Kaohsiung International Airport evaluate its services and facilities, it would be important to know passengers' perception of Kaohsiung International Airport. Thus, the purpose of the study is to investigate travelers' satisfaction of Kaohsiung International Airport in terms of its services and facilities. Besides, this study will further investigate how important travelers' perspectives of the services and facilities provided in an airport are. Kaohsiung International Airport can further strengthen its services and upgrade its facilities based on the result of travelers' satisfaction and importance of the services and facilities. Moreover, this research tries to seek the answers of the following questions:

1. What is the overall traveler satisfaction of Kaohsiung International Airport?
Are travelers satisfied with the services and facilities offered by Kaohsiung International Airport?
2. From travelers' perspectives, what is the most important services or facility in an airport? Are they provided in Kaohsiung International Airport?
3. What kinds of services or facilities in Kaohsiung International Airport are the travelers most satisfied with and most unsatisfied with?
4. Do valuables such as age, gender, traveling frequency, occupation field, and education background influence travelers' perception of the image of Kaohsiung International Airport?

Significance of the Study

This study focuses on the satisfaction of passengers who arrive or depart from Taiwan through Kaohsiung International Airport. The findings will analyze the strengths and weaknesses which will help the airport to increase its quality and

upgrade its facilities. Furthermore, the result will be helpful in building up the image of Kaohsiung City.

Literature Review

Customer Satisfaction

In modern marketing practice, knowing, producing, and delivering satisfaction to customers are the most important keys. In the modern business philosophy, customer is the center and satisfaction is the primary goal. Airport is a one of the service industries; therefore, before evaluating airport, it is necessary to clarify the definition of satisfaction. Siri, Josiam, Kennon, and Spears (2012) explain that “satisfaction is an outcome experience that has at least met or has exceeded expectations” (cited in Engel et al, 1995, p.2). Therefore, Siri et al (2012) add that “satisfaction occurs when the experience meet the expectation” (p.3). However, travelers’ satisfaction of an airport can also be influenced by the surrounding environment, technical facilities and the service they received. Tsai, Hsu, and Chou (2011) state that “passengers will judge airport services based on their perceptions of the technical outcome, the process by which that outcome was delivered and the quality of the physical surroundings where the service was delivered” (p.1027). De Meyer and Mostert (2011) support the same idea that “customers will evaluate their satisfaction with each service element provided by the business as well as their satisfaction with the overall service experience” (p.80). Moreover, at an airport, aviation and non-aviation services are the two kinds of services which are both important when travelers evaluate their satisfactions of an airport. Atalık (2009) indicates that every manager in airport industry emphasizes the importance of his or her customers’ viewpoints of service quality including both aviation trade and non-aviation trade.

Discrepancy between perceived satisfaction and expected satisfaction.

Evaluating passengers' satisfaction can be very difficult. As Gourdin and Kloppenborg(1991) comment, word of mouth communication, personal needs, and past experience would result in different expected services of customers. As for passengers' expectations, they could simply be the courtesy of staff such as customs and immigration bureau staff, the total time of service (check-in process, customs inspection, immigration process, and ticketing), availability of facilities (lifts, conveyors and moving walkways), availability of information display for flights, and the distance and service in case of flight delay (Chou, 2012). When evaluating the satisfaction of an airport, it is also vital to understand the gap between how travelers' receive the service and how they experience it. Tsai et al (2011) suggest that customers evaluate service through not only their perceptions and quality of the service but also their experiences of the service. Gourdin and Kloppenborg (1991) assume that if there is a difference between customers' expected services and perceived service, the customers' satisfaction will result in either positive image or negative image. Travelers may have assumption about how they believe the service should be like to satisfy their needs. Nevertheless, sometimes real service they receive could be far different from their imagination. Tsai et al (2011) emphasize that "customer perceptions are subjective assessments of actual service experiences; customer expectations are beliefs about service delivery that function as reference or ideal points against which performance is evaluated" (p.1026). As Gourdin and Kloppenborg (1991) state, besides customers' perceived service, service delivery, external communications to consumers, translation of perceptions into service quality specifications, and management perceptions of consumer expectations can lead to the gap between customers' expected services and perceived service. Tsai et al (2011) explain that in order to fulfill travelers' satisfaction, service providers try to close the

gap between travelers' perceived and expected service quality. Therefore, it seems to be necessary to understand the travelers' expected service and perceived service before evaluating their satisfaction of an airport.

Empirical studies related to airport passenger satisfaction.

Passengers will compare the offerings of a variety of service to determine which of them can best meet and satisfy their needs because they purchase service that suits their specific needs. As a result, if passengers have to spend time and money on the service, they would consequently spend more time comparing the service instead of their real expectation of the service.

Similar studies (Atalık, 2009; Tsai et al, 2011) conclude that efficiency of airport circulation and availability of flight information are the most important elements when evaluating the satisfaction of an airport. Passengers emphasize on the efficiency of how fast and simple it is when going through check-in process.

In Suvarnabhumi International Airport, Bangkok, Thailand, passengers are most satisfied with their cleanliness and facilities. Nevertheless, the visibility of flight information is marked the least satisfied (Siri et al, 2012).

In OR Tambo International Airport, Johannesburg, Gauteng Province of South Africa, the cleanliness is also marked as the most satisfied. However, the comforts of waiting lounges and the punctuality of flight departures and arrivals are marked as the least satisfied (De Meyer and Mostert, 2011).

In Ataturk Airport, Istanbul, Turkey, the facilities, the cleanliness, and the duty-free services are marked as the most satisfied. Nonetheless, public transportation to the airport, availability of the flight information and attitude of staffs are marked as the least satisfied (Atalık, 2009).

Summarizing the previous researches, it seems obvious that passengers are

satisfied with the cleanliness of the three airports, while the availability of the flight information seems to be the least satisfied service that should be improved.

Methodology

Participants and Procedure

The purpose of the study is to investigate participants' perception of the importance of airport services and facilities and travelers' satisfaction of Kaohsiung International Airport in terms of its services and facilities. The participants were people who traveled through Kaohsiung International Airport. There was no limitation in gender, age, occupation, and education level. The questionnaire was both distributed randomly and posted on <http://www.mysurvey.tw/s/pwEpcAnh>. There were 60 participants who answered the questionnaire.

Instrument

The questionnaire originally composed by Liu (Chun-I) was adopted and modified into the questionnaire employed in this study. There are three parts in the questionnaire. The first part, demographics, asked about participants' gender, age, traveling frequency, education, and occupation. The second part includes participants' perception of the importance of airport services and facilities. Likert scale was also used in this part, and the five-point rating scales range from "1" for "the most important" to "5" for "the least important". The third part includes travelers' satisfaction of Kaohsiung International Airport. Likert scale was used in this part, and the five-point rating scales range from "1" for "the most satisfied" to "5" for "the least satisfied". Thirty-five questions were further categorized into 7 themes. They were Transportation to Airport, Terminal, Check-in, Customs inspection, Shop, Immigration, and Luggage.

Data Analysis

Statistical Package for the Social Sciences (SPSS) was used for data analysis,

and data collected were analyzed via descriptive analysis, ANOVA and t-test.

Result

The purpose of the study is to investigate participants' perception of the importance and the satisfaction of Kaohsiung International Airport in terms of its service and facilities. The results were divided into three parts: (1) general information, (2) participants' perception of the importance of service and facilities in an airport, and (3) satisfaction of Kaohsiung International Airport.

General Information

As Figure 1.1 shows, there were 60 participants who answered the questionnaire. There were 24 male participants and 36 female participants.

Figure 1.1 Participants' Gender

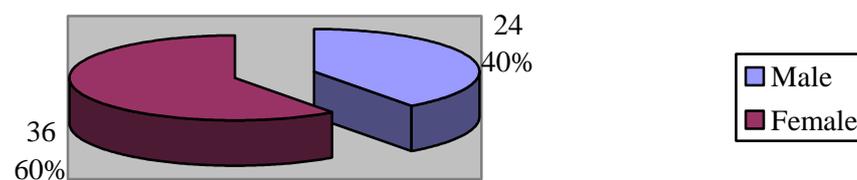
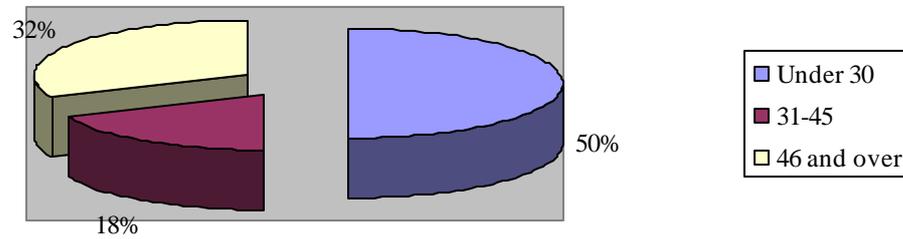
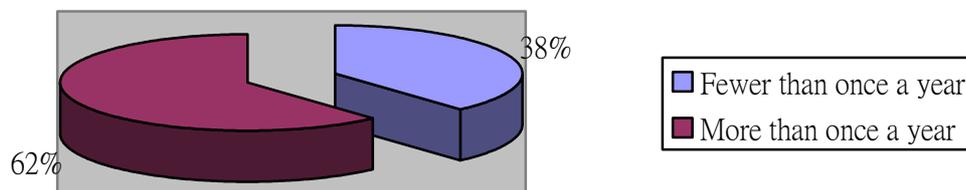


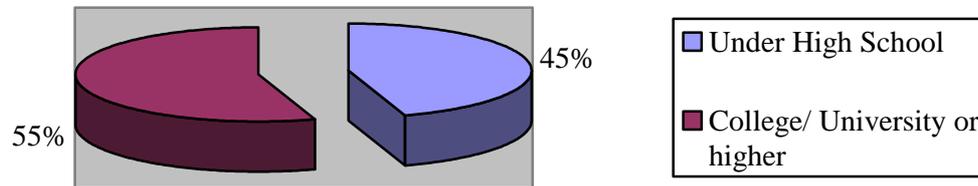
Figure 1.2 indicates the age of the participants. 30 of the participants (50%) were aged under 30 years old. There were 11 of the participants (18%) aged between 31 and 45. 19 of the participants (32%) were aged over 46 years old.

Figure 1.2 Participants' Age

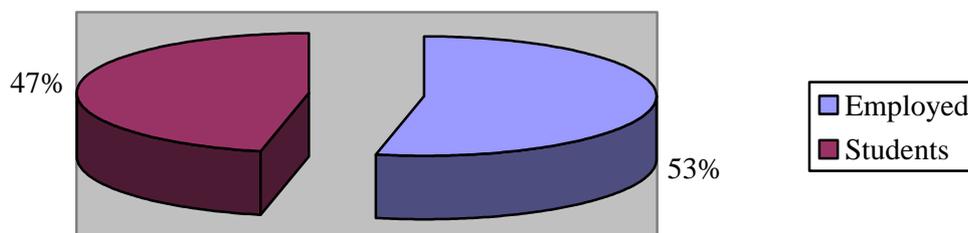
As shown by Figure 1.3, there were 38% of the participants who travel abroad fewer than once a year. However, many of the participants (62%) travel abroad more than once a year.

Figure 1.3 Participants' Traveling Frequency

As Figure 1.4 indicates, 45% of the participants' education level was high school, while 55% of the participants' education level was college/university.

Figure 1.4 Education Level

As indicated by Figure 1.5, 53% of the participants who were employed. On the other hand, 47% of the participants were students.

Figure 1.5 Participants' Occupation

Participants' perception of the importance of service in an airport

As shown by Table 1.1, the participants believed that every the service provided in an airport was important. Table 1.1 indicates that the top three important service in an airport were Check-In (M=1.43), Immigration (M=1.45), and Luggage (M=1.46). On the contrary, the bottom three unimportant service were Transportation (M=1.79), Terminal (M=1.82), and Shopping Areas (M=1.83).

Table 1.1 Importance Questionnaire

Importance of Service in an Airport	I	N	NI	M	SD
1. Transportation to Airport	83.4%	15.0%	1.7%	1.79	.724
2. Terminal	79.2%	16.3%	4.5%	1.82	.549
3. Check-In	92.5%	7.5%	0.0%	1.43	.582
4. Customs Inspection	91.6%	8.3%	0.0%	1.49	.580
5. Shop	81.0%	17.0%	2.0%	1.83	.657
6. Immigration	94.2%	5.0%	0.9%	1.45	.563
7. Luggage	91.1%	7.2%	1.7%	1.46	.623

Note. I= Most Important+ Important; N= Neutral; NI= Not Important+ Least Important; M= Mean; SD= Standard Deviation

Table 1.2 shows that 83.4% of the participants believed Transportation to Airport was important (M=1.79). 90% of the participants believed that “public transportation availability” was the most important service in an airport (M=1.67).

Table 1.2 Importance of Transportation to Airport

Transportation to Airport	I	N	NI	M	SD
1. Public transportation availability	90.0%	8.3%	1.7%	1.67	.774
2. Courtesy of the service provider	73.4%	25%	1.7%	1.93	.880
3. Parking lot availability	86.6%	11.7%	1.7%	1.78	.783
Overall	83.4%	15.0%	1.7%	1.79	.724

Note. I= Most Important+ Important; N= Neutral; NI= Not Important+ Least Important; M= Mean; SD= Standard Deviation

As Table 1.3 indicates, 79.2% of the participants believed that service in terminal was important (M=1.82). In participants’ perception, the top three important service or facilities were “toilet facilities” (M=1.35), “visibility of flight Information screens”

(M=1.38), and “intelligibility of directions and signpost” (M=1.45). However, it is clear that from participants’ perspectives, the bottom three unimportant service or facilities were “smoking lounges or segregation” (M=2.47), “Art and exhibition” (M=2.40), and “availability of telephone or fax services” (M=2.27).

Table 1.3 Importance of Terminal

Terminal	I	N	NI	M	SD
1. Terminal cleanliness	93.3%	6.7%	0.0%	1.47	.623
2. Toilet facilities	93.4%	6.7%	0.0%	1.35	.606
3. Intelligibility of directions and signpost	96.6%	3.3%	0.0%	1.45	.565
4. Visibility of flight Information screens	96.7%	3.3%	0.0%	1.38	.555
5. Clarity of announcements	90.0%	8.3%	1.7%	1.62	.715
6. Availability of telephone or fax services	56.7%	38.3%	5.0%	2.27	1.023
7. Availability of ATM Cash machines	75.0%	16.7%	8.3%	2.05	.891
8. Availability of the Internet or wifi service	93.3%	5%	1.7%	1.55	.675
9. Smoking lounges or segregation	53.4%	25%	21.7%	2.47	1.321
10. Airport information services	83.4%	16.7%	0.0%	1.75	.728
11. Service of currency exchange	76.7%	20%	3.3%	1.95	.811
12. Options of cooperative banks	71.7%	23.3%	5.0%	2.02	.873
13. Art and exhibition	50.0%	38.3%	11.7%	2.40	1.012
Overall	79.2%	16.3%	4.5%	1.82	.549

Note. I= Most Important+ Important; N= Neutral; NI= Not Important+ Least Important; M= Mean; SD= Standard Deviation

As Table 1.4 shows, 92.5% of the participants believed that service provided in Check-In section was important (M=1.43). It is clear that 93.3% of the participants

believed “courtesy of airline check-in staff” was the most important service in an airport (M=1.33). Moreover, 93.3% of the participants believed that “total time for check-in process” was the most important service in an airport (M=1.42).

Table 1.4 Importance of Check-In

Check-In	I	N	NI	M	SD
1. Ticketing waiting time	93.3%	6.7%	0.0%	1.47	.623
2. Total time for check-in process	93.3%	6.7%	0.0%	1.42	.619
3. Courtesy of airline check-in staff	93.3%	6.7%	0.0%	1.33	.601
4. Congestion level of check-in area	90.0%	10%	0.0%	1.50	.676
Overall	92.5%	7.5%	0.0%	1.43	.582

Note. I= Most Important+ Important; N= Neutral; NI= Not Important+ Least Important; M= Mean; SD= Standard Deviation

As shown by Table 1.5, 91.6% of the participants believed that the service provided in Customs Inspection was important in an airport (M=1.49). It is clear that 93.3% of the participants believed that “courtesy of Customs staff” was the most important service (M=1.42). Besides, 91.6% of the participants also believed that “total time for customs inspection” was the most important service (M=1.45).

Table 1.5 Importance of Customs Inspection

Customs Inspection	I	N	NI	M	SD
1. Total time for customs inspection	91.6%	8.3%	0.0%	1.45	.649
2. Courtesy of Customs staff	93.3%	6.7%	0.0%	1.42	.619
3. Congestion level of inspection area	90.0%	10%	0.0%	1.60	.669
Overall	91.6%	8.3%	0.0%	1.49	.580

Note. I= Most Important+ Important; N= Neutral; NI= Not Important+ Least Important; M= Mean; SD= Standard Deviation

As indicated by Table 1.6, 90% of the participants believed that “courtesy of duty-free attendant” was the most important service of Shopping Areas (M=1.68). In addition, 78.3% of the participants believed that “price of food and drink” was important as well (M=1.78).

Table 1.6 Importance of Shopping Areas

Shop	I	N	NI	M	SD
1. Variety and number of cafes and restaurants	75.0%	21.7%	3.3%	1.95	.832
2. Price of food and drink	78.3%	20%	1.7%	1.78	.825
3. Variety of stores within the terminal	76.6%	21.7%	1.7%	1.92	.787
4. Courtesy of duty-free attendant	90.0%	8.3%	1.7%	1.68	.701
5. Variety and number of products in duty-free	85.0%	13.3%	1.7%	1.82	.725
Overall	81.0%	17.0%	2.0%	1.83	.657

Note. I= Most Important+ Important; N= Neutral; NI= Not Important+ Least Important; M= Mean; SD= Standard Deviation

As Table 1.7 shows, 94.2% of the participants believed that the service of Immigration was important in an airport (M=1.45). In the immigration section, 95% of the participants believed “courtesy of immigration bureau staff” was the most important service (M=1.37). Moreover, 95% of the participants also believed that “total time for immigration processing” was also the most important service of Immigration in an airport (M=1.42).

Table 1.7 Importance of Immigration

Immigration	I	N	NI	M	SD
1. Waiting time for immigration process	95.0%	3.3%	1.7%	1.50	.651
2. Total time for immigration processing	95.0%	3.3%	1.7%	1.42	.645

3.	Courtesy of immigration bureau staff	95.0%	5%	0.0%	1.37	.581
4.	Congestion level of inspection area	91.7%	8.3%	0.0%	1.52	.651
Overall		94.2%	5.0%	0.9%	1.45	.563

Note. I= Most Important+ Important; N= Neutral; NI= Not Important+ Least Important; M= Mean; SD= Standard Deviation

As Table 1.8 indicates, 91.1% of the participants believed that service relating to luggage was important (M=1.46). Within the luggage section, participants believed that “waiting time for luggage claim” was the most important service (M=1.43). In addition, 68.3% of the participants also believed that “service if luggage mistaken” was also the most important service in an airport (M=1.43).

Table 1.8 Importance of Luggage

Luggage	I	N	NI	M	SD
1. Waiting time for luggage claim	90.0%	10%	0.0%	1.43	.673
2. Availability of luggage trolley	91.7%	6.7%	1.7%	1.50	.701
3. Service if luggage mistaken	91.6%	5%	3.3%	1.43	.745
Overall	91.1%	7.2%	1.7%	1.46	.623

Note. I= Most Important+ Important; N= Neutral; NI= Not Important+ Least Important; M= Mean; SD= Standard Deviation

According to the result of t-test, there was no significant difference between gender, traveling frequency, education level, and occupation in participants' perception of the importance of service or facilities in an airport. The result of ANOVA also indicates that there was no significant difference among three age groups in participants' perception of the importance of service or facilities in an airport.

Satisfaction of Kaohsiung International Airport

As shown by Table 2.1, many of the participants were satisfied with the service provided by Kaohsiung International Airport (M=2.31). Table 2.2 shows that 53.8% of the participants (M=2.33) who were satisfied with the transportation to airport. In addition, there were 56.7% of the participants who were satisfied with “public transportation availability” (M=2.32). Although half of the participants (51.6%) were satisfied with “parking lot availability”, 10% of the participants were not satisfied (M=2.38).

Table 2.1 Satisfaction of Kaohsiung International Airport

Kaohsiung International Airport	M	SD
Overall Satisfaction	2.31	.649

Note. M= Mean; SD= Standard Deviation

Table 2.2 Satisfaction of Transportation to Airport

Transportation to Airport	S	N	D	M	SD
1. Public transportation availability	56.7%	38.3%	5%	2.32	.813
2. Courtesy of the service provider	53.3%	45%	1.7%	2.30	.788
3. Parking lot availability	51.6%	38.3%	10%	2.38	1.027
Overall	53.8%	40.5%	5.6%	2.33	.744

Note. S= Most Satisfied+ Satisfied; N= Neutral; D= Most Dissatisfied+ Dissatisfied; M= Mean; SD= Standard Deviation

As shown by Table 2.3, the mean of the overall satisfaction is 2.27. The top three most satisfied service were “terminal cleanliness” (80%, M=1.95), “visibility of flight Information screens” (80%, M=2.00), and “intelligibility of directions and signpost” (70%, M=2.12). In addition, the bottom three least satisfied service were “smoking lounges or segregation” (18.4%, M=2.67), “availability of telephone or fax services”

(11.7%, M=2.57), and “art and exhibition” (11.6%, M=2.57).

Table 2.3 Satisfaction of Terminal

Terminal	S	N	D	M	SD
1. Terminal cleanliness	80.0%	18.3%	1.7%	1.95	.723
2. Toilet facilities	65.0%	26.7%	8.3%	2.18	.911
3. Intelligibility of directions and signpost	70.0%	30%	0.0%	2.12	.691
4. Visibility of flight Information screens	80.0%	16.7%	3.3%	2.00	.736
5. Clarity of announcements	51.7%	43.3%	5.0%	2.32	.873
6. Availability of telephone or fax services	36.6%	51.7%	11.7%	2.57	.927
7. Availability of ATM Cash machines	51.6%	46.7%	1.7%	2.27	.841
8. Availability of the Internet or wifi service	61.7%	30%	8.3%	2.10	1.003
9. Smoking lounges or segregation	40.0%	41.7%	18.4%	2.67	1.115
10. Airport information services	60.0%	38.3%	1.7%	2.18	.813
11. Service of currency exchange	58.4%	40%	1.7%	2.22	.804
12. Options of cooperative banks	48.3%	48.3%	3.3%	2.35	.840
13. Art and exhibition	40.0%	48.3%	11.6%	2.57	.998
Overall	57.2%	36.9%	5.9%	2.27	.667

Note. S= Most Satisfied+ Satisfied; N= Neutral; D= Most Dissatisfied+ Dissatisfied; M= Mean; SD= Standard Deviation

As indicated by Table 2.4, 66.7% of the participants (M=2.17) were satisfied with the service provided at Check-In section of Kaohsiung International Airport. Most of the participants were satisfied with “courtesy of airline check-in staff” (75%, M=1.93). Besides, many of the participants were also satisfied with “total time for check-in process” (66.6%, M=2.15).

Table 2.4 Satisfaction of Check-In

Check-In	S	N	D	M	SD
1. Ticketing waiting time	61.7%	31.7%	6.7%	2.30	.809
2. Total time for check-in process	66.6%	28.3%	5.0%	2.15	.840
3. Courtesy of airline check-in staff	75.0%	25%	0.0%	1.93	.756
4. Congestion level of check-in area	63.3%	26.7%	10.0%	2.30	.926
Overall	66.7%	27.9%	5.4%	2.17	.744

Note. S= Most Satisfied+ Satisfied; N= Neutral; D= Most Dissatisfied+ Dissatisfied; M= Mean; SD= Standard Deviation

As Table 2.5 shows, many of the participants were satisfied with customs inspection in Kaohsiung International Airport (72.2%, M=2.09). 75% of the participants were satisfied with “total time for customs inspection” (M=2.07). In addition, many of the participants were satisfied with “congestion level of inspection area” (71.7%, M=2.17), and 70% of the participants were also satisfied with “courtesy of customs staff” (M=2.05).

Table 2.5 Satisfaction of Customs Inspection

Customs Inspection	S	N	D	M	SD
1. Total time for customs inspection	75.0%	21.7%	3.3%	2.07	.756
2. Courtesy of Customs staff	70.0%	28.3%	1.7%	2.05	.852
3. Congestion level of inspection area	71.7%	23.3%	5.0%	2.17	.763
Overall	72.2%	24.4%	3.3%	2.09	.732

Note. S= Most Satisfied+ Satisfied; N= Neutral; D= Most Dissatisfied+ Dissatisfied; M= Mean; SD= Standard Deviation

As Table 2.6 indicates, although nearly half of the participants (41.7%) were satisfied with the service provided in Shopping Areas, the percentage (21%, M=2.66)

of being not satisfied was marked the highest comparing to other sections in Kaohsiung International Airport. Within the service in Shopping Areas, “price of food and drink” (35%, M=2.95) and “variety of stores within the terminal” (33.3%, M=2.88) were marked the least satisfied. However, there were still 65% of the participants who were satisfied with “courtesy of duty-free attendant” (M=2.15).

Table 2.6 Satisfaction of Shopping Areas

Shop	S	N	D	M	SD
1. Variety and number of cafes and restaurants	35.0%	45%	20.0%	2.73	1.023
2. Price of food and drink	28.3%	36.7%	35.0%	2.95	1.048
3. Variety of stores within the terminal	35.0%	31.7%	33.3%	2.88	1.091
4. Courtesy of duty-free attendant	65.0%	33.3%	1.7%	2.15	.777
5. Variety and number of products in duty-free	45.0%	40%	15.0%	2.58	1.046
Overall	41.7%	37.3%	21.0%	2.66	.870

Note. S= Most Satisfied+ Satisfied; N= Neutral; D= Most Dissatisfied+ Dissatisfied; M= Mean; SD= Standard Deviation

Table 2.7 shows that many of the participants (70%) were satisfied with the service in Immigration section in Kaohsiung International Airport (M=2.16). It is clear that most of the participants (75%) were satisfied with “courtesy of immigration bureau staff” (M=2.07). Besides, there were also 70% of the participants who were satisfied with “total time for immigration processing” (M=2.15).

Table 2.7 Satisfaction of Immigration

Immigration	S	N	D	M	SD
1. Waiting time for immigration process	66.7%	30%	3.4%	2.22	.804
2. Total time for immigration processing	70.0%	25%	5.0%	2.15	.860

3.	Courtesy of immigration bureau staff	75.0%	21.7%	3.4%	2.07	.821
4.	Congestion level of inspection area	68.3%	25%	6.7%	2.20	.879
Overall		70.0%	25.4%	4.6%	2.16	.778

Note. S= Most Satisfied+ Satisfied; N= Neutral; D= Most Dissatisfied+ Dissatisfied; M= Mean; SD= Standard Deviation

As Table 2.8 indicates, there were nearly half of the participants (48.3%) who were satisfied (M=2.51). Within the Luggage section, more than half of the participants were satisfied with “availability of luggage trolley” (53.4%, M=2.43).

Table 2.8 Satisfaction of Immigration

Luggage	S	N	D	M	SD
1. Waiting time for luggage claim	46.6%	36.7%	16.7%	2.58	.962
2. Availability of luggage trolley	53.4%	35%	11.7%	2.43	.945
3. Service if luggage mistaken	45.0%	46.7%	8.3%	2.52	.813
Overall	48.3%	39.5%	12.2%	2.51	.822

Note. S= Most Satisfied+ Satisfied; N= Neutral; D= Most Dissatisfied+ Dissatisfied; M= Mean; SD= Standard Deviation

The t-test and ANOVA results show that there was no significant difference in participants’ satisfaction of Kaohsiung International Airport between gender and among traveling frequency, education level, and occupation. However, the result of ANOVA indicates that there were significant differences in participants’ satisfaction of transportation (F=7.382, p<0.01) and terminal (F=6.386, p<0.05) among age groups. As Table 1.9 indicates, participants aged under 30 were more satisfied with the overall transportation service (M=2.03) than participants aged 31 to 45 (M=2.91). Moreover, participants aged under 30 were much more satisfied with the service provided in the terminal (M=1.99) than participants aged between 31 and 45

(M=2.68).

Table 2.9 Age Differences for Travelers' Satisfaction

Variable	Under 30		31-45		46 and over		ANOVA
	M	SD	M	SD	M	SD	F
1. Overall satisfaction	2.09	.624	2.76	.463	2.40	.646	5.250
2. Transportation	2.03	.639	2.91	.598	2.47	.764	7.382**
3. Terminal	1.99	.605	2.68	.361	2.46	.728	6.386*
4. Check-In	1.90	.611	2.66	.761	2.32	.777	5.419
5. Customs Inspection	1.87	.676	2.55	.793	2.19	.670	4.109
6. Shop	2.59	.964	3.11	.671	2.52	.761	1.888
7. Immigration	2.04	.846	2.52	.754	2.13	.642	1.584
8. Luggage	2.27	.864	3.06	.647	2.58	.701	4.275

Note. M= Mean; SD= Standard Deviation; *=p <0.05; **=p<0.01

As Table 2.10 further shows, within the transportation section there was a significant difference in participants' satisfaction of "parking lot availability" among age groups (F=7.101, p<0.05). Participants aged under 30 were significantly more satisfied with the parking lot availability (M=2.03) than participants aged 31 to 45 (M=3.27).

Table 2.10 Age Differences for Travelers' Satisfaction of Transportation

Variable	Under 30		31-45		46 and over		ANOVA
	M	SD	M	SD	M	SD	F
1. Public transportation availability	2.03	.809	2.73	.647	2.53	.772	4.288
2. Courtesy of the service provider	2.03	.809	2.73	.467	2.47	.772	4.214
3. Parking lot availability	2.03	.890	3.27	1.104	2.42	.902	7.101*

Note. M= Mean; SD= Standard Deviation; *=p <0.05

As shown by Table 2.11, the most significant difference was “airport information service” (F=12.794, p=<0.001). Participants aged under 30 were very satisfied with the airport information service (M=1.80); on the contrary, participants aged 31 to 45 were dissatisfied with it (M=3.00). There was a significant difference on “visibility of flight Information screens” (F=7.886, p<0.01). Participants aged under 30 were very satisfied with the information screens (M=1.67). In contrast, participants aged 31 to 45 were only slightly satisfied (M=2.45). Moreover, “service of currency exchange” also shows a significant difference (F=6.032, p<0.05). Participants aged under 30 were very satisfied (M=1.90), yet participants aged 31 to 45 were slightly not satisfied with the service of currency exchange (M=2.73).

Table 2.11 Age Differences for Travelers’ Satisfaction of Terminal

Variable	Under 30		31-45		46 and over		ANOVA
	M	SD	M	SD	M	SD	F
1. Terminal cleanliness	1.67	.711	2.18	.405	2.26	.733	5.333
2. Toilet facilities	1.83	.834	2.45	.688	2.58	.961	5.118
3. Intelligibility of directions and signpost	1.93	.691	2.36	.505	2.26	.733	2.279
4. Visibility of flight Information screens	1.67	.547	2.45	.522	2.26	.872	7.866**
5. Clarity of announcements	2.03	.890	2.64	.505	2.58	.902	3.436
6. Availability of telephone or fax services	2.30	.915	3.09	.539	2.68	1.003	3.408
7. Availability of ATM Cash machines	2.00	.788	2.82	.751	2.37	.831	4.486
8. Availability of the Internet or wifi service	1.93	.907	2.64	1.286	2.05	.911	2.080
9. Smoking lounges or segregation	2.33	1.093	3.09	.701	2.95	1.224	2.918

10. Airport information services	1.80	.664	3.00	.447	2.32	.820	12.794***
11. Service of currency exchange	1.90	.712	2.73	.467	2.42	.902	6.032*
12. Options of cooperative banks	2.10	.885	2.82	.603	2.47	.772	3.518
13. Art and exhibition	2.43	1.135	2.55	.820	2.79	.855	.737

Note. M= Mean; SD= Standard Deviation; *= <0.05; **=<0.01; ***=<0.001

Discussion

Research Question 1

What is the overall traveler satisfaction of Kaohsiung International Airport? Are travelers satisfied with the services and facilities offered by Kaohsiung International Airport?

As shown by the results, more than half of the participants were satisfied with the services provided by Kaohsiung International Airport (57.7%, M=2.31). The top three most satisfied sections in Kaohsiung International Airport were “Customs Inspection” (M=2.09), “Immigration” (M=2.16), and “Check-In” (M=2.17). As indicated by the result, participants were satisfied with “Transportation to Airport” (M=2.33), and “Terminal” (M=2.27). However, according to the result, participants were slightly dissatisfied with “Shopping Areas” (M=2.66) and “Luggage” section (M=2.51). Based on the statistics mentioned above, it is reasonable to believe that most of the participants were satisfied with the services and facilities provided in Kaohsiung International Airport.

Research Question 2

From travelers' perspectives, what is the most important services or facility in an airport? Are they provided in Kaohsiung International Airport?

As indicated by the results, participants believed that the top three most important services in an airport were “courtesy of airline check-in staff” (M=1.33), “toilet facilities” (M=1.35), and “visibility of flight Information screens” (M=1.38). The finding that “visibility of flight Information screens” was important strengthens Atalık’s (2009) and Tsai et al’s (2011) study that efficiency of airport circulation and availability of flight information are the most important elements when evaluating the satisfaction of an airport.

As indicated by the result, participants were satisfied with the top three important services and facilities in Kaohsiung International Airport. It is noticeable that the mean of “courtesy of airline check-in staff” were marked the highest (M=1.93). Moreover, participants were also satisfied with “visibility of flight Information screens” (M=2.00) and “toilet facilities” (M=2.18). Therefore, it is reasonable to suggest that Kaohsiung International Airport does provide quality services and facilities that travelers’ perceived as important, for participants were satisfied with the top three most important services and facilities.

Research Question 3

What kinds of services or facilities in Kaohsiung International Airport are the travelers most satisfied with and most unsatisfied with?

According to the result of the questionnaire, the top three most satisfied services or facilities were “courtesy of airline check-in staff” (M=1.93), “terminal cleanliness” (M=1.95), and “visibility of flight Information screens” (M=2.00). Moreover, the top three most satisfied sections in Kaohsiung International Airport were “Customs Inspection” (M=2.09), “Immigration” (M=2.16), and “Check In” (M=2.17). However, according to Atalık’s (2009) study, in Ataturk Airport, Istanbul, Turkey, the behavior of check-in attendant is the least satisfied from passengers’ perceptive. Consequently,

it is reasonable to assume that Kaohsiung International Airport provides better services with respect to the courtesy of airport staff.

According to the results, participants were slightly dissatisfied with “Shopping Areas” (M=2.66). The bottom three least satisfied services “price of food and drink” (M=2.95), “variety of stores within the terminal” (M=2.88), and “variety and number of cafes and restaurants” (M=2.73). It may be interpreted that participants expect more varieties of stores and restaurants with cheaper price in the terminal of Kaohsiung International Airport.

There are some similarities and differences between the findings of this study and these of the previous studies. As Siri et al (2012) indicates, in Suvarnabhumi International Airport, Bangkok, Thailand, passengers are most satisfied with their cleanliness and facilities, while they are dissatisfied with the availability of the flight information. In addition, De Meyer and Mostert (2011) also points out that in OR Tambo International Airport, Johannesburg, Gauteng Province of South Africa, cleanliness is also marked as the most satisfied, and the availability of the flight information is the least satisfied. Moreover, Atalık (2009) states that in Ataturk Airport, Istanbul, Turkey, the facilities and the cleanliness are marked as the most satisfied; however, the flight information screens and behavior of check-in attendant are the least satisfied. In summary, the availability of the flight information seems to be the least satisfied services among the three airports. On the contrary, participants were satisfied with the visibility of flight information screens in Kaohsiung International Airport (M=2.00). In addition, the finding suggests that in Kaohsiung International Airport, the cleanliness was marked the most satisfied (M=1.95). Therefore, it is likely that Kaohsiung International Airport provides better services and facilities compared to other International Airport mentioned in the empirical studies.

Research Question 4

Do variables such as age, gender, traveling frequency, occupation field, and education background influence travelers' perception of the image of Kaohsiung International Airport?

The t-test and ANOVA results show that there was no significant difference in participants' satisfaction of Kaohsiung International Airport between gender and among traveling frequency, education level, and occupation. However, the result analyzed by ANOVA shows that there were significant differences in participants' satisfaction of transportation ($F=7.382$, $p<0.01$) and terminal ($F=6.386$, $p<0.05$) among age groups. Participants aged under 30 were more satisfied with the overall transportation services ($M=2.03$) than participants aged 31 to 45 ($M=2.91$). Moreover, participants aged under 30 were much more satisfied with the services provided in the terminal ($M=1.99$) than participants aged between 31 and 45 ($M=2.68$). It seems that because of age, participants' experience of traveling abroad differs. This finding is consistent with the results of the previous studies on customer satisfaction which is "an outcome experience that has at least met or has exceeded expectations" (Siri, Josiam, Kennon, and Spears, 2012). Compared to participants aged under 30, participants aged 31 to 45 had more traveling experiences that their expectation of what services and facilities an airport should provide are higher. Thus, when they experienced the services and facilities that Kaohsiung International Airport provides, their experience cannot be easily met or exceed their expectations. On the other hand, participants aged under 30 had less experience of seeing other airports in the world compared to participants aged 31 to 45. Therefore, participants aged under 30 were more satisfied with the current services and facilities in Kaohsiung International Airport, while participants aged 31 to 45 believed that there were still many of the

services and facilities that can be further improved to be more modernized and advanced.

Conclusion

The aim of this study was to investigate participants' perception of the importance of airport services and facilities and travelers' satisfaction of Kaohsiung International Airport in terms of its services and facilities. The finding of this research indicates that most of the participants were satisfied with the services and facilities provided in Kaohsiung International Airport. Participants believed that courtesy of staff, efficiency of airport circulation, and availability of flight information were the most important elements when evaluating an airport. According to the result, most of the participants were satisfied with courtesy of staff, efficiency of airport circulation, and the availability of flight information in Kaohsiung International Airport. However, participants were relatively unsatisfied with the price of food and drink, variety of stores, and the number of cafes and restaurants in the terminal. Participants slightly agreed that these three services were important. In addition, the result also shows that participants' age influences their decision when evaluating the satisfaction of Kaohsiung International Airport. Participants who were younger were more likely satisfied than participants who were older in terms of the services and facilities provided in Kaohsiung International Airport.

The limitation of this study is the small number of the participants. Furthermore, almost half of the participants were under 30 years old. As a result, there could be fewer significant differences among variables. For future studies, it is recommended that the questionnaires could be distributed to a larger amount of participants in order to have more reliable findings.

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Appendix 1

Dear Sir or Madam:

We are conducting this survey to understand **the importance of the service or facilities provided in an airport** and **your satisfaction of Kaohsiung International Airport**. This survey is modified from student Mr. Liu, Chun-I of Department of Shipping and Transportation Management, National Taiwan Ocean University. This research is for academic purpose; therefore, your information will be kept strictly confidential. It will take approximately 5 minutes to finish this survey. Thank you for assisting us in filling out this survey.

Best wishes,
Wenzao Ursuline University of Languages
Department of English
Student: Hsin-Hung Liu
Advisor: Tun-Whei Isabel Chuo, Ed.D

Part 1 – Demographics

Please put a check (✓) on your answers

Gender		
	<input type="checkbox"/> Male	<input type="checkbox"/> Female
Age		
	<input type="checkbox"/> Under 18	<input type="checkbox"/> 19-30
	<input type="checkbox"/> 31-45	<input type="checkbox"/> 46-59
	<input type="checkbox"/> 60 and over	
Traveling frequency		
	<input type="checkbox"/> Fewer than one time a year	<input type="checkbox"/> Once a year
	<input type="checkbox"/> Twice a year	<input type="checkbox"/> Three times a year
	<input type="checkbox"/> More than three times a year	
Education		
	<input type="checkbox"/> Under High school	<input type="checkbox"/> High school
	<input type="checkbox"/> 5-Year Junior College	<input type="checkbox"/> College
	<input type="checkbox"/> Doctorate/Professional degree	
Occupation		
	<input type="checkbox"/> Military/ Public servant/ Education	<input type="checkbox"/> Student
	<input type="checkbox"/> Industry/ Business/ Service industry	<input type="checkbox"/> Others

Part 2 – Mean of importance

Please put a check (✓) on your answers

	Service detail	Importance of service provided in an airport				
		Most important	Important	Neutral	Not important	Least Important
Transportation to Airport						
	Public transportation availability					
	Courtesy of the service provider					
	Parking lot availability					
Terminal						
	Terminal cleanliness					
	Toilet facilities					
	Intelligibility of directions and signpost					
	Visibility of flight Information screens					
	Clarity of announcements					
	Availability of telephone or fax services					
	Availability of ATM Cash machines					
	Availability of the Internet or wifi service					
	Smoking lounges or segregation					
	Airport information services					
	Service of currency exchange					
	Options of cooperative banks					
	Art and exhibition					
Check-in						
	Ticketing waiting time					
	Total time for check-in process					
	Courtesy of airline check-in staff					
	Congestion level of check-in area					
Customs inspection						
	Total time for customs inspection					
	Courtesy of Customs staff					
	Congestion level of inspection					

	area					
Shop						
	Variety and number of cafes and restaurants					
	Price of food and drink					
	Variety of stores within the terminal					
	Courtesy of duty-free attendant					
	Variety and number of products in duty-free					
Immigration						
	Waiting time for immigration process					
	Total time for immigration processing					
	Courtesy of immigration bureau staff					
	Congestion level of inspection area					
Luggage						
	Waiting time for luggage claim					
	Availability of luggage trolley					
	Service if luggage mistaken					

Part 3 – Mean of satisfaction of Kaohsiung International Airport

Please put a check (✓) on your answers

	Service detail	Satisfaction of service provided in KIA				
Transportation to Airport		Strongly satisfied	Satisfied	Neutral	Not satisfied	Strongly dissatisfied
	Public transportation availability					
	Courtesy of the service provider					
	Parking lot availability					
Terminal						
	Terminal cleanliness					
	Toilet facilities					
	Intelligibility of directions and signpost					
	Visibility of flight Information					

	screens					
	Clarity of announcements					
	Availability of telephone or fax services					
	Availability of ATM Cash machines					
	Availability of the Internet or wifi service					
	Smoking lounges or segregation					
	Airport information services					
	Service of currency exchange					
	Options of cooperative banks					
	Art and exhibition					
Check-in						
	Ticketing waiting time					
	Total time for check-in process					
	Courtesy of airline check-in staff					
	Congestion level of check-in area					
Customs inspection						
	Total time for customs inspection					
	Courtesy of Customs staff					
	Congestion level of inspection area					
Shop						
	Variety and number of cafes and restaurants					
	Price of food and drink					
	Variety of stores within the terminal					
	Courtesy of duty-free attendant					
	Variety and number of products in duty-free					
Immigration						
	Waiting time for immigration process					
	Total time for immigration					

	processing					
	Courtesy of immigration bureau staff					
	Congestion level of inspection area					
Luggage						
	Waiting time for luggage claim					
	Availability of luggage trolley					
	Service if luggage mistaken					

Appendix 2

您好：

感謝您百忙中撥空接受此問卷調查，本問卷修改自海洋大學航運管理學系研究生劉俊易先生之問卷，本次研究目的是為了瞭解您對於一般國際機場服務項目的重視程度及高雄小港國際機場的服務滿意度。您在問卷中所提供的資訊，僅作為學術研究之用，不會提供其他單位，敬請安心填寫。您將需要花5分鐘填寫本問卷，衷心期盼您依自己的實際感受填答。感謝您的熱情支持與協助！敬祝 平安快樂，萬事如意！

文藻外語大學英國語文系

研究生：劉信宏

指導教授：卓惇慧 博士

第一部分 - 基本資料
請在符合您的選項中打勾(✓)

性別		
	<input type="checkbox"/> 男	<input type="checkbox"/> 女
年齡		
	<input type="checkbox"/> 18歲以下	<input type="checkbox"/> 19-30
	<input type="checkbox"/> 31-45	<input type="checkbox"/> 46-59
	<input type="checkbox"/> 60歲以上	
出國頻率		
	<input type="checkbox"/> 一年不到一次	<input type="checkbox"/> 一年一次
	<input type="checkbox"/> 一年兩次	<input type="checkbox"/> 一年三次
	<input type="checkbox"/> 一年三次以上	
教育背景		
	<input type="checkbox"/> 高中職以下	<input type="checkbox"/> 高中職
	<input type="checkbox"/> 五專	<input type="checkbox"/> 大學
	<input type="checkbox"/> 碩博士	
職業類別		
	<input type="checkbox"/> 軍公教人員	<input type="checkbox"/> 學生
	<input type="checkbox"/> 工商服務人員	<input type="checkbox"/> 其他

第二部分 - 重視程度
請在符合您的選項中打勾(✓)

	服務內容	一般國際機場服務項目的重視程度				
		非常重視	重視	普通	不重視	非常不重視
往機場的交通						
	大眾交通工具便利性					
	大眾交通服務員的態度(司機等)					
	機場外停車場的便利性					
機場大廳						
	機場大廳的整潔					
	廁所的整潔與設置					
	大廳內的引導指標					
	班機時刻看板					
	機場內廣播的清晰度					
	電話或傳真服務					
	機場內提款機服務					
	機場內網路以及無線網路服務					
	吸菸區的設置					
	機場服務台					
	機場內兌換外幣服務					
	機場內合作銀行的選擇性					
	機場內藝廊					
報到櫃台						
	報到櫃台的排隊等候時間					
	航空公司人員處理時間					
	服務人員的態度					
	報到櫃台的空間大小及擁擠程度					
出境證照安全檢查						
	證照查驗與安全檢查的檢查時間					
	處理人員的態度					
	證照查驗與安全檢查的空間大小及擁擠程度					
商店						
	餐廳與咖啡廳的選擇性與數量					
	餐點的價位					
	機場大廳內商店的多樣性與選擇性					
	免稅商店人員服務態度					

	免稅商品的多樣性與選擇性					
入境證照安全檢查						
	入境檢查的等候時間					
	入境檢查的處理時間					
	處理人員的態度					
	入境檢查區域的空間大小及擁擠程度					
提領行李						
	提領行李等候時間					
	行李推車的使用與便利性					
	行李遺失的善後服務					
第三部分 - 滿意度量表 請在符合您的選項中打勾(✓)						
	服務內容	小港國際機場服務項目的滿意程度				
往機場的交通		非常 滿意	滿意	普通	不滿意	非常不 滿意
	大眾交通工具便利性					
	大眾交通服務員的態度(司機等)					
	機場外停車場的便利性					
機場大廳						
	機場大廳的整潔					
	廁所的整潔與設置					
	大廳內的引導指標					
	班機時刻看板					
	機場內廣播的清晰度					
	電話或傳真服務					
	機場內提款機服務					
	機場內網路以及無線網路服務					
	吸菸區的設置					
	機場服務台					
	機場內兌換外幣服務					
	機場內合作銀行的選擇性					
	機場內藝廊					
報到櫃台						
	報到櫃台的排隊等候時間					
	航空公司人員處理時間					
	服務人員的態度					
	報到櫃台的空間大小及擁擠程度					

出境證照安全檢查						
	證照查驗與安全檢查的檢查時間					
	處理人員的態度					
	證照查驗與安全檢查的空間大小及擁擠程度					
商店						
	餐廳與咖啡廳的選擇性與數量					
	餐點的價位					
	機場大廳內商店的多樣性與選擇性					
	免稅商店人員服務態度					
	免稅商品的多樣性與選擇性					
入境證照安全檢查						
	入境檢查的等候時間					
	入境檢查的處理時間					
	處理人員的態度					
	入境檢查區域的空間大小及擁擠程度					
提領行李						
	提領行李等候時間					
	行李推車的使用與便利性					
	行李遺失的善後服務					