

AIRLINE SERVICE PERFORMANCE AND SERVICESCAPE AND THEIR INFLUENCES ON CUSTOMER SATISFACTION

by

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Abstract

Presently, airline industry is one of the fastest growing and highly competitive business sectors. The airline executives search for new ways to improve customer satisfaction in order to maintain their competitive edge. By understanding service performance and servicescape, the airlines can deliver better airline services to their passengers, leading to generate greater customer satisfaction. This study aims to study service performance and servicescape and their impacts on customer satisfaction. Primary data were collected from the airline passengers by using self-administered questionnaires. This study showed that service performance and servicescape had positive influence on customer satisfaction. Discussions and further implications are also given in this study.

Keywords: Service performance, Servicescape, Customer satisfaction, Airline industry

1. Introduction

Global air travel in 2014 in which the annual growth in the international air travel volumes increased 6.1% in 2014 which was higher than the ten years average growth rate of 5.6% (Airlines International, 2015). Moreover, airline passengers benefited from the lower fuel prices with the lower airline fares and more routes were offered, as a result, air transport accounted about 1% of world GDP in 2014 (International Air Transport Association (IATA), 2014).

In addition, the airlines in Asia-Pacific region performed better than the airlines in Europe. By 2016, three of the world's largest domestic markets would be in Asia: China (415 million passengers), India (107.2 million passengers) and Japan (93.2 million passengers) (Hai, 2014). To cater to this significant growth, 12,000 new aircraft was projected to enter Asia's skies by 2030 while 350 new airports are projected to be built in Asia Pacific over the

next 10 years (Hai, 2014). The profit per passenger would increase to 4.3 U.S. dollar in 2015 as the result of lower fuel costs and stronger cargo markets while the airlines in North America had greater financial performance with the net post-tax profits at 13.2 billion U.S. dollar in 2015 (International Air Transport Association (IATA), 2014).

Since there was very intensive competition in airline industry for both domestic and international level, the airlines should find the ways to outperform their competitors by providing the higher level of service performance with superb flying experience through servicescape for their passengers in order to reach higher satisfaction from airline passengers. Customer satisfaction is well-known as a key factor leading to repeat patronage and sustainable business performance. In fact, customer satisfaction does not only have a strong influence on the customer retention, but it also has a strong influence on business effectiveness (Kwong, Wong, Chan, 2009).

Understanding the service performance of the airline and servicescape from the viewpoints of customers can help the organizations to improve important aspects of airline operations. In addition, the purpose of the study is to test the differences in levels of service performance, servicescape and customer satisfaction. In addition, the current research aims also to study the effect of service performance and servicescape on customer satisfaction.

2. Literature Review

2.1 Service Performance

Zeithaml (1988) defined service performance as a judgment of customer on superiority, esteem, or excellence of the brand in the relative terms. Furthermore, Tih and Ennis (2006) defined service performance as the judgment of customer towards the overall service, offered by a particular service provider. According to Brodie et al. (2006), customers could evaluate the perceived quality of a brand through the understandings of service delivery and performance; therefore, service performance creates direct experiences that allow customers to be familiar with brands awareness and brand meanings, building brand loyalty.

Moreover, Wang and Horsburgh (2007) divided service performance into two streams. The first stream was the experiment to find the linkages among service quality, customer satisfaction, and customer loyalty while the second stream was the search for creating the linkage between specific organizational features (employee attitudes, employee skills and abilities) and service quality. Liao and Chuang (2004) assessed service performance using a seven-item employee service performance; items are such as “Being friendly and helpful to customers,” “Being able to help customers when needed,” and “Suggesting items customers might like but do not think of.” Yeh (2012) found that work engagement and service climate in the airline industry has a positive influence on service performance. In the study of Wu and Chen (2015), a framework that combines empowering leadership, psychological contract fulfillment, knowledge exchange, and service performance was constructed to promote hotel employees’ service performance.

2.2 Servicescape

Servicescape dimensions is referred to the “build environment” or “man-made” physical surrounding which is opposed to the natural or social environment (Bitner, 1992). Bitner (1992) categorized servicescape into three primary dimensions which were ambient conditions (temperature, air quality, noise, music, odor, etc.), spatial layout and functionality (layout, equipment, furnishings, etc.), and signs, symbols, and artifacts (signage, personal

artifacts, style of décor, etc.). According to Zeithaml, Bitner, and Gremler (2009), servicescape is referred to physical dimensions which are also known as a tangible cues that associated with service quality where it is include all aspects of the physical facilities exterior (parking), facility interior (décor), and other tangible (website) of the service provider. Other exterior attributes such as building exterior, signage, parking, waiting areas, lobby, admission office and landscape; meanwhile, the interior attributes are such as design, layout, equipment and décor (Zeithamal et al, 2009; Bitner, 1992).

Furthermore, Durna, Dedeoglu, and Balikçioğlu (2015) noted that servicescape did not include only a substantive components such as décor and design but servicescape also had the commucative components such as politeness, concern, and culture delivery.

2.3 Customer Satisfaction

Churchill and Suprenant (1982) defined that satisfaction can be explained conceptually and operationally. Satisfaction is the result of purchase and use from the comparison of customers between rewards and costs of purchase for conceptual perspective. Furthermore, satisfaction can be defined as the attitude evaluated based on the sum of satisfactions from various attributes of product or service for operational perspective.

In addition, Cronin, Brady, and Hult (2000) defined satisfaction as the evaluation of emotion which reflected the way customers believed that the possession and use of the service increased their positive feelings. Kotler and Armstrong (2010) defined customer satisfaction as the degree to which customer expectations of a product or service are met or exceeded when compared to the perceived performance. According to Posselt and Gerstner (2005), improvement of customer satisfaction will bring about improved customer retention and customer loyalty; ultimately, resulting in better profit.

2.4 Airline Passengers' Demographic Factors

From the research of (Gilbert and Wong, 2003), there were the differences in demographic factors of airline passengers, purpose of travelling, and ethnic background, leading to the unequal importance ratings of service dimensions.

Clemes, Gan, Kao, and Choong (2008) found that socio-demographic characteristics such as income, age and gender influence airline choice based on the significance of service quality dimensions. In the study of Milioti, Karlaftis, and Akkogiounoglou (2015) on Traveler perceptions and airline choice, socio-demographic characteristics including income, age, nationality, education level, and gender were used as independent variables.

3. Methodology

This study used the questionnaire to conduct the research and the questionnaire was generated based on the information from previous literatures in order to test the relationship among service performance, servicescape and customer satisfaction. Moreover, this research also developed constructed the measurement items for each factor based on the past research. The population of the study was airline passengers, having experiences with airline inflight operations. The sample size was determined by Yamane's formula to 400. Moreover, the self-administered questionnaires were distributed to the airline passengers in the Arrival Hall at the Suvarnabhumi International Airport. Lastly, there were 243 usable questionnaires with no missing values to be used for further data analysis.

4. Results

Table 1: Reliability Test

In order to test the reliability of the factors, the authors applied Cronbach's alpha to test the questions for each factor.

	Cronbach's Alpha	Mean
Service Performance	0.975	5.673
Servicescape	0.959	5.459
Customer Satisfaction	0.969	5.735

Table 1 provided reliability test of service performance, servicescape, and customer satisfaction. All factors had Cronbach's Alpha greater than 0.8, indicating the acceptable reliability.

The followings showed the results of the relationship between airline passengers' demographic factor and three research variables.

Table 2: "T-test" on service performance by gender of airline passengers

Service Performance	t	Sig.
This airline's physical facilities are virtually appealing.	-2.143	0.033
This airline's employees are well dressed and appear neat.	-3.462	0.001
The appearance of physical facilities of this airline is in keeping with the type of services provided.	-2.695	0.008
When this airline promises to do something by a certain time, it does so.	-1.996	0.047
This airline keeps its record accurately.	-2.587	0.011
Employees of this airline are not too busy to respond to customers' requests promptly.	-2.658	0.009
Employees get adequate support from this airline to do their jobs well.	-2.58	0.011

*Significant at the 0.05 level

The result indicated that gender of airline passengers had the statistically significant difference on service performance for seven items. Moreover, the female airline passengers had a higher means for a higher influence on service performance than the male airline passengers in these seven items.

Table 3: "T-test" on servicescape by gender of airline passengers

Servicescape	t	Sig.
The physical facilities are comfortable.	-2.238	0.026

*Significant at the 0.05 level

The result indicated that gender of airline passengers had the statistically significant difference on servicescape for only one item under servicescape measures. Moreover, the female airline passengers had a higher means for a higher influence on servicescape than the male airline passengers in this item.

Table 4: “T-test” on customer satisfaction by gender of airline passengers

Customer Satisfaction	t	Sig.
You think that you did the right thing when you purchased the service from this airline.	- 2.557	0.011

*Significant at the 0.05 level.

The result indicated that gender of airline passengers had the statistically significant difference on customer satisfaction for merely one item. Moreover, the female airline passengers had a higher means for a higher influence on customer satisfaction than the male airline passengers in this item.

Table 5: “ANOVA” on service performance by age of airline passengers

Service Performance	F	Sig.
When this airline promises to do something by a certain time, it does so.	2.471	0.045
You receive prompt service from this airline’s employees.	3.493	0.009

*Significant at the 0.05 level.

From the analysis of one-way analysis of variance (ANOVA) on service performance by age of airline passengers, the results showed that there were two items with the statistically significant difference on service performance by age of airline passengers.

The further analysis by the post hoc test was conducted and showed that for the item “When this airline promises to do something by a certain time, it does so.”; and the item “You receive prompt service from this airline’s employees.”, the airline passengers in the age group of 30 years old and below had the higher means than those with the age between 41 and 50 years old.

For the item “You receive prompt service from this airline’s employees.”, the airline passengers in the age group of 30 years old and below had the higher means on service performance than the airline passengers who were in the age group between 41 and 50 years old.

Table 6: “ANOVA” on servicescape by age of airline passengers

Servicescape	F	Sig.
The architecture is attractive.	2.432	0.48
The colors of the physical facilities and the interior are pleasant.	3.658	0.007
The materials used inside are pleasing and of high quality.	3.703	0.006

*Significant at the 0.05 level.

From the analysis of one-way analysis of variance (ANOVA) on servicescape by age of airline passengers, the results showed that there were three items with the statistically significant difference on servicescape by age of airline passengers.

The further analysis by the post hoc test was conducted and showed that for the item “The colors of the physical facilities and the interior are pleasant”; the item “The colors of the physical facilities and the interior are pleasant.”; and the item “The materials used inside are pleasing and of high quality.”, the airline passengers who had age over 60 years old had the

higher mean for the higher influence on servicescape than the airline passengers who had age between 41 and 50 years old.

Moreover, for the item “The colors of the physical facilities and the interior are pleasant.”, the airline passengers who had age 30 years old and below had the higher means than those who were between 41 and 50 years old.

Table 7: “ANOVA” on customer satisfaction by age of airline passengers

Customer Satisfaction	F	Sig.
Your choice to purchase the service from this airline was a wise one.	3.345	0.011
You think that you did the right thing when you purchased the service from this airline.	4.355	0.002
This airline’s facility is exactly what is needed for the service of this airline.	3.447	0.009
You have really enjoyed the flying experience with this airline.	3.182	0.014
You are pleased to fly with this airline.	2.822	0.026
Overall, you are satisfied with the flying experience with this airline.	2.681	0.032

*Significant at the 0.05 level.

From the analysis of one-way analysis of variance (ANOVA) on customer satisfaction by age of airline passengers, the results showed that there were six items had the statistically significant difference on customer satisfaction by age of airline passengers.

The further analysis by the post hoc test was conducted and showed that for the item “Your choice to purchase the service from this airline was a wise one.”; the item “You think that you did the right thing when you purchased the service from this airline.”; the item “This airline’s facility is exactly what is needed for the service of this airline.”; the item “You have really enjoyed the flying experience with this airline.”; the item “You are pleased to fly with this airline.”; and the item “Overall, you are satisfied with the flying experience with this airline.”, the airline passengers who had age above 60 years old had the higher means for the higher influence on customer satisfaction than the airline passengers who had age between 41 and 50 years old.

In addition, for the item “You think that you did the right thing when you purchased the service from this airline.”, the airline passengers who had age 30 years old and below had the higher means for the higher influence on customer satisfaction than the airline passengers who had age between 41 and 50 years old.

Table 8: The result of regression analysis among service performance, servicescape, and customer satisfaction

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.817 ^a	0.668	0.665	0.62421	2.083

The coefficient of determination was 0.668; therefore, about 66.80% of the variation in customer satisfaction could be explained by service performance and servicescape. In addition, the Durbin-Watson statistic had the value of 2.083 meaning that there was no autocorrelation.

Table 9: Regression Coefficients

Coefficients							
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	0.503	0.242		2.076	0.039		
Service Performance	0.62	0.068	0.57	9.109	0	0.353	2.835
Servicescape	0.314	0.069	0.285	4.548	0	0.353	2.835

The result showed that service performance and servicescape had the significant impact on customer satisfaction. It can be specified that service performance has the highest influence on customer satisfaction, followed by servicescape. Moreover, the tolerance was greater than 0.2 and VIF was less than 5 which meant that service performance and servicescape had the low relationship to each other.

5. Discussion

The regression result provided the positive influence of service performance, servicescape and customer satisfaction. For the positive relationship between service performance and customer satisfaction, Kim, Jeong, Park, Park, Kim, and Kim (2007) found that there was the relationship between service performance and customer satisfaction in the context of high-speed internet service in Korea. Additionally, Kim, Jeong, Park, Park, Kim, and Kim (2007) revealed that the speed-related network performance measures (including download speed and upload speed) had significant and large impacts on customer satisfaction. In the study of Wu and Chen (2015), service performance, included the quality of employee performance, can be implied to improve the satisfaction of customers.

In addition, for the positive relationship between servicescape and customer satisfaction, Wakefield and Blodgett (1994) found that the satisfaction levels and repatronage intentions of the customers were largely impacted by the perceptions of servicescape in the leisure services especially when the customers spent more time the service facility. Furthermore, the study of Durna, Dedeoglu, and Balikçioglu (2015) suggested also that servicescape has broad dimensions and directly affected the customer satisfaction.

Finally, this study found that the gender of airline passengers had the statistically significant difference in service performance, servicescape, and customer satisfaction. Furthermore, the age of airline passengers was also revealed to have the statistically significant difference in service performance, servicescape, and customer satisfaction. Aksoy, Atilgan, and Akinci (2003) supported the findings that the gender and age of airline passengers influenced on foreign and domestic airline selection, travel purpose, and travel frequency.

6. Conclusions and Recommendations

The researchers achieved the purpose of this study in which the findings revealed that the demographic factors of airline passengers had the significant differences on service performance, servicescape, and customer satisfaction. The airlines should focus more in their service offerings to reach each airline passenger's demographic group. Moreover, this study also revealed the positive relationships among service performance, servicescape, and customer satisfaction in which the better understanding of these factors from airlines would

be beneficial for both airline companies and airline passengers in that the airlines could improve their service performance and physical environment during airline passengers are on board which could lead to more satisfaction from airline passengers.

For the management implication, the airline executives can emphasize its service performance, including the services by employees by providing more training to the employees and keeping with the new trends of customer expectation in order to always adjust the performance to fit well with the needs of the customers. In addition, servicescape has a significant influence on customer satisfaction and therefore, the airlines should pay close attention to the design and environment (such as choice of color and quality of materials), both inside and outside the aircraft, because passengers identified that those design and environment can have the impact of their satisfaction levels. Even though the study achieved its purposes, a limitation was worth mentioning in that, the data were only collected from one of the biggest international airports in Thailand, Suvarnabhumi International Airport, while there are several airports in the country.

Regarding directions for further research, there are several dimensions in the context of hospitality research to be investigated, such as restaurants and hotels. Additionally, the comparative research among different hospitality sectors can improve the degree of generalization of the findings.

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