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BUILDING PASSENGER TRUST THROUGH IMPROVEMENTS OF SERVICE QUALITY (PRE-FLIGHT, IN-FLIGHT, AND POST-FLIGHT) AND PASSENGER SATISFACTION (A CASE STUDY OF CITILINK INDONESIA)

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Abstract. Pre-flight, in-flight, and post-flight services are essential to all prospective air travelers as they expect that all services are seamless and will judge whether the services provided by the airlines have met their desire, upon which their satisfaction is to be built. This study sought to find out the effect of pre-flight, in-flight, and post-flight services on trust-generating passenger satisfaction in Indonesian low-cost carriers (LCC) (a case study of Citilink Indonesia). Data were collected from 100 respondents and analyzed with the Structural Equation Modeling (SEM). Respondents were enrolled through non-probability sampling. The research results show that the quality of pre-flight, in-flight, and post-flight services have a significant, positive effect on passenger satisfaction, and on passenger trust. Finally, passenger satisfaction has a significant, positive effect on passenger trust. Customer satisfaction is proven to mediate the relationship of service quality of pre-flight, in-flight, and post-flight to passenger trust.

Keywords: *pre-flight service, in-flight service, post-flight service, passenger satisfaction, passenger trust*

1. Introduction

The intensifying of the national development has influenced the growth of the community's demand for transport services. Correspondingly, the services in air travel have also developed. In Indonesia, commercial scheduled flight services are categorized into three: full-service, medium-service, and no-frills or low-cost carriers (LCCs) (Azmarani, 2016). Among the Indonesian airline companies included in the last category are Lion Air, Air Asia, Citilink, and Wings Air.

Figure 1. Number of Passengers and Market Share of Citilink

Source: citilink.co.id

Based on the data in the chart above, Citilink has managed to grow in the midst of current pressure- and challenge-heavy aviation industry. Citilink has strived to refine its performance and eventually earned itself the "4-star Airline" predicate from Skytrax as the first low-cost carrier in Asia and Indonesia to do so. Such award was won largely due to the company's commitment to provide the best services for its passengers (www.citilink.co.id). Such phenomenon has inspired the authors to conduct an investigation into how the quality of pre-

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flight, in-flight, and post-flight services affects the passenger satisfaction and, in turn, the passenger trust to Citilink Indonesia.

2. Literature Review

2.1 Relationship between Pre-flight Service Quality and Passenger Satisfaction

The variety of pre-flight services provided by an airline can potentially improve the passenger perception of the pre-flight service quality (Etemad-Sajadi, Way, & Bohrer, 2015). Pre-flight services include ticket booking, check-in counter, boarding gate, and transit services (Hadani, 2009). Passenger satisfaction is the response given by the passengers emotionally and cognitively (Espejel, Fandos, & Flavián, 2008). In prior research, it was concluded that pre-flight service quality has a significant, positive effect on passenger satisfaction (Namukasa, 2013). It was discovered, then, that the pre-flight services provided by Citilink may have an influence on the passenger satisfaction.

H1 : Pre-flight Service Quality has a significant, positive relationship with Passenger Satisfaction.

2.2 Relationship between In-flight Service Quality and Passenger Satisfaction

In-flight services are the services provided by an airline company for the passengers onboard the aircraft (Hadani, 2009). The airline company's image might be more directly related to the quality of the in-flight services than to the quality of the pre-flight and post-flight services (An & Noh, 2009). Aircraft passengers will judge and evaluate the services given directly by the airlines to them by comparing their expectation against their experience (Namukasa, 2013). Specifically speaking, the level of satisfaction the passengers derive from the pleasurable in-flight services would tend to strengthen their intention to reuse the airline services (Han & Hwang, 2017). Hence, it was figured that in-flight services may influence passenger satisfaction.

H2 : In-flight Service Quality has a significant, positive relationship with Passenger Satisfaction.

2.3 Relationship between Post-flight Service Quality and Passenger Satisfaction

Post-flight services are the services provided by an airline company for the passengers upon arrival at the destination airport (Hadani, 2009). The post-flight services made available by the airline company at the destination airport include timeliness in baggage transport and disembark (Namukasa, 2013). Meanwhile, passenger satisfaction is an emotional response based on their perception on the quality of the services and performance (An & Noh, 2009). In previous work, it was stated that the services given by the employees, facilities, ground services, security, baggage services, and service quality experienced by the passengers are positively related to the passenger satisfaction (Khuong, 2014). It was figured, then, that post-flight services may influence passenger satisfaction.

H3 : Post-flight Service Quality has a significant, positive relationship with Customer Satisfaction.

2.4 Relationship between Pre-flight Service Quality and Passenger Trust

Pre-flight services are the services provided by an airline company to the passengers prior to departure at the home airport (An & Noh, 2009). Trust arises from one party's confidence in another party to rely on the promises given by the other party, and it helps with developing a relationship between the two parties (Salo & Karjaluoto, 2007). Previous study perceived that service quality has a positive effect on trust (Setiawan, Wati, Wardana, & Ikhsan, 2020). It can be inferred then that Pre-flight services may have an influence on passenger trust.

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H4 : Pre-flight Service Quality has a positive relationship with Passenger Trust.

2.5 Relationship between In-flight Service Quality and Passenger Trust

The key to a company's survivability is the assurance of high-quality services, and this is also the case with an airline company (Namukasa, 2013). Passengers will feel secure and confident to carry forward their relationship with the company if they perceive that the company is reliable (Saleem, Zahra, & Yaseen, 2016). The trust established will build a strong relationship between the company and the passengers (Morgan & Hunt, 1994). Hence, it was discovered that in-flight services may have an influence on passenger trust.

H5 : In-flight Service Quality has a positive relationship with Passenger Trust.

2.6 Relationship between Post-flight Service Quality and Passenger Trust

Post-flight services feature the Lost and Found department. This department is the airline's management party which handles any events of passengers' lost, damaged, delayed, or stolen baggage; if such events should happen, passengers are to make reports to this department (van Leeuwen et al., 2020). Trust is established if one party trusts that the conduct of another party creates positivity (Setiawan et al., 2020). It is assumed that trust reflects the confidence in the airline's ability to manage service affairs, such as, aircraft safety, waiting room condition, and lost baggage reclaim (Saleem et al., 2016). Hence, post-flight services may have an influence on passenger trust.

H6 : Post-flight Service Quality has a positive relationship with Passenger Trust.

2.7 Relationship between Passenger Satisfaction and Passenger Trust

Airline service quality is a significant driver of passenger satisfaction; therefore, a good service quality is a prerequisite for marketing with the ever increasing competitive pressure on airlines (Park, Robertson, & Wu, 2006). Trust is one of the most crucial factors for a company to achieve success as the customer trust can help the company implement its marketing strategies (Salo & Karjaluoto, 2007). Satisfaction alone may not suffice to ensure the customer exclusive commitment in the long run to a service provider (Setiawan et al., 2020). It was figured that passenger satisfaction may result in passenger trust.

H7 : Passenger Satisfaction has a significant, positive relationship with Passenger Trust.

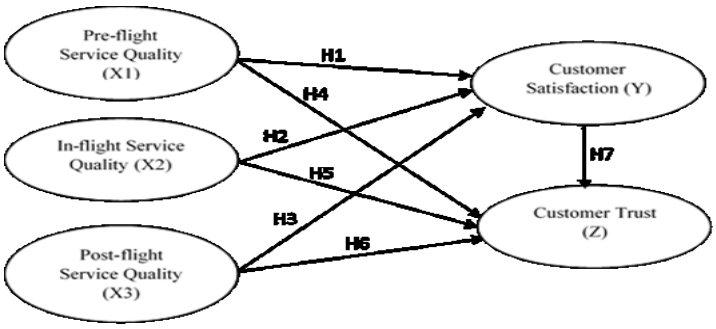

Figure 2. Theoretical Framework

3. Research Methods

This research used quantitative methods by disseminating questionnaires. Non-probability sampling was conducted on air travelers with experience using Citilink Indonesia services, and as a result, a sample of 100 respondents were extracted. The respondents were selected based on

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the criteria of whether or not they had used the services within the last 12 months. The data collected were analyzed using the Structural Equation Modelling (SEM) with the SMART-PLS 3 application. Five variables were identified in this research.

Table 1. Measurement Items

NO	Variable	Indicator	Sources
1	Pre-flight Service Quality	Pre-flight information available (PRE1) Efficient check-in process (PRE2) Courteous check-in attendant (PRE3)	(Etemad-Sajadi et al., 2015)
2	In-flight Service Quality	Passengers feeling secure about the flight services (IN1) Clean aircraft interior (IN2) Neat-looking flight attendants (IN3) Courteous cabin crew (IN4) Services worth the payment (IN5)	(Namukasa, 2013)
3	Post-flight Service Quality	Efficient baggage handling (POST1) Timely baggage arrival at the destination airport (POST2) Prompt handling of damaged or lost baggage (POST3)	(Namukasa, 2013) (Aksoy, Atilgan, & Akinci, 2003) (Song, Ruan, & Park, 2019)
4	Customer Satisfaction	Satisfaction with the services (CS1) Expectation fulfilment (CS2) Satisfactory experience (CS3)	(Setiawan et al., 2020)
5	Customer Trust	The airline working excellently (CT1) The airline being reliable (CT2) The airline keeping its promises (CT3)	(Setiawan et al., 2020)

4. Results

4.1 Evaluation of the Measurement Model (Outer Model)

This research's evaluation featured three measurement steps: convergent validity test; discriminant validity test, and composite reliability test.

Table 2. Convergent Validity and Average Variance Extracted (AVE)

Construct	Item	Sample Mean (M)	Outer Loading	T-Statistics	AVE	Result
Pre-flight Service Quality	PRE1	0,738	0,748	8,640	0,633	Valid
	PRE2	0,858	0,855	27,394		Valid
	PRE3	0,778	0,779	12,160		Valid
In-flight Service Quality	IN1	0,701	0,694	13,428	0,512	Valid
	IN2	0,610	0,616	5,885		Valid
	IN3	0,798	0,806	12,493		Valid
	IN4	0,793	0,800	14,488		Valid
	IN5	0,636	0,639	6,812		Valid
Post-flight Service Quality	POST1	0,829	0,829	21,672	0,648	Valid
	POST2	0,840	0,843	19,099		Valid
	POST3	0,739	0,739	12,599		Valid
Customer Satisfaction	CS1	0,853	0,854	26,004	0,745	Valid
	CS2	0,874	0,876	27,859		Valid
	CS3	0,860	0,859	26,980		Valid
Customer Trust	CT1	0,892	0,893	31,018	0,766	Valid

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Construct	Item	Sample Mean (M)	Outer Loading	T-Statistics	AVE	Result
	CT2	0,867	0,872	19,886		Valid
	CT3	0,859	0,861	21,199		Valid

As stated by (Hair Jr, Hult, Ringle, & Sarstedt, 2017), an outer loading was to be declared valid if the result exceeded 0.50. Table 2 shows that all the outer loading exceeded 0.50, suggesting that the indicators used reached convergent validity. Additionally, all the variables had AVE values above 0.50, showing that the convergent validity from the AVE perspective was good. The AVE value for the pre-flight service was 0.633, meaning that the three indicators in the pre-flight service quality variable were represented at 63.3%. The AVE value for in-flight service quality was 0.512, meaning that the five indicators in the in-flight service quality variable were represented at 51.2%. The AVE value for the post-flight service quality was 0.648, meaning that the three indicators in the post-flight service quality variable were represented at 64.8%. The AVE value for passenger satisfaction was 0.745, meaning that the three indicators in the passenger satisfaction variable were represented at 74.5%. Lastly, the AVE value for passenger trust was 0.766, meaning that the three indicators in the passenger trust variable were represented at 76.6%. It can be stated that, on average, every variable was able to represent more than 50% of the information in the indicators.

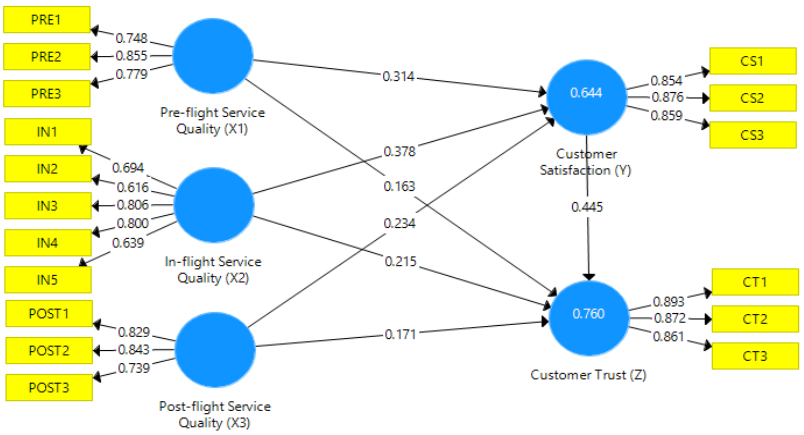

Figure 3. PLS Algorithm

Table 3. Discriminant Validity

	Pre-flight Service Quality	In-flight Service Quality	Post-flight Service Quality	Customer Satisfaction	Customer Trust
PRE1	**0,748**	0,452	0,500	0,492	0,523
PRE2	**0,855**	0,562	0,571	0,652	0,694
PRE3	**0,779**	0,599	0,382	0,543	0,505
IN1	0,579	**0,694**	0,414	0,569	0,646
IN2	0,343	**0,616**	0,262	0,422	0,440
IN3	0,465	**0,806**	0,437	0,471	0,498
IN4	0,557	**0,800**	0,471	0,562	0,562
IN5	0,418	**0,639**	0,347	0,514	0,450
PO1	0,510	0,487	**0,829**	0,557	0,591
PO2	0,529	0,408	**0,843**	0,515	0,576
PO3	0,441	0,432	**0,739**	0,456	0,442

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	Pre-flight Service Quality	In-flight Service Quality	Post-flight Service Quality	Customer Satisfaction	Customer Trust
CS1	0,615	0,694	0,583	**0,854**	0,720
CS2	0,610	0,567	0,573	**0,876**	0,701
CS3	0,622	0,594	0,486	**0,859**	0,713
CT1	0,687	0,612	0,635	0,743	**0,893**
CT2	0,572	0,658	0,572	0,705	**0,872**
CT3	0,657	0,671	0,555	0,716	**0,861**

According to Table 3, all indicators included in every construct had a stronger relationship with each other than with other loading constructs, implying that the discriminant validity was good. Reliability testing used the Composite Reliability (CR) and Cronbach's Alpha methods. The questionnaire was to be declared reliable if the CR value and Cronbach's alpha exceeded 0.70. The followings are the results of the reliability testing.

Table 4. Reliability Indicator

Variable	Composite Reliability	Cronbach's Alpha
Pre-flight Service Quality (X1)	0,837	0,711
In-flight Service Quality (X2)	0,838	0,757
Post-flight Service Quality (X3)	0,846	0,729
Customer Satisfaction (Y)	0,897	0,829
Customer Trust (Z)	0,908	0,847

From Table 4, it was concluded that the composite reliability value and Cronbach's alpha surpassed 0.70 and that all the latent variables were reliable.

4.2 Evaluation of Structural Models (Inner Model)

Evaluation of the structural model was performed using R-squared test and significance test through path coefficient estimation.

Table 5. R-Square and Hypothesis Testing

Model	Path	Path coefficient (Standardized)	T-statistics	P Values	Decision	R-Square
First	PRE-CS	0,314	3,625	0,000	H1 : Support (+)	0,644
	IN-CS	0,378	4,916	0,000	H2 : Support (+)	
	POST-CS	0,234	3,358	0,001	H3 : Support (+)	
Second	PRE-CT	0,163	1,974	0,049	H4 : Support (+)	0,760
	IN-CT	0,215	3,021	0,003	H5 : Support (+)	
	POST-CT	0,171	2,399	0,017	H6 : Support (+)	
	CS-CT	0,445	5,584	0,000	H7 : Support (+)	

According to Table 5, the first model had an R-squared of 0.644. The construct variability of the pre-flight, in-flight, and post-flight service quality of 64.4% was able to explain the variability of passenger satisfaction. The second model had an R-squared of 0.760. The

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construct variability of the pre-flight, in-flight, and post-flight service quality of 76% was able to explain the variability of passenger trust.

The first hypothesis was accepted in that pre-flight service quality had a significant, positive effect on passenger satisfaction at 0.314 and significance level of 0.000. The second hypothesis was accepted in that in-flight service quality had a significant, positive effect on passenger satisfaction at 0.378 and significance level of 0.000. The third hypothesis was accepted in that post-flight service quality had a significant, positive effect on passenger satisfaction at 0.234 and significance level 0.001. Hence, the higher the pre-flight, in-flight, and post-flight service quality, the higher the passenger satisfaction. The fourth hypothesis was accepted in that pre-flight service quality had a significant, positive effect on passenger trust at 0.163 and significance level 0.049. The fifth hypothesis was accepted in that in-flight service quality had a significant, positive effect on passenger trust at 0.215 and significance level 0.003. The sixth hypothesis was accepted in that post-flight service quality had a significant, positive effect on passenger trust at 0.171 and significance level 0.017. Hence, the higher the pre-flight, in-flight, and post-flight service quality, the higher the passenger trust. The seventh hypothesis was accepted in that passenger satisfaction had a significant, positive effect on passenger trust at 0.445 and significance level 0.000. Hence, the higher the passenger satisfaction, the higher the passenger trust.

Table 5 describes the criteria for R-squared values: 0.75 is strong, 0.50 is moderate, and 0.35 is weak.

$$Q2 = 1 - (1 - 0{,}644)(1 - 0{,}760)$$
$$= 0{,}92$$

The Q-squared obtained in this research was 0.92. With a Q-squared greater than 0, the model was proven to have strong predictive relevance.

4.3 Indirect Effect

Table 6 shows that there is an indirect effect between the service quality of pre-flight, in-flight, and post-flight to passenger trust through passenger satisfaction.

Table 6. Indirect effect

Effect	Coefficient of Influence	T-Statistic	P-Value	Result
Pre-Flight Service Quality → Passenger Satisfaction → Passenger Trust	0.140	2.924	0.004	Significant
In-Flight Service Quality → Passenger Satisfaction → Passenger Trust	0.168	3.718	0.000	Significant
Post-Flight Service Quality → Passenger Satisfaction → Passenger Trust	0.104	2.913	0.004	Significant

First, passenger satisfaction indirectly affects the pre-flight service quality to passenger trust with a T- Statistic 2.924 and P-Value 0.004, so the result was significant. Second, passenger satisfaction indirectly affects in-flight service quality to passenger trust with a T-Statistic 3.718 and P-Value 0.000, so the result was significant. And lastly, passenger satisfaction indirectly affects the post-flight service quality to passenger trust with T-

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Statistic 2.913 and P-Value 0.004, so the result was significant. From Table 6, it can be concluded that passenger satisfaction was proven to mediate the relationship of service quality of pre-flight, in-flight, and post-flight to passenger trust.

5. Conclusion

The research results showed that pre-flight, in-flight, and post-flight service quality was positively related to passenger satisfaction. This was because the services provided by Citilink had met the passengers' expectation. Therefore, the passengers were satisfied with Citilink's services. Furthermore, pre-flight, in-flight, and post-flight service quality also had a positive effect on passenger trust. The reason was that because Citilink was perceived as reliable by the passengers. Also, passenger satisfaction was found positively affecting passenger trust because the passengers' satisfaction could induce and increase their trust in Citilink. Lastly, customer satisfaction was proven to mediate the relationship of service quality of pre-flight, in-flight, and post-flight to passenger trust.

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