The Impact of Responsiveness and Empathy on Satisfaction and Loyalty of the PT Citilink Indonesia's Passengers at Kualanamu International Airport

Defri Kurnanda(✉), Endang Sulistya Rini, and Beby Karina

University of North Sumatera, Medan, Indonesia
kurnanda.defri@gmail.com

Abstract. In providing the services to the passengers, the company's management has tried to provide its best. However, it is not easy to establish passenger satisfaction which leads to the passengers' loyalty, though the employees have maximally delivered the services given. It is hoped that by providing an excellent service based on the PT Citilink Indonesia service standards, the number of passengers and people's demand to fly PT Citilink Indonesia airline will increase. This study aims to investigate the impact of responsiveness on satisfaction and loyalty of the PT Citilink Indonesia's passengers at Kualanamu International Airport. The study took 100 respondents who were taken using a convenience sampling technique. While the data analysis technique used was path analysis, which has fulfilled all the assumptions of multivariate research. The results of this study indicate a significant positive directly on the responsiveness of passenger satisfaction. Empathy has a significant positive effect on passenger satisfaction. Responsiveness has a significant positive effect on passenger loyalty. Passenger satisfaction has a significant positive effect on passenger loyalty. There is an indirect effect of the responsiveness towards passenger loyalty through the significant passenger satisfaction of PT Citilink Indonesia. There is an indirect effect of the empathy towards the passenger loyalty through the significant passenger satisfaction.

Keywords: responsiveness · empathy · passenger satisfaction · passenger loyalty

1 Introduction

The aviation industry, commonly referred to as air transportation, is one of the leading service industries that significantly contribute to the economy of developed and developing countries [1]. Business competition in the aviation sector is getting tighter, making the airline management try to create strategies to increase service sales.

The Indonesia National Air Carrier Association [2] shows that the Indonesian economy, which has continued to move forward since the 1970s, has caused the overall flight volume to grow consistently from year to year, this has caused the growth of the aviation business to continue increasing. Until 2020, there are 14 airline companies still operating and consistently running their aviation business in Indonesia [2].

W. R. Murhadi et al. (Eds.): INSYMA 2022, AEBMR 223, pp. 919–929, 2023.
https://doi.org/10.2991/978-94-6463-008-4_115

The Covid-19 pandemic began in 2020 and has caused quite heavy pressure on all the airlines in Indonesia and even the whole world. The number of flight routes that were cancelled caused significant losses for the airline companies. The Covid-19 condition has made the domestic flight business competition even more intense. Thus, in order to survive in this business, the company needs to implement the right strategy; a strategy that can be used is to focus on the passengers.

PT Citilink Indonesia is one of the airlines that runs its aviation business in Indonesia. One of Citilink's branches is located at Kualanamu Airport. In providing services to the passengers, the company's management has tried to provide its best. However, it is not easy to establish passenger satisfaction, leading to passenger loyalty.

The intense competition among the airlines, along with the Covid-19 pandemic, led to a downward trend in the number of passengers on several flight routes owned by the company. There is a downward trend in the number of passengers of Citilink. The Covid-19 pandemic has forced the company to change its existing strategies. By focusing on passengers, it is hoped that this strategy will create a sense of satisfaction among the consumers and finally raise the passenger loyalty to the company. This is in line with Akhter et al. [3], who stated that creating loyal passengers is more important because the significant escalation in competition and a concentrated market causes companies to survive.

PT Citilink Indonesia at Kualanamu International Airport needs to ensure passenger satisfaction before, during, and after the flight. In this case, it is important to ensure that the employees in the field, such as check-in staff, porters, etc., provide good services. The quality service provided by employees will make passengers satisfied and raise loyalty.

It is known that the standard of passenger satisfaction set by the management is higher than 80%. Although the results reached are more than 80%, there are still some who feel dissatisfied with the service, and this cannot be ignored. There is a need for an in-depth study so that the level of passenger satisfaction should become higher and get 0% of complaints from the passengers.

Passenger satisfaction is a must for Citilink. The company's management must review the strategies implemented to create passenger satisfaction because creating passenger satisfaction is an excellent strategy to be carried out by the company management. Quality service is one factor that determines passenger satisfaction [4].

Kotler & Keller [5] suggested that many companies systematically measure how well brands treat their passengers, recognizing the factors that shape passenger satisfaction. One of the efforts that can be made to create and maintain passenger satisfaction is to provide an excellent service to the passengers. If passenger satisfaction cannot be maintained, passengers may fly with other competitors [6].

Measuring the service quality can be done by using the service quality dimensions. Parasuraman & Berry [7] developed service quality in 5 dimensions: reliability, responsiveness, assurance, empathy, and tangibility. These five dimensions are known as Service Quality (Servqual). Based on the dimensions of service quality used by Parasuraman & Berry [7], this study tries to adapt to existing conditions; therefore, this study only focuses on discussing the Responsiveness and Empathy side [8, 9]. Responsiveness and empathy were used to see the level of passenger satisfaction, which is expected to increase passenger loyalty to Citilink Airlines. Responsiveness and prompt service to

passengers are essential during the airport's pre-flight process. Not only a quick response from employees but greetings passengers is a must for all airline employees to provide satisfaction to passengers.

Based on this background explanation, the authors are very interested in conducting a study of the causes of the low level of passenger satisfaction which ultimately forms a low level of passenger loyalty due to the low quality of the company management services to the passengers.

2 Research Methods

Citilink Airline, Kualanamu International Airport was the subject of the study. A total of 545,710 passengers pass through the airport each year. Simple random sampling was utilized, and the sample size for this investigation was obtained using the Slovin method; the total number of samples for this study was 100. Convenience sampling was utilized as the sample method. The information was gathered by handing out questionnaires to the respondents, who were PT Citilink Indonesia passengers at Kualanamu Airport. The questionnaires and documentation studies were distributed to collect data. Structured (closed) questions are the sort of questions used in the survey. The Path Analysis approach was employed as the analytical method.

3 Results and Discussion

3.1 Characteristics of Respondents

Table 1 exhibits PT Citilink Indonesia passengers, based on gender, education, age, and occupation.

3.2 Substructure Path Analysis Model I

3.2.1 Classic Assumption Test

Classical assumption test was conducted to ensure that the data is suitable for regression model testing.

3.2.1.1 Data Normality Test

Table 2 shows the data normality test using the Kolmogorov Smirnov test technique. The value of Asymp. Sig was compared to the research alpha value of 0.05 for this test. The Asymp value is displayed in the test results. The significance of 0.200 is higher than 0.05 ($0.200 > 0.05$). As a result, the data in the substructure I was found to be normally distributed.

3.2.1.2 Multicollinearity Test

A multicollinearity test was conducted to measure and ensure that all the independent variables in this study do not correlate. It is measured by using VIF with threshold of maximum 5 The VIF value of all variable in this study are else than 5, showing no multicollinearity.

Table 1. The Characteristics of Respondents

Indicator	Information						
Gender	Man			Woman			
	59			41			
Education	Elementary	Middle School	High School	Vocational	Undergraduate	Master's	Doctoral
	1	7	27	16	32	12	5
Age (years)	20–30	3140	41–50	>50			
	11	39	37	13			
Work	Civil Servant	TNI/Polri	Teachers, Lecturers, Lecturers	Entrepreneurial	Private Employees	Other	
	9	8	13	49	20	1	

Table 2. Substructure Normality Test I

N		100
Normal parameters[a,b]	Mean	.0000000
	Std. Deviation	1.73607229
Most extreme differences	Absolute	.062
	Positive	.035
	Negative	−.062
Test statistic		.062
Asymp. Sig. (2-tailed)		.200[c,d]

Table 3. Coefficient of Determination of Substructure I

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.633[a]	.401	.388	1.75388

3.2.2 Coefficient of Determination

The Coefficient of Determination was used to see how much the Responsiveness and Empathy variables explain Customer Satisfaction at PT Citilink.

The value of the Adjusted R squared in Table 3 above is 0.388, this shows that the magnitude of the Responsiveness and Empathy ability that explains the passenger satisfaction on PT Citilink Indonesia of 0.388 or 38.8%. Furthermore, to find out the magnitude of the error value in the Substructure I test using a calculation where e = 1 – R-squared e = 1 – 0.388 e = 0.612 or 61.2%.

Table 4. Feasibility Test of Substructure Model

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	199.379	2	99.690	32.408	.000[b]
	Residual	298.381	97	3.076		
	Total	497.760	99			

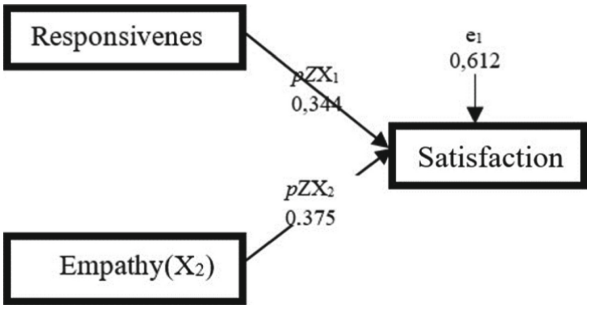

Fig. 1. Substructure Path Analysis Model I

Table 5. Substructure Model Equation I

Model	Standard Coefficient		Sig.	Collinearity Statistics	
	B	t		Tolerance	VIF
1 (constant)		3.719	.000		
Resp	.344	3.667	.000	.701	1.427
Empathy	.375	3.993	.000	.701	1.427

3.2.3 Feasibility Test of Substructure Model I

To find out whether the model in Substructure I is correct, a test was carried out on the Substructure I model:

From the Table 4 above, it is known that the significant value in the Substructure I model is 0.000, indicating that the Substructure I model is true.

3.2.4 Substructure Model I Equation

Table 5 shows the equation for the substructure model I based on the test findings. The equations of the Substructure I path analysis model produces as Eq. (1) and Fig. 1 based on Table 5.

$$Z = 0.344pZX_1 + 0.375pZX_2 + 0.612pe_1 \quad (1)$$

Table 6. Substructure I Hypothesis Testing

Model	Standard Coefficient		Sig.	Collinearity Statistics	
	B	t		Tolerance	VIF
1 (constant)		3.719	.000		
Resp	.344	3.667	.000	.701	1.427
Empathy	.375	3.993	.000	.701	1.427

3.2.5 The Substructure Model Hypothesis I Testing

H0 1: Responsiveness has a positive and significant effect on passenger satisfaction.
H0 2: Empathy has a positive and significant effect on passenger satisfaction.

The results of testing the hypothesis on substructure can be seen in Table 6.

3.2.6 The Effect of Responsiveness on Passenger Satisfaction (X1 → Z)

Table 6 shows that the sig responsiveness value in this substructure I study is 0.000. When compared with the alpha value (0.05), it is known that $0.000 < 0.05$, so it can be concluded that responsiveness has a positive and significant effect on passenger satisfaction. The value of the coefficient of responsiveness towards passenger satisfaction is 0.344. This means that the magnitude of the responsiveness ability affects passenger satisfaction partially by 0.344 or 34.4%.

3.2.7 The Effect of Empathy on Passenger Satisfaction (X2 → Z)

Table 6 shows that the value of the sig empathy in this sub-structure I study is 0.000 so it can be concluded that empathy has a positive and significant effect on passenger satisfaction. The value of the coefficient of empathy on passenger satisfaction is 0.375. This means that the amount of empathy ability affects passenger satisfaction partially by 0.375 or 37.5%.

3.3 Substructure Model II Path Analysis

3.3.1 Classic Assumption Test

3.3.1.1 Data Normality Test

The test results show the value of Asymp. Sig of 0.200 is greater than 0.05, ($0.200 > 0.05$). So the substructure II data has been normally distributed.

3.3.1.2 Multicollinearity Test

The VIF value of every variable is below 5, this means that there is no multicollinearity.

3.3.2 Coefficient of Determination

The value of Adjusted R-squared in the above results is 0.550. So to find out the value of the error in Substructure II is seen in the calculation, e = 1 – R-squared, e = 1 – 0.550, e = 0.450 or 45%.

3.3.3 Feasibility Test of Substructure Model II

Substructure II model is 0.000 which indicates that the substructure II model in this study is fit.

3.3.4 The Equation of Substructure Model II

Based on Table 7, the equations of the Substructure II path analysis model can be arranged as Eq. (2) and Fig. 2.

$$Y = 0.226pYX_1 + 0.281pYX_2 + 0.384YZ + 0.450e_2 \quad (2)$$

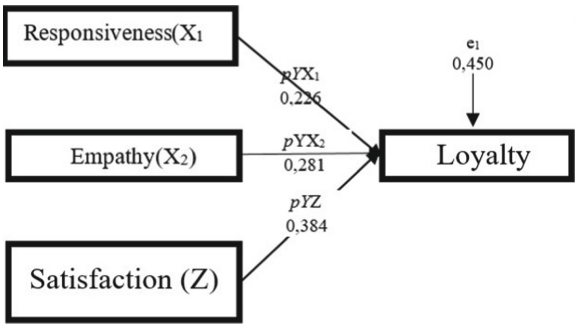

Fig. 2. Substructure Path Analysis Model II

Table 7. Equation of Substructure Model II

Model	Std. Coeff Beta	t	Sig.	Collinearity Statistics	
				Tolerance	VIF
1 (constant)		2.970	.004		
Resp	.226	2.627	.010	.615	1.625
Empathy	.281	3.232	.002	.602	1.662
Kep_Pen	.384	4.404	.000	.599	1.668

Table 8. Substructure I Hypothesis Testing

Model	Std. Coeff Beta	t	Sig.	Collinearity Statistics	
				Tolerance	VIF
1 (constant)		2.970	.004		
Resp	.226	2.627	.010	.615	1.625
Empathy	.281	3.232	.002	.602	1.662
Kep_Pen	.384	4.404	.000	.599	1.668

3.3.5 Hypothesis Testing for Substructure Model II

From Table 8, it is known that the hypothesis in the research of the substructure model II is as follows:

H3: Responsiveness has a positive and significant effect on passenger loyalty.
H4: Empathy has a positive and significant effect on passenger loyalty.
H5: Passenger satisfaction has a positive and significant effect on passenger loyalty.

3.3.6 The Effect of Responsiveness on Passenger Satisfaction (X1 → Y)

Table 8 shows that the value of sig responsiveness in this substructure II study is 0.010, so it can be concluded that responsiveness has a positive effect on passenger loyalty.

3.3.7 The Effect of Empathy on Passenger Satisfaction (X2 → Y)

Showing that the value of sig empathy is 0.002, it can be concluded that empathy has a positive effect on passenger loyalty.

3.3.8 Effect of Passenger Satisfaction on Passenger Satisfaction (Z → Y)

Showing that the sig value of passenger satisfaction in substructure II is 0.000, it is concluded that it has a positive and significant effect.

3.4 Path Analysis Model

Based on the results of the discussion of the analysis of the substructure models I and II, the path analysis in this study can be seen at Fig. 3.

3.4.1 The Direct Effect of the Independent Variables on the Bound Variable

The following is the calculation of the direct effect of the independent variable on the dependent variable and its mediating variable:

1. The direct effect of responsiveness on passenger satisfaction is 0.344, so when employees improve high-quality service in the form of good responsiveness, the level of passenger satisfaction will increase by 34.4%.

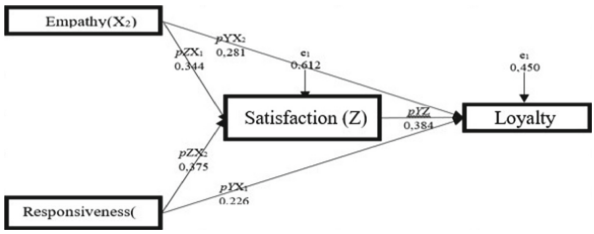

Fig. 3. Model Path Analysis

	Input:		Test statistic:	Std. Error:	*p*-value:
a	0.344	Sobel test:	2.40368464	0.05495563	0.01623077
b	0.384	Aroian test:	2.35886287	0.05599986	0.01833103
s_a	0.117	Goodman test:	2.45116256	0.05389116	0.01423956
s_b	0.092	Reset all	Calculate		

Fig. 4. Sobel Test X1 Against Y Through Z

2. The direct influence of empathy on passenger satisfaction is 0.375, so when employees improve service in the form of good empathy, passenger satisfaction will increase by 37.5%.
3. The direct effect of responsiveness on passenger loyalty is 0.281, so when employees improve service with good responsiveness, the level of passenger loyalty will increase by 28.1%.
4. The direct influence of empathy on passenger loyalty is 0.226, so when employees improve service in the form of good empathy, the level of passenger loyalty will increase by 22.6%.
5. The direct influence of passenger satisfaction on passenger loyalty is 0.384; then when employees get maximum satisfaction, the level of passenger loyalty will increase by 38.4%.

3.4.2 Indirect Effect of Responsiveness on Passenger Loyalty Through Passenger Satisfaction (X1 → Z → Y)

The Sobel test was used to determine the significance level and the magnitude of the indirect effect of responsiveness on passenger loyalty through passenger satisfaction.

The results of the Sobel test have a significance value of 0.016, as shown in Fig. 4. Because the sig value (0.016 0.050) is less than the Alpha value (0.016 0.050), it may be stated that responsiveness has a substantial indirect influence on passenger loyalty via passenger pleasure.

3.4.3 Indirect Effect of Empathy on Passenger Loyalty Through Passenger Satisfaction (X2 → Z → Y)

From the Fig. 5, it is known that the results of the Sobel test have a significance value of 0.015. The sig value is smaller than the Alpha value (0.015 < 0.050), so it can be

Input:			Test statistic:	Std. Error:	*p*-value:
a	0.375	Sobel test:	2.43604611	0.05911218	0.01484879
b	0.384	Aroian test:	2.39121514	0.06022043	0.01679271
s_a	0.125	Goodman test:	2.48349699	0.05798276	0.01300994
s_b	0.092	Reset all	Calculate		

Fig. 5. Sobel Test X2 Against Y Through Z

concluded that there is a significant indirect effect of empathy on passenger loyalty through passenger satisfaction.

3.5 Total Influence

The total effect of responsiveness on passenger loyalty mediated by passenger satisfaction is 0.476 (0.132 + 0.344). The total effect of empathy on passenger loyalty mediated by passenger satisfaction is 0.519 (0.144 + 0.375).

4 Conclusion

The following are the study's findings: The impact of responsiveness on passenger satisfaction is immediate and considerable. This is based on a 0.000 0.05 significance value. The effect of responsiveness is 34.4% in magnitude. Empathy has a direct and considerable beneficial impact on passenger satisfaction. Based on a sig value of 0.000 0.05, this is the result. The extent of empathy's effect is 37.5%. Passenger loyalty is directly influenced by response in a favorable and meaningful way. Based on a sig value of 0.010 0.05, this is the result. The effect of responsiveness is 28.1% in magnitude. There is a direct positive and significant effect of empathy on passenger satisfaction. This is based on the sig value of 0.002 < 0.05. The magnitude of the influence of empathy is 22.6%. There is a direct positive and significant influence on passenger satisfaction on passenger loyalty. This is based on a sig value of 0.000 < 0.05. The magnitude of the influence of passenger satisfaction is 38.4%. There is an indirect effect of responsiveness on passenger loyalty through significant passenger satisfaction. This is based on the Sobel test sig value of 0.016 < 0.05. Empathy has a direct and considerable beneficial impact on passenger pleasure. Based on a sig value of 0.002 0.05, this is the result. The extent of empathy's effect is 22.6%. There is a direct and considerable beneficial impact on passenger satisfaction and loyalty. Based on a sig value of 0.000 0.05, this is the result. The impact of passenger satisfaction is estimated to be 38.4%. Through high passenger satisfaction, responsiveness has an indirect influence on passenger loyalty. This is based on a sig value of 0.016 0.05 in the Sobel test.

References

1. Rahim, A. G. (2016). Perceived service quality and customer loyalty: The mediating effect of passenger satisfaction in the Nigerian Airline Industry.
2. INACA. (2019). Menjelang Setengah Abad Industri Penerbangan Nasional INACA Berkiprah.

3. Abbasi, A. S., Akhter, W., Ali, I., & Hasan, A. (2011). Factors affecting customer loyalty in Pakistan. *African Journal of Business Management, 5*(4), 1167–1174.
4. Nunkoo, R., Teeroovengadum, V., Ringle, C. M., & Sunnassee, V. (2020). Service quality and customer satisfaction: The moderating effects of hotel star rating. *International Journal of Hospitality Management, 91*, 102414.
5. Kotler, P., Keller, K. L., & Chernev, A. (2016). *Marketing Management* (16th Ed.). Pearson.
6. Isra, J. M., & Trenggana, A. F. M. (2017). Pengaruh Kualitas Pelayanan Terhadap Kepuasan Konsumen Pada Uber Car (studi Pada Konsumen Uber Car Di Kota Bandung). *eProceedings of Management*, *4*(3).
7. Parasuraman, A., Zeithaml, V. A., & Berry, L. (1988). SERVQUAL: a multiple-item scale for measuring consumer perceptions of service quality, *64*(1), 12–40.
8. Agalela, A. (2019). Pengaruh Responsiveness Dan Empathy Terhadap Kepuasan Pelanggan Yang Berdampak Pada Penjualan Pt. Yakult Indonesia Persada Cabang Bandar Jaya. *JURNAL SIMPLEX, 2*(3).
9. Iberahim, H., Taufik, N. M., Adzmir, A. M., & Saharuddin, H. (2016). Customer satisfaction on reliability and responsiveness of self service technology for retail banking services. *Procedia Economics and Finance, 37*, 13–20.