Optimizing Paylater Service Design with Service Quality Approach Using Factor Analysis and Analytical Hierarchy Process Methods

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ABSTRACT

The automotive business is one of the businesses that experienced a difficult time during the Covid pandemic and gradually increased after the pandemic along with the increasing need for transportation. The aftersales service business has a considerable revenue contribution to the company, but the competition in this business is very tight, considering the cost of service at authorized workshops is more expensive compared to non-authorized workshops. To increase people's interest in using the after-sales service at PT Astra Isuzu, transformation is needed related to service, service quality and payment channel. PT Astra Isuzu already has an e-wallet called AstraPay, which works together with Maucash paylater. However, this digital payment platform has not been utilized as a payment channel for aftersales service. This research aims to identify and prioritize customer needs related to paylater payment methods. The method used in this research consists of 2 (two) stages, namely factor analysis and Analytical Hierarchy Process (AHP). The factor analysis method is used to determine the factors that have a positive and significant effect on interest in using paylater by identifying and measuring factors that are thought to have an effect. Furthermore, these factors are made into quality dimensions through Service Quality. While the AHP method is used to determine the priority ranking of the results of factor analysis by weighting. So that the results of factor analysis will be the basis for determining criteria in the AHP method. Data collection in this study used a questionnaire method with respondents being Isuzu vehicle service users. Focus group discussion was also conducted by involving the management of PT Astra Isuzu. By using factor analysis method, it was found that from 15 indicators were reduced to 9 indicators which were grouped into 3 components or factors. Furthermore, for the 9 indicators, AHP weighting was carried out, in which the 3 most important priorities for paylater design were the speed of handling customer complaints, Service Advisor providing information about paylater to customers and followed by a smooth and stable internet network at Astra Isuzu.

INTRODUCTION

The automotive business is one of the businesses that experienced a difficult time during the Covid pandemic and gradually improved after the pandemic along with the increasing need for transportation. One of the most profitable branches of the business is not in sales, but in service. The sizable revenue contribution in aftersales service has its challenges, because competition in this business is very tight. This is due to the cost of service at authorized workshops is more expensive compared to non-authorized workshops. PT Astra Isuzu as one of Astra International's subsidiaries engaged in the sale of vehicles and spare parts as well as maintenance and repair of Isuzu brand vehicles, has a strategy to increase public interest in using aftersales services. Since 2018, Astra launched an e-wallet called AstraPay, in

collaboration with Maucash paylater, as one of the options for customers who want Astra standard excellent service but are constrained by limited funds. However, this digital payment platform has not been utilized as an aftersales service payment channel. Although paylater has become a major trend in e-commerce purchases, the application of this concept in the context of the aftersales service business still requires further research. So the research questions are how to identify the factors that influence customer interest in choosing paylater as a payment method when performing maintenance or repair of Isuzu vehicles, how to find out the interaction between factors in the service quality dimension, how much weight or level of importance of each service quality dimension and what factors are prioritized by PT Astra Isuzu management in designing paylater.

LITERATURE REVIEW

Indonesia's economic conditions are depressed and full of challenges due to the Covid-19 corona virus pandemic, making financial inclusion an important role for the economy. Openness to financial access or financial inclusion for the community is one of the keys to development in the current era of digitalization. The financial inclusion strategy is not an isolated initiative. Therefore, involvement in financial inclusion is not only related to the duties of Bank Indonesia as the central bank, but also regulators, ministries and other institutions in efforts to provide financial services to the wider community. Through the national strategy in inclusive finance, it is hoped that collaboration between government agencies and stakeholders will be well structured (Bank Indonesia, 2020). The economic slowdown that occurred during the pandemic has caused financial technology (fintech) to have the potential to take a role in the economic recovery process (Marginingsih, 2021). The potential of the car market is huge in Indonesia. According to the Central Bureau of Statistics, the total car population in Indonesia in 2019 reached 15,592,419 units (CNN Indonesia, 2021). Meanwhile, the use of paylater in Indonesia has also experienced a very significant increase. Based on a report issued by International Data Corporation (IDC) entitled "How Southeast Asia Buys and Pays: Driving New Business Value for Merchants", e-commerce transactions using paylater in Indonesia reached USD 530 million in 2020. It is projected that by 2025, e-commerce transactions using paylater in Indonesia will increase 8.7 times from 2020, reaching USD 8.84 billion (International Data Corporation, 2021).

The fintech industry is one of the financial service innovations that is gaining popularity in today's digital era and technology with the concept of digitizing payments is one of the most developed sectors in the fintech industry in Indonesia. In this case, the fintech sector is most expected by the government and society to encourage and increase the number of people who have access to be able to use financial services (Muzdalifa et al, 2018). One type of lending fintech, namely paylater, is one of the fintech innovations that is now in great demand by the public in making transactions. Paylater is a concept that resembles a credit card, where users can make transactions on e-commerce platforms where payments can be made in installments or paid in full on the due date. What distinguishes the two is the form and conditions. In addition to easy requirements and a fast process, the appeal of the paylater feature is that it is able to provide loans to people who do not have bank accounts (unbanked), thus opening up opportunities for various types of people to use the paylater feature. This attraction then makes paylater one of the innovations that users are interested in today. In addition, the paylater feature has now been used by many e-commerce platforms to attract users, such as Traveloka, Shopee, Lazada, Tokopedia and BliBli. E-commerce products and paylater have a high relationship because companies that offer products using payment methods through paylater generate consumer interest in making purchases even by delaying payment (Pratika et al., 2021).

This research is also motivated by the results of several previous studies which state that effort expectancy and facilitating conditions have a positive influence on interest in use

(Hasibuan, 2021). Another study states that effort expectation, facilitating conditions and hedonic motivations have a positive effect on interest in use (Adirinekso, 2021).

The high public interest in implementing an electronic payment system (e-payment) has made the fintech industry increasingly innovate to develop a more efficient and profitable payment system, both for users and for sellers. With that, the paylater payment system was developed. Paylater is a form of P2P lending or also known as peer to peer lending. P2P lending is a borrowing and lending activity carried out by lenders and loan recipients through intermediaries other than banks (Nirmalapurie, 2020).

RESEARCH METHOD

Furthermore, this research will use qualitative methods with purposive sampling of questionnaires, literature studies and focus group discussions by the management of PT Astra Isuzu, where the results are factors that influence customer decisions on the use of paylater. This research integrates factor analysis and AHP which refers to the service quality approach. The result of factor analysis will be the basis for determining criteria and sub criteria in AHP method. This research will prioritize the factors that influence the selection of paylater payment methods that have a major impact on improving the quality of aftersales service in accordance with customer expectations.

RESULTS AND DISCUSSION

In this study, there are 2 types of data collection, namely: questionnaires to customers related to factors that are thought to influence customer interest in choosing Astra Paylater and a weighting questionnaire filled out by the management of PT Astra Isuzu. Data collection was carried out through distributing questionnaires to 50 workshop customers. The following are the demographics of the 50 workshop customer samples with categories of gender, age and business field as in Table 1.

Table 1. Demographics of Questionnaire Respondents

Category	Detail	Total	Percentage
Gender	Male	45	90%
	Female	5	10%
	Total	50	100%
Age	31 – 35 years old	6	12%
	36 – 40 years old	5	10%
	> 40 years old	39	78%
	Total	50	100%
Line of Business	Distributor	9	18%
	Transporter	10	20%
	Expedition	1	2%
	Manufacture	7	14%
	Trade	11	22%
	Mining	1	2%
	Agriculture and Livestock	2	4%
	Contractor	4	8%
	Oil and Gas	2	4%
	Others	3	6%
	Total	50	100%

Based on Table 1, the demographics of most respondents are male with age> 40 years old, with the most business fields in the trade, transporter, distributor and manufacturing segments.

Service Quality Dimension

Table 2 shows the question items in the questionnaire grouped by Service Quality dimension.

Table 2 Astra Paylater Service Quality Dimensions

Question	*Item*	Service Quality Dimensions
Q_1	Affordable paylater installments	Reliability 1
Q_2	Paylater payment transaction processing speed	Responsiveness 1
Q_3	Service Advisors are knowledgeable and understand paylater payments	Assurance 1
Q_4	Service Advisor provides information about paylater to customers	Empathy 1
Q_5	Astra paylater customer service hotline phone number	Tangible 1
Q_6	Rupiah value that can be financed by paylater	Reliability 2
Q_7	Speed of handling customer complaints	Responsiveness 2
Q_8	Security of transactions using Astra paylater	Assurance 2
Q_9	Service Advisor teaches interested customers how to use paylater	Empathy 2
Q_{10}	Smooth and stable internet network at Astra Isuzu	Tangible 2
Q_{11}	Flexible paylater installment period according to customer needs	Reliability 3
Q_{12}	Customer convenience when contacting Astra paylater customer service	Responsiveness 3
Q_{13}	Service Advisor politely asks for the payment method desired by the customer	Assurance 3
Q_{14}	Ease of customer access to the paylater app	Empathy 3
Q_{15}	Astra paylater features are concise, easy to understand and easy to operate	Tangible 3

Validity Test

In the Kaiser Meyer Oikin Measure of Sampling Adequacy validity test, if the KMO MSA value is > 0.5 then factor analysis can be done. Based on Figure 1, the KMO MSA value is 0.877 > 0.5 so that factor analysis can be carried out on the research questionnaire.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.877
Bartlett's Test of Sphericity	Approx. Chi-Square	822.057
	df	105
	Sig.	<,001

Figure 1. Results of Kaiser Meyer Oikin Measure of Sampling Adequacy and Barlett's Test

The Anti-Image Correlation value indicates whether the number of samples taken is sufficient or not. If the Anti-Image Correlation value> 0.5, then the measure of sampling

adequacy (MSA) assumption has been met. Based on Table 3, it can be concluded that the amount of sampling has met the adequacy of the data.

Table 3 Summary of Anti-Image Correlation Output

Service Quality Dimensions	Value of *Anti-Image Correlation*	Reference Value	Summary
Reliability 1	0,762	0,5	The assumption of measure of sampling adequacy is met
Reliability 2	0,813		
Reliability 3	0,884		
Responsiveness 1	0,875		
Responsiveness 2	0,928		
Responsiveness 3	0,922		
Assurance 1	0,801		
Assurance 2	0,947		
Assurance 3	0,89		
Empathy 1	0,847		
Empathy 2	0,859		
Empathy 3	0,864		
Tangible 1	0,867		
Tangible 2	0,908		
Tangible 3	0,904		

Factor Loading Value

The reference to the factor loading value depends on the number of samples taken. Table 4 below shows the guidelines for factor loading values based on the number of samples taken.

Table 4 Factor Loading Value Guidelines

Factor Loading	Sample Quantity
0,3	350
0,35	250
0,4	200
0,5	150
0,55	100
0,6	85
0,65	70
0,7	60
0,75	50

If the actual factor loading value > guideline factor loading value and clustered in one factor, it can be concluded that the indicators used in the variable are valid. Based on Figure 2, there are 3 (three) components or factors formed. And for the number of samples (N) = 50, based on Table 4, the reference factor loading value is 0.75.

Rotated Component Matrix[a]

	Component		
	1	2	3
Reliability 1			.892
Reliability 2			.512
Reliability 3			.687
Responsiveness 1			.702
Responsiveness 2	.868		
Responsiveness 3	.810		
Assurance 1		.776	
Assurance 2	.854		
Assurance 3	.629	.582	
Empathy 1		.832	
Empathy 2		.878	
Empathy 3	.736	.513	
Tangible 1	.647		
Tangible 2	.831		
Tangible 3	.882		

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Figure 2 Rotated Component Matrix

Furthermore, Table 5 shows a summary of the factors formed from valid indicators with a factor loading value> 0.75, which formed 3 components or factors from the factor analysis method that has been carried out.

Table 5 Summary of Factor Analysis Based on Service Quality Dimensions

Service Quality Dimensions	Indicator	Component/Factor		
		1	2	3
Assurance 2	Security of transactions using Astra paylater	0,854		
Responsiveness 2	Speed of handling customer complaints	0,868		
Responsiveness 3	Customer convenience when contacting Astra paylater customer service	0,81		
Tangible 2	Smooth and stable internet network at Astra Isuzu	0,831		
Tangible 3	Astra paylater features are concise, easy to understand and easy to operate	0,882		
Assurance 1	Service Advisors are knowledgeable and understand paylater payments		0,776	
Empathy 1	Service Advisor provides information about paylater to customers		0,832	
Empathy 2	Service Advisor teaches interested customers how to use paylater		0,878	
Reliability 1	Affordable paylater installments			0,892

So that only the 9 indicators above are then used at the Analytical Hierarchy Process stage.

Analytical Hierarchy Process

The following is the hierarchical structure of AHP which can be seen in Figure 3.

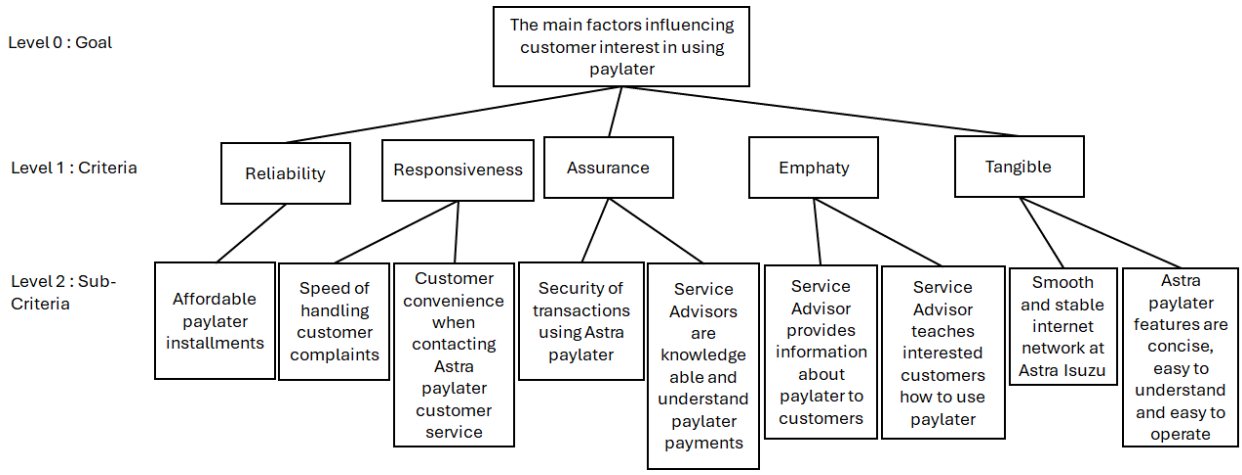

Figure 3. The Hierarchical Structure of AHP

Recapitulation of Weighting and Priority Order of Each Indicator

The next process after performing the AHP hierarchical structure is the creation of a pairwise comparison matrix, normalization matrix and consistency ratio for each criterion (service quality dimension) and sub-criteria (indicator). After going through the steps above, we can then recapitulate the total weighting calculation for each indicator. In Table 6, we can see the 3 most important sequences in the design of Astra paylater are the speed of handling customer complaints, Service Advisor providing information about paylater to customers and the internet network at Astra Isuzu which is smooth and stable.

Table 6 Recapitulation of Total Weighting and Priority Order of Each Indicator

Service Quality Dimensions	Criteria Weight	Indicator	Sub Criteria Weight	Total Weight	Priority Order
Reliability 1	0,04	Affordable paylater installments	1	0,04	5
Responsiveness 2	0,5	Speed of handling customer complaints	0,83	0,41	1
Responsiveness 3	0,5	Customer convenience when contacting Astra paylater customer service	0,17	0,08	4
Assurance 1	0,08	Service Advisors are knowledgeable and understand paylater payments	0,5	0,04	5
Assurance 2	0,08	Security of transactions using Astra paylater	0,5	0,04	5
Empathy 1	0,25	Service Advisor provides information about paylater to customers	0,83	0,21	2
Empathy 2	0,25	Service Advisor teaches interested customers how to use paylater	0,17	0,04	5

Service Quality Dimensions	Criteria Weight	Indicator	Sub Criteria Weight	Total Weight	Priority Order
Tangible 2	0,13	Smooth and stable internet network at Astra Isuzu	0,83	0,11	3
Tangible 3	0,13	Astra paylater features are concise, easy to understand and easy to operate	0,17	0,02	6

CONCLUSION

Based on the results of factor analysis, from 15 existing indicators extracted into 9 indicators which are grouped into 3 factors. Indicators that are in the same factor indicate similarities. Furthermore, the level of importance of the 3 factors formed is measured, which consists of these 9 indicators or sub criteria. Based on the results of the Analytical Hierarchy Process (AHP), it is found that for the design of paylater as a payment method at PT Astra Isuzu, the most important service quality dimensions according to customers are responsiveness with a weight of 50%, empathy with a weight value of 25% and tangible with a weight of 13%. Meanwhile, reliability and assurance dimensions are not very important to customers. Meanwhile, the order of the most important sub criteria for customers is as follows:

a. The speed of handling customer complaints with a total weight value of 41%.
b. Service Advisor provides information about paylater to customers which has a total weight of 21%.
c. Smooth and stable internet network at Astra Isuzu office with a total weight of 11%.
d. Based on these customer needs, the management of PT Astra Isuzu must then prepare resources, allocation of funds and the next strategic steps.
e. After knowing the main factors that influence customer interest in choosing paylater as a payment method in the aftersales service business, further research is needed that is more detailed quantitatively and metrics to support and explore more deeply about the 3 things that are prioritized by customers. This follow-up research should also involve Astra paylater, to anticipate the emergence of potential and technical problems during the implementation of this project.

The research we have conducted has several limitations, such us, the number of respondents in this study was 50 people due to the limited number of decision makers who came to the workshop to carry out vehicle maintenance and repair. Secondly, the process of focus group discussion (FGD) by the management of PT Astra Isuzu was conducted in a closed manner, so the author did not know the FGD process directly.

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