THE EFFECT OF PRODUCT QUALITY, SERVICE QUALITY AND PRICING ON CUSTOMER SATISFACTION AND LOYALTY CASE STUDY ON 4G LTE-ADVANCED SMARTFREN

Edy Rahmat J.[1], **Maya Ariyanti**[2]

School of Economics & Business, Telkom University,
INDONESIA.

[1]edyrahmatj02@gmail.com, [2]ariyanti@telkomuniversity.ac.id

ABSTRACT

The social development of the Indonesian people will lead to the information society. In the current modern era in the world of telecommunications, the public places telecommunications as a source of activity in carrying out its activities especially according to a survey conducted by APJJI revealing that the development of internet use in Indonesia from year to year is increasing. Therefore, the demand for telecommunications services both in terms of quantity and quality will increase.

PT Smartfren through Smartfren 4G LTE-Advanced products offers the first 4G LTE service in Indonesia. With the emergence of the first LTE service in Indonesia, and followed by the quality of products, services and prices offered are affordable so that they are acceptable to the public. These three components are the most calculated components in order to achieve the satisfaction of the community of internet users in Indonesia.

Through this research is to analyze the effect of product quality which consists of components: performance, features, conformance, reliability, durability, esthetica, perceived quality, serviceability and service quality consisting of: tangible, reliability, durability, assurance, empathy and product prices. The three things above want to be investigated because currently PT Smartfren has decreased the number of customers so that sales profits have decreased every month.

The method used to collect data is by distributing questionnaires, where the questionnaire contains closed questions and will be distributed to ± 400 customers in Makassar City to find out how much influence the three components above have on the sale of Smartfren 4G LTE-Advanced.

Keywords: Product Quality; Service; Price; Smartfren; LTE; 4G

INTRODUCTION

In today's modern era in the world of telecommunications, data packages are a basic necessity to support almost all fields of work. Seeing the development of EVDO technology or 3G Smartfren towards 4G LTE generation Smartfren to support the needs of consumers who are increasingly higher on stable data packages and fast connections in the form of images, video or what we call triple play. Along with the development of the times, also popping up application supporters to use these services resulting in the increasing need for internet use in Indonesia. Based on the results of a survey in collaboration with Teknopreneur conducted by the Association of Indonesian Internet Network Providers (APJII) revealed that more than half of Indonesia's population has now been connected to the internet. A survey conducted throughout 2017 found that 143.26 million Indonesians were connected to the internet and the total population of Indonesia alone was 262 million. This means an increase of 54.68%

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compared to 2016, which was 132.7 million internet users. Through survey results in 2016 showed an increase of 10.56 million people.

In this study the object taken is Smartfren, a 4G LTE Advanced mobile operator that allows customers to enjoy 4G LTE services more optimally with coverage of Frequency Division Duplex (FDD) capacity for feature downloads and Time Division Duplex (TDD) bandwidth capacity for features the upload provided compared to other operators is much bigger, making Smartfren 4G LTE Advanced service faster and more stable. Smartfren began to improve the network by applying the latest technology from the MIMO Massive antenna commercially which began in January 2018. This technology is claimed to be better than 2x2 MIMO or 4x4 MIMO. The improvement in network technology called 4G + is in line with Smartfren's plan to double the number of users this year, from 12 customers to over 20 million. Massive MIMO has many beams or paths that can be received by the device so that it can improve stability and connection on the handset with an average speed per user up to 40 Mbps. Antennas that use time division duplex (TDD) frequencies are used around tall buildings with a height of 30 floors. To get a stable connection the ideal distance can reach a 100-meter radius. Smartfren did not rule out the possibility to expand the scope of its technology as long as the area has a sufficient user base and urgent needs along with the increasing need for internet access speed every year. (Smartfren, 2018).

MATERIAL AND METHODS

Participants

Respondents in this study amounted to 400 people who have used Andromax Smartfren 4G LTE-Advanced products.

Instruments

The data collection tools are customer value and benefit questionnaire involving 5 questions, Product Quality involving 16 questions, Quality of Service or Services involving 10 questions, Price involving 4 questions, Customer Satisfaction involving 6 questions, and Customer Loyalty of customers involving 6 question.

Table 1. Operationalization of Variables

Variable	Dimension	Symbol	Indicator	Item Number	Scale
Product Quality	*Performance*	X1.1	Product responsiveness (receive)	1	Ordinal
		X1.2	Product durability	2	Ordinal
	Feature	X2.1	The level of attractiveness of the services provided	3	Ordinal
		X2.2	The level of ease of use	4	Ordinal
	Reliability	X3.1	Level of access speed	5	Ordinal
		X3.2	The level of reliability of service area coverage	6	Ordinal
	Durability	X4.1	Modem reliability level	7	Ordinal
		X4.2	The level of reliability of the battery in a long time	8	Ordinal
	Serviceability	X5.1	The level of ease in submitting improvements	9	Ordinal
		X5.2	The level of magnitude of the costs required for repairs	10	Ordinal

		X5.3	The period of time needed during the repair period	11	Ordinal
	Perceived Quality	X6.1	The level of suitability of the quality of the modem with the advertisements offered	12	Ordinal
		X6.2	The level of compatibility of the signal quality with the advertisements offered	13	Ordinal
	Aesthetics	X7.1	The level of product appearance	14	Ordinal
		X7.2	The level of popularity of the product is heard by the public	15	Ordinal
	Suitability	X8.1	The level of suitability of the product with its benefits	16	Ordinal
Service Quality (X2)	*Tangible*	X9.1	Smartfren 4G LTE outlets are easy to find	1	Ordinal
		X9.2	Neat-looking employees	2	Ordinal
	Reliability	X10.1	The product was delivered correctly	3	Ordinal
		X10.2	Employees are quick to respond to customer needs	4	Ordinal
	Responsiveness	X11.1	Vendors are quick to respond to customer complaints (complaints)	5	Ordinal
		X11.2	Employees who are always willing to help customers	6	Ordinal
	Guarantee and certainty	X12.1	Transactions made by customers are guaranteed safe	7	Ordinal
		X12.2	Employees will tell customers what services are needed and immediately done	8	Ordinal
	Empathize	X13.1	Employees understand customer needs	9	Ordinal
		X13.2	Employees can maintain good relations	10	Ordinal
Product Price (X3)	Price Level	X14.1	The level of suitability of product prices with the benefits provided	`1	Ordinal
		X14.2	The level of suitability of prices with purchasing power	2	Ordinal
		X14.3	The level of suitability of prices with product quality	3	Ordinal
		X14.4	The level of product price comparison with similar competitors	4	Ordinal
Customer Satisfaction (Y1)	Product Quality, Services and Prices	X15.1	Quality of products	1	Ordinal
		X15.2	Quality of Services / Services	2	Ordinal
		X15.3	Satisfaction with the price of the product offered	3	Ordinal
	Customer expectations	X16.1	The services provided to customers are as expected	4	Ordinal
		X16.2	Employee performance in	5	Ordinal

			handling services as expected		
		X16.3	Handling complaints that are responded quickly	6	Ordinal
Customer Loyality(Y2)	Repeat purchase	X17.1	Loyalty level by repurchasing Smartfren products (modem / voucher)	1	Ordinal
		X17.2	Keep buying Smartfren 4G LTE Advanced if you want to replace or add a product	2	Ordinal
	Recommendations to others	X18.1	Talk about the advantages of Smartfren 4G LTE Advanced to others	3	Ordinal
		X18.2	Recommend to others about Smartfren 4G LTE Advanced	4	Ordinal
	Commitment	X19.1	Keep using Smartfren 4G LTE Advanced without being affected by similar products	5	Ordinal
		X19.2	Making Smartfren 4G LTE Advanced the first choice among other similar operators	6	Ordinal

Source: (Danang, 2012) ,Sumber management Pemasaran

Data Analysis

The analytical method used in this research is using PLS-SEM with two evaluation steps:

a) Evaluation of measurement (outer model) to assess the validity and reliability of the model through the validity of convergent and discriminant

b) Evaluation of structural (inner model) that aim to predict the relationship between latent variables

RESULTS

The majority are 244 women or 61%. This shows that more than half of Smartfren 4G LTE Advanced customers are women. Furthermore, from an age background, the majority of respondents in this study were 21-25 years old or 48% totaled 190 people. This illustrates that the respondents in this study were in the productive age.

When viewed from the educational background of the respondents, the majority of 49% or as many as 194 people have an undergraduate education background (S1). Finally, the majority of respondents in this study were Smartfren 4G LTE Advanced customers who had used the product / service for less than one year. This can be seen from the table above of 286 respondents or 71% of the total 400 research respondents.

It is known that the quality of Smartfren 4G LTE Advanced products has a positive and significant effect on customer satisfaction of Smartfren 4G LTE Advanced, it will have an impact on customer loyalty of Smartfren 4G LTE Advanced (t value> 1.96) with a coefficient or direct effect of 0.28, while the indirect effect (indirect effect) is 0.11. This shows that the indirect effect of Smartfren 4G LTE Advanced product quality variables on customer loyalty through customer satisfaction is lower than the direct effect.

In addition, the most dominant indicator of product quality is the PD16 indicator (4G LTE Smartfren Network which is spread throughout southern Sulawesi, especially Makassar) with a weight of 0.85. This shows that the provider network plays an important role in influencing customer satisfaction. Meanwhile, the indicator that forms the largest customer satisfaction for Smartfren 4G LTE Advanced is the XP5 indicator (I am satisfied with the performance of Smartfren 4G LTE employees) with a loading factor of 0.82.

quality of service / service has a positive and significant effect on customer satisfaction Smartfren 4G LTE Advanced that affects customer loyalty Smartfren 4G LTE Advanced (t value> 1.96) with the coefficient value or the effect of direct service quality at 0.18 and the indirect effect on service quality to customer loyalty through Smartfren 4G LTE. Advanced customer satisfaction is 0.07. This shows that the indirect effect of service quality variables on Smartfren 4G LTE Advanced customer loyalty is lower than the direct effect.

The most dominant indicator of service quality variables is the JS8 indicator (Employees have knowledge and skills in accordance with their duties) with a magnitude of influence of 0.80.

Smartfren 4G LTE The price of the advanced product has a significant positive effect on customer loyalty with a coefficient of 0.16. Meanwhile, the effect of product prices on loyalty through customer satisfaction is 0.15. Thus, the indirect effect is lower than the direct effect of product prices on customer loyalty. Furthermore, the indicator that gives the greatest influence on product price variables is the HG3 indicator (Price of the Smartfren 4G LTE modem with its internet quota in accordance with perceived quality) with a loading factor value of 0.76.

Table 2. Standarized Loading Factor,Composite Realibility, and Variance Extracted

Latent Variable	Measurement Variable	SLF	Error	CR	VE	Remarks
Product Quality				0.96	0.59	Good Reliability
	PD1	0.85	0.42			Good Validity
	PD2	0.83	0.46			Good Validity
	PD3	0.66	0.39			Good Validity
	PD4	0.75	0.42			Good Validity
	PD5	0.86	0.39			Good Validity
	PD6	0.74	0.43			Good Validity
	PD7	0.78	0.55			Good Validity
	PD8	0.65	0.51			Good Validity
	PD9	0.78	0.38			Good Validity
	PD10	0.85	0.3			Good Validity
	PD11	0.7	0.31			Good Validity
	PD12	0.76	0.37			Good Validity
	PD13	0.78	0.49			Good Validity
	PD14	0.68	0.42			Good Validity
	PD15	0.77	0.42			Good Validity
	PD16	0.81	0.26			Good Validity
Kualitas Jasa				0.98	0.61	Good Reliability
	JS1	0.77	0.38			Good Validitity
	JS2	0.66	0.33			Good Validitity
	JS3	0.75	0.2			Good Validitity
	JS4	0.77	0.22			Good Validitity
	JS5	0.72	0.32			Good Validitity
	JS6	0.7	0.28			Good Validitity
	JS7	0.73	0.25			Good Validitity

	JS8	0.81	0.18			Good Validitity
	JS9	0.76	0.25			Good Validitity
	JS10	0.77	0.35			Good Validitity
Product Price				0.99	0.63	Good Reliability
	HG1	0.77	0.3			Good Validitity
	HG2	0.73	0.25			Good Validitity
	HG3	0.76	0.26			Good Validitity
	HG4	0.71	0.38			Good Validitity
Customer Satisfaction				0.99	0.63	Good Reliability
	XP1	0.85	0.31			Good Validitity
	XP2	0.85	0.29			Good Validitity
	XP3	0.73	0.29			Good Validitity
	XP4	0.82	0.22			Good Validitity
	XP5	0.87	0.15			Good Validitity
	XP6	0.82	0.19			Good Validitity
Customer Loyality				1	0.64	Good Reliability
	LY1	0.77	0.25			Good Validitity
	LY2	0.74	0.22			Good Validitity
	LY3	0.81	0.2			Good Validitity
	LY4	0.77	0.24			Good Validitity
	LY5	0.75	0.24			Good Validitity
	LY6	0.62	0.46			Good Validitity

Based on the validity and reliability test results above, it can be seen that all reliable indicators can be seen from the composite reliability (CR) value> 0.70 and from the five variance extracted value variables (VE)> 0.50. Furthermore, it can also be seen that all valid indicators can be seen from the value of Standardized Loading Factor (SLF)> 0.50.

all forming indicators have a standard loading factor (SLF) value above 0.50 or meet the validity test requirements. The construct reliability value of this model is also in accordance with the references from Mathotra (2005), the indicators used in this study can be accounted for if the results of the calculation of the reliability composite ≥ 0.70 can be used so that it can be used reliably or reliably.

Table 3. Intervening Variable

Free Variable	Dependent Variable	Directly	Intermediate Variable	Indirect
Product Quality	Customer Loyality	0,28	Customer Satisfaction	0,10
Service Quality	Customer Loyality	0,18	Customer Satisfaction	0,07
Product Price	Customer Loyality	0,16	Customer Satisfaction	0,15

By looking at the results above, it shows that for product quality, service quality, product prices have a lower indirect effect on customer loyalty compared to direct influence. This represents that Smartfren 4G LTE Advanced customer loyalty is more directly influenced by product quality, service quality, and product price variables.

These results support previous studies conducted by Zeithaml and Bitner quoted from (Kurriwati, 2015), stating that customer or customer satisfaction can be affected by product or service features where perceptions related to product quality play an important role in influencing satisfaction, or in words others product quality is the main predictor of customer satisfaction

Table 4. Goodness of Fit Model

No.	Goodness of fit	Match level requirements	Test Result	Match Level
1	RMSEA	RMSEA ≤ 0,08	0,098	***Marginal fit***
2	NFI	NFI ≥ 0,90	0,97	***Good fit***
3	TLI/NNFI	TLI ≥ 0,90	0,97	***Good fit***
4	CFI	CFI ≥ 0,90	0,97	***Good fit***
5	IFI	IFI ≥ 0,90	0.97	***Good fit***
6	RFI	RFI ≥ 0,90	0,97	***Good fit***
7	GFI	GFI ≥ 0,90	0,68	***Not Fit***
8	AGFI	AGFI ≥ 0,90	0,64	***Not Fit***

Of the eight measurements of the model's fit, five of them showed good results, but there was one marginal fit size that was quite good or close to the cut-off value, and there were 2 sizes of Not fit so that overall the model could be said to be good. According to (Wijanto, 2008) there is a match model in the structural equation model (SEM) and the assessment of the suitability of the model is assessed based on how many model sizes can be matched by the research model. The more matching target values from the Goodness of fit measure that are met by the model, the better the research model.

Table 5. Hypothesis Testing

Hypothesis	Structural Path	t-values	Remarks	Conclusion
H1	Product quality →Customer Satisfaction	4,04	Significant	Product Quality influences Smartfren 4G LTE Advanced customer satisfaction
H2	Product quality →Customer loyalty	3,79	Significant	Product quality affects the loyalty of Smartfren 4G LTE Advanced customers
H3	Service Quality → Customer Satisfaction	3,09	Significant	Quality of service / service affects customer satisfaction Smartfren 4G LTE Advanced
H4	Service Quality → Customer Loyalty	2,72	Significant	Quality of service / service affects the loyalty of Smartfren 4G LTE Advanced customers
H5	Product Prices → Customer Satisfaction	5,98	Significant	The price of Smartfren 4G LTE Advanced products affects the satisfaction of Smartfren 4G LTE Advanced customers
H6	Product Price → Customer Loyalty	1,98	Significant	The price of Smartfren 4G LTE Advanced products affects the loyalty of Smartfren 4G LTE Advanced customers
H7	Customer Satisfaction → Customer Loyalty	4,52	Significant	Smartfren 4G LTE Advanced customer satisfaction affects Smartfren 4G LTE Advanced customer loyalty

Of the seven hypotheses proposed, all of which have a significant influence, SEM is a measurement tool for research conducted to find pathways that can be implemented in real conditions. Based on the explanation above and from the SEM analysis results can be made a model as the core of SEM research. Therefore, there is a structure that can increase satisfaction, and customer loyalty Smartfren 4G LTE Advanced.

DISCUSSION AND CONCLUSION

Based on the results of the study concluded that of the three independent variables, all variables have a positive effect on customer satisfaction and customer loyalty Smartfren 4G LTE Advanced. Next is a discussion of the results of research on each hypothesis.

After comprehensive research related to the influence of product quality, service quality, product prices on customer satisfaction and loyalty of Smartfren 4G LTE Advanced, and testing of the seven research hypotheses submitted in the previous chapter, the following conclusions in this study are as follows:

1. There is a positive and significant influence on product quality on Smartfren 4G LTE Advanced customer satisfaction. This indicates that the network owned by Smartfren 4G LTE Advanced, ease of use, and speed when accessing the internet, as well as affordable prices play an important role and is proven to affect the satisfaction of Smartfren 4G LTE Advanced customers.
2. There is a positive and significant influence of Product Quality on Smartfren 4G LTE Advanced customer loyalty. This proves that the standard and quality of products offered by Smartfren 4G LTE Advanced have an impact on the level of loyalty or loyalty of customers in using Smartfren 4G LTE Advanced in the long run.
3. There is a positive and significant influence on the quality of service / service to Smartfren 4G LTE Advanced customer satisfaction. the increasing quality of services provided by Smartfren 4G LTE Advanced in this case is the improvement of service quality at Smartfren outlets, employee appearance and communication, and security in transacting at these outlets. Therefore proven to have an impact on increasing customer satisfaction, and vice versa.
4. There is a positive and significant influence on the quality of services / services on Smartfren 4G LTE Advanced customer loyalty. Thus, this shows that the more response or response of employees to customer complaints, service quality at the store, frontliner appearance, and a good relationship between employees and customers, then these things have an impact on increasing customer loyalty, and vice versa.
5. There is a positive and significant influence on product prices on Smartfren 4G LTE Advanced customer satisfaction. When the price of a Smartfren modem with the internet package offered is in accordance with the perceived benefits, in accordance with the purchasing power of the community, and the price is competitive, then this has an impact on increasing customer satisfaction in using Smartfren 4G LTE Advanced.
6. There is a positive and significant influence on product prices on Smartfren 4G LTE Advanced customer loyalty. In addition, the price of the Smartfren modem offered is in accordance with the benefits felt by the customer and in accordance with the purchasing power of the people, as well as the competitive price, so this has a positive impact on increasing customer loyalty in using Smartfren 4G LTE Advanced and vice versa.
7. There is a positive and significant influence of customer satisfaction on customer loyalty Smartfren 4G LTE Advanced. This indicates that when Smartfren 4G LTE Advanced customers are satisfied with the quality of products received, good service, prices that are in line with quality, and performance, as well as satisfactory after service, these things have a positive effect on increasing customer loyalty of Smartfren 4G LTE Advanced where they will recommend Smartfren 4G LTE Advanced to the surrounding environment, and will make a repeat purchase of this product.
8. With the supporting factors that are in accordance with the quality and performance, as well as satisfactory after service, these things have a positive effect on increasing customer loyalty Smartfren 4G LTE Advanced where they will recommend Smartfren 4G LTE Advanced to the surrounding environment, and will make purchases reset this product.

9. Overall, the influence of Customer Satisfaction, Service Quality and Price has a positive and significant effect on customer satisfaction and loyalty. The results of this study are also supported by previous studies that have the same variables with different objectives by (Dhani, 2018) which states that there is a positive and significant influence on Product Quality, Service Quality, and Product Prices on Customer Satisfaction and Loyalty of Bolt Super 4G Customers.

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