The Effect Of Service Quality and Price On Customer Satisfaction and Loyalty in Telkomsel Cellular Operator Services

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Abstract

The rapid development of cellular technology is directly proportional to internet penetration which continues to grow yearly. This certainly results in the emergence of intense competition between cellular operator companies in Indonesia. The fierce competition between operators at this time forces all telecommunications companies to wage a price war to secure loyal customers and increase market share in the future. Telkomsel is the telecommunications company with the largest number of subscribers in Indonesia. Still, Telkomsel is also a cellular operator that ranks first as the cellular operator with the most customer complaints, according to a survey by the Indonesian consumer institute foundation in 2021. Based on this phenomenon, this study aims to analyze "The Influence of Service Quality and Price on Customer Satisfaction and Loyalty in Telkomsel Cellular Operator Services." The aspects of service quality studied are reliability, assurance, tangible, empathy, responsiveness, network aspects, and convenience. The method used in this study is a quantitative method with data collection techniques distributing questionnaires. The sampling technique used is non-probability sampling with a purposive sampling method. The sample to be studied is 400 respondents who use Telkomsel cellular operator services throughout Indonesia.

The study's results indicate a positive and significant influence of service quality (reliability, assurance, tangible, empathy, responsiveness, network aspects, convenience) and price on customer satisfaction (customer satisfaction). There is a positive and significant influence of customer satisfaction on customer loyalty and a positive and significant effect of service quality and price on customer loyalty through customer satisfaction.

Keywords
Service Quality, Price, Customer Satisfaction, Customer Loyalty

1. Introduction
In Indonesia, the growth of the cellular telecommunication business continues to progress every year in line with the increasing population and number of people using cellular phones in recent years. Seeing this, the players in the telecommunications industry continue to improve their competence in providing various conveniences and cheap services to customers so that later they can attract customers from competitors and make previous customers more loyal. However, not all services provided by every cellular operator can meet the needs and desires of customers. According to research conducted by Open Signal, it is revealed that Indonesians easily switch to services belonging to other cellular operators when they feel dissatisfied with the services provided because a contract does not bind them by the cellular operator company.

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Telkomsel is the operator with the largest number of subscribers and the operator with the largest revenue in Indonesia. However, from 2017 to 2021, there has been a significant decline in the customer base, almost reaching 16.10% with a churn rate of around 4%. This was also one of the many factors that caused the company's profit to shrink by -17.54% in the same year. Telkomsel is also listed as a cellular operator with the highest number of complaints in 2021 at 21% of the total complaints, the highest if we compare it to similar telecommunication operator companies. So the ability to retain customers and strengthen loyalty seems very important to gain a competitive advantage (Abu-Alhaija et al., 2018). Aryani and Rosinta (2010) also said that customers would be faced with more choices of varying prices, products, and quality due to increased competition, thus encouraging customers to continue to look for products that offer the best value among the available choices. Seeing this makes the company must always maintain the quality of service to create customer satisfaction, so that product shifts do not occur.

Some previous studies have shown how customer satisfaction and loyalty are positively influenced by service quality and price. Customer satisfaction has a positive and significant impact on customer loyalty, and customer satisfaction has a positive and significant effect on service quality (reliability, assurance, tangible, empathy, responsiveness, network aspect, and convenience) (Antomy 2021). According to Yugi (2019), there is also a partial effect of service quality and price on customer satisfaction. Of course, based on these problems, with this research, it is hoped that the company can see service quality and price as a measure of customer satisfaction and loyalty in the future. So that later the company can determine the right strategy for the future work program.

1.1 Objectives
This research aims to:
1. To determine the level of respondents' assessment of Service Quality variables (reliability, assurance, tangible, empathy, responsiveness, network aspect, convenience) and Price of Telkomsel's cellular operator services, which will be broken down in a continuum line.
2. To determine the level of respondents' evaluation of Telkomsel's customer satisfaction and customer loyalty to Telkomsel's cellular operator services, which will be described in a continuum line.
3. To determine the influence of Service Quality (reliability, assurance, tangible, empathy, responsiveness, network aspects, convenience) and Price on customer satisfaction at Telkomsel cellular operator services.
4. To determine customer satisfaction's influence on customer loyalty in Telkomsel cellular operator services.
5. To determine the influence of Service Quality (reliability, assurance, tangible, empathy, responsiveness, network aspects, convenience) and Price on customer loyalty to Telkomsel cellular operator services.

2. Literature Review
Marketing
Every activity that exists in a company can not be separated from marketing activities. Marketing is one of the most important tasks that any business, whether providing goods or services, must complete to keep its operations running smoothly. So that one of a company's successes cannot be separated from management's ability to manage its marketing activities properly. Marketing is a design and process of creating, delivering, communicating, and exchanging offerings that have value for consumers and society in general.

Service Quality
Service quality has become a priority and one of the mandatory keys that must be considered by both manufacturers and service providers in today's customer-centric era. In other words, a company can be said to be good when it can provide services per customer wishes. So that later it will influence in encouraging customer loyalty and profitability for the company. Rusydi (2017: 39) states that service quality is the ability of a company to provide the best service compared to its competitors.

Service Quality Dimensions
- Tangibles are the ability of a company to demonstrate its existence and presence to external parties. The tangibles dimension includes physical appearance such as buildings, warehouses, front-office rooms, parking lots, etc.
- Reliability is the company's ability to provide services according to what was promised and presented accurately and reliably at the outset.
- Responsiveness is the company's ability to be fast, precise, and responsive in providing services so as not to become a negative perception of service quality.

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- Assurance is a company guarantee so that customers get good service from the company, such as knowledge, courtesy, and the ability to foster consumer trust in the company.
- Empathy is the company's ability to understand and understand the wants and needs of consumers and attract customers to use the services that have been provided.
- Network aspect refers to network performance indicators in terms of voice quality, call drop rate, network coverage, and network congestion so that it can improve the quality of cellular service perceived by subscribers.
- Convenience, according to Rahhal (2015), convenience is provided to customers by saving time and effort from customers when making transactions.
- Price is a benchmark used as one of the considerations for consumers to buy or use a product or service.

Customer satisfaction

Consumer satisfaction is one of the keys to building a business. Because if consumers are satisfied with the product provided, then a feeling of satisfaction will arise, so repeated use will be created. Of course, this will increase sales or income from the company's business. According to Bob Sabran (2012: 177), customer satisfaction is a feeling of disappointment or pleasure that arises after comparing the expected results or performance.

Customer loyalty

Customer loyalty is formed through a series of long processes, not in a short time. Loyalty is created because customers get a pleasant experience using our products and services. This situation is certainly very profitable for the company because consumers who are loyal to a product or service will make purchases regularly and repeatedly. According to Robby (2017), customer loyalty is a consumer who is said to be loyal if the consumer exhibits frequent buying behavior or is required to buy at least twice within a certain time interval.

3.Methods

The research method used in this study is the quantitative method, which is widely used in various studies to test a model or hypothesis. The measurement scale used to measure operational variables is using a Likert scale. The Likert scale determines how strongly respondents agree and disagree with statements based on a five-choice scale (Chew in Indrawati 2015: 131). For data analysis in this study, use PLS-SEM because the Smart PLS application can be used to analyze a theory that is still said to be weak. So it is suitable for developing approaches early or designing new models. The theoretical framework used as a reference in this study is a combination of the frameworks of Rahhal (2015) and Shen and Yahya (2021), with detailed frameworks as follows:
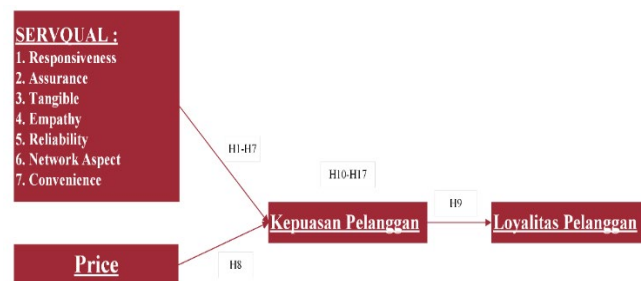

Figure 1. Thinking Framework
Source: (Rahhal 2015); (Shen and Yahya 2021)

Based on this framework, the hypotheses that will be proposed and the truth will be analyzed are as follows:
H1-H8: There is a positive and significant effect of reliability, assurance, responsiveness, tangible, empathy, network aspects, convenience, and price on Telkomsel's customer satisfaction.
H9: Customer satisfaction has a positive and significant effect on Telkomsel's customer loyalty.
H10-H17: There is a positive and significant effect of reliability, assurance, responsiveness, tangible, empathy, network aspects, convenience, and price on customer loyalty through customer satisfaction variables

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4. Data Collection

The research was conducted on Telkomsel users in all regions of Indonesia. The data sources used in this study used two types of data sources: primary data in the form of company internal data and secondary data in the form of literature or academic texts, articles, and so on. Indrawati (2015: 164) states that the population is the entire group of people, events, and objects that attract researchers to study. The population in this study are people who are Telkomsel users in all parts of Indonesia. The sampling technique used is non-probability sampling using the purposive sampling technique. In this study, the total population of Telkomsel users in all regions of Indonesia is 169.7 million subscribers. So to meet the minimum number of samples required in this study, researchers used the Cochran formula. Based on the results of calculations using the Cochran formula, the minimum number of samples needed in this study is 385 samples.

In this study, there were 472 respondents, of which 400 met the research criteria because users had purchased Telkomsel products, either packages or pulses, two times or more, users had visited the Grapari Telkomsel office, and the remaining 72 respondents did not meet the criteria during the screening question.

5. Results and Discussion

5.1 Descriptive Analysis

Based on the results of the study distributing questionnaires, 400 Telkomsel user respondents met the criteria, where there were 308 male respondents and 92 female respondents. Among the distribution of respondents, the most age group was in the range of 20-60 years, namely as many as 383 people or 95.75%, and as many as 46% of the respondents who filled out had a high school education. Furthermore, in terms of work, the majority of respondents who filled in came from the private sector/self-employed, as many as 245 people or as much as 61.25%. Regarding monthly expenses, most of the respondents came from the middle group, who had a high level of loyalty because almost 97% of respondents subscribed to Telkomsel products over one year.

Based on the results of descriptive analysis calculations among all variables, the assurance variable has the highest average value of 83.68%, followed by the customer satisfaction variable at 83.08%, the convenience variable at 83.07%, the network aspect variable at 83.01%, the customer loyalty variable is 82.73%, the tangible variable is 82.13%, the responsiveness variable is 82.01%, the empathy variable is 81.25%, the reliability variable is 81.40%, and finally the price variable is 74, 66%.

5.2 Analysis Model

Outer Model

Convergent Validity

The first validity test is convergent validity testing; according to Ghozali (2014: 74), an indicator can be said to have high validity if it has a loading factor value greater than 0.7. From Figure 2, it can be seen that the results of the study show that all the variable indicators of Service Quality, Price, Customer Satisfaction, and Customer Loyalty used in this study have a factor loading value above 0.7, so it can be concluded that the factor loading value for each indicator is valid. Furthermore, in table 1, it can be seen that the AVE value for all research variables is worth above 0.5, so the AVE value fulfills the requirements to continue in the next test.
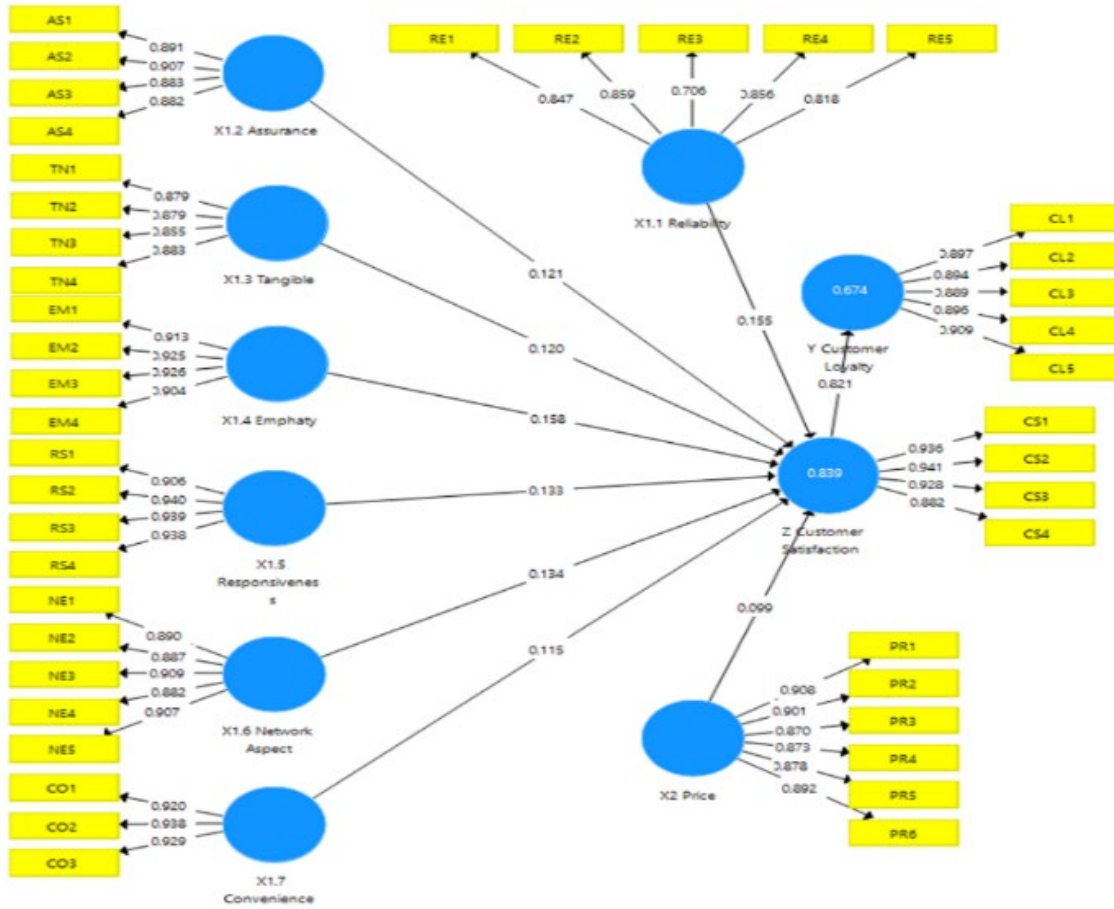
Figure 2. Interconstruct Value of the Research Model

Table 1. Average Variance Extraction Value

Variabel	Value AVE
X1.1 Responsiveness	0,671
X1.2 Assurance	0,794
X1.3 Tangible	0,764
X1.4 Emphaty	0,841
X1.5 Reliability	0,866
X1.6 Network Aspect	0,801
X1.7 Convenience	0,863
X2 Price	0,787
Z Customer Satisfaction	0,850
Y Customer Loyalty	0,804

Discriminant Validity

The second stage of validity testing is discriminant validity testing. Where by looking at the Fornell-Larcker value.

Table 2 Fornell-Larcker Criterion Research Model

	X1.1 Reliability	X1.2 Assurance	X1.3 Tangible	X1.4 Emphaty	X1.5 Responsiveness	X1.6 Network Aspect	X1.7 Convenience	X2 Price	Y Customer Loyalty	Z Customer Satisfaction
X1.1 Reliability	0,819									
X1.2 Assurance	0,754	0,891								
X1.3 Tangible	0,743	0,726	0,874							
X1.4 Emphaty	0,771	0,771	0,826	0,917						
X1.5 Responsiveness	0,753	0,762	0,777	0,842	0,931					
X1.6 Network Aspect	0,790	0,721	0,766	0,771	0,753	0,895				
X1.7 Convenience	0,740	0,734	0,792	0,814	0,787	0,834	0,929			
X2 Price	0,673	0,612	0,650	0,656	0,682	0,684	0,677	0,887		
Y Customer Loyalty	0,740	0,691	0,748	0,758	0,730	0,758	0,811	0,634	0,897	
Z Customer Satisfaction	0,815	0,790	0,815	0,844	0,827	0,821	0,826	0,719	0,821	0,922

In table 2 above, it can be seen that the correlation value of the items measuring the association construct is higher than the other constructs, so it can be said that the model has good discriminant validity.

Reliability

Table 3. Composite reliability and cronbach's alpha values

Variabel	Composite Reliability	Condition	Cronbach's Alpha	Condition	Remark
X1.1 Responsiveness	0,910	> 0,7	0,877	> 0,6	Reliabel
X1.2 Assurance	0,939	> 0,7	0,913	> 0,6	Reliabel
X1.3 Tangible	0,928	> 0,7	0,897	> 0,6	Reliabel
X1.4 Emphaty	0,955	> 0,7	0,937	> 0,6	Reliabel
X1.5 Reliability	0,963	> 0,7	0,949	> 0,6	Reliabel
X1.6 Network Aspect	0,953	> 0,7	0,938	> 0,6	Reliabel
X1.7 Convenience	0,950	> 0,7	0,920	> 0,6	Reliabel
X2 Price	0,957	> 0,7	0,946	> 0,6	Reliabel
Z Customer Satisfaction	0,958	> 0,7	0,941	> 0,6	Reliabel
Y Customer Loyalty	0,954	> 0,7	0,939	> 0,6	Reliabel

Table 3 above shows that each variable has a composite reliability value above 0.7 and a Cronbach's alpha value above 0.6. So from these results, it can be concluded that the research model meets the reliability criteria and is a reliable and reliable measuring tool.

Inner Model
R-Square (R²)

Table 4. Value of R Square (R^2)

	R Square	R Square Adjusted
Y Customer Loyalty	0,674	0,673
Z Customer Satisfaction	0,839	0,836

In Table 4, it can be seen that the R-square value for the Customer Satisfaction (Z) variable is 0.836. This indicates that 83.6% of the Customer Satisfaction (Z) variable can be influenced by the Service Quality variables (Reliability, Assurance, Tangible, Empathy, Responsiveness, Network Aspect, and Convenience), Price, while other variables outside those studied influence the remaining 16.4%. While the R-square value for the variable Customer Loyalty (Y) is equal to 0.674, this indicates that 67.4% of the variable Customer Loyalty (Y) can be influenced by the variable Customer Satisfaction (Z). The remaining 32.6% is controlled by variables other than those studied. So it can be concluded that the R^2 value in this study is included in the strong classification.

5.3 Hypothesis Testing

Table 5. Path coefficient values, t Statistics, and p-values

Hypothesis	Relations Between Constructs	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Direct Effect						
H1	X1.1 Reliability -> Z Customer Satisfaction	0,155	0,153	0,043	3,572	0,000
H2	X1.2 Assurance -> Z Customer Satisfaction	0,121	0,124	0,044	2,754	0,006
H3	X1.3 Tangible -> Z Customer Satisfaction	0,120	0,122	0,049	2,426	0,015
H4	X1.4 Emphaty -> Z Customer Satisfaction	0,158	0,154	0,060	2,651	0,008
H5	X1.5 Responsiveness -> Z Customer Satisfaction	0,133	0,132	0,050	2,673	0,008
H6	X1.6 Network Aspect -> Z Customer Satisfaction	0,134	0,134	0,057	2,330	0,020
H7	X1.7 Convenience -> Z Customer Satisfaction	0,115	0,116	0,056	2,051	0,040
H8	X2 Price -> Z Customer Satisfaction	0,099	0,099	0,035	2,798	0,005
H9	Z Customer Satisfaction -> Y Customer Loyalty	0,821	0,821	0,030	26,954	0,000
Indirect Effect						
H10	X1.1 Reliability -> Z Customer Satisfaction -> Y Customer Loyalty	0,127	0,126	0,036	3,499	0,000
H11	X1.2 Assurance -> Z Customer Satisfaction -> Y Customer Loyalty	0,100	0,101	0,036	2,768	0,006
H12	X1.3 Tangible -> Z Customer Satisfaction -> Y Customer Loyalty	0,098	0,101	0,041	2,391	0,017
H13	X1.4 Emphaty -> Z Customer Satisfaction -> Y Customer Loyalty	0,130	0,126	0,049	2,656	0,008
H14	X1.5 Responsiveness -> Z Customer Satisfaction -> Y Customer Loyalty	0,109	0,108	0,041	2,658	0,008
H15	X1.6 Network Aspect -> Z Customer Satisfaction -> Y Customer Loyalty	0,110	0,110	0,047	2,327	0,020
H16	X1.7 Convenience -> Z Customer Satisfaction -> Y Customer Loyalty	0,095	0,095	0,047	2,031	0,042
H17	X2 Price -> Z Customer Satisfaction -> Y Customer Loyalty	0,081	0,081	0,029	2,811	0,005

The effect of reliability, assurance, tangible, empathy, responsiveness, network aspects, convenience, and price on customer satisfaction

Based on table 5, it can be seen that the P-Values of H1-H8 are <0.05, and the T Statistics values of H1-H8 are > 1,65. So it can be concluded that the H1-H8 hypothesis test is accepted.

The results of this study follow the results of previous research by Negi (2009), which stated that modified SERVQUAL by adding network aspect and convenience variables could be used to determine the level of customer satisfaction in Ethiopian mobile communications. The research results of Arokiasamy and Abdullah (2013) also show that all service quality dimensions (tangibility, reliability, responsiveness, assurance, and empathy) in Malaysia have a positive effect on customer satisfaction, and David (2019) also shows that price has the most significant positive impact on customer satisfaction, among other variables. Of course, this indicates that the better the value of reliability, assurance, tangible, empathy, responsiveness, network aspect, convenience, and price, it will have an impact on increasing customer satisfaction.

Reliability is the company's ability to provide services following what is promised and can be relied on. Seeing this, Telkomsel must be committed to always providing comfortable network services throughout the country so that later customers will think that Telkomsel is reliable in dealing with telecommunications networks. Assurance is a company guarantee that customers get good service from the company, such as knowledge, courtesy and the ability to foster consumer trust in the company. To win consumer trust, companies must make customers feel safe and comfortable when making transactions. Telkomsel must also strive to provide friendly and swift service in responding to customer complaints. In this regard, of course, it is better if every employee is given training on how to serve consumers well, and provide training on product knowledge, so that later employees who often have direct contact with customers can answer and provide solutions quickly whenever the customer is facing a problem. Tangible describes the physical facilities, equipment, building and appearance of employees. Seeing this, Telkomsel must always pay attention to the

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company's physical facilities, lest customers cannot enjoy the latest services, monotonous product materials, and unattractive website appearance, which will affect customer satisfaction in using Telkomsel products.

Empathy describes the care and concern that a company gives to its customers. Seeing this, it is appropriate that Telkomsel, in carrying out a network development plan, always prioritizes customers' interests in making decisions. Do not let the products that come out later not fully understand the needs of customers in the field. Responsiveness describes the company's ability to be fast, precise and responsive in providing services. Seeing this, employees must have a high sense of belonging to what customers feel so that employees can help customers regarding problems they are facing and respond to existing complaints and complaints. For example, if there is a weak signal complaint in an area, the company and employees must be alert and responsive in handling the complaint. Don't let customers be given uncertainty regarding the problem being faced. The network aspect describes network performance indicators that affect the increase in the quality of cellular services felt by subscribers. Seeing this, Telkomsel must always pay attention to the availability of a cellular network that covers each area, the ease of customers accessing services, the network speed when accessing the internet, and maintaining the network to minimize disruptions. Convenience describes the ease of service to reduce the time, and effort consumers spend obtaining the goods and services they want. Seeing this, Telkomsel has a call center, website, and others that customers can use to clarify if there are problems with existing services. Telkomsel also has Grapari operating hours that are comfortable for all its customers because it opens its work operations from Monday to Saturday. Kotler and Armstrong (2012: 52) explained that four indicators characterize a price, namely price affordability, price compatibility with product quality, price compatibility with benefits, and price according to ability or price competitiveness. So Telkomsel, in determining the cost for each region, must pay attention to these four indicators.

The effect of customer satisfaction on customer loyalty

Table 5 shows that the P-Values value of H9 is <0.05, and the T Statistics value of H9 is > 1.65. So it can be concluded that the hypothesis test H9 is accepted. Customer satisfaction has a positive and significant effect on customer loyalty at Telkomsel. The results of this study follow previous research, according to David (2019), indicating that of the three variables studied, namely service quality, price, and customer satisfaction, customer satisfaction is the most influential on customer loyalty. Customer satisfaction describes a consumer's pleasure or disappointment after comparing what he received with what he expected. Seeing this, Telkomsel must focus on making customers feel comfortable and happy using their purchased products. So that later, of course, it will affect by itself the customer's repeated purchases.

Effect of reliability, assurance, tangible, empathy, responsiveness, network aspect, convenience, and price on Customer Loyalty through Customer Satisfaction variables

Based on table 5, it can be seen that the P-Values of H10-H17 are <0.05, and the T Statistics values of H10-H17 are > 1.65. So it can be concluded that there is a positive and significant effect of reliability, assurance, tangible, empathy, responsiveness, network aspects, convenience, and price on customer loyalty to Telkomsel customers through customer satisfaction variables. The better service the company provides will impact customer satisfaction and will affect customer loyalty. Vice versa, if customers feel insecure and comfortable when transacting using company products, it will impact customer satisfaction and loyalty.

The results of this study follow the results of previous research, according to Hani (2016), showing that the effect of service quality on customer loyalty can be intervened or mediated with the customer satisfaction variable and research results according to Shen and Yahya (2021) show that customer satisfaction mediates the effect of price on customer loyalty.

6. Conclusion

Based on the results of research, test results, and analysis that has been done before, it can be explained some research conclusions about the effect of service quality on customer satisfaction and customer loyalty with the following description:
1. There is a positive and significant influence of variable service quality (reliability, assurance, tangible, empathy, responsiveness, network aspect, convenience) and price on customer satisfaction with Telkomsel cellular operator services.
2. There is a positive and significant influence on customer satisfaction with Telkomsel cellular operator services on customer loyalty with a t statistics value of 26.954 and a path coefficient value of 0.821.

3. There is a positive and significant influence of variable service quality (reliability, assurance, tangible, empathy, responsiveness, network aspect, convenience) and price on customer loyalty through customer satisfaction at Telkomsel cellular operator services.

Suggestion
There are several limitations in this study, so the researcher suggests some things that can be used as a future reference by the next researcher:

1. In future studies, it is hoped that they can conduct research by adding other service quality indicators and modification variables that have not been included in this research model, such as Wen and Hilmi's (2011) value-added services variable and Rahhal (2015) complaint handling variable.
2. Adding other variables to be studied related to telecommunications company objects, focusing on service quality and price and adding product quality variables, Yugi (2019).

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Biography

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Indira Rachmawati is an Associate Professor of Marketing and Consumer Studies. She has been a permanent lecturer at Telkom University for fourteen years. In 2003, she obtained a Bachelor of Engineering - BE, Environmental Health Engineering Bachelor of Engineering - from the Bandung Institute of Technology. In 2008, she continued his postgraduate education at the same campus and earned a Master of Science in Management. Furthermore, in 2019 she obtained a Doctor of Philosophy (PhD) degree after studying at the University of Science Malaysia. Her research focuses on services marketing, consumer behaviour, branding, ICT-based marketing, strategic marketing and growth in the digital era, model evaluation and development for digital marketing, and application models for digital marketing. He has produced several papers and publications based on his studies, one of which was published in a technology management journal under Customer's Loyalty of Indonesia Cellular Operators in the 2020 edition of The Pandemic of COVID-19.