

## **THE EFFECT OF DISCOUNT PRICES AND COMPETITIVENESS OF MOBILE INTERNET SERVICES IN IMPROVING CUSTOMER LOYALTY THROUGH THE SERVICES QUALITY OF TELECOMMUNICATION PROVIDER AS MODERATION VARIABLES IN THE COMMUNITIES IN MEDAN CITY**

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### **ABSTRACT**

*Telecommunication providers are internet service providers. The purpose of the research was carried out to increase the growth and even distribution of telecommunication network infrastructure development which could further reach and improve access to information for the Indonesian people more broadly. This research method uses a quantitative approach, a type of quantitative descriptive research with the nature of research that is explanatory. The population in this study were people in the city of Medan who came from the District of Medan - Petisah. Sampling used in this study using the Slovin formula so that the number of samples used in this study was 100 people. Sampling uses a non-probability sampling approach. The type of sampling chosen is accidental sampling with a type of qualified volunteer sample. Research data analysis method is descriptive statistical analysis and multiple regression analysis. The results obtained in this study are that discount prices, service competitiveness and service quality as a moderating variable simultaneously have a positive and significant effect in increasing customer loyalty in the community in Medan City but on service competitiveness variables have a negative value and no significant effect in improving customer loyalty. Moderation variables are proven to be able to influence discount prices, service competitiveness in increasing customer loyalty in the community in the city of Medan, with a coefficient of determination of 15%*

*Keyword : Customer Loyalty, Discount Prices, Service Competitiveness, Service Quality,*

### **ABSTRAK**

Penyedia telekomunikasi adalah penyedia layanan internet. Penelitian ini dilakukan untuk meningkatkan pertumbuhan dan pemerataan pembangunan infrastruktur jaringan telekomunikasi yang selanjutnya dapat menjangkau dan meningkatkan akses informasi bagi masyarakat Indonesia secara lebih luas. Metode penelitian ini menggunakan pendekatan kuantitatif, jenis penelitian deskriptif kuantitatif dengan sifat penelitian yaitu explanatory. Penduduk di Kota Medan yang berasal dari Kecamatan Medan - Petisah. Pengambilan sampel digunakan dalam penelitian ini menggunakan rumus Slovin. Pengambilan sampel menggunakan pendekatan sampling non-probabilitas. Jenis sampling yang dipilih adalah accidental sampling dengan tipe sampel relawan yang memenuhi syarat. Metode analisis data penelitian adalah analisis statistik deskriptif dan analisis regresi berganda. Hasil yang diperoleh dalam penelitian ini adalah harga diskon, daya saing layanan dan kualitas layanan sebagai variabel moderasi secara simultan memiliki pengaruh positif dan signifikan dalam meningkatkan loyalitas pelanggan di masyarakat di Medan. Kota pada variabel daya saing layanan memiliki nilai negatif dan tidak berpengaruh signifikan dalam meningkatkan loyalitas pelanggan. Variabel moderasi terbukti mampu mempengaruhi harga diskon, daya saing layanan dalam meningkatkan loyalitas pelanggan di masyarakat di kota Medan, dengan koefisien determinasi sebesar 15%

*Kata Kunci: Loyalitas Pelanggan, Harga Diskon, Daya Saing Layanan, Kualitas Layanan,*

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## **INTRODUCTION**

### **1.1 Background Problem**

Information technology and communication are inseparable from people's lives and become one of the important needs to support activities, including communication without limitation of distance and time, getting up to date information, supporting business activities, and etc. One of them is by using internet services, the advancement of internet technology is changing the way people view the environment around and in the world in the era of globalization. On the one side, the era of globalization is expanding the product market, on the other side this situation has led to increasingly sharp competition, with the advancement of increasingly sophisticated information and communication technology. The number of Internet users in Indonesia in 2016 was 132.7 million users or around 51.5% of the total Indonesian population of 256.2 million. The most internet users are in Java island with a total user of 86,339,350 users or around 65% of the total Internet users and in Sumatra with a total user of 20,752,185 users or around 15.7%. Compared to Indonesian Internet users in 2014 of 88.1 million users, there was an increase of 44.6 million within 2 years (2014-2016) and eMarketer also predicted that the amount of this growth would continue to increase rapidly until 2018. This shows that at present the internet is one of the needs that cannot be separated from the lives of people in Indonesia.

Consumer needs to access data with an easy and flexible device has become a reality that the telecommunications industry cannot reject. The rapid development of telecommunications technology in Indonesia makes mobile internet an important need for various segments of society, where the need for mobile internet is driven by trends and

lifestyle of the Indonesian people themselves. According to data from the Opera Mediaworks and Mobile Marketing Association (MMA) in 2015 stated that Indonesia was one of the Asia Pacific countries which showed significant growth in the use of mobile internet devices to reach 93.16%. This is in line with the predictions of the International Data Corporation (IDC) market research institute which states that starting in 2016 China, India and Indonesia will lead the growth of mobile internet for the next five years.

Seeing the opportunity of the large number of internet users in Indonesia, especially the need for mobile internet, many companies provide mobile internet services or referred to as ISP Mobile (Internet Service Provider Mobile). Some of these companies include Smartfren, Telkomsel Flash, XL Broadband, Indosat M2, Tri '3', and Bolt. This phenomenon explains the intense competition between internet data service provider companies or ISP Mobile so that the company is aware of a need to maximize company assets for the survival of the company, especially for companies that provide internet data services or Internet Service Providers. The development of internet data service providers or ISP Mobile in Indonesia is currently growing rapidly. In addition, the level of competition in various products based on the progress of telecommunications, especially mobile internet data service providers, or called ISP Mobile, has caused some interesting phenomena. One of them is the emergence of the development of CDMA data services that continue to grow and increase service speed and freedom in choosing data service packages. To encourage the creation of a healthy industry, the Government has issued several regulations, one of which is the policy of

interconnection rates that are cost-based as stated in Government Regulation No. 52 of 2000 concerning the operation of telecommunications and the rules under it. The Government has also established Ministerial Regulation (PM) No.8 of 2006 concerning interconnection and Ministerial Regulation No. 9 of 2008 concerning Procedures for Determining the Tariff of Telecommunications Services channeled through the Cellular Mobile Network and Ministerial Regulation No. 15 of 2008 concerning Procedures for Determining the Tariff of Telecommunication Services channeled through the Fixed Network. From the point of view of the climate of competition between telecommunications providers, there is still a need to improve advanced policies / regulations so that the target of healthy competition between telecommunications providers can be achieved. This is considered necessary considering the concentration of market share in some telecommunications providers, the existence of areas where the community does not have alternative choices of telecommunications service providers, even some have not received telecommunication services at all, the marketing activities carried out by many telecommunications providers are still focused only - eyes on ways to attract other telecommunications provider customers through a tariff war scheme; not through expanding the scope of services and improving product quality, most telecommunication providers are still focused on providing services in big cities / urban / profit, the implementation of levy rates in the community is a significant difference between on-net and offnet rates, there are still providers telecommunication which is not developing at all but trying to survive.

For that, the government has improved tariff and interconnection regulations, especially in improving the method of calculating interconnection rates and levied tariff regulations to telecommunications providers with the aim

that policies and regulations as an instrument for accelerating telecommunications services to overcome gaps (fill in the gap), open blockages (debottlenecking), so that the acceleration and equity of national telecommunications services can be realized, policies and regulations to ensure that telecommunications services can be accessed and utilized by all levels of society, without discrimination, with rational prices and improvement of service quality, policies and regulations are set to create a conducive business climate, one of the means to provide incentives for telecommunications providers that contribute significantly to the growth and development of infrastructure and telecommunications services, prevent the occurrence of monopolistic behavior, improve reduce barrier to entry, ensure effective and efficient use of resources and infrastructure and ensure that there is no limited resource concentration, tariff and interconnection policies are one of the main drivers whose role is very large in improving the climate of competition and market growth, after allocation of spectrum resources frequency, encourage and maintain a healthy competition climate and maintain sustainable industrial growth and facilitate the fulfillment of the Indonesian Broadband Plan.

Medan is the third largest city in Indonesia after Jakarta and Surabaya, as well as the largest city outside Java. The development of trends and lifestyle of the Medan city community in the use of mobile internet to date reaches up to 3.5 million people with the criteria of internet users based on work, age, gender, type of device used both mobile and computer and other social media usage. This is what underlies the community in the city of Medan using a telecommunications provider that is able to provide discounted prices at the time of purchase of internet data service quota, namely purchases can be made through services available to each telecommunications provider or direct

purchase, as well as alternative price options at the time of purchase. In addition to discount prices, service quality will also have an impact on customer loyalty and whether customers remain loyal using the product from the telecommunications provider or not.

The large number of Internet Service Providers in Indonesia does not affect the quality provided because there are still many complaints from telecommunication provider customers, including inconsistencies: discrepancies between the promotional rates offered by the operator with reality, lack of publication of applicable provisions, operator response to customer complaints submitted in print and online.

### **1.2 Formulation of the problem.**

Based on the reasons stated above, the problem formulation that the researcher will examine in this study is

1. How is the influence of discount prices in increasing customer loyalty to the people in Medan City.
2. How is the influence of the competitiveness of mobile internet services in increasing customer loyalty to the people in Medan City.
3. How is the influence of the quality of telecommunications service providers as a moderating variable in increasing customer loyalty to the people in Medan City.

## **Theoretical Review.**

### **2.1 Discounted Prices.**

Price is the sum of all values that consumers exchange for the amount of benefits by owning or using an item and service (Aryani and Rosinta, 2010). The prices referred to here include the affordability of prices, price competitiveness, price compatibility with product quality and prices according to the services provided. Discounts are one type of sales promotion. A discount is a reduction in the product from the normal price in a certain period. While sales

promotion is a form of direct persuasion through the use of various incentives that can be regulated to stimulate product purchases by and or increasing the amount of goods purchased by customers (Tjiptono, 2008: 229). There are various discounts that can be applied or dealt with. Because not all discounts mean selling products at a cheaper price. Various discounts: (1) Discounts given for certain moments; (2) Discounts for products that are out of fashion; (3) closing a business discount; (4) Discounts by raising the selling price first; (5) Discounts for new products; (6) A partial discount; (7) Cash discounts; (8) Quantity discount; (9) Seasonal Discounts. (Arifin, 2009: 135)

### **2.2 Competitiveness.**

According to Muhardi (2007: 39), competitiveness is a function that is not only oriented internally but also externally, that is, responding to the market's business objectives proactively. The competitive advantage of a business in serving the market segment can be built by selling goods at a lower price than its competitors. According to Tangkilisan (2008), that competitive advantage refers to the ability of an organization to formulate a strategy that places it in a favorable position related to other companies. Competitive advantage arises when customers feel that they receive more value from transactions made with a competing organization. In addition, a business can also build competitive advantage based on its ability to differentiate products offered in the targeted market segments (Henky and Felicia, 2012).

### **2.3 Customer Loyalty**

According to Hasan (2008: 83), that customer loyalty is a customer who simply does not buy back an item and service for example by recommending someone else to buy. According to Griffin (2010: 04), loyalty is that a consumer is said to be loyal or loyal if the consumer shows buying behavior on a regular basis or there

is a condition that requires consumers to buy at least twice in a certain time interval. According to Kotler and Keller (2009: 138), expressing loyalty is "A commitment that is held in depth to buy or support a product or service that is preferred in the future even though the influence of the situation and marketing efforts has the potential to cause customers to switch.

### 2.4 Quality of Service

According to Kotler (2009: 49), service quality is "All trait and characteristics of a product or service that affect the ability to satisfy the stated or implied needs". This is clearly a definition of quality that is customer-centered, a

### Research Methods

The approach used in this study is a survey approach that is the activity of collecting as much data as possible about the facts that are supporting the research in order to find out the status, the symptoms find the same status by comparing with the standards that have been selected or determined (Sugiyono, 2010) . The type of research used is quantitative descriptive research. Quantitative descriptive research involves collecting data to test hypotheses or answering questions about the final status of the research

producer can provide quality if the product or service provided can meet or exceed consumer expectations. According to the Big Indonesian Dictionary (2008), the definition of quality is the level of good and bad things, levels; degree or level, quality. In Adiningsih's research, Tya Dwi (2012) on the Analysis of the Effect of Core Service Quality and Peripheral Service Quality on customer satisfaction in using Telkomspeedy's services stated that there were several indicators of the quality of core services used, namely: access speed, including download and upload speeds, stability access, breadth of the internet network, practicality of services.

subject (Sugiyono, 2010). The nature of research is explanatory research. According to Sugiyono (2010) states that explanatory research is a study that intends to explain the position of the variables studied and the relationship between one variable and other variables.

**Population and Sample.** The population in this study is the population of Medan City in Medan Petisah Subdistrict in 2016 as many as 70,610 people.

**Table 1.1**  
**Count of population of Medan City In Sub-district of Medan Petisah 2015-2016**

No	Urban Village	Count of Family Cards		Count of Population	
		2015	2016	2015	2016
1	Petisah Tengah	3.120	3.096	11.183	11.094
2	Sekip	2.471	2.431	8.927	8.807
3	Sei Sikambing-D	2.901	2.812	10.064	9.982
4	Sei Putih Barat	3.862	3.776	13.601	13.511
5	Sei Putih Tengah	2.825	2.809	10.196	10.078
6	Sei Putih Timur I	2.015	2.004	7.173	7.090
7	Sei Putih Timur Ii	2.856	1.968	10.153	10.048
<b>TOTAL</b>		<b>20.050</b>	<b>19.706</b>	<b>71.297</b>	<b>70.610</b>

Source : <http://medanpetisah.pemkomedan.go.id/demografi/>

Sampling uses a non-probability sampling approach. The type of sampling chosen is

accidental sampling with the type of qualified volunteer sample, meaning that

the respondent met by the researcher is willing to volunteer to become a respondent and meet the criteria of the researcher (Morrisan, 2014). The sampling technique used in this study using the

$$n = \frac{N}{1 + N(e)^2} = \frac{70.610}{1 + 70.610(0,1)^2} = \frac{70.610}{707,1} = 99,85 \sim 100 \text{ response}$$

Which is :

- n = sample size  
 N = population size  
 e = error percentage (10%)

#### Data Collection Technique.

Data collection techniques are used by means of: Interview, namely conducting interviews to competent or authorized parties to provide information and information needed by this research, questionnaire which provides a number of written questions to the people of Medan City in the region Medan - Petisah which was sampled in this study. Documentation study is to study and analyze data and information obtained from documents owned from research journals.

**Type of Data Source.** The types and sources of data in this study are primary and secondary data with the following

Slovin formula. According to Sanusi (2011: 101), the Slovin formula is used to determine the sample size of a known population in the amount as follow :

The results of calculations using the Slovin formula obtained the number of samples as many as 100 people in Medan City In Sub-district of Medan Petisah. explanation: Primary data, is data obtained directly from research respondents for further processing by researchers and obtained from questionnaires to obtain clear information. Secondary data is complementary data related to research problems.

#### Identification and variable operation.

Identification and operation there is a dependent variable are increasing customer loyalty (Y), the independent variable consists of discount prices (X1), competitiveness (X2) and service quality as moderating variables (X3).

**Table 1.2**  
**Variable, Indicators and Measurement of Scales**

Variable	Indicators	Measurement of Scales
Discount Prices (X <sub>1</sub> )	1. Price of internal reference 2. Consumer perception about quality 3. Perception of value	Interval
Competitiveness (X <sub>2</sub> )	1. Product display 2. Period of receipt 3. Product durability 4. Speed of completion 5. Consumer complaints 6. Product conformity to design specifications	Interval
Quality of Service (Mderation) (X <sub>3</sub> )	1. Access speed 2. Access stability 3. Extensive internet network 4. Practical services	Interval
Increasing Customer	1. Makes regular repeat purchases 2. Purchases across product and service lines	Interval

Loyalty (Y)	3. Refers other product 4. Demonstrates an immunity to the full of the competition	
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Descriptive statistical analysis is to describe some conditions of the research object concisely obtained from the results of data collection or answers to questionnaires by respondents.

Statistical analysis used in this study using statistical analysis with moderated regression analysis (MRA) or interaction test is a special application of linear multiple regression where in the equation regression contains elements of interaction or multiplication of two or more independent variables. (Ghozali, 2013). This research model is described based on the regression equation. Regression

**4. Hypothesis 4 (H<sub>4</sub>)**

Interaction Test :

$$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_1X_3 + b_5 X_2X_3 + e$$

**Information :**

a = Constants

b1, b2 ... b5 = Regression Coefficient of Each Variable

X1 = Discount Price

**Data Analysis Method**

equation is multiple regression to test all hypotheses in the study between

**1. Hypothesis 1 (H<sub>1</sub>)**

Influence of Discount Price (X1) on Customer Loyalty (Y)

$$Y = a + b1X1 + e$$

**2. Hypothesis 2 (H<sub>2</sub>)**

Influence of Competitiveness (X2) on Customer Loyalty (Y)

$$Y = a + b2X2 + e$$

**3. Hypothesis 3 (H<sub>3</sub>)**

Influence of Discount Price (X1) and Service Competitiveness (X2) together on Customer Loyalty (Y).

$$Y = a + b1X1 + b2 X2 + e$$

X2 = Service Competitiveness

X3 = Quality of Service as Moderating

Y = Customer Loyalty

e = % error (10%)

**Descriptive statistics**

Descriptive statistical analysis is to describe some conditions of the research object concisely obtained from the results of data collection or answers to questionnaires by respondents. Descriptive

statistics are used to get a glimpse of discounted price data, service competitiveness, in increasing customer loyalty and service quality so that it is easier to read and meaningful the data can be seen in the following Table 1.3:

**Table 1.3**  
**Descriptive Statistics Test Results**  
**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
Discount Prices (X1)	100	6.00	15.00	10.2000	2.03008
Service Competitiveness (X2)	100	10.00	27.00	17.1200	3.26376
Quality of Service (X3)	100	7.00	20.00	13.0700	2.97211
Customer Loyalty (Y)	100	7.00	20.00	13.4700	3.01664
Valid N (listwise)	100				

Source : Primary Data Processed, 2018 (SPSS)

From Table 1.3 it can be seen that the variable discount price with a sample of

100 respondents has an average value of 10.20 units with a minimum value of 6.00

units and a maximum of 15.00 units and a standard deviation of 2.03008 units. Service competitiveness variables with a sample of 100 respondents have an average value of 17.12 units with a minimum value of 10.00 units and a maximum of 27.00 units and a standard deviation of 3.26376. Service quality variables with a sample of 100 respondents have an average value of 13.07 units with a minimum value of 7.00 units and a maximum of 20.00 units and a standard deviation of 2.97211. Customer loyalty variables with a sample of 100 respondents have an average value of 13.47 units with a minimum value of 7.00 and a maximum value of 20.00 units and a standard deviation of 3.01664.

**Classic Assumption Testing.** Classic assumption test is a way to find out whether the regression model obtained can produce a good linear estimator. If you have fulfilled the classical assumption, it means that the ideal regression model (not biased) (Best Linear Unbiased Estimator / BLUE)

### 1. Multicollinearity Test.

According to Umar (2010: 80), multicollinearity testing is useful to find out whether the proposed regression model has found a strong correlation between independent variables. If there is a strong correlation, there is a multicollinearity problem that must be overcome. According to Umar (2010: 81-82), multicollinearity tests can be known by using 2 formulas, namely:

1. Using VIF (Variance Inflation Factor). According to Umar (2010: 81), the criterion is that if the VIF value is close to 10 then there is no multicollinearity and vice versa if the VIF moves away from the number 10 then multicollinearity occurs. According to Umar (2010: 81) states that to calculate VIF for coefficients of independent variables using the formula:  $VIF = 1 / (1-R^2)$
2. Using the Tolerance value. According to Umar (2010: 82), the criteria for this test are if the tolerance value is greater than 0.1 then there is no multicollinearity and vice versa if the tolerance value is smaller than 0.1 then there is multicollinearity. According to Umar (2010: 81) states that to calculate TOL with the formula:  $TOL = (1-R^2)$

**Table. 1.4**  
**Multicollinearity Test**

Coefficients <sup>a</sup>		
Model	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
Discount Prices (X1)	.911	1.098
Service Competitiveness (X2)	.916	1.091
Quality of Service (X3)	.987	1.013

a. Dependent Variable: Loyalitas Pelanggan (Y)

**Source : Primary Data Processed, 2018 (SPSS)**

### 2. Normality Test

According to Umar (2010: 77), stated that the normality test is useful to know whether the dependent, independent or both variables are normally distributed, close to normal or not. If the data turns out

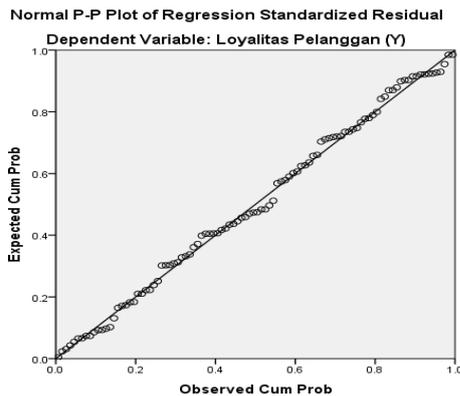
to be not normally distributed, then nonparametric analysis can be used. According to Umar (2010: 77-79), the normality test is divided into 2 types of testing, namely:

1. Test using Graph

Test using graphs is divided into 2, namely:

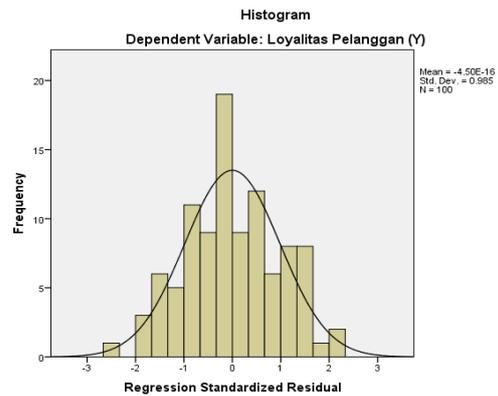
- a. Probability-plot graph  
The criteria is that if the data spreads around the diagonal line, and there is no data that is far from the diagnostic line, then the data is normal.

**Picture 1.1  
Probability-Plot Graph**



- b. Histogram chart  
The criterion is that if the data spreads to form a bell shape and the data distribution is not right, the data is normal.

**Picture 1.2  
Histogram Chart**



**Source : Primary Data Processed, 2018 (SPSS)**

- 2. Test using statistics by using the Kolmogorov-Smirnov test. This test criterion is if the value is Asymp. Sig. (2-tailed), more than 0.05, the data is said to be normally distributed and if the value is Asymp. Sig. (2-tailed), smaller than 0.05, the data is said to be not normally distributed

**Table 1.5  
Kolmogorov-Smirnov Test**

One-Sample Kolmogorov-Smirnov Test		Unstandardized Residual
N		100
Normal Parameters <sup>a,b</sup>	Mean	0E-7
	Std. Deviation	2.78196366
Most Extreme Differences	Absolute	.047
	Positive	.047
	Negative	-.046
Kolmogorov-Smirnov Z		.466
Asymp. Sig. (2-tailed)		.982

a. Test distribution is Normal.  
b. Calculated from data.

**Source : Primary Data Processed, 2018 (SPSS)**

### 3. Heteroscedasticity test

According to Umar (2010:82), heteroscedasticity test was conducted to determine whether in the regression model, there was a variance inequality from residuals of an observation to other observations. If the variance of residuals is an observation to another observation, it is

called homoscedasticity, where as for different variances it is called heteroscedasticity. According to Umar (2010: 84), heteroscedasticity test is divided into 2 tests, namely:

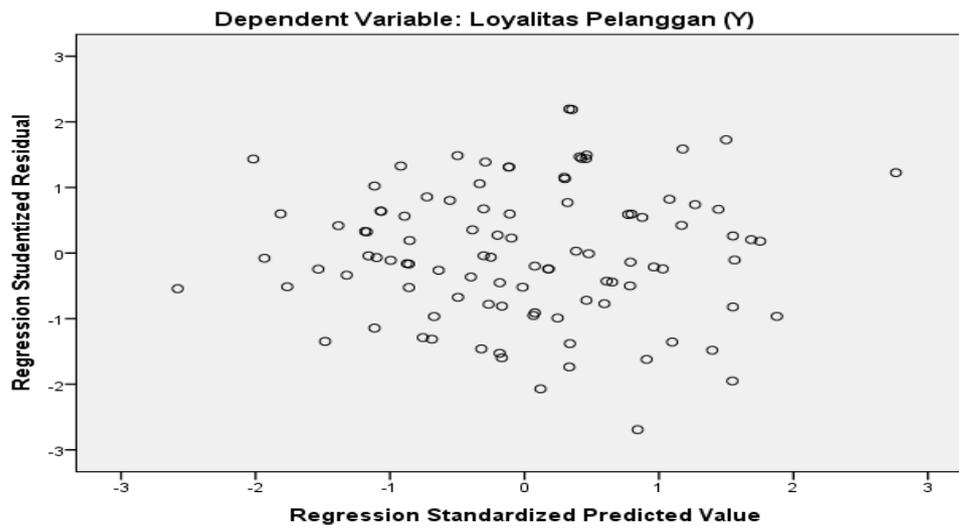
### 1. Test using graphs

The test uses graphs using Scatterplot graphs. According to Umar (2010: 84), the criteria are if the irregular distribution of data by not being close to each other and away from line 0 there will be heteroscedasticity.

### 2. Test with Glejser

Testing using statistics is by using the Glejser Test. The criteria is when the Asymp value. Sig. smaller than 0.05, the data occurs heteroscedasticity.

**Picture 1.3**  
**Scatter Plot Graph**  
Scatterplot



**Table 1.6**  
**Glejser Test**  
Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.462	1.289		-.358	.721
Discount Prices (X1)	.119	.084	.148	1.421	.159
Service Competitiveness (X2)	.030	.052	.059	.571	.569
Quality of Service (X3)	.076	.055	.138	1.380	.171

a. Dependent Variable: RES2

Source : Primary Data Processed, 2018 (SPSS)

In Table 1.6 above, it is known that the significant value of the discount price variable (X1) is 0.159 greater than 0.05, meaning that heteroscedasticity does not occur at discounted price variables (X1). Meanwhile, it is known the significance value of service competitiveness variables (X2) that is 0.569 greater than 0.05 means that heteroscedasticity does not occur in the service competitiveness variable (X2). While the significance value of the service quality moderating variable (X3) is 0.171

greater than 0.05, it means that there is no heteroscedasticity in service quality variables (X3).

**Data analysis method.** Statistical analysis used in this study uses statistical analysis with moderated regression analysis (MRA) or interaction test is a special application of linear multiple regression in which the regression equation contains elements of interaction or multiplication of two or

more independent variables. (Ghozali, 2013).

This research model is described based on the regression equation.

$$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_1X_3 + b_5 X_2X_3 + e$$

Regression equation is multiple regression to test all hypotheses in the study, among others:

- X1 = Discount Price
- X2 = Service Competitiveness
- X3 = Quality of Service as Moderating
- Y = Customer Loyalty
- e = % error (10%)

**Information :**

a = Constants  
 b1, b2 ... b5 = Regression coefficient of each variable

**Table 1.7**  
**Research Analysis Model Test Results**  
**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	19.487	7.349		2.652	.009
Discount Price*Quality of Service (X1*X3)	.077	.047	.987	1.621	.108
Service Competitiveness*Quality of Service (X2*X3)	.010	.025	.243	.424	.673
Discount Price (X1)	-.452	.627	-.304	-.722	.472
Service Competitiveness (X2)	-.233	.335	-.252	-.697	.488
Customer Loyalty (X3)	-.758	.532	-.747	-1.425	.157

a. Dependent Variable: Customer Loyalty (Y)

**Sumner : Primary Data Processed, 2018 (SPSS)**

Based on Table 1.7 above obtained multiple linear regression equation, as follows :

$$Y = 19,487 - 0,452 X_1 - 0,233 X_2 - 0,758 X_3 + 0,077 X_1X_3 + 0,010 X_2X_3 + e$$

The regression equation model above can be interpreted that a constant of 19,487 means that if the value of the independent variable is discounted prices, service competitiveness and service quality is zero, it is considered non-existent, it will increase customer loyalty by 19,487%.

Discounted price (X1) has a regression coefficient of 0.452 and is negative, this means that every reduction of one percent of the discount price variable will give a decrease in customer loyalty by 0.452 or 45.2% if other variables are assumed to be constant. This gives an explanation that discount prices are part of the changes that are not in line with increasing customer loyalty.

Service competitiveness (X2) has a regression coefficient of 0.233 and is negative, this means that every decrease of

one percent of service competitiveness variables will provide a decrease in customer loyalty by 0.233 or 23.3% if other variables are assumed to be constant. This gives an explanation that service competitiveness is part of the change that is not in line with increasing customer loyalty.

Service Quality (X3) has a regression coefficient of 0.758 and is negative, this means that every one percent reduction in service quality variables will provide a decrease in customer loyalty by 0.758 or 75.8% if other variables are assumed to be constant. This gives an explanation that service quality is part of the change that is not in line with increasing customer loyalty.

Interaction discount prices (X1) and service quality (X3) have a regression

coefficient of 0.077 and are positive, this means that every increase of one percent of the discount price variable and service quality will increase customer loyalty by 0.077 or 7.7% if other variables assumed to be constant. This gives an explanation that discount prices and service quality are the parts that change in the direction of increasing customer loyalty.

The interaction of service competitiveness (X2) and service quality

#### 4. Coefficient of Determination

According to Ghozali (2011:97) states that the coefficient of determination essentially measures how far the ability of the model in explaining the variation of the dependent variable. The coefficient of determination is between zero and one. A small  $R^2$  value means that the ability of independent variables in explaining the variation of the dependent variable is very limited. A value close to one means that

(X3) has a regression coefficient of 0.010 and is positive, this means that every increase of one percent of service competitiveness variables and service quality will provide an increase in customer loyalty by 0.010 or 1.0% if other variables are assumed to be constant. This provides an explanation that competitiveness and service quality are parts that change in the direction of increasing customer loyalty.

the independent variables provide almost all the information needed to predict the variation of the dependent variable. According to Gujarati in Ghozali (2011: 97-98), if the adjusted empirical test obtained a negative  $R^2$  value, then the adjusted  $R^2$  value is considered to be zero. Mathematically if the value of  $R^2 = 1$ , then the adjusted  $R^2 = R^2 = 1$ , whereas if the value of  $R^2 = 0$ , then adjusted  $R^2 = (1 - k) / (n - k)$ . If  $k > 1$ , the adjusted  $R^2$  will be negative.

**Table 1.8**  
**Test Results of the Coefficient of Determination**  
**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.387 <sup>a</sup>	.150	.123	2.82510

a. Predictors: (Constant), Quality of Service (X3), Service Competitiveness (X2), Discount Price (X1)

**Source : Primary Data Processed, 2018 (SPSS)**

Based on the test results above it can be seen that the value of  $R^2$  is 0.150 and the value of adjusted  $R^2$  is 0.123. The coefficient of determination in this study is seen based on the  $R^2$  value of 0.150 which means that the variation in the variable

discount prices, service competitiveness, service quality can explain 15% variation in customer loyalty variables while the remaining 85% is explained by other variables not examined in this study.

### Hypothesis Testing

#### 1. Simultaneous Hypothesis Testing (Test F)

**Table 1.9**  
**F Test Results (Simultaneous)**  
**ANOVA<sup>a</sup>**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	134.717	3	44.906	5.626	.001 <sup>b</sup>
	Residual	766.193	96	7.981		
	Total	900.910	99			

a. Dependent Variable: Customer Loyalty (Y)

b. Predictors: (Constant), Quality of Service (X3), Service Competitiveness (X2), Discount Prices (X1)

**Source : Primary Data Processed, 2018 (SPSS)**

Simultaneous testing or F test aims to see how the discount prices influence and the competitiveness of mobile internet services in increasing customer loyalty through the quality of telecommunications service providers as a moderating variable in the community in the city of Medan. Based on the results of the above test, the  $F_{count}$  value is 5.626 and the significance value is 0.001. The  $F_{count}$  value will be compared with the  $F_{table}$  value of 2.70 (obtained see  $F_{table}$  with the criteria  $df1 = 2$  and  $df2 =$  greater than 100), then the results obtained are  $F_{count} > F_{table}$  (5.626 >

2.70) and a significance value of  $0.001 < 0.05$  so it can be concluded that discount prices, competitiveness of mobile internet services and the quality of telecommunications service providers together have a positive and significant effect in increasing customer loyalty to the community in Medan City.

**2. Partial Hypothesis Testing (t test)**

**Table 1.10. T Test Results (Partial) Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	6.663	2.259		2.949	.004
1 Discount Prices (X1)	.545	.147	.367	3.722	.000
Service Competitiveness (X2)	-.082	.091	-.089	-.902	.369
Quality of Service (X3)	.203	.096	.200	2.107	.038

a. Dependent Variable: Customer Loyalty (Y)

**Source : Primary Data Processed, 2018 (SPSS)**

Based on Table 1,10 above, it appears that:

1. Test the partial hypothesis of the discount price variable from the table can be seen the value of  $t_{count}$  discount prices variable (X1) is equal to 3.722 with a significance of 0.000. Then the results of the study show that  $H_a$  hypothesis is accepted because  $t_{count} > t_{table}$  ( $2.005 > 1.98447$ ) and is significantly smaller than 0.05, which means that the discount price variable (X1) partially has a positive and significant effect on increasing customer loyalty to the people in Medan City
2. Partial hypothesis test of service competitiveness variables from the table can be seen the value of  $t_{count}$  variable service competitiveness (X2) is equal to -0.902 with a significance of

- 0.369. Then the results of the study showed  $H_a$  hypothesis was rejected because  $t_{count} < t_{table}$  ( $-0.902 < 1.98447$ ) and significance was greater than 0.05, which means that service competitiveness variable (X2) partially had no effect and was not significant in increasing customer loyalty to the community in Medan City
3. Partial hypothesis testing variable service quality from the table can be seen the value of  $t_{count}$  service quality variable (X3) is 2.107 with a significance of 0.038. Then the results of the study show that the  $H_a$  hypothesis is accepted because  $t_{count} > t_{table}$  ( $2.107 > 1.98447$ ) and the significance is less than 0.05, which means that the service quality variable (X3) partially has a positive and

significant effect on increasing customer loyalty to the community in

Medan City .

### 3. Test of Moderation Variable Test Hypothesis Interaction

**Table 1.11. Interaction Test Results for Moderation Variables**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	19.962	6.671		2.992	.004
Discount Price (X1)	-.087	.332	-.059	-.262	.794
Service Competitiveness (X2)	-.464	.202	-.502	-2.302	.024
Quality of Service (X3)	-.312	.261	-.307	-1.195	.235
MODERATION	.003	.001	.852	2.114	.037

a. Dependent Variable: Customer Loyalty (Y)

**Sumber : Primary Data Processed, 2018 (SPSS)**

The table shows that the moderating variable has proven significant in influencing discount prices and service competitiveness in increasing customer loyalty. Prediction of negative values indicates that the moderating effect provided is negative, meaning that service quality has the effect of reducing the influence of discount prices and service competitiveness in increasing customer loyalty. The insignificance of the X1 discount price coefficient (sig 0.794) and X3 service quality (sig 0.235) indicates that this variable is a pure moderator variable and cannot be placed as an independent variable. But if the results show that discount prices (X1) and service quality moderation (X3) are both significant then it can be concluded that the service quality variable is a quasi moderator variable or can be used as an independent variable as well as a moderator variable.

#### Conclusion

1. Increasing customer loyalty requires good quality of service and followed by price discounts and service competitiveness between telecommunications providers, this can be seen from the number of users of mobile internet services who move from

one telecommunications provider to another telecommunications provider.

- Discount prices, service competitiveness and service quality simultaneously have a positive and significant effect in increasing customer loyalty in the community in Medan City while partially competitiveness of services has a negative value and does not significantly influence customer loyalty to the people in Medan City.
- Factors affecting the increase of customer loyalty in the community in Medan City are discount prices because they have the most dominant influence in increasing customer loyalty to the people in Medan City.
- Service quality as a moderating variable has been proven to significantly affect discount prices and the competitiveness of telecommunications service providers in increasing customer loyalty to the people in Medan City.

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