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The Effect of Brand Image, Product Quality, and Relationship Marketing on Customer Satisfaction and Loyalty

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ABSTRACT*: The purpose of this study is to know and analyze how to affect the brand image, product quality and relationship marketing with individually and collectively to customer satisfaction and loyalty. This research type is quantitative descriptive through population of optical network consumer. The sample data is saturated sample of 31 respondents.This researchis case study for optical network devices in PT. Alcatel-Lucent Indonesia (Nokia Group).*
Research data using questionnaires, interviews, and document studies. Test the validity and reliability used to measure each item of research variables. Data analysis using descriptive statistics method to describe research variables and multiple linear regression analysis, with F-test and T-test for dependent variables. Based on regression analysis results obtained: 1. Brand Image (X1), Product Quality (X2), and Relationship Marketing (X3) with individually effect to Customer Satisfaction (Y1) and Customer Loyalty (Y2) evidenced by testing with T-test where the results research shows the significance value of all the independent variables <0.05. 2. Together Brand Image (X1), Product Quality (X2), and Relationship Marketing (X3) effect to Customer Satisfaction (Y1) and Customer Loyalty (Y2) as evidenced by F-test where the result of research shows significance value F <0.05. The presence of some disgruntled customers where a decrease in loyalty from customers will lead to the delivery of information from and among customers down the potential of subsequent customers and reduce the following customer loyalty.

Keywords*: brand image, product quality, marketing relationships, customer satisfaction and loyalty.*

I. INTRODUCTION

The current competition has changed the company's point of view in serving its market. The demand for change is imperative, for only those who are ready to change can survive. Companies must always anticipate the occurrence of a change, because with the changes will create a new opportunity and the old to be left behind.

In this study the author raised the theme with the product of the optical network devices as already mentioned. The capital expenditure of a consumer service provider is enormous, of which nearly 70% is used for the purchase of mobile infrastructure development equipment and the researcher focuses only on a part of the general capital spending of an operator for optical network devices ranging from 5 ~ 7% only. Along with the development of telecommunication infrastructure technology as well as cellular phones, the need for bandwidth by operators (Telkom, Telkomsel, Indosat, XL) and in the provision of long distance communication services (data or voice) has become even greater. The increase in bandwidth requirements by operators is reflected in the increase of internet usage in Indonesia by 58% (55 million people) from 2011 to 2012.

In this study is the decline in consumer purchases of mobile operators for optical network devices in Indonesia, especially caused by the factors of brand image, product quality, and relationship marketing are limited and also affects the decrease in the number of customers and turnover at PT. Alcatel-Lucent Indonesia in particular. Therefore, with this decreasing number of subscribers and turnover, ALU Global has generally been acquired by Nokia Group recently, as ALU Global in the last three years cannot survive the tight market and changing customer patterns.

II. STUDY THEORY

Marketing is one of the main activities that need to be done by a company either a goods or service company in an effort to maintain its business survival. This is because marketing is one of the activities of the company, where directly related to the consumer. So marketing activities can be defined as human activities that take place in relation to the market. Kotler and Keller (2012: 5) suggests the definition of marketing means the process of planning and execution of a conception by setting the price, promotion, and distribution of ideas both

goods and or services to create exchanges that satisfy individual and organizational goals. So it can be said that the success of marketing is the key to success of a company.

Brand Image

Brand Image is a series of descriptions of associations and consumer beliefs on a particular brand. Brand Image of a good product will encourage potential buyers of the product compared to other brands with the same product. According to Frank Jefkin (Ardianto & Soemirat, 2010: 114) the image is defined as the impression of a person or an individual about something that arises as a result of his knowledge and experience.

Product Quality

The definition of product according to Kotler and Armstrong (2012: 283) is anything that can be offered to the market to get attention, bought, used, or consumed that can satisfy the desires or needs. According to Kotler and Keller (2009: 4), the product is a key element in the overall market supply. In addition, the product can also be defined as the consumer perceptions described by the producers through their production (Tjiptono, 2008).

Relationship Marketing

The concept of relationship marketing for the first time was introduced by Berry in 1983 in the context of service organizations. Berry defines relationship marketing as a strategy to attract, retain, and enhance customer relationships (Berry, 1983; Ranjbarian & Berari, 2009, in Gilaninia, et.al, 2012). Taheri and Heidari (2004: 56) in Gilaninia, et.al (2012) defines "relationship marketing" as: "a business strategy that will be enhanced by technological developments and through paying companies to create cooperative benefits to optimize consumer perception value.

Customer Satisfaction

Customer Satisfaction is the response of the behavior shown by the customer by comparing the performance or perceived results with the expected. If the results are felt below expectations, the customer will be disappointed, dissatisfied even not satisfied, but otherwise when in accordance with expectations, customers will be satisfied and if performance exceeds expectations, customers will be very satisfied (Kotler, 2014: 150).

Customer Loyalty

According to Kotler and Keller (2012: 207), Loyalty is defined as a strongly held commitment to buy or subscribe to a particular product or service in the future. Customer loyalty will be the key to success, not only in the short run but in a sustainable competitive advantage, despite the influence of marketing situations and efforts that could potentially lead to behavioral change.

Framework

Sekaran (2003) suggests that the frame of mind is a conceptual model of how theory relates to various factors that have been identified as important issues. Based on this the authors compiled a frame of thought in this study are as follows:

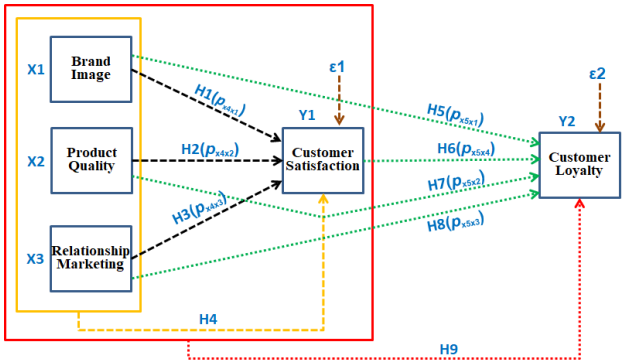


Figure 2.1. Framework

Empirical Model as following

$$Y1 = p_{x4x1}.X1 + p_{x4x2}.X2 + p_{x4x3}.X3 + \varepsilon 1$$

$$Y2 = p_{x5x1}.X1 + p_{x5x2}.X2 + p_{x5x3}.X3 + p_{x5x4}.X4 + \varepsilon 2$$

Hypothesis

On the basis of the theoretical framework and the results of previous research, formulated hypotheses concerning Brand Image, Product Quality, Relationship Marketing, and Satisfaction and Customer Loyalty in case study for optical network devices in PT. Alcatel-Lucent Indonesia as follows:

H1: Suspected there is influence of individual Brand Image to Customer Satisfaction.
H2: Suspected there is influence of Product Quality individually to Customer Satisfaction.
H3: Suspected there is influence of individual Relationship Marketing to Customer Satisfaction.
H4: Suspected there is influence of Brand Image, Product Quality, and Relationship Marketing together towards Customer Satisfaction.
H5: Suspected there is an Individual Brand Image influence on Customer Loyalty.
H6: Suspected there is influence of individual Customer Satisfaction on Customer Loyalty.
H7: Suspected there is an effect of Individual Product Quality to Customer Loyalty.
H8: Suspected there is influence of individual Relationship Marketing to Customer Loyalty.
H9: Suspected there is the influence of Brand Image, Product Quality, Relationship Marketing, and Customer Satisfaction collectively to Customer Loyalty.

III. RESEARCH METHODS

Design of Research

The research method used in this research is quantitative analysis method, that is research which emphasizes its analysis on numerical data or numbers obtained by statistical method. Sugiyono (2010: 13) put forward as follows, Quantitative research can be interpreted as a research method based on positivism philosophy, used to examine the population or a particular sample, data collection using research instruments, quantitative / statistical data analysis, with the aim to test the hypothesis.

Research Variable

The instrument to be discussed consists of 3 (three) independent variables (Eksogen), namely brand image (X1) as the first independent variable, product quality (X2) as the second independent variable, (X2), and relationship marketing (X3) third, while the dependent variable (Endogen) is customer satisfaction as dependent variable (Y1) and customer loyalty (Y2).

Variable Measurement

The measurement scale is the whole used as a reference to determine the length of the short interval that is in the measuring instrument, so that the measuring instrument when used in the measurement will produce quantitative data.

In this study, the variables used with the hypotheses and problems are:

Exogenous variables (X), consisting of:

1. Brand Image (X1) of the company logo ALU and this variable is done for case study with optical network devices in ALU-I.
2. Product Quality (X2) in this case is the use and use of optical network devices for case studies in ALU-I.
3. Relationship Marketing (X3) in this case is a sales and marketing strategy for the study of chassis with optical network devices in ALU-I.

Endogenous Variable (Y), consisting of

1. Customer Satisfaction (Y1) where the customer to be conducted research in accordance with the limits of research located five major cellular and fixed service companies, namely Telkom, Telkomsel, Indosat Ooredoo, XL Axiata, and Moratel.
2. Customer Loyalty (Y2) where the continuation after the customer feels fulfilled their needs and satisfied for the product built, thus bringing loyalty to the brand, in this case repeat order.
3. In this study the operational table is as listed in the table below.

The technique data used is through questionnaire (questionnaire), interview, and literature study.

Table 3.1. Research Variable Operational

Variabel Penelitian	Dimensi	Indikator	Skala
Citra Merek (X1)	1. **Identitas Merek** (*Brand Identity*)	X.1.1. Identitas merek jelas dikenali (Q1)	Skala Interval
		X.1.2. Slogan merek mudah diingat (Q2)	
	2. **Kepribadian Merek** (*Brand Personality*)	X.1.3. Merek mendukung *human-life* (Q3)	
		X.1.4. Merek mendukung kreativitas (Q4)	
	3. **Perilaku & Sikap Merek** (*Brand Behavior & Attitude*)	X.1.5. Perilaku merek yang mendukung manfaat korelasi produk (Q5)	
		X.1.6. Sikap merek yang menunjukan kekuatan korelasi produk (Q6)	
Kualitas Produk (X2)	1. **Kinerja** (*Performance*)	X.2.1. Produk mudah dioperasikan (Q7)	Skala Interval
		X.2.2. Produk mudah dalam maintenance (Q8)	
	2. **Fitur** (Features)	X.2.3. Produk dilengkapi *OTN (Q9)*	
		X.2.4. Produk dilengkapi *Koherent (Q10)*	
	3. **Kehandalan** (*Reability*)	X.2.5. Produk tidak mudah mengalami kerusakan selama masa operasional (Q11)	
		X.2.6. Produk menunjukan manfaat yang tidak menurun selama masa operasional (Q12)	

Variabel Penelitian	Dimensi	Indikator	Skala
Relationship Marketing (X3)	1. ***Knowledge* penjual**	X.3.1. Tenaga penjual memiliki pengetahuan tentang produk (Q13)	Skala Interval
		X.3.2. Tenaga penjual memiliki solusi taktis terhadap konsern pelanggan (Q14)	
	2. ***Responsif* penjual**	X.3.3. Tenaga penjual cepat tanggap terhadap kebutuhan pelanggan (Q15)	
		X.3.4. Tenaga penjual cekatan internal & eksternal koordinasi ke pelanggan (Q16)	
	3. ***Komunikatif* penjual**	X.3.5. Tenaga penjual mudah berkomunikasi dalam pemaparan produk deskripsi (Q17)	Skala Interval
		X.3.6. Tenaga penjual menggunakan bahasa yang sederhana dan mudah dimengeri (Q18)	
	4. ***Citra* Perusahaan** (*Corporate Image*)	X.3.7. Perusahaan menyelesaikan SOW proyek berjalan dan sebelumnya (Q19)	
		X.3.8. Perusahaan fleksible akan kebutuhan pelanggan yang ditunjukan dalam termin pembayaran (Q20)	

Variabel Penelitian	Dimensi	Indikator	Skala
Kepuasan Pelanggan (Y1)	1. **Penanganan Pesanan** (*Order handling*)	Y.1.1. Pengelolaan dan penanganan pesanan (Order) dari pelanggan dengan progress yang jelas (Q21)	Skala Interval
		Y.1.2. Interaktif dan info yang jelas setiap kendala yang timbul dalam pengelolaan suatu proyek yang diinginkan pelanggan (Q22)	
	2. **Kesesuaian Pesanan** (*Fit & Match Order*)	Y.1.3. Pengiriman Pesanan (*Order*) yang sesuai spesifikasi produk yang dibeli oleh pelanggan (Q23)	
		Y.1.4. Pengiriman Pesanan (Order) yang tepat waktu kepada pelanggan (Q24)	
	3. **Penanganan Keluhan** (*Complaint Handling*)	Y.1.5. Pengelolaan dan penanganan keluhan/komplain oleh pelanggan serta rencana mitigasi (*mitigate plan*) yang jelas (Q25)	
		Y.1.6. Tindak lanjut mitigate plan yang diselesaikan serta kompensasi pengurangan proyek yang jelas (Q26)	

Variabel Penelitian	Dimensi	Indikator	Skala
Loyalitas Pelanggan (Y2)	1. **Pesanan yang berulang** (*Repeat Order*)	Y.2.1. Pengeluaran PO ekspansi dari proyek yang sama, baik penambahan kapasitas dan pengelolaan spare-pool yang konsisten (Q27)	Skala Interval
		Y.2.2. Pengeluaran PO ekspansi untuk area yang berbeda dari proyek sebelumnya (Q28)	
	2. **Pembelian jenis/tipe lain** (*Buying other products of Brand*)	Y.2.3. Pengeluaran PO jenis/tipe yang lain dari *optical network* (Q29)	
		Y.2.4. Pengeluaran PO jenis perangkat yang lain diluar *optical network* (Q30)	
	3. **Memperkecil waktu pencarian** (*Reduce Search Time*)	Y.2.5. Persetujuan POC (Trial produk) untuk kebutuhan yang baru dari pelanggan pada katalog produk *in roadmap optical network* (Q31)	
		Y.2.6. Persetujuan POC (Trial produk) untuk kebutuhan yang baru dari pelanggan pada katalog produk in roadmap non-optical network (Q31)	

Questionnaire is a data collection technique that is done by giving a set of questions or written statement to the respondent to answer (Sugiyono, 2010: 199).

The population of this study are some consumers of optical network devices at PT. Alcatel Lucent Indonesia (ALU-I) during the period 2015 ~ 2016, and where there are 5 (five) customer companies observed for customer satisfaction and loyalty behavior. namely: Telkom, Telkomsel, Indosat Ooredoo, XL Axiata, and Moratel, with the weight of the two companies at the beginning for an average sales volume of 78% of the total.

The sample of research that meets the criteria desired by the researcher is in accordance with the problem restrictions listed in chapter 1 where the number of population during 2015 ~ 2016 is 31 customer correspondents. Since there is a total sample of 31 consumer correspondents, we say that the number of samples is a saturated sample of the existing population so no sampling technique is required using Slovin formula (Sunyoto, 2013: 16). So the number of samples used.

IV. RESULTS AND DISCUSSION

Researchers process data of statistical research using SPSS v24 program then the output data is used as the basis for analysis and answer the proposed research hypothesis.Based on the results of respondents' answers to the questionnaires distributed, can be described profile of respondents by age, gender, and length of subscription as follows:

Table 4.1. Description of Respondence Identity

Responden Berdasarkan Usia

		Frequency	Percent
Valid	< 30 th	3	9,7
	30-40 th	16	51,6
	> 40 th	12	38,7
	Total	31	100,0

Sumber: Lampiran 3

Responden Berdasarkan Jenis Kelamin

		Frequency	Percent
	Laki-Laki	26	83,9
Valid	Perempuan	5	16,1
	Total	31	100,0

Sumber: Lampiran 3

Responden Berdasarkan Lama Berlangganan

		Frequency	Percent
Valid	< 3 th	4	12,9
	3-5 th	12	38,7
	> 5 th	15	48,4
	Total	31	100,0

Sumber: Lampiran 3

Descriptive analysis is used to determine the results of the responses of respondents to the variables used through the questionnaire items submitted. These variables are described in several indicators measured by Likert scale with a score of 1 to 5. The respondents' answers to each indicator variable are as follows:

Table 4.2. Respondence Feedback

Jawaban Responden Terhadap Indikator Variabel Citra Merek (X1)

No	Pernyataan	Skor Jawaban									
		1	%	2	%	3	%	4	%	5	%
1	Identitas merek jelas dikenali	0	0,0	0	0,0	1	3,2	**27**	**87,1**	3	9,7
2	Slogan merek mudah diingat	0	0,0	2	6,5	13	41,9	**16**	**51,6**	0	0,0
3	Merek mendukung human-life	0	0,0	0	0,0	4	12,9	**25**	**80,6**	2	6,5
4	Merek mendukung kreativitas	0	0,0	2	6,5	**15**	**48,4**	13	41,9	1	3,2
5	Perilaku merek yang mendukung manfaat korelasi produk	0	0,0	0	0,0	7	22,6	**21**	**67,7**	3	9,7
6	Sikap merek yang menunjukan kekuatan korelasi produk	0	0,0	2	6,5	**15**	**48,4**	13	41,9	1	3,2

Sumber: Lampiran 3

Jawaban Responden Terhadap Indikator Variabel Kualitas Produk (X2)

No	Pernyataan	Skor Jawaban									
		1	%	2	%	3	%	4	%	5	%
1	Produk mudah dioperasikan	1	3,2	2	6,5	10	32,3	**15**	**48,4**	3	9,7
2	Produk mudah dalam maintenance	1	3,2	2	6,5	6	19,4	**18**	**58,1**	4	12,9
3	Produk dilengkapi OTN	1	3,2	1	3,2	**13**	**41,9**	11	35,5	5	16,1
4	Produk dilengkapi Koherent	1	3,2	0	0,0	8	25,8	**17**	**54,8**	5	16,1
5	Produk tidak mudah mengalami kerusakan	3	9,7	2	6,5	**11**	**35,5**	8	25,8	7	22,6
6	Produk menunjukan manfaat yang tidak menurun	2	6,5	4	12,9	8	25,8	**11**	**35,5**	6	19,4

Sumber: Lampiran 3

Jawaban Responden Terhadap Indikator Variabel *Relationship Marketing* (X3)

No	Pernyataan	Skor Jawaban									
		1	%	2	%	3	%	4	%	5	%
1	Tenaga penjual memiliki pengetahuan tentang produk	0	0,0	0	0,0	10	32,3	8	25,8	**13**	**41,9**
2	Tenaga penjual memiliki solusi taktis terhadap konsern pelanggan	0	0,0	4	12,9	4	12,9	**19**	**61,3**	4	12,9
3	Tenaga penjual cepat tanggap terhadap kebutuhan pelanggan	0	0,0	0	0,0	5	16,1	**13**	**41,9**	13	41,9
4	Tenaga penjual cekatan internal & eksternal koordinasi ke pelanggan	0	0,0	1	3,2	3	9,7	**25**	**80,6**	2	6,5
5	Tenaga penjual mudah berkomuni-kasi dalam pemapa-ran deskripsi produk	0	0,0	0	0,0	2	6,5	7	22,6	**22**	**71,0**
6	Tenaga penjual menggunakan bahasa yang sederhana dan mudah dimengeri	0	0,0	5	16,1	5	16,1	**19**	**61,3**	2	6,5
7	Perusahaan menyelesaikan SOW proyek berjalan dan sebelumnya	1	3,2	2	6,5	8	25,8	**10**	**32,3**	10	32,3
8	Perusahaan fleksibel akan kebutuhan pelanggan yang ditunjukan dalam termin pembayaran	0	0,0	3	9,7	6	19,4	6	19,4	**16**	**51,6**

Sumber: Lampiran 3

Jawaban Responden Terhadap Indikator Variabel Loyalitas Pelanggan (Y2)

No	Pernyataan	Skor Jawaban									
		1	%	2	%	3	%	4	%	5	%
1	Pengeluaran PO ekspansi dari proyek yang sama	0	0,0	0	0,0	3	9,7	**27**	**87,1**	1	3,2
2	Pengeluaran PO ekspansi untuk area yang berbeda	0	0,0	0	0,0	14	45,2	**16**	**51,6**	1	3,2
3	Pengeluaran PO jenis/tipe yang lain dari *optical network*	0	0,0	0	0,0	6	19,4	**23**	**74,2**	2	6,5
4	Pengeluaran PO jenis perangkat yang lain diluar *optical network*	0	0,0	1	3,2	**16**	**51,6**	14	45,2	0	0,0
5	Persetujuan POC (trial produk) untuk kebutuhan yang baru dari pelanggan pada katalog produk in roadmap *optical network*	0	0,0	0	0,0	7	22,6	**17**	**54,8**	7	22,6
6	Persetujuan POC (trial produk) untuk kebutuhan yang baru dari pelanggan pada katalog produk in roadmap *non-optical network*	0	0,0	1	3,2	13	41,9	**17**	**54,8**	0	0,0

Sumber: Lampiran 3

Table 4.2. Respondence Feedback (con't)

Jawaban Responden Terhadap Indikator Variabel Kepuasan Pelanggan (Y1)

No	Pernyataan	Skor Jawaban									
		1	%	2	%	3	%	4	%	5	%
1	Pengelolaan order dengan progress yang jelas	0	0,0	0	0,0	3	9,7	**26**	**83,9**	2	6,5
2	Interaktif dan info yang jelas setiap kendala	0	0,0	0	0,0	**18**	**58,1**	13	41,9	0	0,0
3	Pengiriman order sesuai spesifikasi produk	0	0,0	0	0,0	2	6,5	**26**	**83,9**	3	9,7
4	Pengiriman order tepat waktu	0	0,0	0	0,0	**16**	**51,6**	15	48,4	0	0,0
5	Pengelolaan dan penanganan keluhan serta rencana mitigasi	0	0,0	0	0,0	9	29,0	**20**	**64,5**	2	6,5
6	Tindak lanjut mitigate plan serta kompensasi pengurangan proyek	0	0,0	1	3,2	**16**	**51,6**	14	45,2	0	0,0

Sumber: Lampiran 3

Validity and Reliability Test

A research instrument can be said to be valid if it is able to measure what it wants to measure and can reveal the data of the variables studied permanently. According Sugiyono (2011: 134) if the correlation coefficient equal to 0.3 or more (smallest 0.3), then the instrument items declared valid.

Reliability test is used to determine the consistency of measuring instruments, whether the measuring instruments used are reliable and remain consistent if the measurement is repeated. Reliability variable is determined based on the value of alpha cronbach, if the value of alpha is greater than 0.6 then said the variable is reliable or reliable.

Table 4.3. Validity and Reliability Test

Uji Validitas Variabel Citra Merek (X1)

Pernyataan	*Correlation*	Keterangan
$X_{1.1}$	0,646	Valid
$X_{1.2}$	0,754	Valid
$X_{1.3}$	0,645	Valid
$X_{1.4}$	0,746	Valid
$X_{1.5}$	0,597	Valid
$X_{1.6}$	0,637	Valid

Sumber: Lampiran 3

Uji Validitas Variabel Kualitas Produk (X2)

Pernyataan	*Correlation*	Keterangan
$X_{2.1}$	0,692	Valid
$X_{2.2}$	0,740	Valid
$X_{2.3}$	0,517	Valid
$X_{2.4}$	0,626	Valid
$X_{2.5}$	0,646	Valid
$X_{2.6}$	0,643	Valid

Sumber: Lampiran 3

Uji Validitas Variabel *Relationship Marketing* (X3)

Pernyataan	*Correlation*	Keterangan
$X_{3.1}$	0,686	Valid
$X_{3.2}$	0,761	Valid
$X_{3.3}$	0,437	Valid
$X_{3.4}$	0,431	Valid
$X_{3.5}$	0,476	Valid
$X_{3.6}$	0,501	Valid
$X_{3.7}$	0,622	Valid
$X_{3.8}$	0,606	Valid

Sumber: Lampiran 3

Uji Validitas Variabel Kepuasan Pelanggan (Y1)

Pernyataan	*Correlation*	Keterangan
$Y_{1.1}$	0,704	Valid
$Y_{1.2}$	0,559	Valid
$Y_{1.3}$	0,697	Valid
$Y_{1.4}$	0,612	Valid
$Y_{1.5}$	0,709	Valid
$Y_{1.6}$	0,764	Valid

Sumber: Lampiran 3

Uji Validitas Variabel Loyalitas Pelanggan (Y2)

Pernyataan	*Correlation*	Keterangan
$Y_{2.1}$	0,508	Valid
$Y_{2.2}$	0,583	Valid
$Y_{2.3}$	0,561	Valid
$Y_{2.4}$	0,725	Valid
$Y_{2.5}$	0,555	Valid
$Y_{2.6}$	0,630	Valid

Sumber: Lampiran 3

Uji Reliabilitas

Variabel	*Alpha Cronbach*	Keterangan
Citra Merek (X1)	0,743	Reliabel
Kualitas Produk (X2)	0,708	Reliabel
Relationship Marketing (X3)	0,699	Reliabel
Kepuasan Pelanggan (Y1)	0,753	Reliabel
Loyalitas Pelanggan (Y2)	0,623	Reliabel

Sumber: Lampiran 3

Analysis of Multiple Linear Regression

Table 4.4. Coefficients Regression each Variable

Persamaan Regresi Linier BergandaModel 1

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	,808	,241		3,353	,002
	X1	,177	,077	,200	2,291	,030
	X2	,353	,040	,674	8,862	,000
	X3	,237	,055	,339	4,310	,000

a. Dependent Variable: Y1, Sumber: Lampiran 3

Persamaan Regresi Linier Berganda Model 2

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	,365	,173		2,107	,045
	X1	,313	,051	,363	6,142	,000
	X2	,185	,048	,362	3,884	,001
	X3	,155	,043	,229	3,606	,001
	Y1	,247	,116	,254	2,127	,043

a. Dependent Variable: Y2 , Sumber: Lampiran 3

Y1 = 0,177**X1** + 0,353**X2** + 0,237**X3**+ 0,808

Y2 = 0,313**X1** + 0,185**X2** + 0,155**X3** + 0,247**Y1**+ 0,365

Classic Assumption Test

From the results of data processing with SPSS program obtained the graph of Normality &Heteroskedasticity as follows:

Figure 4.1. Normality Test

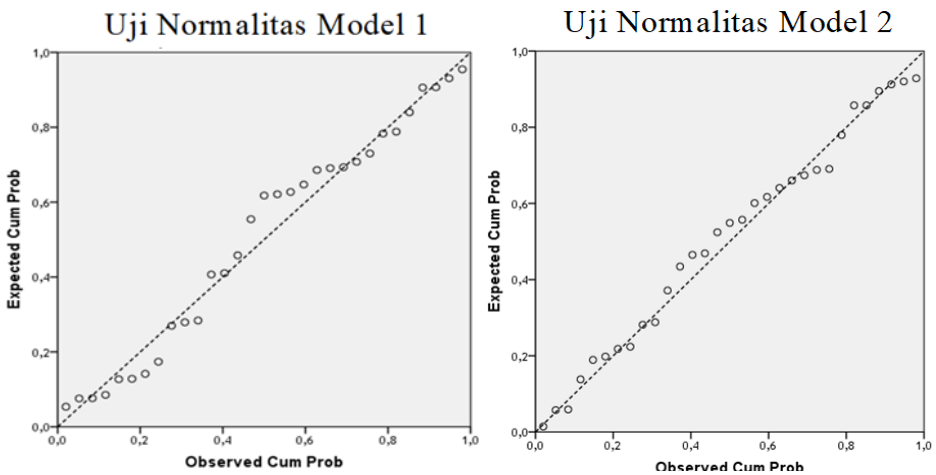
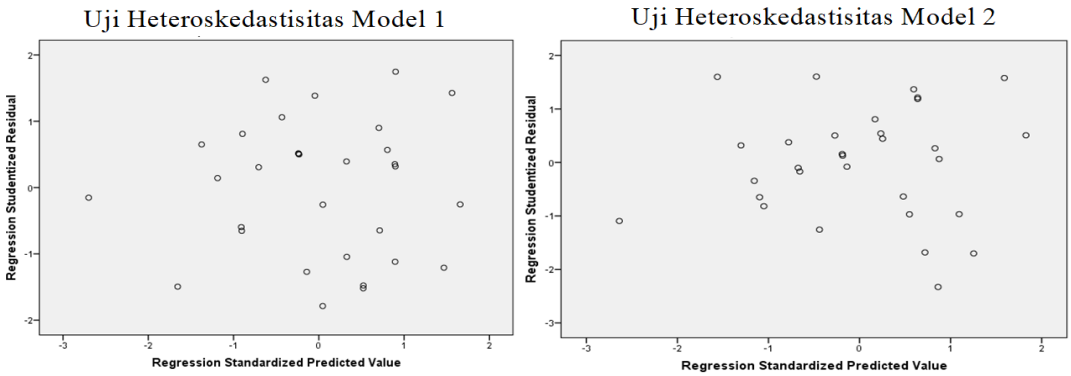


Figure 4.2. Heteroscedasticity Test



Correlation and Determination (R2) Coefficient

Multiple coefficients are used to determine the strength of exogenous variables relationship to endogenous variables. Based on result of calculation result of multiple analysis as follows:

Table 4.5. Correlation & Determination (R2) Coefficients

Nilai Koefisien Korelasi BergandaModel 1

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,937[a]	,878	,864	,12235

a. Predictors: (Constant), X3, X2, X1
b. Dependent Variable: Y1 Sumber: Lampiran 3

Nilai Koefisien Korelasi BergandaModel 2

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,977[a]	,955	,948	,07387

a. Predictors: (Constant), Y1, X3, X1, X2
b. Dependent Variable: Y2 , Sumber: Lampiran 3

The coefficient of determination (R2) is used to measure how much the exogenous variable in explaining or influencing the endogenous variables.

Matrix of Correlation between Dimension

The correlation matrix n random variables X1, ..., Xn are n × n matrices where i, j are Corr (Xi, Xj). If the correlation measure used is the product moment coefficient, the correlation matrix will be equal to the Xi / SD (Xi) standardized random variable covariance matrices for i = 1, ..., n. Thus, the correlation matrix is a non-negative definite matrix.

Table 4.6. Correlations Matrix

Correlations

		X1	X2	X3	Y1	Y2
X1	Pearson Correlation	1	,459**	,513**	,683**	,820
	Sig. (1-tailed)		,005	,002	,000	,00
	N	31	31	31	31	3
X2	Pearson Correlation	,459**	1	,166	,822**	,775
	Sig. (1-tailed)	,005		,186	,000	,00
	N	31	31	31	31	3
X3	Pearson Correlation	,513**	,166	1	,554**	,616
	Sig. (1-tailed)	,002	,186		,001	,00
	N	31	31	31	31	3
Y1	Pearson Correlation	,683**	,822**	,554**	1	,926
	Sig. (1-tailed)	,000	,000	,001		,00
	N	31	31	31	31	3
Y2	Pearson Correlation	,820**	,775**	,616**	,926**	
	Sig. (1-tailed)	,000	,000	,000	,000	
	N	31	31	31	31	3

**. Correlation is significant at the 0.01 level (1-tailed),

The correlation matrix is always symmetrical, ie the correlation between Xi and Xj is the same as the correlation between Xj and Xi).

Hypothesis Testing

From Table 4.4 Model-1 (t-test) Hypotheses 1, 2, and 3 can be seen that:

- The significance value of Brand Image Variable X (X1) is 0,030. The value indicates that individually Brand Image (X1) have an effect on Customer Satisfaction (Y1) because of significance value t <0,05.
- The significance value of Product Quality variable (X2) is 0.000. These values indicate that individually Product Quality (X2) affects Customer Satisfaction (Y1) because of the significance value t <0,05.
- The significance value of t Relationship Marketing (X3) variable is 0.000. The value indicates that individually Relationship Marketing (X3) affects Customer Satisfaction (Y1) because of significance value t <0,05.

From table 4.7 (F-test) Hypotheses 4 and 9 it can be seen that:

- This indicates that simultaneously Brand Image (X1), Product Quality (X2), and Relationship Marketing (X3) have an effect on Customer Satisfaction (Y1) because of significance value F <0,05.
- This shows that simultaneously Brand Image (X1), Product Quality (X2), Relationship Marketing (X3), and Customer Satisfaction (Y1) influence Customer Loyalty (Y2) because F significance value <0,05.

Table 4.7. Correlation Matrix

Pengujian Hipotesis 4

ANOVA[a]

Model		F	Sig.
1	Regression	64,697	,000[b]
	Residual		
	Total		

a. Dependent Variable: Y1
b. Predictors: (Constant), X3, X2, X1

Pengujian Hipotesis 9

ANOVA[a]

Model		F	Sig.
1	Regression	137,187	,000[b]
	Residual		
	Total		

a. Dependent Variable: Y2
b. Predictors: (Constant), Y1, X3, X1, X2

From table 4.4 Model-2 (t-test) Hypotheses 5, 6, 7 and 8 can be seen that:

- The significance value of Brand Image variable (X1) is 0.000. The value indicates that individually Brand Image (X1) has an effect on Customer Loyalty (Y2) because of significance value t <0,05.
- The significance value of Product Quality variable (X2) is 0,001. The value indicates that individually Product Quality (X2) affects Customer Loyalty (Y2) because of significance value t <0,05.
- Value of significance t variable Relationship Marketing (X3) of 0.001. The value indicates that individually Relationship Marketing (X3) affects Customer Loyalty (Y2) because of significance value t <0,05.
- Value of significance t Customer Satisfaction variable (Y1) of 0.043. These values indicate that individually Customer Satisfaction (Y1) affects Customer Loyalty (Y2) because the significance value t <0,05.

Analysis of Multiple Linear Regression

Path analysis is an extension and development of multiple linear regression, and which allows the analysis of more complex models (Streiner, 2005). The Line Analysis Technique is used to test the amount of contribution (contribution) shown by the path coefficient on each path diagram of the causal relationship between variables. Based on the results of research known Brand Image (X1), Product Quality (X2), Relationship Marketing (X3), and Customer Satisfaction (Y1) individually and together influence to Customer Loyalty (Y2).

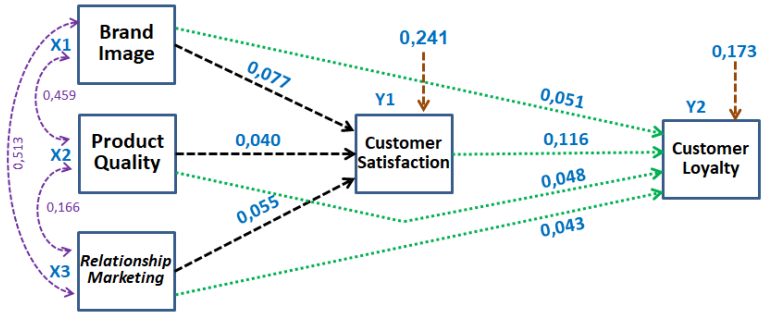


Figure 4.2. Path Analysis of Linear Regression

V. CONCLUSIONS

Based on the results of the research, the conclusions obtained from this study are as follows:

- ✓ Brand Image (X1), Product Quality (X2), and Relationship Marketing (X3) individually influence Customer Satisfaction (Y1). The result of research with t test means supporting hypothesis 1, 2, and 3 submitted.
- ✓ Brand Image (X1), Product Quality (X2), and Relationship Marketing (X3) together affect Customer Satisfaction (Y1). The result of the research with the F test means supporting the hypothesis 4 proposed.
- ✓ Brand Image (X1), Product Quality (X2), Relationship Marketing (X3), and Customer Satisfaction (Y1) individually influence Customer Loyalty (Y2). The result of research with t test means supporting hypothesis 5, 6, 7, and 8 submitted.
- ✓ Brand Image (X1), Product Quality (X2), Relationship Marketing (X3), and Customer Satisfaction (Y1) jointly affect Customer Loyalty (Y2). The result of the research with the F test means supporting the proposed hypothesis 9.

REFERENCES

[1]. Akarapanich, S. (2006), Comparing Customer Loyalty Intentions using Trust, Satisfaction, and Commitment of Online MBA Students Versus Traditional MBA Students, dissertation, Nova Southeastern University, Fort-Lauderdale-Davie, FL **

[2]. Anderson, E.W. and Sullivan, M.W. (1993), "The antecedents and consequences of customer satisfaction for firms", Marketing Science, Vol. 12 No. 2, pp. 125-143, **

[3]. Anderson, E. and Weitz, B.A. (1992), "The use of pledges to build and sustain commitment in distribution channels", Journal of Marketing Research, Vol. 29, Febraury, pp. 18- 34.

[4]. Anderson, R.E. and Swaminathan, S. (2011), "Customer satisfaction and loyalty in e-markets: a PLS path modeling approach", The Journal of Marketing Theory and Practice, Vol.19 No. 2, pp. 221-234, **

[5]. Anders Gustaffsson, Michael D. Johnson, Inger Roos (2006), The Effects of Customer Satisfaction, Relationship Commitment Dimensions, and Triggers on Customer Retention, Journal of Marketing, 69(4), 210-218, 2006.
[6]. Athiyaman, A. (1997), "Linking student satisfaction and service quality perceptions: the case of
[7]. university education", European Journal of Marketing, Vol. 31 No. 7, pp. 528-540.
[8]. Bambang Sukma Wijaya (2013), Dimensions of Brand Image: A Conceptual Review from the Perspective of Brand Communication, European Journal of Business and Management ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online) Vol 5, No.31, 2013.
[9]. Bowen, J.T. and Shoemaker, S. (2003), "Loyalty: a strategic commitment", Cornell Hotel and Restaurant Administration Quarterly, Vol. 44 Nos 5/6, pp. 31-46, **
[10]. Carvalho, S.W. and de Oliveira Mota, M. (2010), "The role of trust in creating value and student loyalty in relational exchanges between higher education institutions and their students", Journal of Marketing for Higher Education, Vol. 20 No. 1, pp. 145-165, **
[11]. Chen-Yu, H. J., Williams, G., and H, D. K. (1999). Determinants of Consumer Satisfaction/Dissatisfaction with the Performance of Apparel Products. Family and Consumer Sciences Research Journal, 28 (2), 167–192, **
[12]. Cronin, J. J., Taylor, J., & Taylor, S. A. (1987). Measuring service quality: A reexamination and extension. Journal of Marketing , 56 (3), 55-68.
[13]. Christian Homburga, Bettina Rudolphb (2011), Customer satisfaction in industrial markets: dimensional and multiple role issues, Journal of Business Research 52 (2001) 15 – 33, 2011.
[14]. Deghan, A., Dugger, J., Dobrzykowski, D., dan Balazs, A. (2014), "The Antecedents of student loyalty in online programs", International Journal of Educational Management, Vol. 28, No. 1, pp. 15 – 35, **
[15]. Dehghan, A. (2006), Relationship Between Service Quality and Customer Satisfaction: In the Case of CCG (Customer Centric Group) CO, Department of Business Administration an d Social Science, Lulea University of Technology, Lulea, **
[16]. Dehghan, A. and Shahin, A. (2011), "Customer loyalty assessment a case study in MADDIRAN, the distributor of LG electronics in Iran", Business Management and Strategy, Vol. 2 No. 1, pp. E2-23, **
[17]. Govindasamy, T. (2002), "Successful implementation of e-Learning pedagogical considerations", The Internet and Higher Education, Vol. 4 Nos 3-4, pp. 287-299, **
[18]. Gundlach, G.T., Achrol, R.S. and Mentzer, J.T. (1995), "The structure of commitment in exchange", The Journal of Marketing, Vol. 59 No. 1, pp. 78-92, **
[19]. Helgesen, Ø. and Nesset, E. (2007b), "What accounts for students' loyalty? Some field study evidence", International Journal of Educational Management, Vol. 21 No. 2, pp. 12 6-143. **
[20]. Muhammad Ishtiaq Ishaq, Mazhar H. Bhutta, Asad Afzal Hamayun, Rizwan Qaiser Danish, Nazia Munazer Hussain (2014), Role of Corporate Image, Product Quality and Customer Value in Customer Loyalty: Intervening Effect of Customer Satisfaction, ISSN 2090-4304, Journal of Basic and Applied Scientific Research.
[21]. Nischay Kumar Upamannyu & Shilpa Sankpal (2014), Effect of brand image on customer satisfaction & loyalty intention and the role of customer, Journal of Social Science Research, ISSN:2321-1098, 2014, Vol.3, No.2.
[22]. Parasuraman, A., Zeithaml, V.A. and Berry, L. (1985), "A conceptual model of service quality and its implications for future research", Journal of Marketing, Vol. 49 No. 4, pp. 41-50.
[23]. Selnes, F. (1993), "An examination of the effect of product performance on brand reputation, satisfaction and loyalty", European Journal of Marketing, Vol. 27 No. 9, pp. 19-35.
[24]. Shankar, V., Smith, A.K. and Rangaswamy, A. (2003), "Customer satisfaction and loyalty in online and offline environments", International Journal of Research in Marketing, Vol. 20 No. 2, pp. 153-175.
[25]. Shahroudi, Kambiz (2014), The Impact of Brand Image on Customer Satisfaction and Loyalty Intention (Case Study: Consumer of Hygiene Products), International Journal of Engineering Innovation & Research Volume 3, Issue 1, ISSN: 2277 – 5668.
[26]. Tepeci, M. (1999). Increasing Brand Loyalty in the Hospitality Industry. International Journal of Contemporary Hospitality Management, 11(5), 223-229.
[27]. Young Gin Choi, Chihyung Ok, Seunghyup Seon, Hyun (2011), Evaluating Relationships among Brand experience, Brand Personality, Brand Prestige, Brand Relationship Quality, and Brand Loyalty: An Empirical Study of Coffeehouse Brands.
[28]. Zohaib Ahmed, Mukhtar Ahmad, Misbahul Haq (2014), Effect of brand trust and customer satisfaction on brand loyalty in Bahawalpur, Journal of Sociological Research, ISSN 1948-5468, 2014, Vol. 5, No. 1.
[29]. Zins, A.H. (2001), "Relative attitudes and commitment in customer loyalty models: some experiences in the commercial airline industry", International Journal of Service In dustry Management, Vol. 12 No. 3, pp. 269-294.