

**THE FACTORS THAT AFFECT CUSTOMER LOYALTY IN SHOPEE
ONLINE SHOP**

THESIS

Presented as partial fulfillment of the Requirements

To Obtain the Bachelor Degree in Management Department



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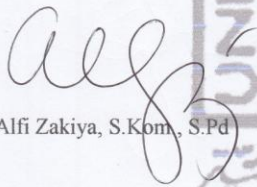
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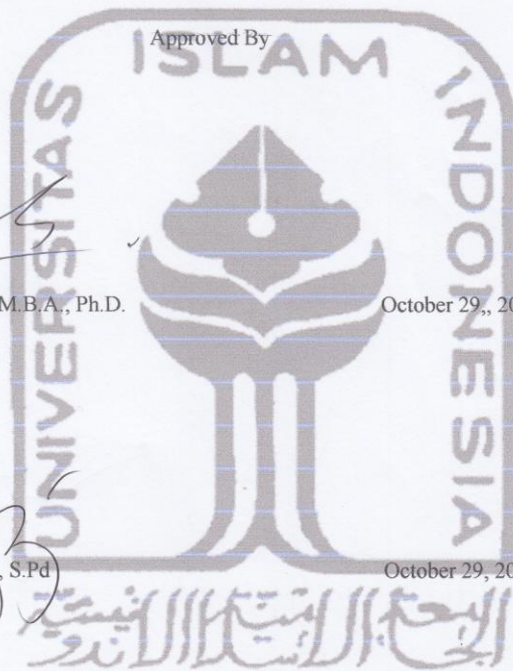
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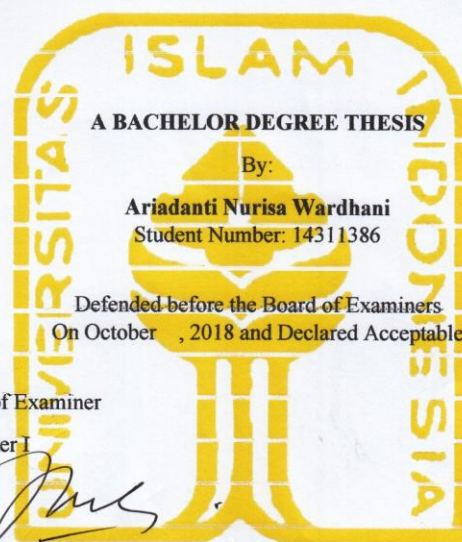


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DECLARATION OF AUTHENCITY

Here in I declare the originality of the thesis. I have not presented anyone else's work to obtain my university degree, nor have I presented anyone else's words, ideas, or expression without acknowledgement. All quotations are cited and listed in the bibliography of the thesis.

If in the future this thesis statement is proven to be false, I am willing to accept any sanction complying with the determined regulation or its consequence.

Yogyakarta, Augustus 08, 2018



Ariadanti Nurisa Wardhani

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ABSTRACT

This research aims to examine the factors that influence customer loyalty, value of customer perception and customer satisfaction in Shopee Application user in Indonesia. There are three hypotheses tested in this research, namely (1) customer perception has positive effect on customer loyalty, (2) customer perception has positive effect on customer satisfaction, (3) customer satisfaction has positive effect on customer loyalty. This research took samples from Shopee application user in Indonesia using questionnaire on 200 samples. Hypothesis testing used Structural Equation Modeling customer perception had positive influence on customer satisfaction and customer loyalty. Customer satisfaction had positive influence on customer loyalty. It can be concluded that Shopee customer loyalty was influenced by customer perception and customer satisfaction.

Keywords: *Customer Perception, Customer Satisfaction, Customer Loyalty*

ABSTRAK

Penelitian ini bertujuan untuk menguji secara empiris faktor-faktor yang mempengaruhi loyalitas konsumen, nilai persepsi pelanggan dan kepuasan pemakai aplikasi online shop Shopee. Terdapat tiga hipotesis yang diuji dalam penelitian ini, yaitu (1) Nilai persepsi pelanggan mempunyai pengaruh positif terhadap loyalitas konsumen, (2) Nilai persepsi pelanggan mempunyai pengaruh positif terhadap kepuasan pelanggan, (3) Kepuasan pelanggan mempunyai pengaruh positif terhadap loyalitas konsumen. Penelitian ini mengambil sampel dari pengguna jasa aplikasi online shop Shopee menggunakan metode kuesioner sejumlah 200 sampel. Pengujian hipotesis menggunakan *Structural Equation Modelling* (SEM) dengan bantuan perangkat lunak *AMOS 21*. Hasil dari penelitian ini menunjukkan bahwa persepsi pelanggan memiliki pengaruh yang positif pada kepuasan pelanggan dan loyalitas konsumen. Kepuasan pelanggan memiliki pengaruh yang positif pada loyalitas konsumen. Dapat disimpulkan bahwa loyalitas konsumen pengguna aplikasi Shopee dipengaruhi oleh persepsi pelanggan dan kepuasan pelanggan.

Kata kunci : Persepsi Pelanggan, Kepuasan Pelanggan, Loyalitas Konsumen.

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CHAPTER 1

INTRODUCTION

1.1 Background

The need for technology, both in the form of information and telecommunication is very high from the lower middle class to the upper middle class. All individuals are in desperate need of technology to accelerate development or enhance the development of both individual and group development. The development of technology that is currently very rapid is internet technology, which has become an integral part of people's lives.

The Internet or the World Wide Web (www) has dramatically influenced business behavior. Markets, industries and businesses are changing to meet economic and technological demands. Information technology (IT) is now used to encourage business and market activities. Today, the internet is a strong communication mechanism and can facilitate the improvement and processing of business transactions. This has led to substantial changes in the industry. The internet offers opportunities to sell products for daily living needs directly to customers who are in the customer market or customers in the industrial market.

Direct selling of goods and services via internet is called 'electronic commerce'. The definition of electronic commerce (e-commerce) according to Laudon and Laudon (2009) is a process of buying and selling products electronically by customers and from companies to companies with computers as intermediaries for business transactions. According to the data from APJII (2016)

or Indonesian Internet Service Providers Association, the number internet in Indonesia really seen very positive results. The number of internet users in 2016 had reached 88.1 million people from 252.4 M population with a penetration of 34.9%. The rapid development of the internet users in Indonesia was triggered by the needs of the Indonesian people for the ease of obtaining goods through the internet. The rapid growth of internet users turned out to encourage the growth of online shopping service providers. E-commerce has become an irreplaceable marketing channel in business transactions. Online stores and services are important sales channels in B2C transactions. Studying online shopping behavior of consumers has been one of the most important research agendas in e-commerce during the past decade (Chen, 2009). With the increasing number of online shopping service providers, it also makes the level of competition higher in facilitating internet users among service providers to do the E-commerce.

E-commerce means paperless transactions where innovations such as electronic data exchange, electronic mail, electronic bulletin boards, electronic fund transfers and other network-based technologies are applied on a network basis. Generally, e-commerce is a new commercial strategy leading to improvements in product quality and services and improvements at the service provision level while linking the requirements of organizations, suppliers, and customers towards reducing costs (Shaw, 2012). In this way, the process of buying and selling or exchanging products, services and information through computers are doing communication and networking including the internet (Turban et al., 2006).

Individuals or business people who are involved in e-commerce, buyers or sellers, rely on Internet-based technology to carry out their transactions. E-commerce has the ability to allow transactions at anytime and anywhere. The power of e-commerce allows geophysical barriers to disappear (Blut, 2015).

There are five e-commerce business models in Indonesia, namely Classified Ads, C2C Marketplace, Shopping malls, B2C online stores, online social media stores. One of the most widely used e-commerce business models is the C2C Marketplace (Lukman,2014). This is because the C2C Marketplace model of buying and selling activities must use online transaction facilities such as escrow services or third party accounts to ensure transaction security. The seller will only receive payment money after the item is received by the buyer. As long as the goods have not arrived, the money will be kept in the third party account. If the transaction fails, the money will be returned to the buyer. This facility provided transaction convenience for sellers and buyers (Lukman, 2014).

One of the newest E-commerce products is Shopee. Shopee is an online Marketplace application for buying and selling through mobile easily and quickly. Shopee offers a variety of products ranging from fashion products to products for daily needs. Shopee comes in the form of a mobile application to make it easier for users to do online shopping without having to open a website through a computer device. Shopee began to enter the Indonesian market at the end of May 2015 and Shopee began the operations at the end of June 2015 in Indonesia. Shopee is a subsidiary of Garena based in Singapore.

Shopee has been presented in several countries in Southeast Asia such as Singapore, Malaysia, Vietnam, Thailand, Philippines, and Indonesia. Shopee Indonesia is located at Wisma 77 Tower 2, Jalan Letjen. S. Parman, Palmerah, Special Capital Region of Jakarta 11410, Indonesia. Shopee gives new shopping experience. Shopee facilitates sellers to sell easily and provide buyers with a secure payment process and integrated logistics arrangements. In improving and maintaining its users, it takes several factors to maintain the loyalty of Shopee users, both factors are customer perceived value and customer satisfaction. Customer loyalty is the main factor which every business project should be maintain to keep the company run smoothly and success.

According to Yang and Peterson (2004), customer loyalty is influenced by several factors, namely the value of customer perception, customer satisfaction and switching costs. Customer loyalty is the main goal of marketing, thus; customer loyalty really needs to be maintained and improved because it retains existing customers more easily and saves costs more than finding new customers. Loyalty will provide many benefits for the company, thus; it will encourage someone to do repeat purchases (purchase intention) and recommend the brand to friends and colleagues (Lau and Lee, 1999). Based on the seller's point of view, loyal customer behavior will work easily, complain a little, have low sensitivity to price changes and provide greater benefits (Dick and Basu, 1994). Customer loyalty is a measure of customer loyalty to the use of a brand. Loyalty is recognized as an important factor and is a prerequisite for the survival of a company.

Kotler (2000) describes the value of customer expectation of the product capacity to fulfilled goals. Service management literature stated that customer satisfaction is a perception of the value received in a transaction or relationship (Heskett et al., 1997).

Mowen and Minor (2002) defined customer satisfaction as the overall attitude that customers show on goods or services after the customer has acquired and used them. Beside that, Kotler and Keller (2007) explained that satisfaction is associated with feelings of pleasure or disappointment of someone who appears after comparing perceived product performance to the expected performance. If the product performance is not in line with expectations, there will be dissatisfaction. But when a product has a performance that is at least equal to or exceeds customer expectations, it will create satisfaction.

Previous empirical research has identified the value of perception as a major determinant of customer loyalty in conditions such as telephone services (Yang and Peterson, 2004), flight travel, and retail services (Sirdeshmukh et al. in Yang and Peterson, 2004). According to Yang and Peterson (2004), the perception has positive contribution on loyalty.

Mc Dougall and Levesque (2000) concluded that perceived value is a significant determinant of customer satisfaction and effects loyalty through customer satisfaction. In testing the ACSI model (American Customer Satisfaction Index), Fornell et al. (1996) stated that the value of customer perception is one of the antecedents of the overall customer satisfaction.

Customer satisfaction is one of the marketing goals that are closely related to customer loyalty. If customers feel satisfied with a product or service, they tend to continue to buy and use it (Peter and Olson, 1996). Customer satisfaction is closely related to customer loyalty and it is very influential toward profitability.

This research is a form of replication of research conducted by Yang and Peterson (2004). The object of this research is the Shopee online shop, which is one of the best online shop in Indonesia. Based on the description above, the researcher conducted a research entitled: **"THE FACTORS THAT AFFECT CUSTOMER LOYALTY IN SHOPEE ONLINE SHOP"**

1.2 Problem formulation

The formulation of the problem in this research as follows:

1. Does customer perception has positive effect on customer loyalty?
2. Does customer satisfaction has positive affect on customer loyalty?
3. Does customer perception mediating positive relationship between customer perception and customer loyalty?

1.3 Research objectives the purpose of the research is as follows:

The objectives of the research are as follow:

1. To examine the effect of customer perception on customer loyalty.
2. To examine the effect of customer satisfaction on customer loyalty.
3. To examine the effect of customer perception on customer satisfaction.

1.4 Research Benefits

Every action taken should produce benefits, while the expected benefits from the result of this research are as follow:

1. For the Company

Companies are able to find out the effect of customer perception and customer satisfaction on customer loyalty, thus; companies could find a way on how to keep their customers loyal. This research is expected to provide contributions and information to the company in managing customers.

2. For Academics

This research is expected to add knowledge and experience in order to improve the ability to analyze matters related to the effect of customer perception and customer satisfaction on customer loyalty (case research on Shopee online shop in Indonesia).

1.5 Systematical Writing

In writing this study, the author used systematic writing as follows:

CHAPTER I: INTRODUCTION

This chapter contains things that will be discussed in the thesis. This chapter contains the background, problem formulation, research objectives, research contributions, and systematical writing.

CHAPTER II: LITERATURE REVIEW

The theoretical basis of this research is the foundation of theory which will underlie the formation of hypotheses and basic research discussion.

CHAPTER III: RESEARCH METHODS

This chapter contains the methodology, population, and the study sample, as well as hypothesis testing.

CHAPTER IV: DATA ANALYSIS AND DISCUSSION

This chapter outlines the general description and information of test data, analysis and research result discussion.

CHAPTER V: CONCLUSIONS, SUGGESTIONS AND LIMITATIONS

This chapter outlines the conclusions that can be drawn based on the results of data processing, recommendations related to similar studies in the future and the limitation.

CHAPTER 2

LITERATURE REVIEW

This chapter provides a review of literature related to customer loyalty that is affected by the value of customer perception and customer satisfaction. The literature review is obtained from published works such as journals, books, and other reports.

2.1. Customer Loyalty

Loyalty is an old-fashioned word that describes a situation in which a person devote all his body and soul to a country, family and friends (Kotler, 2004). In marketing, loyalty is customer loyalty to a brand or product. Luarn and Lin (2003) defined customer loyalty as a customer's intention to buy back a product or service through a special supplier. Loyalty may fade over time. What begins as a fully loyal situation, may gradually become a situation where the company only gets a portion of the customer's business. Another aspect of customer loyalty that indicates the existence of a customer relationship is the customer's willingness to recommend the company to their friends, family members and colleagues.

Oliver in Yoo et al. (2000) defined customer loyalty as the depth of commitment held to repurchase or subscribe to a product or service in the future. Customer loyalty is a form of repetitive purchase. Loyal customers will carry out repeat buying behavior on the same product, even though many products offer discounts and vigorous promotions.

Customers who are loyal to a product or service have several characters (Assael, 2001), including: loyal customers tend to be more confident in their choices, loyal customers prefer to reduce risk by making repeated purchases of the same product, more loyal customers lead to loyalty to a store, minor customer groups tend to be more loyal. According to Hasan (2008), the benefits of loyalty include: reducing marketing costs, trade leverage, attracting new customers, responding to competitors' threats, positive word of mouth, and a cumulative value of the sustainable business.

2.2. Customer Perceived Value

Customer perceived value is the result of evaluating relative benefits and sacrifices in relation to supply (Yang and Peterson, 2004). Perceived value according to Luarn and Lin (2003) is an assessment by customers and is based on a shared consideration of what is received and what is sacrificed to get it. According to Barnes (2003), buyers who want to buy something in a particular product or service category will observe their choices and observe all brands or models in the category they want to buy. Customers will buy services or products that they feel can give the highest value.

Kotler and Keller (2007) stated that the limitations of search costs, and limited knowledge, mobility and income of customers tend to maximize the value. Thus, it is very important for marketers to know what is customer perceived value (CPV), namely the difference between the prospective customer evaluation of all benefits and all bid costs and other alternatives to think about. Whereas the total customer value is the monetary value that is thought of as a set of economic, functional and psychological benefits, which is expected by the customer for a

particular market offer and the total customer cost is a set of costs that customers must incur to evaluate, obtain, use and ignore certain market bids including monetary, time, energy and psychic costs. (Kotler and Keller, 2007)

It is widely known that the perception of value, which is the key determinant of loyalty, consists of the components taken, namely the buyer's profits obtained from the seller's offer and the components provided, namely the monetary and non-monetary costs of the buyer from obtaining an offer (Zeithaml, 1998).

Barnes (2003) identified that customers perceived value have different ways. The customer's view of value is closely related to the price and what they can replace the money they spend. They observe that customers identify value in four ways: cheap prices, whatever I want in a product or service, the quality I get instead of the price I pay, what I can replace what I can give.

In this case, Sirdeshmukh, Singh, and Sabol (2002) argued that customer value is a higher goal and customer loyalty which is a subordinate goal because this is the behavioral intention. According to the identity and purpose theory of action, higher goals tend to determine subordinate goals. Thus, customer value governs behavioral intentions of loyalty to service providers as long as the relational exchange provided higher value (Sirdeshmukh et al., 2002).

Liu (2007) stated that customer's perception as a longterm ongoing orientation toward a relationship grounded on both emotional bond to the relationship and on the conviction that remaining in the relationship will yield net benefits than terminating it. Customers perception are regarded as antecedents of repeat purchase behavior. perception shown to have significant impact on e-

loyalty also the result of the research by Yang and Peterson (2004) stated that perceived value has positive contribution on loyalty.

H1: Customer perception has positive effect on customer loyalty.

2.3. Customer Satisfaction

According to Oliver (1993), satisfaction is the customer's response after their needs are fulfilled. This means an assessment which is form of a privilege of goods or services, that provides a level of comfort associated with fulfilling a need, including meeting the needs under expectation or fulfilling the needs of customers.

Whereas according to Woodruff (1997) customer satisfaction is defined as all positive or negative feelings regarding the value of services received from service providers. Companies need to monitor and improve the level of customer satisfaction. According to Engel (2001), Customer Satisfaction is a post-purchase evaluation where the alternative is chosen at least equal or exceeding customer expectations, while dissatisfaction arises if it still does not meet expectations.

Customer satisfaction remains a viable business among the customer marketing community (Oliver 1993). According to Szymanski and Henard (2001), customer satisfaction is a critical focus for effective marketing programs. However, the various definitions that appear in the literature tend to be different from each other.

Although there are many theories developed on satisfaction, there are only two key definitions, namely satisfaction of specific transactions and accumulative

satisfaction. Specific transaction satisfaction is seen in the short term, as a post-purchase evaluation at a particular meeting or service (Anderson, Fornell, and Lehmann, 1994). This is the most widely used concept in satisfaction and is the basis of the disconfirmation paradigm. In general, this satisfaction is seen from the aspect of the product. Other aspects include satisfaction with the consumption experience, purchasing decisions, a seller, and a store. In contrast to accumulative satisfaction which describes long-term evaluation which is a summary of customer experience with the company (Anderson, Fornell, and Lehmann, 1994; Anderson and Sullivan, 1993). This means that overall satisfaction is seen as a function of satisfaction with some experience or meeting with the company.

While customers' performance expectancy refers to the degree to which customers believe that online shopping improves their transaction experience and, like effort expectancy, affects their future intentions (Venkatesh et al., 2003). Whenever customers receive pleasure from online shopping, their satisfaction increases, and they will stay loyal.

Yang and Peterson (2004) proposed two approaches on customer satisfaction that are widely used: specific transaction approaches and overall satisfaction approaches. Specific transaction approaches define customer satisfaction as an emotional response by customers to the experience of transactions that have just been experienced with an organization or company (Oliver, 1993). Related responses occur at specific time following consumption, after the selection process has been completed. Affective responses vary in intensity depending on the situational variables shown. The overall satisfaction

perspective views customer satisfaction in the way that cumulative evaluation requires the sum of satisfaction associated with the product in a specific and different aspect of the company. Compared to specific transaction satisfaction, overall satisfaction reflects customers' cumulative impression of the company's service performance.

Customer perception of a product offered in the market will effect customer buying behavior. Feelings of satisfaction or dissatisfaction with a product that we buy appear when we compare what we expect with what we feel after using the product. Customer satisfaction is the extent to which the benefits of a product are perceived according to the customers expectation. This customer satisfaction is the goal of every marketing (Amir, 2005). Performance expectancy refers to the degree to which customers believe that online shopping improves their transaction experience and, like effort expectancy, affects their future intentions (Venkatesh et al., 2003). Whenever customers receive pleasure from online shopping, their satisfaction increases,

Woodruff (1997) argued that perceptual value represents customer knowledge about the nature of relational exchange with their suppliers, and satisfaction reflects. The overall feeling of the customer comes from perceived value. Based on behavioral models, it had significant effect on customer knowledge (Yang and Peterson, 2004) There is also empirical evidence that the value of customer perception has a positive effect on customer satisfaction with suppliers (Anderson and Mittal, 2000). The resulted of research by Yang and Peterson (2004) stated that value perception has a significant effect on loyalty.

H2: Customer perceived value has positive effect on customer satisfaction.

Customer satisfaction and customer loyalty have a very close relationship. Customer satisfaction has the function as an antecedent of customer loyalty. Customer satisfaction prevents customers from making long-standing decisions, thus; constituting an important cause of customer loyalty (Fornell, 1992). The higher the level of customer satisfaction, the more likely customers remain loyal to us (Kotler, 2003). Satisfied customers tend to have a higher level of service than those who are dissatisfied (Bolton and Lemon, 1999). A number of studies have revealed that customer satisfaction has positive effect on loyalty (Zeithaml et al., 2002). Satisfied customers are ready to recommend the company to others, to show their loyalty (Barnes, 2003).

A satisfied customer is likely to return (Lee et al., 2009), satisfaction is not only a key factor that affects customers' online perceived value but also an important factor of customer e-loyalty. Anderson and Srinivasan (2003) revealed that though satisfaction commitment relationship is not so strong, but still, increase in satisfaction level enhances the commitment and loyalty of customers. Commitment to a preferred online service develops loyalty for that service provider. To be loyal, the customer must consistently confirm that his or her expectations about the goods or services are met. Second is the affective sense (favored attitude) in which consumers are repeatedly satisfied from purchasing decisions. A major objective for delivering value to customers is to develop loyal customers who can increase purchase frequency, purchase quantity, and avoid switching behavior (Rust, Lemon, & Zeithaml, 2004). Thus, delivering customer

value is a primary method to build a firm's competitive advantage (Kanagal, 2009; Lee & Overby, 2004).

Study by Luarn and Lin (2003) The customer satisfaction are crucial in business relationship, without customer satisfaction, the relationship will not sustain, and finally relationship between business service and customers should contribute to the loyalty and customer perceived value. Hsu et al. (2006) posit that satisfaction has a positive influence on customers' intention to repeat their online purchases. Additionally, experience affects positively the users' attitude and consequently their satisfaction. Yang and Peterson (2004) also stated that satisfaction has positive contribution on loyalty.

H3: Customer satisfaction has positive mediating effect between customer perceived value and customer loyalty.

2.4. Research Framework

This research tested the effect of customer perception and customer satisfaction on customer loyalty. Based on the formulation of the problem and the theoretical basis described above, the research framework is as follows:

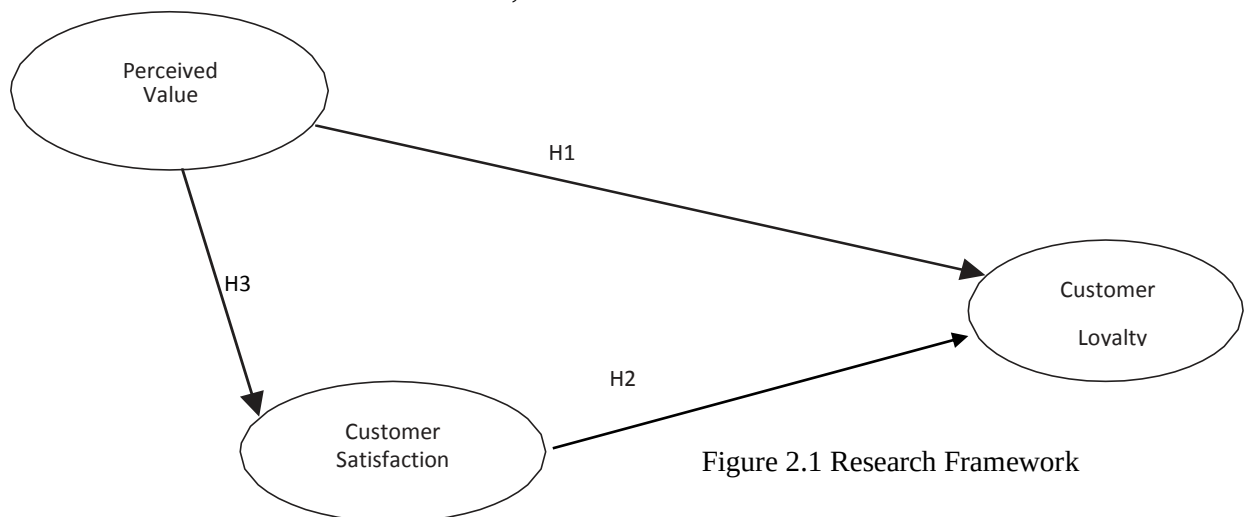


Figure 2.1 Research Framework

Source of research framework: Yang and Peterson (2004) which have been modified. In this frame of mind what is meant by direct effect is the direct relationship between variables X and Y without any other influencing variables. The source of the above theoretical framework comes from a journal written by Yang and Peterson (2004) after modified. The above theoretical framework model explains the effect of customer perception and customer satisfaction on customer loyalty. The independent variable in this research is the value of customer perception and the dependent variable in this research is customer loyalty. In this research, between the independent variable and the dependent variable, there is an intermediate variable namely customer satisfaction.

CHAPTER 3

RESEARCH METHODOLOGY

In this chapter, the researcher discussed research methods includes data collection methods, the method of determining the sample, the measurement of operational variable, testing and Statistics analysis of gauge to test the hypotheses that have been proposed.

3.1 Research Design

This research aimed to test the hypotheses that had been formulated. In testing the hypothesis, the researcher tested whether there was a predicted relationship that strengthened and answered the research questions that had been formulated (Sekaran, 2003). Based on the relationship between independent variables and dependent variable in this research, the independent variable was the cause and the dependent variable was the result of the phenomenon. Based on the time dimension, this research was categorized into cross-sectional or one-shot research, meaning that a research was carried out with the data that was only collected once, daily, weekly or monthly periods in order to answer research questions (Sekaran, 2003). The method used in this research was survey method.

3.2 Population and Research Sample

3.2.1. Population

Population is the total number of units or individuals that have the characteristics to be tested (Djarwanto and Subagyo, 2000). Population is also defined as a whole group of people, events or interests that the researchers want

to investigate (Sekaran, 2006). The population in this research was the Shopee online shop users.

3.2.2 Research Sample

The sample is a portion of the population consisted by a number of members who had been selected from the population to be studied (Sekaran, 2006). In other words, some but not all elements of the population will become a sample (Sekaran, 2003). In this research, convenience sampling technique was used. In this sampling technique the writer was free to choose individuals who will become the research respondents (Sekaran, 2006).

The size of the sample size was determined in accordance with the opinion of Hair et al. (1998) which stated that a representative sample size for using structural equation modeling (SEM) ranged from 100 to 200 samples or 5 times the number of parameters estimated. In this research, the authors used the opinion from Hair et al. (1998). Questionnaire was distributed by IT team to 200 respondents who have access to internet and have the experience of purchasing online stores at shopee. All respondents were voluntarily recruited.

3.3 Data Collection Methods

The data needed in this research was primary data. Primary data is the data obtained directly from the first hand for the next analysis to find the solution or problem after the research (Sekaran, 2006). The method of data collection conducted in this research was questionnaire. Questionnaire is a number of written questions that will be answered by the respondent, thus; the researcher obtained

empirical data to solved the research problem to test the hypothesis (Supardi, 2005). Data was taken by distributing questionnaires to respondents directly. Data used in this research has been collected from a private shopee users, Indonesia. Questionnaire was distributed to 200 users who had access to internet and have the experience of purchasing online stores. All respondents were voluntarily recruited. The respondents are asked to evaluate shopee services within the questionnaire. There are 200 respondents filling out the questionnaire.

The distributed questionnaire consists of three parts:

Part I : Customer Perceived Value.

Part II : Customer Satisfaction.

Part III : Customer Loyalty.

Respondents' answers were analyzed using a Likert scale. A scale is designed to allow respondents to answer some various levels of each item. In this scale, respondents are allowed to express the intensity of their feelings. Respondents are required to find the degree of agreement or disagreement with each of a series of a questions about the stimulus object. The scaling system of this research consists of the following:

Strongly Agree (SS)	: 5 (points)
Agree Answer (S)	: 4 (points)
Neutral Answer (N)	: 3 (points)
Disagree Answer (TS)	: 2 (points)

Strongly Disagree (STS) : 1 (point)

3.4. Research Variables and Its Operation Definition

The definition of operational variable explains some variables by determining the activities or actions that need to be measured by the variables.

3.4.1. Independent Variable

This variable is often called as the predictor variable, stimulus, and antecedent. In Indonesia, it is referred as the independent variable. The independent variable was a variable that affects or causes changes or the emergence of the dependent variable (bound). This variable is usually called an exogenous variable.

1) Customer Perceived Value

Perceived value (conceptual value) is a trade-off between quality and sacrifice that was carried out which has an impact where quality has a positive relationship on value while sacrifice has a negative relationship on perceived value (Agarwal and Teas, 2001). Consumer valuation of a service depends on product expectations and benefits. If consumers get the benefits received by a product greater than their expectations, the consumer would feel satisfied after making a purchase. However, on the contrary, if the benefits received are lower than expectations, consumers will become dissatisfied (Agarwal and Teas, 2001). The indicator value of customer perception consists of:

1. Free subscription fee.
2. Fast and stable application service.
3. Payment is easy to do (flexible).
4. Honest in price structure (no hidden costs).
5. Offers a variety of interesting additional features.

3.4.2. Intervening Variable

Intervening variables affects the relationship between the independent variable and the dependent variable into an indirect relationship. The intermediate variable is a variable that lies between the independent variable and the dependent variable. Therefore, the independent variable does not directly explain or affect the dependent variable.

1) Customer Satisfaction

Customer satisfaction is a post-purchase evaluation where the alternative is chosen at least equal or higher than customer expectations, the dissatisfaction arises when the resulted do not meet expectations (Enggel in Hasan, 2008).

Customer satisfaction indicators consist of:

1. Customer Service serves politely and kindly.
2. Call Center serves politely and kindly.
3. Customer requests are responded quickly.
4. Customer complaints are responded quickly.
5. Lots of promos and bonuses
6. Application bugs resolved immediately.
7. There is a money back guarantee if the item does not arrive at the buyer

3.4.3. Dependent Variable

The dependent variable is also called as the output variable, criteria, consequent. In Indonesian, it is known as the dependent variable. Dependent variables are variables that affect independent variables. The dependent variable is also called as the *indogen* variable.

1) Consumer Loyalty

Loyalty is a deep commitment to buy back or subscribe to a product or service consistently in the future causing the repetition of the same brand purchase despite used by another product and service even if there are lots of influence of the situation and various marketing efforts that have the potential to cause brand transfer (Oliver in Karsono, 2008). The indicators of consumer loyalty consists of:

1. Consistently use Shopee application for a long period of time.
2. Do not use other online shopping applications.
3. Give a positive rating in the Shopee comment column.
4. Recommend to others

3.5. Instrument Tested

3.5.1. Research Instruments

In every research, a valid and reliable research instrument is needed. The instrument can be developed by researchers themselves or previously adopted by other researchers. This study adopted a research instrument developed by previous

researchers. The research instrument in this research is a questionnaire. This questionnaire was used to measure three unobserved variables, namely customer perceived value, customer satisfaction and customer loyalty. The unobserved variable was a variable that cannot be measured directly and requires several indicators that can be measured directly (Ghozali, 2005). Thus, the questionnaire was used as an instrument to measured the unobserved variable.

3.5.2. Validity Test

Validity test is used to determine the similarity between the collected data with the data actually occurs in the object of research, in order to have valid research results to be obtained. A valid instrument means that the measuring instrument used to obtain data (measuring) is valid. Valid means that the instrument can be used to measure what should be measured (Sugiyono, 2004).

In this research, the validity test function was used to measure and analyze whether each item can be explained by the observed variables. The effectiveness of the questionnaire as a measuring tool was the most important factor in determining the quality of the research. Reliability was also designed to determine the consistency of measuring devices. This will show relative consistent result if there is a re-measurement in the same subject. In addition, if the data was strongly relevant to the real conditions, the result of each measurement in the next period would always be the same.

The type of validity that had been used was construct validity. Construct validity determined the validity of the measuring instrument by making a correlation among the scores obtained and in the form of question or statement with a total score. This total score was the value obtained from the sum of all item

scores. The correlation among item scores and their total scores must be significant based on certain statistical measured. If it turns that all the scores of all items arranged based on the dimensions of the concept correlated with the total score, it can be concluded that the measuring instrument has construct validity with the product moment technique (Sigit, 2003). An item is said to be valid if the correlation coefficient (r count) is greater than the table correlation (r table) (Ghozali, 2005). The Validity Test result is shown in Table 3.1.

Table 3 .1

Validity Test Result				
Variable	Indicator	Coef .Correlation	r table	Information
Value of Customer Perception	CPV1	0.7 08	0. 312	Valid
	CPV2	0. 711	0. 312	Valid
	CPV 3	0. 736	0. 312	Valid
	CPV 4	0. 577	0. 312	Valid
	CPV 5	0. 523	0. 312	Valid
Customer satisfaction	CS1	0. 684	0. 312	Valid
	CS2	0. 554	0. 312	Valid
	CS3	0.65 9	0. 312	Valid
	CS4	0. 667	0. 312	Valid
	CS5	0.7 15	0. 312	Valid
	CS6	0.7 70	0. 312	Valid
	CS7	0.7 43	0. 312	Valid
Consumer Loyalty	CL1	0. 611	0. 312	Valid
	CL2	0.7 45	0. 312	Valid
	CL3	0. 891	0. 312	Valid
	CL4	0. 868	0. 312	Valid

Source : Primary Data Processed, 2018

Based on table 3.1, it shows that the calculation of the correlation coefficient (r_{xy}) has r counts which is greater than r table. Thus, it can be concluded that all items were declared valid and all the questions in the research instrument can be declared feasible as instruments to measure research data.

3.5.3 Reliability Test

According to Ghazali (2006), reliability test is actually a tool to measure the reliability of a questionnaire which is an indicator of a variable or construct. A questionnaire is said to be reliable if a person's answer to a question is consistent or stable over time. Measurement of reliability was carried out by Cronbach Alpha (α) statistical test. A variable is said to be reliable if it gives a Cronbach Alpha value $> 60\%$ (0.6). If the Alpha value is $< 60\%$ (0.6), this indicates that there were some respondents who responded inconsistently. The reliability test can be shown in the following Table 3.2.

Table 3.2

Reliability Test Result			
Variable	Alpha Cronbach	Critical value	Resulted
Value of Customer Perception	0. 661	0. 6	Reliable
Customer satisfaction	0. 804	0. 6	Reliable
Consumer Loyalty	0. 729	0. 6	Reliable

Source : Primary Data Processed, 2018

Based on the summary of the reliability test in Table 3.2, it can be seen that the Cronbach Alpha coefficient value of all variables is greater than 0.6, Thus, all the questions in the research variables were declared reliable, and all questions in this research can be used for further research.

3.6. Data analysis method

3.6.1 Descriptive Analysis

Descriptive analysis is a research conducted to determine the value of variables, either one variable or more (independent) without making a

comparisons or linking with other variables (Sugiyono, 2004). The data which used schemes and descriptions of descriptive analysis were used to determine the characteristics of respondents. Descriptive of the research subjects was based on variable data obtained and the subjects studied and intended to test the hypotheses.

3.6.2. Analysis Structural Equation Modelling (SEM)

This research used a Structural Equation Modeling (SEM) as a statistical tool to analyze the collected data and to determine the correlation between variables. Data that have been collected based on questionnaire were analyzed to process the data so the results can be adjusted accordingly to the needs and the predetermined problems. The intended analysis tool is the Structural Equation Modeling (SEM). Structural Equation Modeling (SEM) is a multivariate technique that combines aspects of multiple regression and factor analysis to estimate a series of simultaneous dependency relationships (Hair et al., 2006).

SEM analysis allows the calculation of estimations of a set of regression equations that were simultaneous, multiple and interconnected. According to Ghazali (2005), the characteristics of the use of this model: (1) to estimate interdependent multiple dependent relationships, (2) its ability to bring up unobserved concepts in relationships and in determining measurement errors in the estimation process, and (3) its ability to accommodate a set of relationships between independent variables and dependent variables and reveal latent variables. According to Ferdinand (2002), the process of Structural Equation Modeling (SEM) consists of the following steps:

1) Theoretical Model Development

The first step in developing the SEM model is the development of a model that had the most important justification. Then, the model is empirically validated through the SEM program population. SEM is not used to produce causality relationships. It is used to justify the existence of theoretical causality through empirical test data (Ferdinand, 2006). Structural equation models were based on causality relationships, where changes in one variable which were assumed to result in changes in other variables. The strong causal relationship between the two variables that the researchers assumed was not chosen the method of analysis but lies in theoretical justification to support the analysis. Thus, it is clear that the relationship between variables in a model was a deduction from a theory. Without a strong theoretical basis, SEM cannot be used.

2) Creating a Flow Chart (Path Diagram)

In this second step, the model that had been built in the first stage is described in a flowchart to make it easier to see the causal relationships that the researcher wanted to test. In the flow chart, the relationships between constructs were shown through arrows. A straight arrow shows a direct causality relationship between one construct and another construct. While curved arrows show the correlation between constructs. Constructions that had been constructed in a flowcharts were divided into two groups: exogenous constructs and endogenous constructs. Exogenous constructs were known as "source variables" or "independent variables" which were not predicted by other variables in the model. Endogenous constructs were factors predicted by one or several other endogenous

constructs, but the exogenous construct can only be causally related to the endogenous construct.

3) Flowchart conversion into Structural Equation

After the research model has been developed and illustrated in the flowchart, the next step was to convert the model specification into a series of structural equations.

4) Evaluating GOF (Goodness of Fit) Criteria

In this step, the suitability of the model was evaluated through a review of various criteria for goodness of fit. For this reason, the first action taken was to evaluate whether the data that had been used can meet the assumptions of SEM, namely independent observation, convenience sampling of respondents and the linearity of all relationships. The Goodness of fit measurements can be divided into three, namely: absolute fit measures, incremental fit measures and parsimonious fit measures (Hair et al., 2010). In sum, the indices that can be used to test the feasibility of a model were presented in Table 3.3 below:

Table 3.3

<i>Goodness of Fit Indexes</i>		
No	<i>Goodness of Fit Indexes</i>	<i>Cut of Value</i>
1	<i>Chi Square</i>	Small expected
2	<i>Significance Probability</i>	≥ 0.05
3	<i>GFI</i>	≥ 0.90
4	<i>AGFI</i>	≥ 0.90
5	<i>TLI</i>	≥ 0.90
6	<i>CFI</i>	≥ 0.90
7	<i>CMIN/DF</i>	≤ 2.00
8	<i>RMSEA</i>	≤ 0.08

Sumber : Ghazali, 2005

(1) Chi Square Test

The model tested would be considered good or satisfied if the chi-square (χ^2) value is small. The value of χ^2 small means the model is good ($\chi^2 = 0$, meaning that there is no difference, H_0 is accepted) and was accepted based on probability with $p\text{-value} \geq 0.05$. Because the purpose of this analysis was to develop and test a suitable and appropriate model for the data, it requires a significant value of χ^2 that tests the null hypothesis (estimated population covariance is not the same as the covariance sample). The value χ^2 can be compared with the degree of freedom (df) to get the relative value χ^2 and it was used to conclude that the relative value χ^2 was high, meaning that the significant difference between the covariance matrix was observed and the covariance of the MAT was produced. A small value of χ^2 which produced a significant level of more than 0.05 indicates that there was no significant difference between data matrix covariance and estimated covariance matrix (Hair, et. al. in Ghazali, 2004)

(2) GFI (*Goodness of Fit Index*)

GFI (Goodness of Fit Index) developed by Joreskog and Sorbon in Ferdinand (2006), is a non-statistical measure that has the value ranges from 0 (poor fit) to 1.0 (perfect fit). High GFI values indicate better fit and how many GFI values can be accepted as feasible values to have no standards, but many researchers recommend values above 0.90 as a Good Fit measure.

(3)AGFI

Ghozali (2004) stated that AGFI is an analogchi of R^2 in several regressions. This Fit Index can be adjusted to the degree of freedom (df) to test whether the model is acceptable or not (Ghozali, 2004). The index was found from the following equation:

Whereas :

The level of acceptance is recommended if AGFI had the value of equal to or more than 0.90 (Hair, et al. in Ghozali, 2004). GFI and AGFI were criteria that measured the proportion of variance in a sample covariance matrix. A value of 0.95 can be interpreted as both an overall fit level and 0.090-0.95 indicates an adequate range of fit levels (Hulland, et al. In Ghozali, 2004).

(4) TLI (*Tucker Lewis Index*)

TLI is an alternative incremental fit index that compares models tested against the baseline model (Baumgartner & Homburg, 1996). The recommended value as the basis of the model is ≥ 0.90 (Hair, et. al., 1995), and the value close to 1 (one) indicates very good fit (Ghozali, 2004). The index was found from the equation below:

Or:

Cin's equation is different from the model evaluated and d is the degree of freedom, while Cb and db are the differences and degrees of freedom from the basic model that have a comparison

.

(5) CFI (*Comparative Fit Index*)

This is an incremental fit index that compared the tested model with the null model. The NFI value varies from 0 (no fit at all) to 1.0 (perfect fit). Like TLI, no absolute value was used as a standard, but generally recommended > 90.

(6) CMIN / DF

The function (CMIN) divided by the degree of freedom (df) would produce CMIN / DF (generally, it is used for a researcher as an indicator to measure the fit level of the model). CMIN / DF can also be calculated through chi-square statistics; 22 divided by degrees of freedom (df) which is 2 relative. The value of χ^2 is relatively < 2.0 as an indication of acceptable fit between model and data (Ghozali, 2004)

(7) RMSEA

RMSEA (The Root Mean Square Error of Approximation) is a measurement that attempts to improve the tendency of chi-square statistics to reject models with large samples. RMSEA < 0.08 is an acceptable size. The result of empirical RMSEA test is suitable for testing the strategy model with a large number of samples.

5) Test of Model Significance / Hypothesis Testing

Hypothesis testing is seen from the level of significance of causality relationships between variables with the following conditions:

1. If the probability is ≤ 0.05 , there is a significant effect of exogenous variables on endogenous variables.
2. If the probability is > 0.05 , there is no significant effect of exogenous variables on endogenous variables.

CHAPTER IV

DATA ANALYSIS AND DISCUSSION

This chapter consists of descriptive analysis that contains descriptions of the respondents, as well as the respondent's answer on each variable items. In addition, data quality testing, result of data processing and hypothesis testing, including analysis and interpretation of the result and discussion. The data that had been tested for validity and reliability was processed to test the hypotheses. Afterwards, the discussion of the result of the research is carried out along with its findings.

4.1. Descriptive Analysis

4.1.1. Characteristics of Respondents

1) Gender of Respondents

Gender of respondents consisted of male and female. The result of this data analysis can be seen in Table 4.1 below:

Table 4.1

Gender of Respondents		
Gender	Amount	Percentage
Female	140	70%
Male	60	30%
Total	200	100%

Source: Primary Data Processed, 2018

Based on the data above, it shows that Shopee application users in Indonesia were mostly female compared to male. There were 140 female of 70%

and the remaining were 60 male of 30%. This shows that the majority of Shopee online shop users were female.

2) Age of Respondents

The result of this data analysis based on age can be seen in Table 4.2:

Table 4.2

Age of Respondents		
Age	Amount	Percentage
< 16 years	35	17.5%
16-25 years	84	42 %
26-35 years	52	26 %
> 35 years	29	14.5 %
Total	200	100%

Source: Primary Data Processed, 2018

Based on the data above, Shopee online shop users who were less than 16 years old were 35 people or 17.5%, between 16-25 years old were 84 people 42%, between 26 - 35 years old were 52 people or 26%, and more than 35 years old were 29 people or 14.5%. This shows that Shopee online shop users were mostly young people.

3) Respondent's occupation

The result of this data analysis based on occupation can be seen in Table 4.3 below:

Table 4.3

Respondent's occupation

Work	Amount	Percentage
Government employees	11	5.5 %
Private employees	13	6.5 %
entrepreneur	28	14 %
University students	89	44.5 %
School Students	41	20.5 %
Etc	18	9%
Total	200	100%

Source: Primary Data Processed, 2018

Based on the data above, Shopee online shop users in Indonesia worked as civil servants were 11 people or 5.5%, worked as private employees were 13 people or 6.5%, self-employed were 28 people or 14%, students were 89 people or 44.5%, students were 41 people or 20.5%, and those who answer others were 18 people or 9%. This showed that the majority of Shopee online shop users were school students and university students.

4) Average of Respondents Revenue (within 1 month)

The result of this data analysis based on average of respondent's revenue in one month can be seen in table 4.4:

Table 4.4

Average Revenue in 1 Month

Average Revenue	Amount	Percentage
< Rp 1,000,000	28	14 %

IDR 1,000,000 – IDR 2,000,000	88	44 %
> Rp. 2,000,000	84	42 %
Total	200	100%

Source: Primary Data Processed, 2018

Based on table 4.4 Shopee online shop users in Indonesia who had the average income of 1 month < Rp 1,000,000 were 28 people or 14%, the average income between Rp 1,000,000 - Rp 2,000,000 were 88 people or 44%, and who had an average income of > Rp. 2,000,000 were 84 people or 42%. This can be seen that the majority of Shopee online shop users had an average of > Rp. 1,000,000.

4.1.2 Descriptive Statistic

This analysis described the descriptive assessment of respondents on research variables consisting of the value of customer perception, customer satisfaction, and customer loyalty. Descriptive analysis provided an overview of the data and data distribution used in this research. The description in question includes the average (mean), highest value (maximum) and lowest value (minimum) in the research.

The assessment of this research variable was measured with the lowest score of 1 (strongly disagree), and the highest score was 5 (Strongly agree). Thus; that in determining customer assessment criteria for research variables can be done with the following intervals:

The lowest perception score is: 1

The highest perception score is: 5

$$5 - 1$$

$$\text{Interval} = \frac{\quad}{5} = 0,80$$

$$5$$

Thus, the obtained perception limits were as follows:

1.00 - 1.79 = Strongly Disagree

1.80 - 2.59 = Disagree

2.60 - 3.39 = Enough

3,40 - 4,19 = Agree

4,20 - 5,00 = Strongly Agree

1) Value of Customer Perception

Variable value of customer perception is measured by 5 indicators. The result of descriptive analysis on customer perception can be seen in Table 4.5:

Table 4. 5

Assessment of Customer Perception Value Variables

No.	Value of Customer Perception	Average	Category
1	Free subscription fees.	3.68	Agree
2	Fast and stable application service	3.8	Agree
3	Payments are easy to do (flexible).	3.9	Agree
4	Honest in price structure (no hidden fees).	4	Agree

No.	Value of Customer Perception	Average	Category
5	Offers a variety of interesting additional features.	4.13	Agree
	Average	3.9	Agree

Source: Primary data processed 2018

Based on the result of descriptive analysis in Table 4.5 it shows that the average of respondent's assessment of the value of customer perception was 3.9. Whereas the highest assessment occurs in the item of "Offering a variety of interesting additional features" with an average of 4.13 (agree), and the lowest rating occurs in the item "Low subscription fee" with an average of 3.68 (agree). This seen that customers had a good perception of the Shopee online shop.

1) Customer Satisfaction

Customer satisfaction was measured by seven indicators. The descriptive analysis of customer satisfaction can be seen in the Table 4.6:

Table 4. 6

Variation in Customer Satisfaction

No.	Customer satisfaction	Average	Category
1	Customer Service serves politely and kindly.	4.2	Strongly Agree
2	Call Center serves politely and kindly.	3.95	Agree
3	Customer request are responded quickly	4.08	Agree
4	Customer complaints are responded quickly.	3.85	Agree

No.	Customer satisfaction	Average	Category
5	Lots of Promo and Bonuses	4	Agree
6	Application bugs resolved immediately	4.15	Agree
7	There is a money back guarantee if the item does not arrive at the buyer.	3.63	Agree
	Average	3.98	Agree

Source: Primary data processed, 2018

Based on the result in Table 4.6, it showed that the average of respondent's assessment of customer satisfaction was 3.98. The highest assessment occurred on the item of "Customer Service served politely and kindly" with the average of 4.2 (strongly agree), and the lowest assessment occurred on the item of "Repair of the disorder was completed on time (as promised)" with an average amount of 3.63 (agree). This showed that customers were satisfied with Shopee online shop. Shopee needed to keep up their work to be better than other competitors.

2) Customer Loyalty

Customer loyalty was measured by 4 indicators. The resulted of descriptive analysis of customer loyalty can be seen in Table 4.7:

Table 4. 7

Assessment of Customer Loyalty

No.	Customer Loyalty	Average	Category
1	Keep using Shopee services for a long time.	3.9	Agree
2	Don't use another internet provider.	3.93	Agree
3	Pay subscription fees on time.	4.08	Agree
4	Recommend to others.	4.18	Agree
	Average	4.02	Agree

Source: Primary data processed, 2018

Based on the result of descriptive analysis in Table 4.7 it shows that the average of respondent's assessment of customer loyalty was 4.02. The highest assessment occurred in the item of "Recommend to others" with the average of 4.18 (agree), while the lowest rating on the item "Keep using Shopee services for a long time" with an average of 3.9 (agree) This seen that high loyalty would keep customers to remain loyal by using Shopee application.

4.2. Quantitative Analysis

The Quantitative analysis used in this research was path analysis or SEM assumption test. This path analysis model used SEM (Structural Equation Model) analysis which was a set of statistical techniques that allows testing a series of relatively complex relationships simultaneously. This analysis was chosen to

determine the gradual effect of customer loyalty which was influenced by customer perception and customer satisfaction.

4.2.1. Data Quality Test

The measurement commitment and test of questionnaire or hypothesis were very dependent on the quality of the data used in the test. Research data would not be useful if the instrument used to collect research data has no validity and reliability. Table 4.8 tested the validity and reliability teste with the sample of 200 respondents:

Table 4. 8

Validity Test and Reliability Test 200 Sample

Variable	Indicator	(λ)	(e)	C. R.	Status
<i>Customer Perceived Value</i>				0.908686952	Reliable
	CPV1	0.568	0.369		Valid
	CPV2	0.68	0.313		Valid
	CPV3	0.867	0.128		Valid
	CPV4	0.84	0.164		Valid
	CPV5	0.639	0.324		Valid
<i>Customer Satisfaction</i>				0.887677148	Reliable
	CS1	0.536	0.386		Valid
	CS2	0.504	0.363		Valid
	CS3	0.505	0.456		Valid
	CS4	0.722	0.278		Valid
	CS5	0.703	0.287		Valid
	CS6	0.62	0.325		Valid
	CS7	0.714	0.249		Valid
<i>Customer Loyalty</i>				0.896911209	Reliable
	CL 1	0.539	0.387		Valid
	CL 2	0.582	0.325		Valid
	CL 3	0.905	0.081		Valid
	CL 4	0.817	0.136		Valid

Source: Primary data processed, 2018

4.2.2 Goodness of Fit Test

The assumptions that must be met in the data collection and processing procedures analyzed by SEM modeling were the goodness of fit test. Based on the test result on indicators of goodness of fit, it generally indicated that the measurement model used was accepted. The result of the test can be seen in Table 4.9.

Table 4. 9

<i>Measurement Model - Goodness of fit</i>			
<i>Goodness of fit</i>	<i>Cut-off Value</i>	Model Resulted	Information
<i>X² - Chi Square</i>	It is expected that the value is small	110,377	Good
<i>Significance Probability</i>	≥ 0.05	0,093	Good
GFI	≥ 0.90	0,934	Good
GFI	≥ 0.90	0,903	Good
TLI	≥ 0.90	0.979	Good
CFI	≥ 0.90	0.984	Good
Cmin / DF	≤ 2.00	1.200	Good
RMSEA	≤ 0.08	0.032	Good

Source: Primary data processed 2018

The value of X² - Chi Square had the significance level of 0.093 > 0.05. It can be seen from Ho that stated there was no difference between the sample covariance matrix and the estimated population covariance matrix. This also means that the sample covariance matrix with the estimated population covariance matrix was the same.

Based on the analysis of goodness of fit, GFI reflects the level of conformity of the overall model. The recommended level of acceptance of GFI was > 0.90. The result show the GFI value was 0.934 > 0.9. Thus, the model had good fit.

Based on Goodness of fit Index - AGFI as the development of the GFI index, is an index that has been adjusted with the degree of freedom ratio of the proposed model with the degree of freedom of the null model. The result seen that the AGFI value was $0.903 > 0.9$. This indicated that this model had good fit.

Based on the Tucker Lewis Index - TLI was an alternative incremental fit index that compares models tested with baselines. The recommended value as a good suitability was > 0.90 . The result showed that the TLI value was 0.979. Thus, the level of conformity was in good criteria.

Based on comparative Fit Index - CFI is an incremental suitability index that compares the tested model with the null model. The recommended value of CFI was > 0.90 . The test result of 0.984 indicated that the model was good.

The minimum Sample Discrepancy Function - CMIN / DF was a parsimonious suitability index that measures the relationship of the goodness of fit model and the number of estimated coefficients that were expected to achieve the level of conformity. The CMIN / DF result was 1,200 which was less than the CMIN / DF recommended value of < 2.0 . This indicated good fit model.

4.3. Hypothesis Testing and Discussion of Research Resulted

Hypothesis testing with SEM Analysis obtained the following paths:

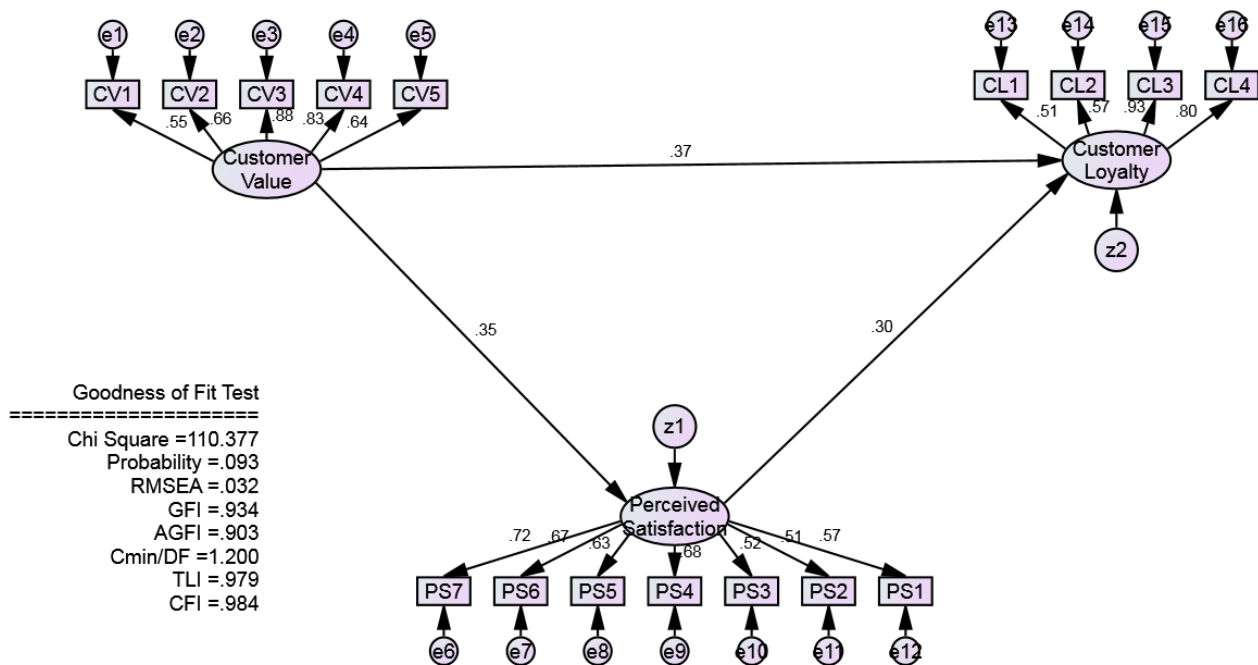


Figure 4.1 Testing Result of the Research model

While the estimation of SEM analysis result can be seen in Table 4.10 follow:

Table 4.10

Estimated Result of SEM Analysis

Relations between Variables			S. E.	C. R.	P
Customer	<-	Customer	0.348	3.560	0.000
Satisfaction	--	Perceived			
Value					
Customer	<-	Customer	0.295	3.196	0.001
Loyalty	--	Satisfaction			
Customer	<-	Customer	0.374	3.729	0.000
Loyalty	--	Perceived			
		Value			

Source: Primary data processed, 2018

From Figure 4.1 and Table 4.1, the equations that serve as guidelines for testing the first hypothesis until the third hypothesis can be formulated as follows:

Equation 1 $CS = 0.348 CPV +$

Equation 2 $CL = 0.374 CPV + 0.295 CS +$

Information:

$CS = \text{Customer Satisfaction}$

$CPV = \text{Customer Perceived Value}$

$CL = \text{Customer Loyalty}$

4.3.1. First Alternative Hypothesis testing and Discussion

The previous chapter has proposed the first alternative hypothesis stated “customer perception has positive effect on customer loyalty”. From the test result of Path Analysis (SEM), it can be seen that the standardized regression coefficient weight of customer perception on customer loyalty was equal to 0.374 with p-value of $0.000 < 0.05$. This means that customer perception had direct, significant and positive effect on customer loyalty. Thus; the first hypothesis was supported.

The better the value of customer perception, the higher the customer loyalty of Shopee online shop services application. The result in this research was consistent with the previous study by Yang and Peterson (2004) that stated perception has positive contribution on loyalty.

The significant relationship between customer perception and customer loyalty provided an understanding that Shopee online shop must be able to provide competitive prices, product diversity, quality products, and more information about customer services to increase customer loyalty.

4.3.2. Second Alternative Hypothesis Testing and Discussion

In the previous chapter, the second alternative hypothesis stated “Customer perception has positive effect on customer satisfaction”. From the test result with Path analysis (SEM), it can be seen that the standardized regression coefficient weight of customer perception on customer satisfaction was equal to 0.348 with the p-value of $0.000 < 0.05$. This means that customer perception had direct, significant and positive effect on customer satisfaction. Thus, the second hypothesis was supported.

The result of research on the effect of customer perception on customer satisfaction proved to have a positive effect. This result proved that if a product is considered to have high value, it would create satisfaction for customers. These results was not in line with the research of Andreassen and Lindestad (1998) which stated that customer perception does not affect customer satisfaction. However, the result of this research supported the statement presented by Yang and Peterson (2004) which found a strong indication of the hypothesis of a positive relationship between customer perception and customer satisfaction.

Satisfaction according to Kotler (1997) is the extent to which product performance is perceived to meet buyer expectations. If product performance is lower than customer expectations, it would lead to satisfaction that was not in accordance with customer expectations and *vice versa*. Furthermore, a significant relationship between customer perception and customer satisfaction provided an understanding that in order to increase customer satisfaction, customer perception of Shopee online shop must be increased to satisfy customer expectations.

4.3.3. Third Alternative Hypothesis Testing and Discussion

In the previous chapter, the third alternative hypothesis stated "Customer satisfaction has a positive effect on customer loyalty". The test result with Path analysis (SEM) showed the standardized regression coefficient weight of customer satisfaction on customer loyalty which was equal to 0.295 with p-value of $0.001 < 0.05$. This means that customer satisfaction had direct, significant and positive effect on customer loyalty. Thus, the third hypothesis was supported.

Conclusively, the higher the customer satisfaction, the higher the customer loyalty. The result of this research was consistent with those of Yang and Peterson (2004) and Aydin and Ozer (2005), which stated that the higher the satisfaction with the product or service the higher the positive effect on customer loyalty.

McIlroy and Barnett (2000) stated that an important concept which must be considered when building loyalty program was customer satisfaction. Customer satisfaction occurred after using the service. Customers would evaluate the experience of using the service to decide whether they would reuse the service or not. Unsatisfied customers would always replace their products with other competing products. A significant relationship between customer satisfaction and customer loyalty provided an understanding that to increase customer loyalty, customer satisfaction must be maximized.

CHAPTER 5

CONCLUSION, SUGGESTION AND LIMITATION

5.1 CONCLUSION

Based on the result of this research, as described in the previous chapter several conclusions can be drawn:

1. Customer perception had positive effect on customer loyalty, which was proven by $p\text{-value} < 5\%$ ($0.000 < 0.05$). The better the customer perception, the higher the customer loyalty.
2. Customer satisfaction had positive effect on customer satisfaction, which was proven by $p\text{-value} < 5\%$ ($0.000 < 0.05$). The better the customer perception, the higher the customer satisfaction.
- .3. Customer perception had positive effect on customer satisfaction, which was proven by $p\text{-value} < 5\%$ ($0.001 < 0.05$). The better the customer satisfaction, the higher the customer loyalty.

From the results above, the loyalty of Shopee application users is quite decent because of the positive relationship between the value of customer perception and customer satisfaction.

5.2 SUGGESTION

Based on the results of the conclusion, the writer propose the following suggestions for Shopee Online Shop in Indonesia:

1. To increase the value of customer perceptions in order to maintain the existing satisfaction and loyalty as it is today is done by maintaining product quality, improving service and paying attention to prices. Thus, it can create new things that can later become the value of customer perception which will be better than competitors.
2. To conduct a survey and evaluation of service quality and customer satisfaction with regular deadlines on the quality of services, Shopee Online Shop can conduct a customer satisfaction survey regularly. This Shopee Online Shop would know the level of customer satisfaction based on the services provided. If the survey results has low quality of service and customer satisfaction, Shopee must improv the level of service and satisfaction given to consumers.

5.3. RESEARCH LIMITATIONS

The limitations of this research are follow:

1. The outcome of this research could be biased because this research collected random sampling for the survey.
2. The sample might not represent all of the respondent of this research.
3. This research was conducted in Indonesia which was necessarily limited to the study's context. Different demographic areas can have different result because demographic factors can have customer loyalty

REFERENCES

- Agarwal, S., & Teas, K. R. (2001). Perceived value: mediating role of perceived risk. *Journal of Marketing Theory and Practice*, 9(4), 1–14.
- Amir, M. T. (2005). *Dinamika Pemasaran: Jelajahi & Rasakan*. Jakarta: Raja Grafindo Persada.
- Anderson, E. W., Fornell, C., D. R. Lehman. (1994). Customer satisfaction, market share, and profitability: findings from sweden. *Journal of Marketing* 5, 53-66
- Anderson, E. W., & Mittal, V. (2000). Strengthening the satisfaction–profit chain. *Journal of Service Research*, 3, 107–120.
- Anderson, E. W., & Sullivan, M. W. (1993). The antecedents and consequences of customer satisfaction for firms. *Marketing Science*, 12(2), 125-145.
- Anderson, R.E. and Srinivasan, S.S. (2003), E-satisfaction and e-loyalty: a contingency framework”, *Psychology and Marketing*, Vol. 20 No. 2, pp. 123-38.
- Andreassen, W. T., & Lindestad, B. (1998). The impact of corporate image on quality, customer satisfaction and customer loyalty for customer with varying degress of service expertise, 9(1), 7-23.
- Assael, H. (2001). *Customer Behavior and Marketing Action*. (6th ed.). New York University: Thomthus;n Learning.
- Aydin, S., & Ozer, G. (2005). The analysis of antecedents of customer loyalty in the turkish mobile telecommunication market. *European Journal Of Marketing*, 39(7/8), 910-925.
- Barnes, J. G. (2003). *Secrets of customer relationship management*. Yogyakarta.
- Baumgartner, H., & Homburg, C. (1996). A hallications of structural equation modeling in marketing and customer research: A review. *International Journal of Research in Marketing*, (13), 139-161.
- Blut, M., Frennea., C. M., Mittal, V., Mothersbaugh, D. L. (2015). How procedural, financial and relational switching costs affect customer satisfaction, repurchase intentions, and repurchase behavior: A meta-analysis. *International Journal of Research in Marketing*, 32(2), 226-229.

- Bolton, R. N., & Lemon, K. N. (1999). A dynamic model of customers usage of services: Usage as an antecedent and consequence of satisfaction. *Journal of Marketing Research*, 36, 171–186.
- Chen, L. (2009). *Online Consumer Behavior: An empirical study based on theory of planned behavior*. Doctoral dissertation, University of Nebraska.
- Dick, A. S., & Basu, K. (1994). Customer loyalty: toward an integrated framework. *Journal of Academy of Marketing Science*, 22(2), 99-133.
- Djarwanto P. S., & Subagyo, P. (2000). *Statistik Indukti* (4th ed.). Yogyakarta: BPFE.
- Engel, J. F. (2001). *Perilaku konsumen*. Jakarta: Binarupa Aksara
- Ferdinand, A. (2006). *Structural Equation Modeling dalam Penelitian Manajemen*. Semarang: Universitas Diponegoro.
- Fornell, C., Johnson, M. D., Anderthus;n, E.W., Cha, J. & Bryant, B. E. (1996). The american customer satisfaction index, nature purpose, and finding. *Journal of marketing*, 60, 7-18.
- Ghozali, I. (2005). *Aplikasi Analisis Multivariate dengan Program SPSS*. Semarang: Universitas Diponegoro.
- Ghozali, I. (2006). *Aplikasi Analisis Multivariate dengan Program SPSS*. Semarang: Universitas Diponegoro.
- Hair, J.F., Anderson, R.E., Tatham, R.L., & Black, W.C.. (1998). *Multivariate Data Analysis*. (5th ed). New Jersey: Prentice Hall.
- Hair, J., Black,W., Babin, B., & Anderson, R. (2010). *Multivariate Data Analysis*. (7th ed.). New Jersey: Prentice Hall.
- Hasan, A. (2008). *Marketing*. Yogyakarta: Media Pressindo.
- Hsu, M., Yen, C., Chiu, C. and Chang, C. (2006), A longitudinal investigation of continued online shopping behaviour: an extension of the theory of planned behaviour. *International Journal of Human-Computer Studies*, 64(9), 889-904.

- Kanagal, N. (2009). Role of relationship marketing in competitive marketing strategy. *Journal of Management and Marketing Research*, 1-17.
- Karsono. (2008). Peran mediasi kepuasan pelanggan, citra perusahaan dan biaya switching dalam pengaruh kualitas pelayanan pada kesetiaan pelanggan. *Fokus Manajerial*, 6(2), 10-31.
- Kotler, P. (1997). *Manajemen Pemasaran: Analisis, Perencanaan, Implementasi, dan Kontrol*. Jilid 1 (Edisi Bahasa Indonesia dari Principles of Marketing 9e). Jakarta : Prenhalindo.
- Kotler, P. (2004). *Manajemen Pemasaran: Analisis, Perencanaan, implementasi dan Kontrol*. (11th ed.). Alih Bahasa, Hendra Teguh. Jakarta: Prenhallindo.
- Kotler, P., & Keller, K. L. (2007). *Manajemen Pemasaran I*. Jakarta: Indeks.
- Lau, G. T., & Lee, S. H. (1999). Customer's trust in brand and the link to brand loyalty. *Journal of Market Focused Management*, 4(4), 341-370.
- Laudon, K., & Laudon, J. (2009). *Management Information Systems: International Edition* (11th ed.). London: Pearson Higher Education.
- Lee, E.J. & Overby, J.W. (2004). Creating value for online shoppers: Implications for satisfaction and loyalty. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 17, 54-67.
- Lee, H., Choi, S.-Y. and Kang, Y.-S. (2009), Formation of e-satisfaction and repurchase intention: moderating roles of computer self-efficacy and computer anxiety, *Expert Systems with Applications: An International Journal*, 36(4), 7848-7859.
- Lemon, K.N., Rust, R.T., & Zeithaml, V.A. (2001). What drives customer equity. *Marketing Management*, 10(1), 20-25.

- Luarn and Lin (2003). A customer loyalty model for e-service context. *Journal of Electronic Commerce Research National Taiwan University of Science and Technology*, 4(4).
- Lukman, E. (2014). 5 Model E-Commerce di Indonesia. Retrieved from <https://id.techinasia.com/5-modelbisnis-ecommerce-di-indonesia/>
- McDougall, G. H.G., & Levesque, T. J. (2000). Customer satisfaction with services: putting perceived value into the equation. *Journal of Service Marketing*, 14(5), 392 - 410.
- McIlroy, A., & Barnett, S. (2000). Building customer relationships: do discount cards work ?. *Managing Service Quality*, 10(6), 347-355.
- Mowen, J. C., & Minor, M. (2002). *Perilaku Konsumen* (2nd ed.). Jakarta: Erlangga.
- Oliver, R. (1993). Cognitive, affective and attribute bases of the satisfaction response. *Journal of Customer Research*, 20, 418–430.
- Peter, J. P., & Olson, J. C. (1996). *Customer Behaviour and Marketing Strategy* (4th ed.). New York: The McGraw-Hill Companies, Inc.
- Rust, R. T., & Oliver, R. T. (n.d). *Service quality: New directions in theory and practice*. California: Sage Publications
- Sekaran, U. (2003). *Research Methods for Business: It Skill Building A Halroach* (4th ed.). New York: John Willey dan sons Inc.
- Shaw, M., Blanning, R., Strader, T., & Whinston, A. (Eds.). (2012). *Handbook On Electronic Commerce*. Berlin: Springer Science & Business Media.
- Sirdeshmukh, D., Singh, J., & Sabol, B. (2002). Customer trust, value, and loyalty in relational exchanges. *Journal of Marketing*, 66, 15–37.

- Sigit, S. (2003). *Pengantar Metodologi Penelitian Thus;sial-Bisnis-Manajemen* (3rd ed.). Yogyakarta: Penerbitan Fakultas Ekonomi Universitas Arjanawiyata Tamansiswa.
- Szymanski, D. M., & Henard, D. H. (2001). Customer satisfaction: a meta-analysis of the empirical evidence. *Journal of Academic of Marketing Science*, 29, 16–35.
- Sugiyono. (2004). *Statistika untuk Penelitian*. (6th ed.). Bandung: Alfabeta.
- Supardi. (2005). *Metodologi Penelitian Ekonomi dan Bisnis*. Yogyakarta: UII Press.
- Turban, E., King, D., Lee, J., Warkentin, M., & Chung, M. H. (2006). *E-commerce: A managerial perspective*. Low Price Edition, 180-183.
- Venkatesh, V., Morris, M.G., Davis, G.B. and Davis, F.D. (2003), User acceptance of information technology: toward a unified view, *MIS Quarterly*, (27)3, 425-478.
- Woodruff, R. B. (1997). Customer value: the next thus;urce of competitive advantage. *Journal of the Academy of Marketing Science*, 25, 139–153.
- Yang, Z., & Peterson, R. T., (2004). Customer perceived values satisfaction and loyalty: the role of switching cost. *Journal Psychologi and Marketing*, 21, 799-822.
- Yoo, B., Donthu, N., and Lee., S. (2000). An examination of selected marketing mix elements and brand equity. *Journal of the Academy of Marketing Science*, 28, 195-211.
- Zeithaml, V.A. (1998). Customer perceptions of price, quality, and value: a means-end model and synthesis of evidence. *Journal of Marketing*, 52(3), 2-22.

APPENDIX 1

Questioner

I. Identitas Responden

Berilah tanda (X) pada jawaban yang saudara pilih :

1. Jenis kelamin?

- a. Laki-laki
- b. Perempuan

2. Usia saudara saat ini ?

- a. Kurang dari 16 tahun
- b. 16 tahun – 25 tahun
- c. 26 tahun – 35 tahun
- d. Lebih dari 35 tahun

3. Pekerjaan saudara saat ini ?

- a. Pegawai Negeri
- b. Pegawai Swasta
- c. Wiraswasta
- d. Mahasiswa
- e. Pelajar
- f. Lain-lain

4. Rata-rata pendapatan saudara / uang saku dalam satu bulan ?

- a. Kurang dari Rp. 1.000.000
- b. Rp. 1.000.000 sampai Rp. 2.000.000
- c. Lebih dari Rp. 2.000.000

II. Daftar Pertanyaan

Berilah tanda (X) pada jawaban yang saudara pilih :

STS = Sangat Tidak Setuju

S = Setuju

TS = Tidak Setuju

SS = Sangat Setuju

N = Netral

No	Pernyataan	Skala Penilaian				
<i>Customer Perceived Value</i>		STS	TS	N	S	SS
1	Gratis biaya berlangganan Shopee.					
2	Layanan internet Shopee cepat dan stabil.					
3	Pembayaran Shopee mudah dilakukan (fleksibel waktu dan tempat).					
4	Shopee jujur dalam struktur harga. (tidak ada biaya tersembunyi)					
5	Shopee menawarkan beragam fitur tambahan yang menarik.					
<i>Customer Satisfaction</i>		STS	TS	N	S	SS
6	<i>Customer Service</i> Shopee melayani pelanggan dengan thus;pan dan ramah.					
7	<i>Call Center</i> Shopee melayani pelanggan dengan thus;pan dan ramah.					
8	Permintaan pelanggan direspon dengan cepat.					

9	Keluhan pelanggan direspon dengan cepat.					
10	Banyak promo dan bonus					
11	Perbaikan gangguan diselesaikan dengan cepat.					
12	Terdapat garansi uang kembali apabila barang tidak sampai ke pembeli.					
<i>Customer Loyalty</i>		STS	TS	N	S	SS
13	Tetap menggunakan layanan Shopee untuk jangka waktu yang lama.					
14	Tidak menggunakan provider lain selain Shopee.					
15	Memberikan rating yang baik untuk aplikasi Shopee					
16	Merekomendasikan Shopee kepada orang lain.					

APPENDIX 2

Validity Test and Reliability Test of 40 Sample

Correlations

		CPV1	CPV2	CPV3	CPV4	CPV5	Tot
CPV1	Pearson Correlation	1	,547**	,435**	,209	,050	,708**
	Sig. (2-tailed)		,000	,005	,196	,757	,000
	N	40	40	40	40	40	40
CPV2	Pearson Correlation	,547**	1	,684**	,000	,088	,711**
	Sig. (2-tailed)	,000		,000	1,000	,589	,000
	N	40	40	40	40	40	40
CPV3	Pearson Correlation	,435**	,684**	1	,157	,137	,736**
	Sig. (2-tailed)	,005	,000		,333	,400	,000
	N	40	40	40	40	40	40
CPV4	Pearson Correlation	,209	,000	,157	1	,498**	,577**
	Sig. (2-tailed)	,196	1,000	,333		,001	,000
	N	40	40	40	40	40	40
CPV5	Pearson Correlation	,050	,088	,137	,498**	1	,523**
	Sig. (2-tailed)	,757	,589	,400	,001		,001
	N	40	40	40	40	40	40
Tot	Pearson Correlation	,708**	,711**	,736**	,577**	,523**	1
	Sig. (2-tailed)	,000	,000	,000	,000	,001	
	N	40	40	40	40	40	40

** . Correlation is significant at the 0.01 level (2-tailed).

Reliability

Case Processing Summary

		N	%
Cases	Valid	40	100,0
	Excluded ^a	0	,0
	Total	40	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,661	5

Correlations

Correlations

		CS1	CS2	CS3	CS4	CS5	CS6	CS7	Tot
CS1	Pearson Correlation	1	,665**	,670**	,188	,249	,341*	,388*	,684**
	Sig. (2-tailed)		,000	,000	,244	,122	,032	,013	,000
	N	40	40	40	40	40	40	40	40
CS2	Pearson Correlation	,665**	1	,602**	,056	,077	,219	,272	,554**
	Sig. (2-tailed)	,000		,000	,731	,635	,175	,090	,000
	N	40	40	40	40	40	40	40	40
CS3	Pearson Correlation	,670**	,602**	1	,229	,180	,351*	,369*	,659**
	Sig. (2-tailed)	,000	,000		,156	,265	,026	,019	,000
	N	40	40	40	40	40	40	40	40
CS4	Pearson Correlation	,188	,056	,229	1	,738**	,499**	,432**	,667**
	Sig. (2-tailed)	,244	,731	,156		,000	,001	,005	,000
	N	40	40	40	40	40	40	40	40
CS5	Pearson Correlation	,249	,077	,180	,738**	1	,734**	,382*	,715**
	Sig. (2-tailed)	,122	,635	,265	,000		,000	,015	,000
	N	40	40	40	40	40	40	40	40
CS6	Pearson Correlation	,341*	,219	,351*	,499**	,734**	1	,460**	,770**
	Sig. (2-tailed)	,032	,175	,026	,001	,000		,003	,000
	N	40	40	40	40	40	40	40	40
CS7	Pearson Correlation	,388*	,272	,369*	,432**	,382*	,460**	1	,743**
	Sig. (2-tailed)	,013	,090	,019	,005	,015	,003		,000
	N	40	40	40	40	40	40	40	40
Tot	Pearson Correlation	,684**	,554**	,659**	,667**	,715**	,770**	,743**	1
	Sig. (2-tailed)	,000	,000	,000	,000	,000	,000	,000	
	N	40	40	40	40	40	40	40	40

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Reliability

Case Processing Summary

	N	%
Cases Valid	40	100,0
Excluded ^a	0	,0
Total	40	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,804	7

Correlations

Correlations

		CL1	CL2	CL3	CL4	Tot
CL1	Pearson Correlation	1	,046	,453**	,347*	,611**
	Sig. (2-tailed)		,778	,003	,028	,000
	N	40	40	40	40	40
CL2	Pearson Correlation	,046	1	,635**	,646**	,745**
	Sig. (2-tailed)	,778		,000	,000	,000
	N	40	40	40	40	40
CL3	Pearson Correlation	,453**	,635**	1	,735**	,891**
	Sig. (2-tailed)	,003	,000		,000	,000
	N	40	40	40	40	40
CL4	Pearson Correlation	,347*	,646**	,735**	1	,868**
	Sig. (2-tailed)	,028	,000	,000		,000
	N	40	40	40	40	40
Tot	Pearson Correlation	,611**	,745**	,891**	,868**	1
	Sig. (2-tailed)	,000	,000	,000	,000	
	N	40	40	40	40	40

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Reliability

Case Processing Summary

		N	%
Cases	Valid	40	100,0
	Excluded ^a	0	,0
	Total	40	100,0

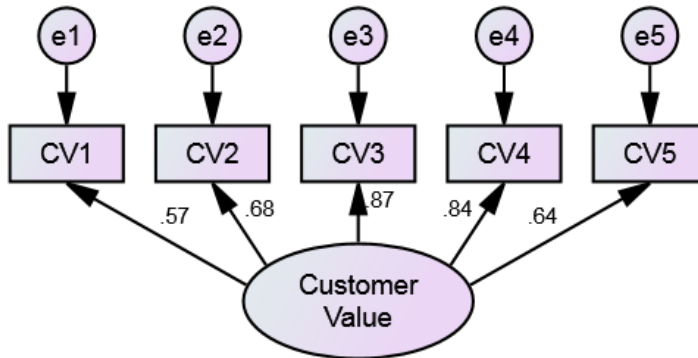
a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,762	4

APPENDIX 3

AMOS RESULT



Estimates (Group number 1 - Default model)

Scalar Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

		Estimate	S.E.	C.R.	P	Label
CV1	<--- Customer_Value	1.000				
CV2	<--- Customer_Value	1.236	.171	7.246	***	
CV3	<--- Customer_Value	1.484	.180	8.259	***	
CV4	<--- Customer_Value	1.493	.183	8.163	***	
CV5	<--- Customer_Value	1.128	.162	6.958	***	

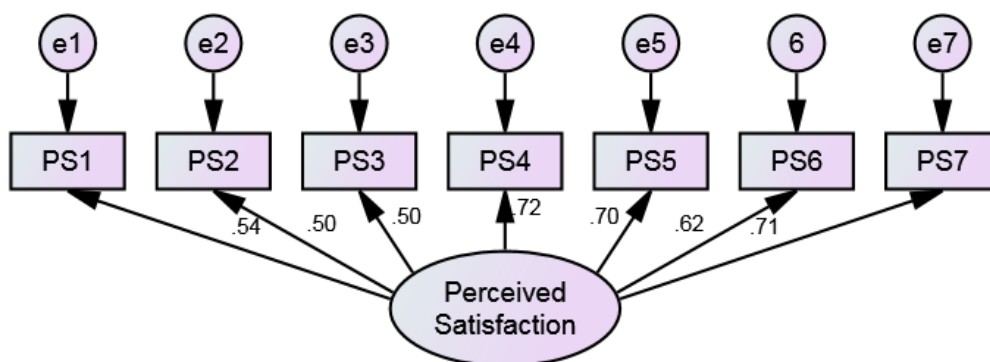
Standardized Regression Weights: (Group number 1 - Default model)

		Estimate
CV1	<--- Customer_Value	.568
CV2	<--- Customer_Value	.680
CV3	<--- Customer_Value	.867
CV4	<--- Customer_Value	.840

	Estimate
21CV5 <--- Customer_Value	.639

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Customer_Value	.176	.043	4.130	**	*
e1	.369	.040	9.325	**	*
e2	.313	.036	8.784	**	*
e3	.128	.023	5.561	**	*
e4	.164	.026	6.403	**	*
e5	.324	.036	9.025	**	*



Estimates (Group number 1 - Default model)

Regression Weights: (Group number 1 - Default model)

		Estimate	S.E.	C.R.	P	Label
PS1	<--- Perceived_Satisfaction	1.000				
PS2	<--- Perceived_Satisfaction	.892	.164	5.434	***	
PS3	<--- Perceived_Satisfaction	1.000	.184	5.436	***	
PS4	<--- Perceived_Satisfaction	1.394	.206	6.756	***	
PS5	<--- Perceived_Satisfaction	1.342	.201	6.667	***	
PS6	<--- Perceived_Satisfaction	1.142	.184	6.217	***	
PS7	<--- Perceived_Satisfaction	1.290	.192	6.721	***	

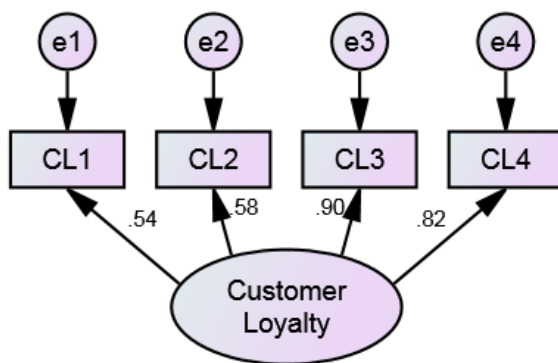
Standardized Regression Weights: (Group number 1 - Default model)

	Estimate
PS1 <--- Perceived_Satisfaction	.536
PS2 <--- Perceived_Satisfaction	.504
PS3 <--- Perceived_Satisfaction	.505
PS4 <--- Perceived_Satisfaction	.722
PS5 <--- Perceived_Satisfaction	.703
PS6 <--- Perceived_Satisfaction	.620
PS7 <--- Perceived_Satisfaction	.714

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Perceived_Satisfaction	.156	.042	3.730	**	
e1	.386	.042	9.132	**	
e2	.363	.039	9.263	**	
e3	.456	.049	9.262	**	

	Estimate	S.E.	C.R.	P	Label
e4	.278	.036	7.667	**	*
e5	.287	.036	7.907	**	*
6	.325	.037	8.661	**	*
e7	.249	.032	7.767	**	*



Estimates (Group number 1 - Default model)

Scalar Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

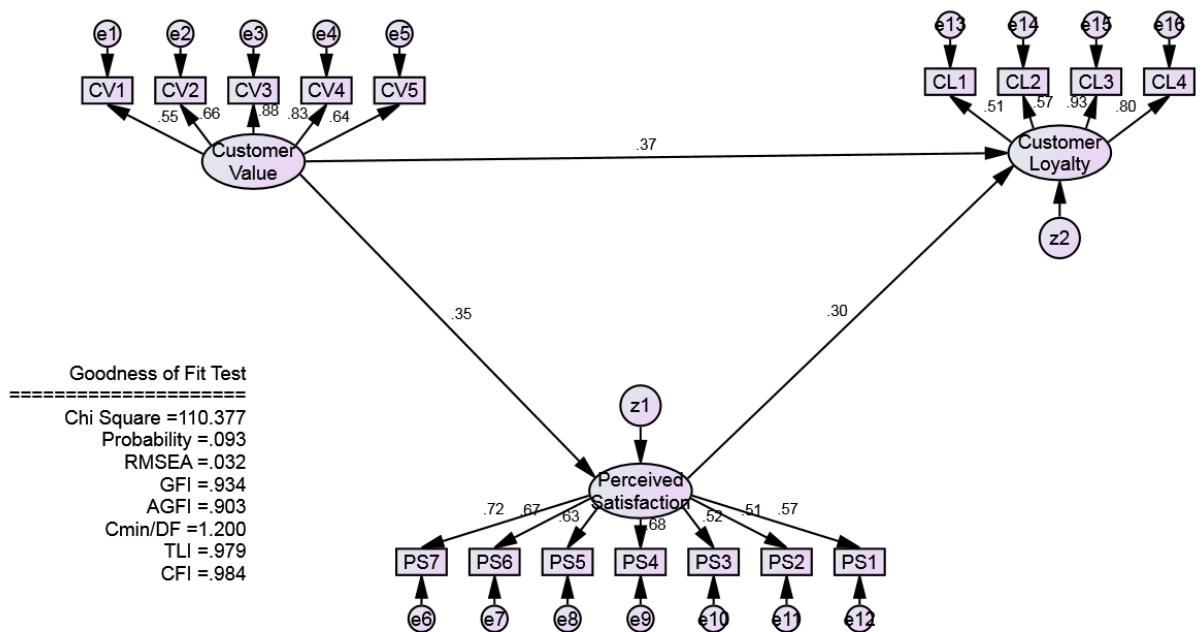
		Estimate	S.E.	C.R.	P	Label
CL1	<--- Customer_Loyalty	1.000				
CL2	<--- Customer_Loyalty	1.024	.163	6.268	***	
CL3	<--- Customer_Loyalty	1.523	.200	7.612	***	
CL4	<--- Customer_Loyalty	1.315	.174	7.575	***	

Standardized Regression Weights: (Group number 1 - Default model)

		Estimate
CL1	<--- Customer_Loyalty	.539
CL2	<--- Customer_Loyalty	.582
CL3	<--- Customer_Loyalty	.905
CL4	<--- Customer_Loyalty	.817

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Customer_Loyalty	.159	.041	3.866	***	
e1	.387	.041	9.382	***	
e2	.325	.035	9.220	***	
e3	.081	.026	3.190	.001	
e4	.136	.023	5.975	***	



Analysis Summary

Date and Time

Date: Sunday, October 06 , 2018

Time: 7:43:18

Title

Hasil amos: Sunday, October 06, 2018

7:43 AM

Groups

Group number 1 (Group number 1)

Notes for Group (Group number 1)

The model is recursive.

Sample size = 200

Variable Summary (Group number 1)

Your model contains the following variables (Group number 1)

Observed, endogenous variables

CV1

CV2

CV3

CV4

CV5

PS1

PS2

PS3

PS4

PS5

PS6

PS7

CL1

CL2

CL3

CL4

Unobserved, endogenous variables

Perceived_Satisfaction

Customer_Loyalty

Unobserved, exogenous variables

Customer_Value

e1

e2

e3

e4

e5

e12

e11

e10

e9

e8

e7

e6

e13

e14

e15

e16

z1

z2

Variable counts (Group number 1)

Number of variables in your model: 37

Number of observed variables: 16

Number of unobserved variables: 21

Number of exogenous variables: 19

Number of endogenous variables: 18

Parameter Summary (Group number 1)

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed	21	0	0	0	0	21
Labeled	0	0	0	0	0	0
Unlabeled	16	9	19	0	0	44
Total	37	9	19	0	0	65

Assessment of normality (Group number 1)

Variable	min	max	skew	c.r.	kurtosis	c.r.
CL4	2.000	5.000	-.286	-1.653	.225	.649
CL3	2.000	5.000	-.350	-2.021	-.052	-.149

Variable	min	max	skew	c.r.	kurtosis	c.r.
CL2	2.000	5.000	-.188	-1.087	-.113	-.325
CL1	2.000	5.000	-.240	-1.386	-.174	-.501
PS7	2.000	5.000	-.138	-.799	-.267	-.770
PS6	2.000	5.000	-.337	-1.947	.030	.085
PS5	2.000	5.000	-.307	-1.771	-.207	-.597
PS4	2.000	5.000	-.098	-.568	-.604	-1.745
PS3	2.000	5.000	-.196	-1.129	-.457	-1.319
PS2	2.000	5.000	-.095	-.549	-.499	-1.440
PS1	2.000	5.000	-.342	-1.977	-.039	-.114
CV5	2.000	5.000	-.192	-1.108	-.382	-1.104
CV4	2.000	5.000	.053	.303	-.887	-2.561
CV3	2.000	5.000	-.074	-.426	-.834	-2.408
CV2	2.000	5.000	-.006	-.036	-.851	-2.456
CV1	2.000	5.000	-.200	-1.156	-.576	-1.662
Multivariate					11.757	3.464

Observations farthest from the centroid (Mahalanobis distance) (Group number 1)

Observation number	Mahalanobis d-squared	p1	p2	Models
171	33.696	.006	.698	Default model (Default model)
87	33.025	.007	.432	
78	32.359	.009	.268	Notes for Model (Default model)
95	31.927	.010	.150	
91	31.703	.011	.070	Computation of degrees of freedom (Default model)
175	30.455	.016	.099	
106	29.304	.022	.153	
12	28.805	.025	.137	
27	28.536	.027	.099	

109	27.680	.035	.156
108	27.590	.035	.100
116	27.151	.040	.105
167	27.129	.040	.061
46	26.824	.043	.055
168	26.144	.052	.101
198	25.523	.061	.166
190	25.110	.068	.202
67	24.916	.071	.184
194	24.230	.085	.333
72	24.210	.085	.256
199	24.034	.089	.242
104	23.633	.098	.314
53	23.457	.102	.304
65	23.299	.106	.291
41	23.242	.107	.241
162	23.160	.110	.205
89	23.001	.114	.199
71	22.902	.116	.175
54	22.730	.121	.176
60	22.508	.128	.196
134	22.493	.128	.150
173	22.350	.132	.146
146	22.331	.133	.110
38	22.318	.133	.080
25	21.978	.144	.126
76	21.970	.144	.092
193	21.946	.145	.069

111	21.916	.146	.052
176	21.852	.148	.042
23	21.636	.155	.053
32	21.528	.159	.050
161	21.397	.164	.051
195	21.323	.166	.043
33	20.844	.185	.116
26	20.764	.188	.106
152	20.438	.201	.175
157	20.363	.204	.161
154	20.269	.208	.155
188	20.178	.212	.148
159	19.965	.222	.190
66	19.964	.222	.148
101	19.874	.226	.143
155	19.795	.230	.135
119	19.674	.235	.142
49	19.660	.236	.113
77	19.531	.242	.122
166	19.336	.252	.157
174	19.265	.255	.147
88	19.121	.262	.167
43	19.116	.263	.132
186	18.843	.277	.208
189	18.633	.288	.271
114	18.588	.291	.246
149	18.470	.297	.262
160	18.396	.301	.254

52	18.274	.308	.274
96	17.981	.325	.407
86	17.905	.329	.401
28	17.874	.331	.366
177	17.842	.333	.332
128	17.706	.341	.367
90	17.624	.346	.368
103	17.582	.349	.342
123	17.567	.350	.299
102	17.496	.354	.293
57	17.410	.360	.297
191	17.337	.364	.293
147	17.249	.370	.299
75	17.172	.375	.298
122	16.892	.393	.442
118	16.874	.394	.398
81	16.851	.395	.361
172	16.834	.396	.320
185	16.698	.405	.362
70	16.598	.412	.381
85	16.557	.415	.356
187	16.491	.419	.351
64	16.491	.419	.299
200	16.442	.423	.283
47	16.416	.424	.253
169	16.364	.428	.240
30	16.349	.429	.207
83	16.260	.435	.216

55	16.141	.443	.244
107	15.864	.462	.388
59	15.812	.466	.373
135	15.734	.472	.379
22	15.692	.475	.358
17	15.490	.489	.461
145	15.376	.497	.498

Number of distinct sample moments: 136

Number of distinct parameters to be estimated: 44

Degrees of freedom (136 - 44): 92

Result (Default model)

Minimum was achieved

Chi-square = 110.377

Degrees of freedom = 92

Probability level = .093

Group number 1 (Group number 1 - Default model)

Estimates (Group number 1 - Default model)

Scalar Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
Perceived_Satisfaction	<---	Customer_Value	.356	.100	3.560	***	
Customer_Loyalty	<---	Perceived_Satisfaction	.265	.083	3.196	.001	
Customer_Loyalty	<---	Customer_Value	.344	.092	3.729	***	
CV1	<---	Customer_Value	1.000				
CV2	<---	Customer_Value	1.241	.171	7.255	***	
CV3	<---	Customer_Value	1.551	.201	7.706	***	
CV4	<---	Customer_Value	1.516	.208	7.297	***	
CV5	<---	Customer_Value	1.163	.180	6.476	***	
PS1	<---	Perceived_Satisfaction	1.000				
PS2	<---	Perceived_Satisfaction	.850	.148	5.731	***	
PS3	<---	Perceived_Satisfaction	.968	.169	5.747	***	
PS4	<---	Perceived_Satisfaction	1.239	.185	6.705	***	
PS5	<---	Perceived_Satisfaction	1.137	.176	6.473	***	
PS6	<---	Perceived_Satisfaction	1.168	.174	6.730	***	
PS7	<---	Perceived_Satisfaction	1.230	.172	7.167	***	
CL1	<---	Customer_Loyalty	1.000				
CL2	<---	Customer_Loyalty	1.068	.151	7.078	***	

			Estimate	S.E.	C.R.	P	Label
CL3	<---	Customer_Loyalty	1.669	.234	7.120	***	
CL4	<---	Customer_Loyalty	1.372	.192	7.153	***	

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
Perceived_Satisfaction	<---	Customer_Value	.348
Customer_Loyalty	<---	Perceived_Satisfaction	.295
Customer_Loyalty	<---	Customer_Value	.374
CV1	<---	Customer_Value	.553
CV2	<---	Customer_Value	.663
CV3	<---	Customer_Value	.882
CV4	<---	Customer_Value	.830
CV5	<---	Customer_Value	.641
PS1	<---	Perceived_Satisfaction	.567
PS2	<---	Perceived_Satisfaction	.511
PS3	<---	Perceived_Satisfaction	.517
PS4	<---	Perceived_Satisfaction	.683
PS5	<---	Perceived_Satisfaction	.630
PS6	<---	Perceived_Satisfaction	.672
PS7	<---	Perceived_Satisfaction	.719
CL1	<---	Customer_Loyalty	.507
CL2	<---	Customer_Loyalty	.569
CL3	<---	Customer_Loyalty	.933
CL4	<---	Customer_Loyalty	.802

Covariances: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
e1	<-->	e2	.056	.028	1.971	.049	
e14	<-->	e16	-.021	.019	-1.093	.275	
e1	<-->	e3	.000	.022	.001	.999	
e2	<-->	e9	.064	.024	2.705	.007	
e13	<-->	e14	.106	.030	3.576	***	
e9	<-->	e8	.091	.032	2.823	.005	
e9	<-->	e7	-.051	.025	-2.018	.044	
e2	<-->	e11	.070	.026	2.719	.007	
e6	<-->	e14	.056	.022	2.500	.012	

Correlations: (Group number 1 - Default model)

			Estimate
e1	<-->	e2	.160
e14	<-->	e16	-.094
e1	<-->	e3	.000
e2	<-->	e9	.201
e13	<-->	e14	.289
e9	<-->	e8	.281
e9	<-->	e7	-.171
e2	<-->	e11	.205
e6	<-->	e14	.194

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Customer_Value	.167	.044	3.762	***	

	Estimate	S.E.	C.R.	P	Label
z1	.153	.039	3.956	***	
z2	.098	.027	3.589	***	
e1	.378	.043	8.787	***	
e2	.327	.037	8.930	***	
e3	.114	.023	4.936	***	
e4	.173	.026	6.612	***	
e5	.323	.036	9.044	***	
e12	.367	.041	8.987	***	
e11	.358	.039	9.238	***	
e10	.448	.049	9.220	***	
e9	.306	.041	7.381	***	
e8	.343	.041	8.310	***	
e7	.290	.037	7.887	***	
e6	.246	.032	7.634	***	
e13	.405	.043	9.528	***	
e14	.335	.037	9.053	***	

	Estimate	S.E.	C.R.	P	Label
e15	.058	.027	2.120	.034	
e16	.146	.024	6.195	****	

Matrices (Group number 1 - Default model)

Total Effects (Group number 1 - Default model)

	Customer_Value	Perceived_Satisfaction	Customer_Loyalty
Perceived_Satisfaction	.356	.000	.000
Customer_Loyalty	.438	.265	.000
CL4	.601	.363	1.372
CL3	.732	.442	1.669
CL2	.468	.283	1.068
CL1	.438	.265	1.000
PS7	.438	1.230	.000
PS6	.416	1.168	.000
PS5	.405	1.137	.000
PS4	.442	1.239	.000
PS3	.345	.968	.000
PS2	.303	.850	.000
PS1	.356	1.000	.000
CV5	1.163	.000	.000
CV4	1.516	.000	.000
CV3	1.551	.000	.000
CV2	1.241	.000	.000
CV1	1.000	.000	.000

Standardized Total Effects (Group number 1 - Default model)

	Customer_Value	Perceived_Satisfaction	Customer_Loyalty
Perceived_Satisfaction	.348	.000	.000
Customer_Loyalty	.477	.295	.000
CL4	.383	.237	.802
CL3	.445	.276	.933
CL2	.272	.168	.569
CL1	.242	.150	.507
PS7	.250	.719	.000
PS6	.234	.672	.000
PS5	.219	.630	.000
PS4	.238	.683	.000
PS3	.180	.517	.000
PS2	.178	.511	.000
PS1	.198	.567	.000
CV5	.641	.000	.000
CV4	.830	.000	.000
CV3	.882	.000	.000
CV2	.663	.000	.000
CV1	.553	.000	.000

Direct Effects (Group number 1 - Default model)

	Customer_Value	Perceived_Satisfaction	Customer_Loyalty
Perceived_Satisfaction	.356	.000	.000
Customer_Loyalty	.344	.265	.000
CL4	.000	.000	1.372

	Customer_Value	Perceived_Satisfaction	Customer_Loyalty
CL3	.000	.000	1.669
CL2	.000	.000	1.068
CL1	.000	.000	1.000
PS7	.000	1.230	.000
PS6	.000	1.168	.000
PS5	.000	1.137	.000
PS4	.000	1.239	.000
PS3	.000	.968	.000
PS2	.000	.850	.000
PS1	.000	1.000	.000
CV5	1.163	.000	.000
CV4	1.516	.000	.000
CV3	1.551	.000	.000
CV2	1.241	.000	.000
CV1	1.000	.000	.000

Standardized Direct Effects (Group number 1 - Default model)

	Customer_Value	Perceived_Satisfaction	Customer_Loyalty
Perceived_Satisfaction	.348	.000	.000
Customer_Loyalty	.374	.295	.000
CL4	.000	.000	.802
CL3	.000	.000	.933
CL2	.000	.000	.569
CL1	.000	.000	.507
PS7	.000	.719	.000
PS6	.000	.672	.000

	Customer_Value	Perceived_Satisfaction	Customer_Loyalty
PS5	.000	.630	.000
PS4	.000	.683	.000
PS3	.000	.517	.000
PS2	.000	.511	.000
PS1	.000	.567	.000
CV5	.641	.000	.000
CV4	.830	.000	.000
CV3	.882	.000	.000
CV2	.663	.000	.000
CV1	.553	.000	.000

Indirect Effects (Group number 1 - Default model)

	Customer_Value	Perceived_Satisfaction	Customer_Loyalty
Perceived_Satisfaction	.000	.000	.000
Customer_Loyalty	.094	.000	.000
CL4	.601	.363	.000
CL3	.732	.442	.000
CL2	.468	.283	.000
CL1	.438	.265	.000
PS7	.438	.000	.000
PS6	.416	.000	.000
PS5	.405	.000	.000
PS4	.442	.000	.000
PS3	.345	.000	.000

	Customer_Value	Perceived_Satisfaction	Customer_Loyalty
PS2	.303	.000	.000
PS1	.356	.000	.000
CV5	.000	.000	.000
CV4	.000	.000	.000
CV3	.000	.000	.000
CV2	.000	.000	.000
CV1	.000	.000	.000

Standardized Indirect Effects (Group number 1 - Default model)

	Customer_Value	Perceived_Satisfaction	Customer_Loyalty
Perceived_Satisfaction	.000	.000	.000
Customer_Loyalty	.103	.000	.000
CL4	.383	.237	.000
CL3	.445	.276	.000
CL2	.272	.168	.000
CL1	.242	.150	.000
PS7	.250	.000	.000
PS6	.234	.000	.000
PS5	.219	.000	.000
PS4	.238	.000	.000
PS3	.180	.000	.000
PS2	.178	.000	.000
PS1	.198	.000	.000
CV5	.000	.000	.000
CV4	.000	.000	.000
CV3	.000	.000	.000

	Customer_Value	Perceived_Satis faction	Customer_Loyalty
CV2	.000	.000	.000
CV1	.000	.000	.000

Modification Indices (Group number 1 - Default model)

Covariances: (Group number 1 - Default model)

		M.I.	Par Change
e7 <-->	Customer_Value	8.378	-.052
e7 <-->	z2	5.074	.032
e10 <-->	Customer_Value	6.501	.054
e11 <-->	z2	5.139	-.033
e12 <-->	e6	5.255	-.055
e4 <-->	z2	4.418	-.024
e4 <-->	e7	4.903	-.044
e2 <-->	e5	4.227	.049

Variances: (Group number 1 - Default model)

M.I.	Par Change
.	

Regression Weights: (Group number 1 - Default model)

		M.I.	Par Change
PS6 <---	Customer_Value	8.378	-.314
PS6 <---	CV4	11.094	-.186
PS6 <---	CV3	8.058	-.165
PS3 <---	Customer_Value	6.501	.325
PS3 <---	CV4	7.729	.183
PS3 <---	CV3	5.802	.164

			M.I.	Par Change
PS2	<---	CL2	4.217	-.126
CV4	<---	CL4	4.655	-.115

Minimization History (Default model)

Iteration		Negative eigenvalues	Condition #	Smallest eigenvalue	Diameter	F	NTRIES	Ratio
0	e	8		-.871	9999.000	1274.088	0	9999.000
1	e	3		-.117	1.809	654.256	20	.572
2	e	1		-.113	.884	408.475	5	.880
3	e*	0	152.571		.997	243.591	5	.792
4	e	0	62.640		.806	170.124	2	.000
5	e	0	73.898		.672	124.802	1	1.213
6	e	0	124.486		.550	113.077	1	1.171
7	e	0	211.431		.301	110.634	1	1.158
8	e	0	290.029		.142	110.384	1	1.092
9	e	0	317.695		.026	110.377	1	1.027
10	e	0	316.158		.001	110.377	1	1.002
11	e	0	316.129		.000	110.377	1	1.000

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	44	110.377	92	.093	1.200
Saturated model	136	.000	0		
Independence model	16	1285.031	120	.000	10.709

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.029	.934	.903	.632
Saturated model	.000	1.000		
Independence model	.153	.412	.333	.363

Baseline Comparithus;ns

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.914	.888	.985	.979	.984
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.767	.701	.755
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	18.377	.000	48.937
Saturated model	.000	.000	.000
Independence model	1165.031	1053.564	1283.926

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	.555	.092	.000	.246
Saturated model	.000	.000	.000	.000
Independence model	6.457	5.854	5.294	6.452

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.032	.000	.052	.931
Independence model	.221	.210	.232	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	198.377	206.596	343.503	387.503
Saturated model	272.000	297.407	720.571	856.571
Independence model	1317.031	1320.020	1369.804	1385.804

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	.997	.905	1.150	1.038
Saturated model	1.367	1.367	1.367	1.495
Independence model	6.618	6.058	7.216	6.633

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	209	228
Independence model	23	25

Execution time summary

Minimization:	.015
Miscellaneous:	1.598
Bootstrap:	.000
Total:	1.613

APPENDIX 4

Research Data of 200 Samples

N o	Customer Value					Perceived Satisfaction							Customer Loyalty				Switching Cost			
	C V 1	C V 2	C V 3	C V 4	C V 5	P S 1	P S 2	P S 3	P S 4	P S 5	P S 6	P S 7	C L 1	C L 2	C L 3	C L 4	S C 1	S C 2	S C 3	S C 4
1	4	4	4	4	4	4	4	4	5	4	4	4	4	4	5	4	4	5	3	3
2	4	4	4	5	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5
3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	3	3
4	4	3	4	4	4	4	4	5	4	4	4	4	4	4	5	4	4	4	3	3
5	4	3	5	5	4	4	4	5	4	4	4	4	4	3	4	4	5	5	4	5
6	4	3	4	4	4	4	4	4	4	4	4	4	4	3	4	4	4	4	2	3
7	4	3	4	3	4	5	4	4	4	4	4	4	3	3	4	4	4	4	2	2
8	4	3	3	4	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3
9	5	4	4	4	3	4	5	5	5	4	4	5	4	4	4	4	4	4	3	4
10	4	3	3	3	4	4	3	4	4	3	4	4	4	4	4	4	4	4	3	4
11	5	5	4	4	4	4	5	5	4	5	4	4	4	4	5	5	1	2	2	2
12	2	2	3	3	2	4	3	4	3	4	4	3	2	2	4	4	3	4	3	3
13	4	4	4	4	3	4	4	4	3	3	3	3	4	3	4	4	4	3	2	
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19 9	3	4	4	4	4	4	5	3	4	4	3	4	2	2	2	2	4	4	4	4

20 0	3	5	4	4	4	4	4	3	5	4	4	3	4	4	4	4	3	3	3	3
R at a2	3, 9 9	3, 8 9	4, 0 0	3, 8 8	3, 8 9	3, 8 9	3, 8 4	3, 8 3	3, 8 6	3, 8 9	3, 8 2	3, 8 2	3, 7 9	3, 7 8	4, 1 3	4, 0 7	3, 9 1	3, 9 3	3, 4 3	3, 6 0