

**THE DOMINANT FACTORS OF PRODUCT WHICH  
INFLUENCE PRESIDENT UNIVERSITY STUDENTS IN  
BUYING DECISION OF MOBILE INTERNET SERVICE  
PROVIDER: A CASE STUDY OF PT. SMARTFREN  
TELECOM, Tbk.**

**By**

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## **PANEL OF EXAMINERS APPROVAL SHEET**

The Panel of Examiners declare that the thesis entitled “**THE DOMINANT FACTORS OF PRODUCT WHICH INFLUENCE PRESIDENT UNIVERSITY STUDENTS IN BUYING DECISION OF MOBILE INTERNET SERVICE PROVIDER: A CASE STUDY OF PT. SMARTFREN TELECOM, Tbk.**” that was submitted by Martina Ester Widya Astuti majoring in Management from the Faculty of Economic was assessed and approved to have passed the Oral Examinations on February 15, 2012

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This thesis entitled “**THE DOMINANT FACTORS OF PRODUCT WHICH INFLUENCE PRESIDENT UNIVERSITY STUDENTS IN BUYING DECISION OF MOBILE INTERNET SERVICE PROVIDE: A CASE STUDY OF PT. SMARTFREN TELECOM, Tbk.**” prepared and submitted by Ester Widya Astuti in partial fulfillment of the requirements for the degree of Bachelor Degree in Economics in the Faculty of Economics has been reviewed and found to have satisfied the requirement for a thesis fit to be examined. I therefore recommend this thesis for Oral Defense.

Cikarang, Indonesia, January 17, 2012

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## **DECLARATION OF ORIGINALITY**

I declare that this thesis entitled “**THE DOMINANT FACTORS OF PRODUCT WHICH INFLUENCE PRESIDENT UNIVERSITY STUDENTS IN BUYING DECISION OF MOBILE INTERNET SERVICE PROVIDER: A CASE STUDY OF PT. SMARTFREN TELECOM, Tbk.**” is, to the best of my knowledge and belief, an original piece of work that has not been submitted, either in whole or in part, to another university to obtain a degree.

Cikarang, Indonesia, Januari 17, 2011

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*Ester Widya Astuti*

## **ABSTRACT**

The purpose of this research is to identify the dominant factors of product influence President University Students choose Smartfren as an internet service provider. The researcher rank the factors based on “Three Level of Product” theory by Philip Kotler and Armstrong.

This research was designed using quantitative research, which involves analysis of factor to determine the dominant factors. The questionnaire was spread to 71 students in President University. All of the respondents are the user of Smartfren. All of the statement is elaborated based on the theory. The questionnaire is designed to answer the matters observed and divided into several variables. Likert scale is used to measure the data.

The researcher use factor analysis to search the most dominant factor. Factor analysis is a statistical method used to describe variability among observed, correlated variables in term of potentially lower number of unobserved, uncorrelated variables called factors.

From the research founding, the needs of an excellent internet service provider become the most dominant factor why customer choose Smartfren as internet service provider. The first dominant factor has 31.696% of variance. From the variance, the least dominant factor is quality of customer service with 2.440% of variance.

Since Smartfren is a merger between 2 products, which are Smart and Mobile-8, company must be able to highlight the strength of the product, which is in this research related with the most dominant factor. In order to gain more customers, Smartfren also have to improve the least dominant factor which is the quality of customer service. The researcher hopes the research founding can be applied in telecommunication sector and improve understanding in product knowledge.

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# CHAPTER I

## INTRODUCTION

### 1.1 Background of Study

Internet Service Provider (ISP) refers to company that provide internet services, including personal and business access to the internet. Basically, there are 2 types of internet service provider in Indonesia, which are fixed ISP and mobile ISP. PT Smartfren is one of the mobile internet service providers in Indonesia which provide the customer with a CDMA based technology.

PT Smartfren Telecom Tbk was established in March 3, 2010. PT Smartfren Telecom is a new comer in Indonesia telecommunication market. The company has just been established for 2 years. The company is a form of cooperation between PT Smart Telecom and PT Mobile-8 Telecom, Tbk. The purpose of this cooperation is to strengthen the position in telecommunication sector.

There are several competitors in the market which is also working in mobile internet service provider sector, such as PT Telekomunikasi Indonesia, PT Indosat Tbk, PT Exelcomindo, PT Bakrie Telecom, Tbk, PT Telkom Indonesia Tbk; PT Hutchison CP Telecommunication; PT Natrindo Telecom Selular, etc.

As a new comer, PT Smartfren Telecom Tbk. have not reached yet the position as the key players in telecommunication sector. Based on the data by IEMarket Research in 2011, PT Telekomunikasi Indonesia has 44.5% of market share. It is followed by Indosat which has 16.1% of market share, and the third is Exelcomindo with 15.8% of market share. Those operators are the key player in ISP sector in 2011.

In order to increase company's growth and gain more customers, PT Smartfren Telecom Tbk. has to understand the strength of their product. The product itself is the key point in overall marketing offering. It is very important to find out the dominant factor why customers choose Smartfren as their mobile internet service provider, in order to reach the position as the key player in internet service provider sector.

## **1.2 Company Profile**

PT Smartfren Telecom, Tbk is a provider of telecommunication service operator based on CDMA technology that have cellular and mobility fixed (fixed wireless access) license. Smartfren also the first telecom operator in the world to provide CDMAEV-DO Rev. B (equivalent to 3.5 G with download speeds up to 14.7 Mbps) and the first CDMA operator to provide Blackberry service. Smartfren Telecom Tbk PT operates in the Communication services sector. Smartfren Telecom Tbk PT Formerly known as PT Mobile-8 Telecom TBK.

PT Smartfren Telecom Tbk, formerly PT Mobile-8 Telecom Tbk, is an Indonesia-based telecommunications company. The Company's principal activities include the provision of multimedia products, telecommunication and after sales services, as well as trading and distribution of telecommunication goods and equipment.

In the full of competition era, Smartfren has taken a step forward action to develop the product. On September 16<sup>th</sup>, 2011 Smartfren launched a new campaign "I Hate Slow". This innovative campaign represents a seriousness of company to synergize between Smart Telecom and Smartfren Telecom. Smartfren brand itself has being a manifestation of corporate culture that emphasize alertness and speed of service-oriented to improving business performance, effectiveness, and satisfaction to customers.

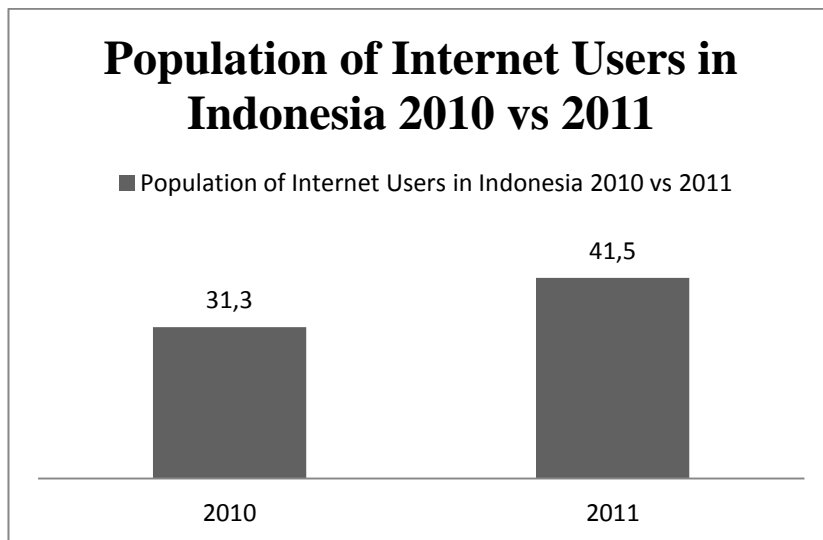
### 1.3 Problem Identification

There are more than 7 internet service providers in Indonesia. The key players in this sector are PT Telekomunikasi Indonesia Tbk, PT Indosat Tbk, and PT Exelcomindo Tbk which have succeed grab 76.4% market share in ISP sector.

Based on latest report from MarkPlus Insight in Marketeers – The Magazine November 2011, the internet users had been increased from 31.3 million last year. Now, internet users have reached 41.5 million in 2011. The graphic from the latest report is explained below:

**Figure 1.1**

**Population of Internet Users in Indonesia 2010 vs. 2011**



*Source: Markplus Insight*

As a new comer, Smartfren is required to work actively in order to increase the number of subscribers. But there is another problem which is the fact show that based on the report on third quartile on 2011; subscriber of Smartfren decreased to 6.8 million. It decreased from 6.9 million subscribers on June 2011. It means they have lost 100,000 subscribers within 3 months period.



As a part of the drivers of market share, product has been a really crucial part in increasing market share; besides promotional expenditure and intensive distribution. In order to get recognition as the key player in ISP industry and also fixing the number of subscribers that have been decreased; the researcher design this thesis to analyze the dominant factor of product which influence President University students choose Smartfren as their ISP.

#### **1.4 Statement of the Problem**

From the previous explanation, it identified that in order to grab more market share, Smartfren have to identify what are their product strength. Thus, this research is aiming to answer question below:

1. What are the dominant factors of product that influence President University students choose Smartfren as mobile internet provider?

#### **1.5 Research Objectives**

According to the statement of problems above, the main objectives of this thesis are:

- a. Identify the dominant factors of product that influence President University students choose Smartfren as mobile internet provider.

#### **1.6 Significance of the Research**

##### **1.6.1 Theoretical Significance**

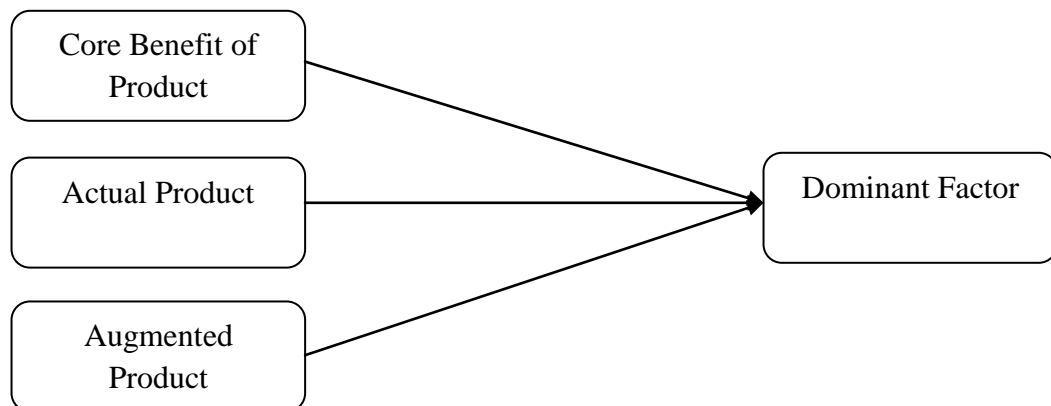
The research is done in order to implement the theory and knowledge that the researcher has learnt in class. Moreover, the research will hopefully improve knowledge about product.

### 1.6.2 Practical Significance

This research is done in order to identify what is the dominant factors of the product that influence President University students choose Smartfren as an mobile internet service provider. This research also designs to identify which factor is the least dominant. After find out the dominant factors, hopefully it can be recommendations for company in the future in order to improve products' offering

### 1.7 Theoretical Framework

**Figure 1.2**  
**Theoretical Framework**



*Source: Self Constructed*

A product can be thought about on three levels. Each level adds more customer value. The most basic level is the core customer value, which addresses the question: what is the buyer really buying? At the second level, product planners must turn the core benefit into an actual product. Product planner need to develop product and service features, design, a quality level, a brand name, and packaging. Finally, product planners must build an augmented product around the core benefit and actual product by offering additional consumer services and benefits (Kotler et al, 2010).

Through the research, the researcher want to identify which factor is dominant by using the concept of three level of product.

### **1.8 Limitations of the Study**

1. The researcher only choose 6 variables in order to determine the dominant factors, which are core benefit of the product, features, brand name, product quality, after sales support, and warranty.
2. Because there is time limitation, the respondents will be only the students who live in President University student housing and use Smartfren as their mobile internet service provider.

## **CHAPTER II**

### **LITERATURE REVIEW**

#### **2.1 Definition of Product**

Kotler and Armstrong (2010) describes product as anything that can be offered to a market for attention, acquisition, use, or consumption that might satisfy a want or need, while Stanton (1996) defined product is asset of tangible and intangible attributes, including packaging, color, price quality and brand plus the services and reputation of the seller. In addition, Karnes and Stephens (2000) asserted a product is tangible evidence of what has been learned through study and investigation.

Majumdar (2004) states a product is any tangible and intangible offering that might satisfy the needs and aspirations of a consumer, however Pride and Ferrel (2007) add product is a good, a service, or an idea received in an exchange. It can be either tangible or intangible and include all functional, social, and physiological utilities or benefits. It also includes supporting service, such as installation, guarantees, product information, and promises of repair or maintenance. Formisano (2004) makes the definition simpler, he describes product as the benefit that company deliver to customers.

#### **2.2 Three Levels of Product**

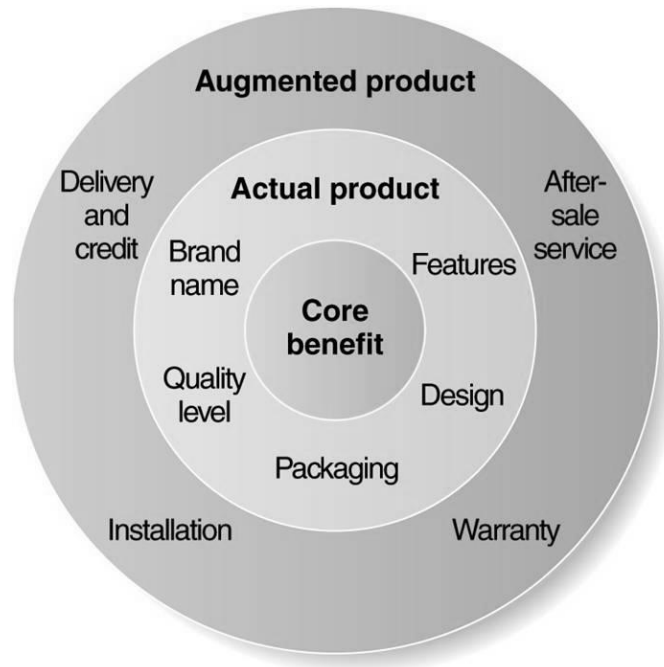
Kotler (2010) stated that product planners need to think about products and services in three levels. Each level adds more customer value. The most basic level is the *core customer value*, which addresses the question what is the buyer really buying? When designing the product marketers must first define the core, problem solving benefits or services that consumers seek.

At the second level, product planner must turn the core benefit into *actual product*. Marketers need to develop product and service features, design, a quality level, a brand name, and packaging. The third level, product planners must build an *augmented product* around the core benefit and actual product by offering additional customer services and benefits.

Consumers see products as complex bundles of benefits that satisfy their needs. When developing products, marketers first must identify the core customer value that customer seeks from the product. Marketers must then design the actual product and find ways to augmented it in order to create customer value and the most satisfying customer experience.

**Figure 2.1**

**The Three Level of Product**



Source: Kotler, Armstrong.,2010. *Principle of Marketing.13<sup>th</sup> Ed.* Singapore:Pearson

### **2.2.1 Core Customer Value**

Core customer value is the basic level of level of product. Kotler and Armstrong (2010) states core customer value addresses the question what is customer really buying. The core product is not a tangible product but it is the ultimate benefit that the customer will receive when customers purchase a product.

The core benefit is the purpose for which a consumer buys the product or service. It should satisfy the target's market highest perceived need. At the very heart of product or service will provide in relation to the unsatisfied need of target market. It is important to understand that, even though the core benefit of product can satisfies the highest need of target market, the actual product plays an important role in satisfying the lesser needs, which may become deciding factors between competing and products or service. The successful co-ordination of the attributes of the actual product in line with the needs of target market could see product or service become consumer's preferable choice (Williams, 2010).

### **2.2.2 Actual Product**

Actual product is the physical product. Core customer value are communicated and delivered by product attributes such as quality, features, styles and design, quality, and brand name. The actual product allows customers to get some use of it and customers normally can touch it. Based on Kotler's theory, the actual product can be divided into five, which are features, design, packaging, quality level, and brand name.

#### **a. Features**

A product can be offered with varying features. The company can create higher-level models by adding more features. Features are a competitive tool for differentiating the company's product from competitor's product. Being the first producer to

introduce a valued new feature is one of the most effective ways to compete (Kotler and Armstrong, 2010).

### **b. Product Style and Design**

Style simply describes the appearance of a product. Styles can be eye-catching or yawn producing. A sensational style may grab attention and produce pleasing aesthetics, but it does not necessarily make the product perform better. Unlike style, design is more than skin deep – goes to the very heart of product. Good design contributes to a product’s usefulness as well as to its looks.

Design begins with a deep understanding of customer needs. More than simply creating product or service attributes, it involves shaping the customer’s product use experience.

Lidwell, Manacsa (2009) points out several characteristic of good product design:

1. Good design is innovative – The possibilities for innovation are not, by any means, exhausted. Technological development is always offering new opportunities for innovative design. But innovative design always develops in tandem with innovative technology, and can never be an end itself.
2. Good design makes a product useful – A product is bought to be used. It has to satisfy certain criteria, not only functional but also psychological and aesthetic. Good design emphasizes the usefulness of a product while disregarding anything that could possibly detract from it.
3. Good design is aesthetic – The aesthetic quality of a product is integral to its usefulness because products are used every day and have effect on people and their well-being. Only well-executed object can be beautiful.

4. Good design makes a product understandable – It clarifies the product’s structure. Better still, it can make the product clearly express its function by making user’s intuition. At best, it is self-explanatory.
5. Good design is unobtrusive – Products fulfilling in purpose are like tools. They are neither decorative objects nor works of art. Their design should therefore be both neutral and restrained, to leave room for the user’s self expression.
6. Good design is honest – It does not make a product more innovative, powerful, or valuable than it really is. It does not attempt to manipulate the consumer with promises that cannot be kept.
7. Good design is long lasting – It avoids being fashionable and therefore never appears antiquated. Unlike fashion design, it lasts many years, even today’s throwaway society.
8. Good design is thorough down to the last detail – Nothing must be arbitrary or left to chance. Care and accuracy in the design process show respect toward the consumer.
9. Good design is environmentally friendly – Design makes an important contribution to the preservation of the environment. It conserves resources and minimizes physical and visual pollution throughout the life cycle of the product.
10. Good design is a little design as possible – Less, but better. Because it concentrates on the essential aspects, and the products are not burdened with non-essentials. Back to purity, back to simplicity.

### **c. Brand Name**

Kotler (2008) states that a brand is a name, term, sign, symbol, or design, or a combination of these, that identifies the maker or seller of a product or service. Levy and Rook (1999) give definition that a brand is a complex symbol that represent a



variety of ideas and attributes. It tells the consumers many things, not only by the way it sounds (and its literal meaning if it has one) but, more important, via the body of associations it has built up and acquired as a public object over a period of time.

Branding helps buyer in many ways. Brand names help consumer identify products that might benefit them. Brand also say something about product quality and consistency – buyers who always buy the same brand know that they will get the same features, benefits, and quality each time they buy (Kotler and Armstrong, 2010).

Branding also gives the seller several advantages. The brand name becomes the basis on which a whole story can be built about a product's special qualities. The seller's brand name and trademark provide legal protection for unique product features that might otherwise be copied by competitors. Branding also helps the seller to segment market (Kotler and Armstrong, 2010).

Onkvisit and Shaw (2008) points out several characteristics of a good brand name:

1. Short
2. Unique
3. Consistent with the category types
4. Not easily confused with the competitor
5. Free of hidden meaning in foreign language
6. Easy to remember
7. Pleasant looking in type
8. Available for a domain name
9. Clear on infringing on someone's trademark

10. Consistent with the brand's personality

#### **d. Packaging**

Packaging involves designing and producing the container or wrapper for a product. Traditionally, the primary function of the package was to hold and protect the product. In recent times, however, numerous factors have made packaging an important marketing tool as well. Increased competition and clutter on retail store shelves means that packages must now perform many sales tasks – from attracting attention, to describing the product, to making sale (Kotler and Armstrong, 2010).

#### **e. Product Quality**

Product quality is one of the marketer's major positioning tools. The American Society for Quality defines product quality is the characteristics of a product or service that bear on its ability to satisfy stated or implied customer needs (Kotler and Armstrong, 2010).

A marketing dictionary definition for product quality is relative nature or kind, distinguishing character; a distinctive property or attribute; that which gives individuality; particular capacity, value or function; particular efficacy, degree of excellence.

According to the International Standardization Organization, product quality is the totality of features and characteristics of a product that satisfies the stated or implied needs.

There are 2 notions of good product quality:

1. Performance: Product performance can be described as the response of a product to external actions in working environment. This consists, in general, of multi-dimensional set of variables, each of which is a measurable property of a product or

its element. Kotler and Armstrong (2010) define performance quality is the ability of a product to perform its' function.

2. Conformance: Conformance can be defined as the degree to which the performance of an item varies from a pre-specified standard. This is the most common accepted notion associated with conformance (or more correctly, with non-conformance). Conformance can be defined as the degree to which a product's design and operating characteristic meet pre-established standard. Kotler and Armstrong (2010) define conformance quality as freedom from defects and consistency in delivering a targeted level of performance.

### **2.2.3 Augmented Product**

The augmented product adds to the core product those services, programs, and systems a supplier offers to meet a broader set of customer requirements and preferences, or to exceed the customer's expectation in ways that add value or reduce cost in what customer does (Lacobucci, 2000).

The augmented product is developed around the core benefit and actual product by offering additional consumer services and benefits (Kotler and Armstrong, 2010). The augmented product can be divided into several aspects, which are after – sale service, warranty, product support, and delivery and credit.

#### **a. After Sales Support**

After sales service include maintenance, repair, and upgrading. If these services can be offered at fixed or guaranteed rate, they could be a significant competitive advantage. In maintenance, it is to be remembered that one way of solving the repair problem is to have detect – free product and then service can be bundled into product price, which can also be a strategic value (Rothschild, 1984).

According to Wellemin (1984), after sales support has changed drastically in recent decades. Customers have become more dependent on efficient operation of suppliers'

equipment, service are labor intensive and cost of labor has risen, products intended for the same markets are becoming more similar, customers are increasingly selective as they seek value for money, and social changes have reflected to services, for example when a service force works in the customer's premises, the supervision is frequently minimal.

After sales service may not be profitable on its own, but is frequently a key determinant in the sale of the product itself. It has been estimated that the importance of services will grow in the future. Product support can be a basis for developing a close relationship between suppliers and its customers. After sales service was followed close by the equipment itself. Difficulties related to a relationship between a supplier and its customer can be reduced by offering service that complements the product (Wellemin, 1984).

Kotler and Armstrong (2010) points out customer service is another element of product strategy. A company offer usually includes some support service, which can be a minor or major part of the total offering.

Kotler and Armstrong (2010) mention steps to offer good product support.

1. Survey customers periodically to assess the value of current services and to obtain ideas for new ones.
2. Fix problems and add new services that will both delight customers and yield profits to the company.
3. Company have to use a sophisticated mix of phone, e-mail, fax, internet, and interactive voice and data technologies to provide support service that were not possible before..

## **b. Warranty**

Murthy and Blischke (2006) define warranty is a written and/or oral manufacturer's assurance to a buyer that product or service is or shall be as represented. It may be

considered to be a contractual agreement between buyer and seller that is entered into upon sale of the product or service. The contract specifies product performance, buyer responsibilities, and what the warrantor (generally the manufacturer) will do if an item purchased fails to meet the stated performance. A warranty may be implicit or it may be explicitly stated.

Brennan (1994) states a warranty is assurance that the supplier of an item will back the quality of the item in terms of correcting any legitimate problems with the item at no additional cost for a particular period time or use.

A warranty protects the buyer and gives essential information about the product. A warranty confirms the the quality or performance of a good or service. An express warranty is a written guarantee. Express warranties range from simple statement – such as “100 percent cotton” (a guarantee of quality) and “complete satisfaction guaranteed” (a statement of performance). In contrast, an implied warranty is an unwritten guarantee that the good or service is fit for the purpose for.

Congress passed the Magnuson – Moss Warantty – Federal Trade Commission improvement Act in 1975 to help consumers understand warranties and get action from manufacturers and dealers. A manufacturer that promise a full warranty must meet certain minimum standards, including repair “within a reasonable time and without charge” of any defects and replacement and merchandise or full refund if the product does not work ‘after a reasonable number of attempts” at repair. Any warranty that does not live up to this tough prescription must be conspicuously promoted as limited warranty.

### **c. Installation, Delivery and Credit**

From [www.businessdictionary.com](http://www.businessdictionary.com), installment can be defined as fixed or semi-fixed location of a complete system or a self contained unit, with its accompanying assemblies, accessories and parts. Installation generally also includes provision of a connection or services required to make the installed equipment ready for operation.

From [www.investorwords.com](http://www.investorwords.com), credit can be defined as a contractual agreement in which borrower receives something of value now and agrees to repay the lender in some later date. Installation, delivery and credit are also important to create a full package product. Customers will delight if company not only offers the core benefit, but also good actual product and augmented product.

## 2.2 The Five Stages Buying Decision Process

Figure 2.2

### The Five Stages of Buying Decision Process



*Source: Pride, Ferrel.2010. Foundation of Marketing. Singapore: Prentice Hall*

The five-stages buying decision process is a widely used tool for marketer to gain a better understanding about their customers and their behavior (Kotler & Kelle, 2006). The idea of the model is that when a customer purchase an item, the purchase event is a-forward-moving process, which begins long before the actual purchase and continues even after the purchase is made. As the name implies, there are five different stages in the process, which are need recognition, information search,

evaluation of alternatives, purchase decision, and post-purchase behavior. Following is the review of each of these stages in the consumer buying process.

### **2.2.1 Need Recognition**

The buying process begins with needs recognition (sometimes referred to problem recognition), where the buyer senses the difference between their actual state and state they desire. Kotler and Armstrong (2005) stated that this need can be triggered by either an internal (hunger, thirst), and external (passing through McDonald's stimulate hunger) stimuli.

Other factors besides differences in the buyer's actual and desired state influence need recognition as well. One of the directly observable influences is demographic factors, including age, sex, income, race, education, household size, and marital status (Kinneer & Bernhardt, 1986). There are also inferred influences which affect need recognition. Psychological factors play a major role in these inferred influences.

Of these psychological factors, motivation is the basis of all consumer behavior. Although there is no general agreement among psychologists on the best way to classify consumer needs as far as motivation goes, Kinneer and Bernhardt (1986) divide the motivational needs into physiological and psychological needs. The former include, for example, the need for food and shelter, while the latter are generated by one's social environment.

Perception reflects how the customers see themselves and their surroundings, which in turn affects not only the need recognition phase, but the other phases as well. Depending on the consumer's needs and perceptions, need recognition may take different forms. In addition to purchasing something totally new or replacing a broken/outdated item, consumers may replace a product that fills their needs completely with another. This phenomenon is called variety seeking. Van Trijp, Hoyer and Inman (1996) have suggested that higher purchase frequencies stimulate

repeat purchasing rather than variety-seeking behaviour, which gives e-marketers a good reason to make the threshold for shopping as low as possible.

### **2.2.2 Information Search**

The next stage in the buying process is information search, where the consumer uses different channels to gather information about available products, which might fulfill the needs discussed above. Kotler (2006) defines two levels of arousal during the information search phase. In the milder state, heightened attention, the consumer just becomes more familiar with the different products that might be suitable for them. In this state, the consumer only pays attention to advertisements and conversations about the subject. In the next state, active information search, the consumer actively engages these conversations and searches for information about different brand, model, etc.

Kotler (2006) also defines four methods by which consumers receive product/service information. Personal sources include family and friends. Commercial sources include advertising and salespersons. Public sources include mass media and consumer-rating organization.

Experimental sources include examining and using the product itself. Most of the information comes from the commercial sources, but according to Dubois, the most effective information comes from personal sources.

Another factor affecting of the amount and type of information search is the perceived risk (uncertainty) involved with the purchase. In his study, Urbany, (1986) divides uncertainty into two categories. Knowledge uncertainty includes uncertainty regarding information about alternatives, and choice uncertainty means uncertainty about which alternative to choose.



Of all the possible products and brands that might satisfy a customer's needs, only a handful will be brought to the consumer's attention. Kotler (2006) defines four sets of alternatives from which the final purchase decision will be made.

The total set includes all the possible brands available to the customer. Derived from the total set, is an awareness set, which includes the brands the customer has come to know. Brands that meet the buyer's purchasing criteria are taken from the awareness set to form the consideration set. As more information about the products of the consideration set is gathered and evaluated, the final purchase decision will be made from the choice set.

Peter and Olson (2004) define a similar process, which divides all the brands in the product class into familiar and unknown brands. From unknown brands, those that are found accidentally and those found through intentional search make it to the choice set. From familiar brands, only those that are activated from memory (evoked set) make it to the choice set. Among the familiar brands, there may be some that once have been familiar to the customer, but are lost in memory. Of the evoked set, brands that are liked more and thought more typical to the product class tend to emerge into the choice set.

Narayana and Markin (1975) have extended the awareness set to consist of three different subsets. They define the evoked set as a set of products of which the consumer has a positive opinion and from which they are likely to make their purchase. Inert set includes products for which the consumer has neither negative nor positive opinion. The consumer may be aware of such products but not have formed an opinion, possibly due to lack of knowledge. The final set is called the inept set, which includes the products for which the consumer has formed a negative opinion, and therefore these will not to be purchased.

### **2.2.3 Evaluation of Alternatives**

Consumers tend to set rules, or attribute cut-offs for the products in their choice set. These are the minimum acceptable levels that an alternative must possess in order to be considered as the final purchase. Huber and Klein (1991) have showed two characteristics to these cut-offs. The first one states that when the reliability of the attribute the customer is considering is high (the information comes from a reliable source, at least in the customer's eyes), the cut-offs on that attribute are more severe than when reliability is low. The second characteristic is that when there is a positive correlation between two attributes (for example, low rent in a high-quality apartment), the cut-offs on those attributes are more severe than they would be if the correlation was negative or of equal magnitude. With respect to price, these cut-offs may however vary between online and offline transactions.

As consumers reduce their alternatives to the choice set, they have first acquired information about the products and then compared and evaluated them. As no consumer has unlimited resources (time, in this case) at their disposal, a line must be drawn as to when to stop the evaluation process and make the actual purchase decision. Hauser, Urban and Weinberg (1996) propose that consumers allocate their time in such a fashion that when the trouble of getting extra information about the product outweighs the value of the additional information itself, information search and evaluation stop.

Still, consumers do not make their decisions based solely on the information about different brands, but also include how easy it is to process the information about the brand. A brand that is easily recognized by its physical characteristics is perpetually fluent, while a brand that comes to mind easily is conceptually fluent. Lee and Labroo (2004) demonstrated that in their experiments that a brand becomes more conceptually fluent if the consumer has been exposed to related products just before they come into contact with the target product.

In addition, with high conceptual fluency conditions, the brand evaluations tend to be more favorable. It is important to note, however, that if conceptual fluency creates negative associations; its effect will be negative. This produces a great challenge for marketers in an online environment, as customers may be faced with a plethora of different advertisements, prior to the one that is needed to get their attention. This is where the new customization technology has its advantages. By keeping record of individual customers' purchases and personal information, companies can now target their advertising accurately to each individual customer, thus having a chance to exploit the concept of conceptual fluency discussed above.

#### **2.2.4 Purchase Decision**

After the evaluation stage, the consumer has ranked the items in the choice set in some sort of order but not always will the number one (if there is a number one assigned) item be chosen. There are two factors that come between the evaluation and purchase decision stages.

First there are the attitudes of others, where best friends or community pressure may change a consumer's preference ranking for a certain brand even if they intended to buy a different one. Secondly there might be some unexpected situational factors that affect the purchase decision. The price of the product may have suddenly gone up, or some other purchase becomes more urgent. As online shopping usually occurs in a more private environment, other people's influences are reduced at the point of purchase. Even when a consumer has decided the exact product they are going to buy, there are still a few purchase sub-decisions to be made. These sub-decisions include price range, point of sale, time of purchase, volume of purchase, and method of payment.

In spite of all the theories on need recognition, information search, and evaluation as a fundamental basis for the purchase decision itself, there are situations where none of these processes apply. This phenomenon is called impulse purchasing. Impulse

buying occurs when the consumer purchases an item based solely on their impulses and emotions. Baumeister (1985) submit that there are some genuinely irresistible impulses, mainly physiological, from which there is no escape, although they do not necessarily lead to purchase. This author continues to define three characteristics, which form consumer's self-control. To fail one of them might result in impulsive shopping given the right circumstances.

The first of these characteristics are the standards the individual has set for themselves. If consumers have set certain goals and norms and they know exactly what they want, they are less likely to act on impulse. This also reduces the vulnerability to sales personnel and advertisers. The second characteristic is monitoring. People who keep better track on their relevant behavior are less prone to lose their self-control. Third and most important, is the consumer's capacity to change. Even if the two previous ingredients fail, there must be something inside the consumer that is willing to make the change and purchase the certain item their impulses suggest. Similar results were found by Sojka and Giese (2001).

### **2.2.5 Post Purchase Behavior**

The purchase process continues even after the actual purchase is made. If marketers and retailers want the customers to come back, they must understand their behavior after the purchase as well. Post-purchase behavior can be divided into two subgroups: post-purchase satisfaction and post-purchase actions. When it comes to post-purchase satisfaction, there is evidence offered by Mittal and Kamakura (2001) that consumers with different characteristics have different thresholds when it comes to loyalty towards the store even if they were dissatisfied with their purchase.

Oliver (1989) has further discussed the concepts of loyalty (post-purchase action) and (post-purchase) satisfaction. Typically, loyal customers tend also to be satisfied but, according to Oliver (1989), satisfaction does not necessarily produce loyalty.

However, studies on several areas of consumer research Coelho and Macha's emphasis how satisfaction indeed does produce loyalty.

In addition to satisfaction and loyalty, important issues in post-purchase actions include brand preference and repurchase intentions and how they affect each other. Hellier et al. have proposed a model where all these aspects are discussed and a number of hypotheses are derived. The following conclusions were made: loyalty has a positive effect on brand preference; satisfaction has a positive effect on loyalty; and brand preference and the strength of brand preference have a positive effect on repurchase intentions. If the aforementioned assumption by Evanschitzky et al. concerning the basic importance of satisfaction and its subsequent effects hold, it may be assumed that the conclusions offered by Heillier et al are also valid in online environment.

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

#### **3.1 Research Design**

In this research, the researcher will explain about the methodology that applied in this research. This research will apply quantitative method; researcher tries to identify the dominant factors of product influence President University students in buying decision of Smartfren.

The researcher want to find out the most dominant factor by identify and divides factors or variables which have the same characteristics into several variable groups. Since that, researcher applies factor analysis as statistical tools in analyzing the data. Factor analysis also conducts reduction or deleting to decrease number of variables.

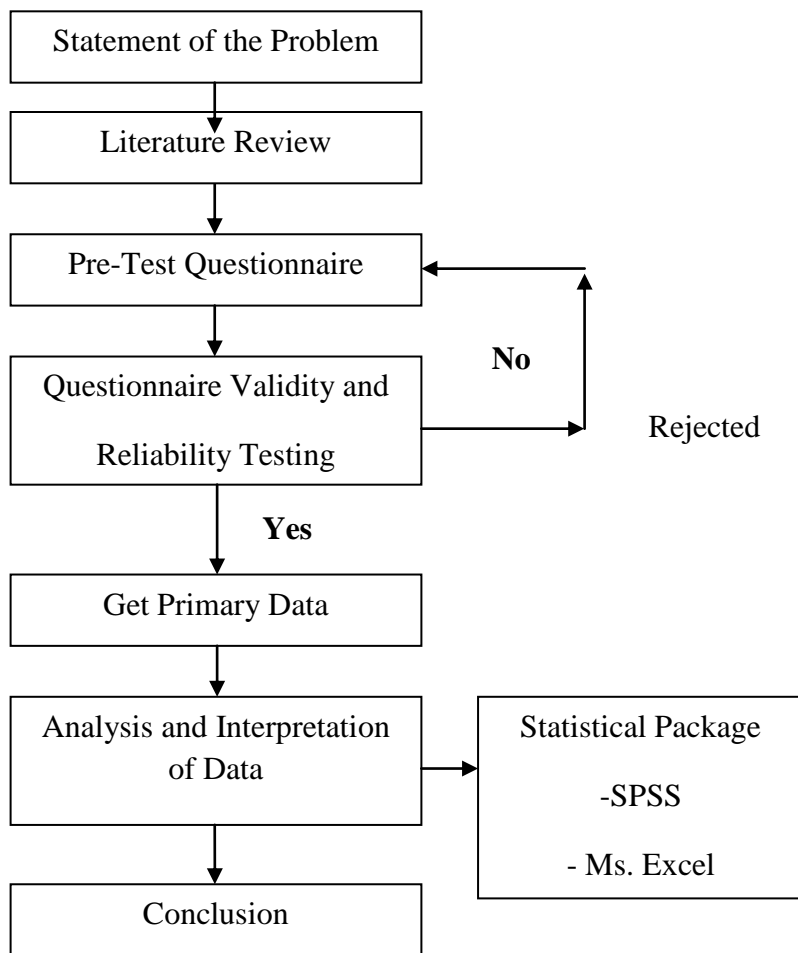
In quantitative research, concept and variable of the study are being limited by guiding the research to a controlled setting, more systematic and structures in a research design (Kriyantono, 2008).

In collecting data, the researcher used primary data by using Likert Scale questionnaire. The consideration of using primary data is the sources of data availability. Researcher can gather information and measure what researcher wish as well as accuracy and consistency of data.

### 3.2 Research Framework

Figure 3.1

#### Research Framework



Source: Adjusted by researcher

The research is begin by define the statement of the problem. The researcher has to find the main problem and what is the purpose of the research based on background of the problem. After define statement of the problem, the researcher need to support the research by many kinds of literature that might support the researcher to solve the problem, construct questionnaire, analyze the data, and make conclusion.

The research is designed with quantitative method, which mean the researcher choose questionnaire as an option to gather data. The researcher needs to do validity and reliability testing before gather primary data using questionnaire. If the questionnaire testing is valid and reliable, then the researcher can get primary data by spreading the questionnaire.

To calculate data, the researcher use SPSS (Statistical Package for Social Science). After data calculation, the researcher analyzes and interpret the data in order to solve the problem and give conclusion.

### **3.3 Research Time and Place**

This research is across sectional studies. Cross sectional studies is a study can be done in which data gathered just once, perhaps over period of days, weeks or months, in order to answer research question.

The pre-test questionnaire was conducted from November 17-18. 2011 and February 17-18, 2012 in President University Student Housing.

Researcher starts to spread the questionnaire for collecting data on November 22-23, 2011. The survey conducted from February 20-26, 2012 in President University student housing.

### **3.4 Research Instrument**

#### **3.4.1 Data Collection**

##### **a. Survey**

At the beginning of this research, researcher has done the survey to know the exact population of Smartfren users who live in President University student housing.



## **b. Questionnaire**

Questionnaire used is Likert Scale questionnaire with scoring 1-5. In Cooper & Schindler study (2006, pp 370), the Likert Scale, developed by Rensis Likert, is the most frequently used variation of summated rating scale.

The figure and rating of Likert Scale is shown below:

**Table 3.1**

### **Likert Scale**

Scale	Rating
1	Strongly Disagree
2	Disagree
3	Moderate
4	Agree
5	Strongly Agree

*Source: Burns and Bush (2010)*

Likert Scale format, in which respondents are asked to indicate their degree of agreement or disagreement on symmetric agree – disagree scale for each series of statement (Burns and Bush, 2010). The research made use of Likert Scale due to its simplicity, flexibility, and reliability (Dournyei, 2003). The participants were asked to agree or disagree with each statement. Each response option was assigned a numbering for scoring purpose.

The reason for using Likert scale is because Likert scale is easy to be calculated and respondent can simply fill the questionnaire without spending a lot of time. The questionnaire is in English, because there are many varieties of nations among President University students so English speaking environment is compulsory.

### **3.5 Statistical Packages**

Researcher used two kind of computer software to analyze the data:

- a. SPSS (Statistical Package for Social Science) version 16.0
- b. Microsoft Excel 2007

Researcher used Microsoft Excel 2007 to gather demographic of the respondents and also frequency and percentage answering the questionnaire.

### **3.6 Sampling Design**

#### **3.6.1 Size of the Population**

According to Lind D.A, Mason W.G & Marchal, R.D., 2005, population is a collection of all possible individual, object, or measurement of interest. Measuring the population is important before start collecting the data because to determine the sample, population must be determine first.

The population of this study was students who live in President University Student Housing which account for 1648 . From the survey, the researcher found out that the number of Smartfren users in President University Student Housing is 187 students.

#### **3.6.2 Sample Technique**

The technique of determining sample in this research is based on purposive sampling. Purposive sampling, also known as judgmental, or subjective sampling, is a type of no-probability sampling technique. Non-probability sampling technique focuses on sampling where the units that are investigated are are based on judgment of the researcher.

Unlike the various sampling technique that can be used under probability sampling, the goal of purposive sampling is not randomly select units from population to create

a sample with the intention to make generalizations from the sample to the people interest.

For sample size the researcher use formula for calculating a sample for proportion (Cochran, 1977):

$$n = \frac{z^2 p(1-p)}{e^2}$$

$$n = \frac{1.96^2 \cdot 0.05(1-0.05)}{0.05^2}$$

$$n = 70.99 = 71$$

Where:

p = population variance or proportion estimation for one group or attribute in population. The researcher estimates there is 1 users in 20 students.

z = a number relating to the degree of confidence you wish to have in the result. 95% confidence\* is most frequently used and accepted. The value of 'z' should be 2.58 for 99% confidence, 1.96 for 95% confidence, 1.64 for 90% confidence and 1.28 for 80% confidence. The researcher use 95% of confidence.

e = the error, measured as a proportion of the standard deviation (accuracy). The researcher use 5% error

From the calculation, the absolute sample size is 71 respondents.

### 3.6.3 Characteristic of Respondent

The total respondent in this research are 71 students from President University which are Smartfren user. The questionnaire use English because there are variance of nationality in President University and English speaking environment is compulsory.

### 3.6.4 Research Variable

Based on theory the three level of product (Kotler and Armstrong, 2010), the researcher choose 6 variables that might represent the characteristic of the product. Each variable will be represented by 5 questions to measure the dominant factor of product.

**Table 3.2**  
**1<sup>st</sup> Questionnaire Variable**

CORE BENEFIT	
P1	Smartfren is the right choice as my internet service provider
P2	Smartfren has answered my needs for internet service provider
P3	I feel satisfy with Smartfren as my internet service provider
P4	Smartfren offer excellent internet service and it is very helpful for my daily activity
P5	Smartfren offer many benefits than the other internet service provider

**Table 3.3**  
**2<sup>nd</sup> Questionnaire Variable**

FEATURES	
P6	Features in Smarfren are easy to be used / user friendly
P7	Features in Smarfren are enough to fulfill my needs
P8	Features in Smarttfren provide me with unlimited access to the internet
P9	Features in Smartfren is better than the other internet service provider
P10	Smartfren have to add more features in order to keep my loyalty

**Table 3.4**  
**3<sup>rd</sup> Questionnaire Variable**

BRAND NAME	
P11	Smartfren is easy to be remembered as a brand name
P12	I can pronounce Smartfren easily
P13	I don't easily confused to compare brand name between Smartfren and another competitors
P14	Smartfren brand name represent characteristic of the product.
P15	Smartfren is an unique name

**Table 3.5**  
**4<sup>th</sup> Questionnaire Variable**

PRODUCT QUALITY	
P16	Smartfren has succeed to prove their campaign 'I Hate Slow'
P17	Smartfren can deliver the service without any trouble or disturbance
P18	Smartfren can give high speed internet service
P19	I never feel regret of using Smartfren as my internet service provider
P20	I choose Smartfren because of its' quality

**Table 3.6**  
**5<sup>th</sup> Questionnaire Variable**

AFTER SALES SUPPORT	
P21	I don't need to spend a lot of time in customer service if I have problem with Smartfren
P22	I feel comfortable with Smartfren customer service
P23	Smartfren use many kind of channel such as text message, email, internet, etc to keep me updated with Smartfren news.
P24	Smartfren customer services are highly trained to deal with customer's problem
P25	Smartfren always upgrade and renew services that delight customers.

**Table 3.7**  
**6<sup>th</sup> Questionnaire Variable**

WARRANTY	
P26	Smartfren mention the warranty points clearly
P27	I prefer to buy product with warranty
P28	I can easily claim warranty in all Smartfren store
P29	I feel protected by warranty of the product
P30	I can understand each point of the warranty easily

### **3.7 Validity and Reliability**

In a study should have called the test instrument in which the researchers will measure the variables that exist to obtain valid data. “By using a valid and reliable instrument in collecting data, it is expected that research result will be valid and reliable” (Sugiyono, 2009).

The researcher concluded that the two test instruments will be fulfilled the requirements to obtain the result valid and reliable research. According to Singarimbun (1996 : 122) “Validity is the extent to which measuring tool to measure what you want to measure.” Added by Arikunto (2002:144) , “Validity is a measure that shows the level of validity or the validity of an instrument.”

Researcher concludes that validity is a measurement instrument that has a level of accuracy in its function. Furthermore, in order to obtain consistent data and can be trusted, the researcher used a measurement tool in the same symptoms so the researcher used a reliability test.

Reliability means to have properties that can be trusted. A measuring instrument is said to reliable when used many times by the same researchers or other researchers who still provide the same result and will provide accurate results for reliable measured unchanged (Grace & Sweet, 2010)

According to Sugiyono (2007:216) if the indicator started to study the end result is relatively the same. Validity and reliability in the study was conducted using software SPSS (Statistical Package for Social Science) by using Cronbach’s Alpha.

Basically coefficient Cronbach’s Alpha is the average of all coefficient halved (split-half) that enable made of measuring instrument used. A reliable instrument can be

said reliable if it has reliability coefficient of 0.6 or more. If the value obtained under 0.6 then measuring instrument which is made not reliable.

According to Ghozali (2005:44), if the value of alpha less than 60% means there are few respondents answer identify inconsistent and should be viewed one by one. Respondent's answer item that is not consistent should be discarded from analysis and alpha will increase.

### 3.7.1 Reliability

Researcher conduct reliability tests to prove whether the variables used in this study are reliable or are invalid. Understanding reliability according to Riduwan and Sunarto (2007): "reliability refers to a sense that something can be used as an instrument of data collection tool because the instrument was considered good."

Test reliability in this study will use a method cronbach's alpha. Here is the test results table that has been done with the help of SPSS version 16 windows.

The figure below is based on the pretest questionnaire that was conducted on 30 students.

**Table 3.8**  
**Reliability Testing**

<b>Variable</b>	<b>Cronbach's Alpha</b>	<b>Remark</b>
Core Benefit of Product	0.897	Reliable
Feature	0.664	Reliable
Brand Name	0.673	Reliable
After Sales Support	0.785	Reliable
Product Quality	0.831	Reliable
Warranty	0.793	Reliable

*Sources: SPSS 16.0 and Primary Data by Researcher*

Based on the conclusions that can be taken from the table above, the result of the analysis of reliability based on Cronbach's Alpha is greater than 0.6 indicates that 30

respondents gave consistent answer. So, based on these results can be seen that all of the variable have Cronbach's Alpha greater than 0.6. This means the respondents who answers to the variable is reliable, these figures show that there is a high reliability.

### 3.7.2 Validity

Validity test is needed before the data will be processed more deep, or in another word, validity test is needed before the researcher do the real test, in measuring the credibility and sincerity of the data. Validity test can be chosen according to the purpose. In this particular research, the test will be result in which item or statement is valid or invalid.

To check the validity, the researcher needs to compare the  $r$  computation and  $r$  table, whereas  $r$  computation is derived from SPSS calculation and  $r$  table comes from  $r$  value product moment. The question in the questionnaire will be mentioned as valid if  $r$  computation value is more than the  $r$  table. The value of  $r$  table of 30 samples is 0.306. It means if the variables have  $r$  computation greater than 0.306, the variables are valid. This validity examination involves 30 questions which is derived come from 6 factors.

**Table 3.9**  
**Validity Testing Table – Variable I**

No	Items	$r$ computation	$r$ table	Remark
P1	Smartfren is the right choice as my internet service provider	0.625	0.306	Valid
P2	Smartfren has answered my needs for internet service provider	0.606	0.306	Valid
P3	I feel satisfy with Smartfren as my internet service provider	0.582	0.306	Valid
P4	Smartfren offer excellent internet service and it is very helpful for my daily activity	0.616	0.306	Valid
P5	Smartfren offer many benefits than the other internet service provider	0.715	0.306	Valid

*Source: SPSS 16 and Primary Data*



**Table 3.10**  
**Validity Testing Table – Variable II**

P6	Features in Smarfren are easy to be used / user friendly	0.553	0.306	Valid
P7	Features in Smarfren are enough to fulfill my needs	0.649	0.306	Valid
P8	Features in Smartfren provide me with unlimited access to the internet	0.372	0.306	Valid
P9	Features in Smartfren is better than the other internet service provider	0.445	0.306	Valid
P10	Smartfren have to add more features in order to keep my loyalty	0.067	0.306	<b>Invalid</b>

**Table 3.11**  
**Validity Testing Table – Variable III**

P11	Smartfren is easy to be remembered as a brand name	0.262	0.306	<b>Invalid</b>
P12	I can pronounce Smartfren easily	0.195	0.306	<b>Invalid</b>
P13	I don't easily confused to compare brand name between Smartfren and another competitors	0.592	0.306	Valid
P14	Smartfren brand name represent characteristic of the product.	0.497	0.306	Valid
P15	Smartfren is an unique name	0.559	0.306	Valid

**Table 3.12**  
**Validity Testing Table – Variable IV**

P16	Smartfren has succeed to prove their campaign 'I Hate Slow'	0.524	0.306	Valid
P17	Smartfren can deliver the service without any trouble or disturbance	0.516	0.306	Valid
P18	Smartfren can give high speed internet service	0.577	0.306	Valid
P19	I never feel regret of using Smartfren as my internet service provider	0.460	0.306	Valid
P20	I choose Smartfren because of its' quality	0.638	0.306	Valid

**Table 3.13**  
**Validity Testing Table – Variable V**

P21	I don't need to spend a lot of time in customer service if I have problem with Smartfren	0.442	0.306	Valid
P22	I feel comfortable with Smartfren customer service	0.527	0.306	Valid
P23	Smartfren use many kind of channel such as text message, email, internet, etc to keep me updated with Smartfren news.	0.466	0.306	Valid
P24	Smartfren customer services are highly trained to deal with customer's problem	0.709	0.306	Valid
P25	Smartfren always upgrade and renew services that delight customers.	0.615	0.306	Valid

**Table 3.14**  
**Validity Testing Table – Variable VI**

P26	Smartfren mention the warranty points clearly	0.642	0.306	Valid
P27	I prefer to buy product with warranty	0.063	0.306	<b>Invalid</b>
P28	I can easily claim warranty in all Smartfren store	0.490	0.306	Valid
P29	I feel protected by warranty of the product	0.311	0.306	Valid
P30	I can understand each point of the warranty easily	0.349	0.306	Valid

Based on the data above, there are about 4 invalid statements that should be eliminated in this questionnaire, which are statement number 10, 11, 12, and 27. After valid and invalid were found, the next step is eliminating the invalid items and revising the questionnaire arrangement.

### **3.8 Method of Processing Data**

The researcher use factor analysis in analyze the data. Factor analysis is a statistical method used to describe variability among observed, correlated variables in term of

potentially lower number of unobserved, uncorrelated variables called factors. In another words, it is possible, for example, that variations in three and four observed variables mainly reflect the variations fewer such unobserved variables. Factor analysis search such joint variations in response to unobserved latent variable. The observed variables are modeled as linear combinations of the potential factors, plus “error” terms.

The information gained about the interdependencies between observed variables can be used later to reduce the set of variables in a dataset. Factor analysis originated in psychometrics, and is used in behavioral science, social science, marketing, product management, operation research, and other applied sciences that deal with large quantities of data (Pohlmann, 2004).

#### KMO and Bartlett’s Test

KMO is a test that determines whether partial correlations among observation variables are high enough. Conventionally, KMO lower than 0.6 suggests that partial correlations are not high enough and the variables won’t ‘factor’ well.

Bartlett's test of sphericity tests whether the correlation matrix is an identity matrix, which would indicate that the factor model is inappropriate. Bartlett's test of sphericity is a test statistic used to examine the hypothesis that the variables are uncorrelated in the population. In other words, the population correlation matrix is an identity matrix; each variable correlates perfectly with itself ( $r = 1$ ) but has no correlation with the other variables ( $r = 0$ ).

#### Anti Image Matrices

The anti-image correlation matrix contains the negatives of the partial correlation coefficients, and the anti-image covariance matrix contains the negatives of the

partial covariance. Most of the off-diagonal elements should be small in a good factor model.

#### Factor Extraction

##### Eigen Value

Eigen value is used in extracting the factor in factor analysis method. This kind of value shows the communality value for variables that represent the factor. The numbers of factors is determined by the percentage of total variance produced. In order to measure the number of factor, the Eigen Value must be more than 1.

##### Loading Factor Value

Loading factor shows the contribution proportion of latent variable, which according to statistic significance of the coefficient of correlation is the size used to determine the degree of correlation. Variable that has higher loading shows that the influence is bigger on latent variables. Relying on that loading factor value, the manifest variables grouping can be performed, variable that has lower than 0.6 loading factor value will not be considered in the latent variable.

### **3.9 Limitation**

Some problems encountered during the research period are as follows:

1. This research is limited only for students who live in President University student housing.
2. The respondents are President University's students who use Smartfren as their internet provider.
3. The respondents are limited for President University students batch 2009 - 2011

## CHAPTER IV

### INTERPRETATION OF RESULTS

#### 4.1 Respondent Characteristic

In this research, the researcher distributes 73 copies of questionnaire to the students of President University, which is 2 copies are not properly answered. The respondents are the user of Smartfren internet provider. The questionnaire consists of six parts. Each part is divided based on variable which is used in the research.

The first part contains the statement of the respondents about the core benefit of the product; second part is about feature of Smartfren; the third part contain of statement about the brand name. On the fourth part contain of statement about product quality; the fifth part is about after sales support; and the last part contain the statement about warranty.

To gain insight about the characteristic of students who were respondents in this study, the respondents classify the characteristic of respondents by gender. The respondent obtained data concerning the characteristic of the respondents were as follows:

**Table 4.1**  
**Grouping Respondent by Gender**

<b>Characteristic</b>	<b>Categories</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Gender	Male	44	61.97%
	Female	27	38.03%
<b>Total</b>		<b>71</b>	<b>100 %</b>

*Source: Primary Data*

**Table 4.2**  
**Grouping Respondent by Age**

<b>Characteristic</b>	<b>Categories</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Age	17	2	2.8%
	18	8	11.27%
	19	13	18.31%
	20	21	29.58%
	21	27	38.04%
<b>Total</b>		<b>71</b>	<b>100 %</b>

*Source: Primary Data*

**Table 4.3**  
**Grouping Respondent by Batch**

<b>Characteristic</b>	<b>Categories</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Batch	2009	31	43.66%
	2010	22	31%
	2011	18	25.34%
<b>Total</b>		<b>71</b>	<b>100 %</b>

*Source: Primary Data*

Based on the table above, the researcher will analyze dominant factor based on the gender. The total respondents of this research are 71 respondents. Male respondents were 44 people (61.97%) and female respondents were 27 people (38.03%).

From the table above, respondents have range of ages are between 17 – 21 years old. From the table, the users come from batch 2009, 2010, and 2011.

## 4.2 Data Collecting

### Correlation Matrix

Factor analysis is a technique to identify and divide factors or variables which have the same characteristics into several variable groups. Factor analysis also conducts reduction or deleting to decrease number of variables.

After deleting the invalid statements based on comparison between  $r$  computation and  $r$  table, the researcher have to do reduction of variable. The table below is the fixed questionnaire after the researcher did reliability and validity testing

**Table 4.4**  
**Fixed Questionnaire**

CORE BENEFIT	
P1	Smartfren is the right choice as my internet service provider
P2	Smartfren has answered my needs for internet service provider
P3	I feel satisfy with Smartfren as my internet service provider
P4	Smartfren offer excellent internet service and it is very helpful for my daily activity
P5	Smartfren offer many benefits than the other internet service provider
FEATURES	
P6	Features in Smarfren are easy to be used / user friendly
P7	Features in Smarfren are enough to fulfill my needs
P8	Features in Smarttfren provide me with unlimited access to the internet
P9	Features in Smartfren is better than the other internet service provider
BRAND NAME	
P10	I don't easily confused to compare brand name between Smartfren and another competitors
P11	Smartfren brand name represent characteristic of the product.
P12	Smartfren is an unique name

PRODUCT QUALITY	
P13	Smartfren has succeed to prove their campaign 'I Hate Slow'
P14	Smartfren can deliver the service without any trouble or disturbance
P15	Smartfren can give high speed internet service
P16	I never feel regret of using Smartfren as my internet service provider
P17	I choose Smartfren because of its' quality
AFTER SALES SUPPORT	
P18	I don't need to spend a lot of time in customer service if I have problem with Smartfren
P19	I feel comfortable with Smartfren customer service
P20	Smartfren use many kind of channel such as text message, email, internet, etc to keep me updated with Smartfren news.
P21	Smartfren customer services are highly trained to deal with customer's problem
P22	Smartfren always upgrade and renew services that delight customers.
WARRANTY	
P23	Smartfren mention the warranty points clearly
P24	I can easily claim warranty in all Smartfren store
P25	I feel protected by warranty of the product
P26	I can understand each point of the warranty easily

Reduction of variable can be done in several steps. The researcher decide which factors are appropriate to be used in next analysis is by using KMO and Bartlett's Test.

**Table 4.5**

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.780
Bartlett's Test of Sphericity	Approx. Chi-Square
	981.829
	Df
	325
	Sig.
	.000

*Source: SPSS 16 and Primary Data*



From the table above, the value of KMO MSA (Kaiser – Meyer – Olkin Measure of Sampling Adequacy) is greater than 0.5. Based on theory if value of KMO MSA is greater than 0.5, the researcher can continue the analysis. It also means that sampling technique in the study can be applied.

The next step is evaluating Anti-Image Matrices to decide which factors are appropriate to be included in the next analysis. There are 6 variables in this research, which are core benefit, feature, brand name, product quality, after sales support, and warranty. Each variable consist of five questions. With details as follow:

- Statement 1 – 5 : Core Benefit of Product
- Statement 6 – 9 : Product’s Features
- Statement 10-12 : Brand Name
- Statement 13-17 : Product Quality
- Statement 18-22 : After Sales Support
- Statement 23-26 : Warranty

The table of Anti Image Matrices is shown below:

**Table 4.4**  
**Anti-Image Matrices**

No	Statement	MSA Value
P1	Smartfren is the right choice as my internet service provider	0.858
P2	Smartfren has answered my needs for internet service provider	0.810
P3	I feel satisfy with Smartfren as my internet service provider	0.855
P4	Smartfren offer excellent internet service and it is very helpful for my daily activity	0.859
P5	Smartfren offer many benefits than the other internet service provider	0.879
P6	Features in Smarfren are easy to be used / user friendly	0.755
P7	Features in Smarfren are enough to fulfill my needs	0.795

P8	Features in Smartfren provide me with unlimited access to the internet	0.589
P9	Features in Smartfren is better than the other internet service provider	0.831
P10	I don't easily confused to compare brand name between Smartfren and another competitors	0.647
P11	Smartfren brand name represent characteristic of the product.	0.630
P12	Smartfren is an unique name	0.614
P13	Smartfren has succeed to prove their campaign 'I Hate Slow'	0.861
P14	Smartfren can deliver the service without any trouble or disturbance	0.728
P15	Smartfren can give high speed internet service	0.742
P16	I never feel regret of using Smartfren as my internet service provider	0.824
P17	I choose Smartfren because of its' quality	0.890
P18	I don't need to spend a lot of time in customer service if I have problem with Smartfren	0.667
P19	I feel comfortable with Smartfren customer service	0.775
P20	Smartfren use many kind of channel such as text message, email, internet, etc to keep me updated with Smartfren news.	0.810
P21	Smartfren customer services are highly trained to deal with customer's problem	0.796
P22	Smartfren always upgrade and renew services that delight customers.	0.734
P23	Smartfren mention the warranty points clearly	0.692
P24	I can easily claim warranty in all Smartfren store	0.823
P25	I feel protected by warranty of the product	0.787
P26	I can understand each point of the warranty easily	0.757

*Source: SPSS 16 and Primary Data*

Mueller et al (1978) states that if MSA (Measure of Sampling Adequacy) Value is less than 0.5, the variable must be deleted and it is not an appropriate factor to be entered in the next step of analysis.

From the table above, all the statements have MSA value greater than 0.5. It means, all the statements can be entered to the next step which is factor analysis.

## Factor Extraction

The extraction of manifest variable is very important to figure out the latent variable. Principal Component Analysis is used to generate the last factor extraction statistic. By relying final statistic, there are three components can be identified which are communality, eigen value, and cumulative percent of extracted factors.

Eigen value is use to determining how many latent variables that will be generated, which is means that if the eigen value is more than 1, so it is considered as significant. The community of variables shows the variance proportion of the variable, which can be explained in generated factors. The range of communality of variable is between 0 to 1. The bigger value, the better it is because the variable become easier to explained by generate factor.

Based on Total Variance Explained table, there are 4 values that are shown as follow: Communality shows the variance proportion of variable toward the whole factors. Eigen value must more than 1, it shows the total variance on each factors. The first factor has the biggest eigen value which is 8.312. Based on the calculation, there are 6 factors that have eigen value exceed more than 1 percentage of variance, which show us the component number 1 is the highest percent variance, with the value is 31.969%.

The total variance is strong, which is 67.109%. It means that 32.891% of variables cannot be presented or become the error of this study. Some factors that is difficult to be interpreted because there are too many manifests that have exceeding values in more than one factor. Therefore, rotated component matrix is needed to go on the next process.

**Table 4.7**  
**Component, Eigen Value, % Variance, Cumulative %**

Component	Eigen Value	% Variance	Cumulative %
1	8.312	31.969	31.969
2	3.163	12.165	44.134
3	2.076	7.983	52.117
4	1.576	6.062	58.178
5	1.225	4.710	62.889
6	1.097	4.220	67.109

*Source: SPSS 16.0 and Primary Data*

#### Rotated Component Matrix

Rotated component matrix is use to get simpler factor structure which will make the variables interpretations become easier. From extraction result interpretation of matrix start from the left side (factor 1) to the right side (factor 6)

In the study orthogonal Varimax is used in rotated component methodology. Orthogonal Varimax is used to rotate the beginning factor from extraction result, so at the end, it will create the rotated result where one column closer to zero. The rotated component matrix can be seen below:

**Table 4.8**  
**Manifest Variable and Factor Value**

Factor	Manifest Variable	Factor Value
1	P3	0.848
	P2	0.817
	P1	0.814
	P5	0.673
	P4	0.612

2	P14	0.797
	P13	0.747
	P15	0.746
3	P22	0.707
	P20	0.689
	P8	0.650
4	P25	0.838
	P26	0.702
	P23	0.673
	P24	0.604
5	P11	0.858
	P12	0.756
	P10	0.709
6	P18	0.677
	P19	0.647

*Source: SPSS 16.0 and Primary Data*

### **4.3 Interpretation of the Result**

Based on factor analysis calculation, 26 statements that have been analyzed can be extracted into 6 latent variables that influence the respondents. These latent variables show 67.109%. It means that there is 32.891% variance that is not explained by 6 latent variables.

#### **4.3.1 Data Interpretation**

Factor analysis consists of latent variable and manifest variable, where latent variables are constructed by manifest variables. Manifest variable is a variable that is directly observable or measurable. Latent variable is variables (as opposed to observable

variables), are variable that are not directly observed, but rather inferred (through a mathematical model) from other variables that are observed and directly measured.

a. 1<sup>st</sup> factor

The first factor has 31.969% percentage variance, which also means the most influencing factor for customer to choose Smartfren as their internet provider. Variable that constructed this factor are:

**Table 4.9**  
**1<sup>st</sup> Factor**

No	Variable	Explanations	Factor Value
1	P3	I feel satisfy with Smartfren as my internet service provider	0.848
2	P2	Smartfren has answered my needs for internet service provider	0.817
3	P1	Smartfren is the right choice as my internet service provider	0.814
4	P5	Smartfren offer many benefits than the other internet service provider	0.673
5	P4	Smartfren offer excellent internet service and it is very helpful for my daily activity	0.612

*Source: SPSS 16.0 and Primary Data*

The first factor consist is P3, P2, P1, P5, and P4 as the manifest variables. Based on the value above, the researcher can make conclusion that **need of an excellent internet service provider** is really essential for customers in choosing internet service provider. From the statement the user feel satisfy with the product (P1) and customers feel Smartfren has answered their needs for internet service provider (P2).

Most customers think Smartfren is the right choice for internet service provider (P1) and Smartfren can give many benefits compare to other competitors (P5). Customers also think Smartfren can give excellent service for their customers (P4).

Marketers have to define what the core benefit of the product is. It has to be answered the question “What is customer’s really buying?” From the questionnaire, the first dominant factor why customers buy Smartfren is because customers feel that Smartfren can give value and answer their basic needs of internet provider. Smartfren not only give regular service, but also by offering excellent benefit it can become helpful for customer to do their daily activities related with internet.

In this high technology era, internet is one of the biggest needs. Since Smartfren has specialty and differentiation in their core benefit product, the company has to highlight and improve the core benefit in order to compete with other competitors.

.b. 2<sup>nd</sup> Factor

The second factor has 12.165 percent variance, which means the second dominant factors why customers choose Smartfren as internet service provider. Variable that constructed this factor are:

**Table 4.10**  
**2<sup>nd</sup> Factor**

No	Variable	Explanation	Factor Value
1	P14	Smartfren can deliver the service without any trouble or disturbance	0.797
2	P13	Smartfren has succeed to prove their campaign ‘I Hate Slow’	0.747
3	P15	Smartfren can give high speed internet service	0.746

*Source: SPSS 16.0 and Primary Data*

The second factor consist of P14, P13, and P15. From the data calculation above product quality become the second dominant factor why customers choose Smartfren as internet service provider. Customers really care about quality of the product,

especially for internet service provider segment quality means performance of the product.

The reason why customers choose Smartfren is because customers feel that Smartfren can perform well, in order to fulfill customer expectation in high speed internet service. Customers also concern and satisfy if there is no disturbance in the service. The latent factor is **performance in delivering service**.

b. 3<sup>rd</sup> Factor

The third factor has 7.983 percent variance, which means the third dominant factors why customers choose Smartfren as internet service provider. Variable that constructed this factor are:

**Table 4.11**  
**3<sup>rd</sup> Factor**

No	Variable	Explanation	Factor Value
1	P22	Smartfren always upgrade and renew services that delight customers.	0.707
2	P20	Smartfren use many kind of channel such as text message, email, internet, etc to keep me updated with Smartfren news.	0.689
3	P8	Features in Smartfren provide me with unlimited access to the internet	0.650

*Source: SPSS 16.0 and Primary Data*

The third factor consists of P22, P20, and P8 as manifest variable. From the value of P22 and P20, customers choose Smartfren as internet service provider because Smartfren always improve services and connect with their customers through many media channels. P8 represent customers choose Smartfren because Smartfren provide unlimited access to the internet. Therefore, the third latent variable is **improvement of services and gets connected with customers**.

d. 4<sup>th</sup> Factor



The fourth factor has 6.062 percent variance, which means the fourth dominant factors why customers choose Smartfren as internet service provider. Variable that constructed this factor are:

**Table 4.12**  
**4<sup>th</sup> Factor**

No	Variable	Explanations	Factor Value
1	P25	I feel protected by warranty of the product	0.838
2	P26	I can understand each point of the warranty easily	0.702
3	P23	Smartfren mention the warranty points clearly	0.673
4	P24	I can easily claim warranty in all Smartfren store	0.604

*Source: SPSS 16.0 and Primary Data*

The fourth factor consists of P25, P26, P23, and P24 as manifest variables. From explanation of the question, P25 state that customer feel secure if they purchase a product with warranty. P26 and P23 mentioned that customer buy a product because the warranty is clear and easy to be understood. P24 mention the importance of easiness to claim warranty for customers. Therefore, the latent variable is **Good, secure, and clear warranty.**

e. 5<sup>th</sup> Factor

The fifth factor has 4.710 percent variance, which means the fifth dominant factors why customers choose Smartfren as internet service provider. Variable that constructed this factor are:

**Table 4.13**  
**5<sup>th</sup> Factor**

No	Variable	Explanation	Factor Value
1	P11	Smartfren brand name represent characteristic of the product..	0.858
2	P12	Smartfren is an unique name	0.756
3	P10	I don't easily confused to compare brand name between Smartfren and another competitors	0.709

*Source: SPSS 16.0 and Primary Data*

The fifth factor consists of P11, P12, and P10 as manifest variables. From the data calculation above brand name become the fifth factor why customers choose Smartfren as internet service provider. P11 mentioned that Smartfren as a brand name has successful to represent characteristic of the product with factor value 0.858. P12 explained that customers think Smartfren is a unique name. P10 also explained that customers not easily get confused to compare Smartfren with other competitors because of the brand name.

This research result is supported by the theory from Kotler and Armstrong (2010) states that brand names help consumer identify products that might benefit them. Brand also say something about product quality and consistency – buyers who always buy the same brand know that they will get the same features, benefits, and quality each time they buy. Therefore, the latent variable is **good characteristic of brand name**.

f. 6<sup>th</sup> Factor

The sixth factor has 4.220 percent variance, which means the sixth dominant factors why customers choose Smartfren as internet service provider.

**Table 4.14**  
**6<sup>th</sup> Factor**

No	Variable	Explanation	Factor Value
1	P18	I don't need to spend a lot of time in customer service if I have problem with Smartfren	0.677
2	P19	I feel comfortable with Smartfren customer service	0.647

*Source: SPSS 16.0 and Primary Data*

The sixth factor consists of P18 and P19 as manifest variables. P18 states that Smartfren customers do not need to spend a lot of time in customer service if

customer face problem related with their internet service provider. P19 explained that customers also feel comfortable with Smatfren customer service.

Customer service is one part of after sales support in a product. It is included in augmented product (Kotler and Armstrong, 2010). After sales service may not be profitable on its own, but is frequently a key determinant in the sale of the product itself. Therefore the sixth latent variable is **quality customer service**.

#### **4.3.2 Latent Factors**

Based on the data calculation and research, the researcher summarized that customers choose Smartfren as internet service provider is influenced by six factors, which are:

Factor I : **Needs of an Excellent Internet Service Provider**

Factor II : **Performance in Delivering Service**

Factor III : **Improvement of Service and Gets Connected with Customers**

Factor IV : **Good, Secure, and Clear Warranty**

Factor V : **Good Characteristic of Brand Name**

Factor VI : **Quality of Customer Service**

## CHAPTER V

### CONCLUSION AND RECOMMENDATION

#### 5.1 Conclusion

The respondents of the research are 71 users of Smartfren. This research targets specific market to ensure that the researcher objective will be answered. According to the variance, the most dominant factors that influence people to choose Smartfren as internet service provider is **needs of an excellent internet service provider**. This dominant factor has 31.696 percent of variance with 5 dominant statements as manifest variable.

From the manifest variables that construct latent variable, customers feel satisfy with Smartfren. Customers thought Smartfren has answered the needs and the right choice for internet service provider. Smartfren also offer many benefits than the other internet service provider and give excellent service which is very helpful for daily activities. This founding is suitable with Kotler and Armstrong (2010) theory which is the core benefit is the purpose for which a consumer buys the product or service. It should satisfy the target's market highest perceived need.

From the percent of variance, the least dominant factor is quality of customer service with 4.220 percent of variance. The result of this research related with theory states that after sales service may not be profitable on its own, but is frequently a key determinant in the sale of the product itself. It has been estimated that the importance of services will grow in the future. Product support can be a basis for developing a close relationship between suppliers and its customers. After sales service were followed close by the equipment itself. Difficulties related to a relationship between a

supplier and its customer can be reduced by offering service that complements the product (Jackson, 1985, Pras, 1987, sit. Mathe and Shapiro, 1993, Simon, 1992).

## **5.2 Recommendation**

According to research founding, the researcher would like to give some recommendations:

a. In order to create more sales and gain more customers, Smartfren should maintain the core benefit of the product. Based on the research founding, needs of an excellent service provider become the most dominant factor for customers choose Smartfren as their internet provider. Company must be able to maintain the core benefit, but at the same time improve the quality of core benefit. Company should highlight the core benefit in each aspect of promotion tools, because it is the best company strength.

b. In this new era of marketing, where the competition become bigger and harder; especially within telecommunication sector; company should be able to improve the weakness of the product. From the result, the least dominant factor is quality of customer service. There are 2 ways to work on company's weaknesses, whether company want to hide all the weaknesses and highlight the strength; or in the other hand, company improve and confess the weaknesses gently. From the researcher point of view, it is better to improve and confess the weaknesses gently because it is the era of transparency and horizontal marketing with customers.

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## Appendices 1

### Questionnaire

Good morning/afternoon/evening. My name is Ester Widya Astuti. I am student from Faculty of Economy, concentration in Marketing working toward my Bachelor Degree in President University. I am doing my research entitle “The Dominant Factor of Product Influence President University Student in Buying Decision of Internet Service Provider (A Case Study of PT Smartfren Tbk).

Based on this background, I truly appreciate your contribution and participation as a respondent in fulfilling this questionnaire. I surely keep any confidential information about the respondents and this questionnaire is arranged to support the completeness of the thesis.

#### A. Respondent’s Data

1. Age :
2. Sex :
3. Batch:

#### B. QUESTIONNAIRE SCALE

Please give cross (x) in the statement list below according with your objective, with the scale listed below:

Strongly Disagree	:1
Disagree	:2
Moderate	:3
Agree	:4
Strongly Agree	:5

**Variable one: Core Benefit of Product**

No	STATEMENT	1	2	3	4	5
P1	Smartfren is the right choice as my internet service provider					
P2	Smartfren has answered my needs for internet service provider					
P3	I feel satisfy with Smartfren as my internet service provider					
P4	Smartfren offer excellent internet service and it is very helpful for my daily activity					
P5	Smartfren offer many benefits than the other internet service provider					

**Variable two : Feature**

No	STATEMENT	1	2	3	4	5
P6	Features in Smarfren are easy to be used / user friendly					
P7	Features in Smarfren are enough to fulfill my needs					
P8	Features in Smarttfren provide me with unlimited access to the internet					
P9	Features in Smartfren is better than the other internet service provider					

**Variable three: Brand Name**

No	STATEMENT	1	2	3	4	5
P10	I don't easily confused to compare brand name between Smartfren and another competitors					
P11	Smartfren brand name represent characteristic of the product.					
P12	Smartfren is an unique name					

**Variable four: Product Quality**

No	STATEMENT	1	2	3	4	5
P13	Smartfren has succeed to prove their campaign 'I Hate Slow'					
P14	Smartfren can deliver the service without any trouble or disturbance					
P15	Smartfren can give high speed internet service					
P16	I never feel regret of using Smartfren as my internet service provider					
P17	I choose Smartfren because of its' quality					

**Variable five: After Sales Support**

No	STATEMENT	1	2	3	4	5
P18	I don't need to spend a lot of time in customer service if I have problem with Smartfren					
P19	I feel comfortable with Smartfren customer service					
P20	Smartfren use many kind of channel such as text message, email, internet, etc to keep me updated with Smartfren news.					
P21	Smartfren customer services are highly trained to deal with customer's problem					
P22	Smartfren always upgrade and renew services that delight customers.					

**Variable six: Warranty**

No	STATEMENT	1	2	3	4	5
P23	Smartfren mention the warranty points clearly					
P24	I can easily claim warranty in all Smartfren store					
P25	I feel protected by warranty of the product					
P26	I can understand each point of the warranty easily					

## Appendices 2

### Cronbach's Alpha

Variable I

**Reliability Statistics**

	Cronbach's Alpha Based on Standardized Items	N of Items
Cronbach's Alpha	.897	.902
		5

Variable II

**Reliability Statistics**

	Cronbach's Alpha Based on Standardized Items	N of Items
Cronbach's Alpha	.673	.680
		5

Variable III

**Reliability Statistics**

	Cronbach's Alpha Based on Standardized Items	N of Items
Cronbach's Alpha	.664	.670
		5

Variable IV

**Reliability Statistics**

	Cronbach's Alpha Based on Standardized Items	N of Items
Cronbach's Alpha		
.785	.795	5

Variable V

**Reliability Statistics**

	Cronbach's Alpha Based on Standardized Items	N of Items
Cronbach's Alpha		
.831	.831	5

Variable VI

**Reliability Statistics**

	Cronbach's Alpha Based on Standardized Items	N of Items
Cronbach's Alpha		
.793	.809	5



## Appendices 3

### Validity Testing

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
VAR00001	95.9000	185.955	.625	.	.904
VAR00002	95.9667	183.482	.606	.	.904
VAR00003	96.2000	187.338	.582	.	.904
VAR00004	96.0667	184.892	.616	.	.904
VAR00005	96.1000	187.748	.715	.	.903
VAR00006	95.5333	189.361	.553	.	.905
VAR00007	96.0667	186.202	.649	.	.903
VAR00008	95.7667	191.840	.372	.	.908
VAR00009	96.2000	191.062	.445	.	.907
VAR00010	95.5667	199.357	.067	.	.913
VAR00011	95.4667	195.016	.262	.	.909
VAR00012	95.4000	195.421	.195	.	.911
VAR00013	95.7000	185.941	.592	.	.904
VAR00014	96.0333	187.757	.497	.	.906
VAR00015	95.7000	185.597	.559	.	.905
VAR00016	96.2667	184.340	.524	.	.905
VAR00017	96.3000	187.941	.516	.	.905
VAR00018	96.2000	185.545	.577	.	.904
VAR00019	96.0333	191.482	.460	.	.906
VAR00020	96.0000	186.069	.638	.	.904
VAR00021	96.1667	190.351	.442	.	.907
VAR00022	96.3000	190.217	.527	.	.905
VAR00023	96.0333	191.344	.466	.	.906
VAR00024	96.0000	187.034	.709	.	.903
VAR00025	96.1000	187.955	.615	.	.904
VAR00026	96.2333	184.875	.642	.	.903
VAR00027	95.4333	198.461	.063	.	.915
VAR00028	96.1667	190.420	.490	.	.906
VAR00029	95.8000	192.579	.311	.	.909
VAR00030	96.0333	192.861	.349	.	.908

## Appendices 4

### KMO & Bartlett's Test and Communalities

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.780
Bartlett's Test of Sphericity    Approx. Chi-Square	981.829
df	325
Sig.	.000

**Communalities**

	Initial	Extraction
VAR00001	1.000	.725
VAR00002	1.000	.753
VAR00003	1.000	.775
VAR00004	1.000	.669
VAR00005	1.000	.589
VAR00006	1.000	.571
VAR00007	1.000	.590
VAR00008	1.000	.642
VAR00009	1.000	.564
VAR00013	1.000	.619
VAR00014	1.000	.733
VAR00015	1.000	.670
VAR00016	1.000	.640
VAR00017	1.000	.747
VAR00018	1.000	.684
VAR00019	1.000	.635
VAR00020	1.000	.602
VAR00021	1.000	.650
VAR00022	1.000	.714
VAR00023	1.000	.595
VAR00024	1.000	.685
VAR00025	1.000	.683
VAR00026	1.000	.640
VAR00028	1.000	.790
VAR00029	1.000	.799
VAR00030	1.000	.683

Extraction Method: Principal Component Analysis.

## Appendices 5

### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.312	31.969	31.969	8.312	31.969	31.969
2	3.163	12.165	44.134	3.163	12.165	44.134
3	2.076	7.983	52.117	2.076	7.983	52.117
4	1.576	6.062	58.178	1.576	6.062	58.178
5	1.225	4.710	62.889	1.225	4.710	62.889
6	1.097	4.220	67.109	1.097	4.220	67.109
7	.923	3.548	70.658			
8	.826	3.176	73.834			
9	.779	2.994	76.828			
10	.744	2.863	79.691			
11	.693	2.667	82.358			
12	.597	2.295	84.653			
13	.500	1.925	86.578			
14	.463	1.782	88.360			
15	.429	1.652	90.012			
16	.418	1.608	91.620			
17	.342	1.314	92.934			
18	.331	1.272	94.206			
19	.299	1.150	95.356			
20	.264	1.017	96.372			
21	.230	.885	97.257			
22	.196	.753	98.010			
23	.175	.673	98.683			
24	.127	.489	99.173			
25	.121	.467	99.640			
26	.094	.360	100.000			

Extraction Method: Principal Component Analysis.

## Appendices 6

**Component Matrix<sup>a</sup>**

	Component					
	1	2	3	4	5	6
VAR00001	.637	-.396	-.150	.307	.189	-.104
VAR00002	.665	-.406	-.119	.298	.018	-.205
VAR00003	.651	-.417	-.274	.192	.139	-.214
VAR00004	.667	-.459	.089	.028	-.047	-.042
VAR00005	.654	-.244	-.204	.210	-.106	-.067
VAR00006	.437	.423	.194	-.025	.392	.094
VAR00007	.663	.233	-.200	.036	.231	-.043
VAR00008	.342	.309	-.449	.182	.221	.382
VAR00009	.494	-.404	-.255	.045	-.008	.299
VAR00013	.437	.173	.304	.504	.114	.199
VAR00014	.369	.034	.611	.467	.063	-.033
VAR00015	.326	.339	.529	.351	-.171	.131
VAR00016	.530	-.318	.378	-.263	-.013	.213
VAR00017	.533	-.330	.351	-.454	-.154	-.043
VAR00018	.602	-.397	.250	-.287	-.006	.139
VAR00019	.565	-.405	-.015	-.249	.222	.202
VAR00020	.672	-.254	-.230	-.109	-.144	.018
VAR00021	.484	.307	-.029	-.060	-.036	-.562
VAR00022	.578	.271	.354	-.098	.198	-.364
VAR00023	.460	.438	-.364	-.073	.184	.142
VAR00024	.603	.322	.085	-.359	.264	-.112
VAR00025	.554	.519	-.055	-.232	.210	.078
VAR00026	.544	.377	-.279	-.126	-.298	-.139
VAR00028	.688	.293	.223	-.128	-.306	.267
VAR00029	.612	.356	-.178	.062	-.509	.050
VAR00030	.669	.278	-.129	.105	-.361	.010

Extraction Method: Principal Component Analysis.

a. 6 components extracted.



# Appendices 8

## Ordinal Data

5	4	4	4	3	3	3	3	4	4	3	4	5	4	4	4	4	4	3	3	3	3	3	4	3	
4	4	4	4	4	3	3	3	5	4	3	4	4	4	4	4	4	4	2	2	1	2	3	4	4	
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