CHAPTER I

INTRODUCTION

1.1. Background of Study

Life is always changing around in the world. People are also changing follow it and compete fairly with each other. In today’s businesses, enterprises and organizations are becoming more and more business sales issues due to trade balance, economic and other influences as well as an increasing concern about the economics of country, and have also different from culture, custom and lifestyle therefore consumer preference for food drink and goods varies from country to country. Usually they were very concerned about the quality and price of the commodity when they made a purchase (Diako et.al, 2010).

In the current economic globalization, the demands for the sale of goods are exchanged at all the times with many different ways with the sale creates competitions between people, large and small countries together. Market commodity trading business is the competition is inevitable always be expressed towards the business aspects of goods. Especially consumer goods are goods necessary for human life. Consumer products of world more developed countries with large-scale, invest in many goods also evident through the consumption of customers. Consumer goods are items mainly interested customers more; it also affects the revenues and expenditures of the family because it is indispensable in their lives.

Besides, the addition of commercially available consumer goods is also very close to each type of product, there are many brand products from many different companies and even to goods imported from foreign countries and exported goods to other
countries so that the problems are research and development play a certainly crucial role on this situation for formulating suggested changes inside its organization, production, management and any respect which to compete. Human are changing many things in this world. Especially, food drink and consumer market is facing to those requirements and a tough competition in serving for human needs. Producers need to be updated to what consumers need and for that, day-by-day changing is requested.

Friedman (2005, p.21) stated that:

“Changing is hard. Change is hardest on those caught by surprise. Change is hardest on those who have difficulty in changing too. But change is natural; change is not new; change is really important.”

Consumer products of Vietnam more developed countries with large-scale, invest in many foreign goods also evident through the consumption of customers. Consumer goods are items mainly interested customers more; it also affects the revenues and expenditures of the family because it is indispensable in their lives. Besides, the addition of commercially available consumer goods is also very close to each type of product, there are many brand products from many different companies and even to goods imported from foreign countries. As mentioned Vinamilk’s products market in Vietnam is getting more and more competitors with kinds of other Vietnamese Milk's brand who are likely to change themselves in order to be successfully.

Vinamilk’s is brand of milk is exporting products from Vietnam; one is local product, are intensively competing to each other the same product but different in brand in Vietnam market. Each of them is trying to study every other's movement in price, appearance taste and other elements that significantly influence consumer's perception and food drink choice so as to change themselves for not to be kicked out of the market. In this situation, the researcher aims to examines some sensory and non-sensory four factors which most influence to consumer buying behavior for
product’s quality because nowadays, consumer are seeking for real quality in terms or their perception for any product bought. Before buying some product customers should know what they need to do and search information about products are made from natural. Buying a certain product nowadays is similar to panning sand to see gold, especially in the world of spreading put and overflowing of product.

So studying which factors that most influence to customer loyalty along with strategies to promote products that are spreading many markets dairy products companying Vietnam to maintain a leading role in the domestic market and compete effectively with other brand soymilk foreign. In this thesis researcher would like to determine factors influence on customer loyalty in Vietnam market and perceive the most factors influence of Vietnam products.

1.2. Company Profile

1.2.1. Vinamilk’s Company

(Vietnam Dairy Products Joint Stock Company) or (VINAMILK) has been established since 1976 and has grown strongly and become the leading business of the industry of milk processing, now occupied 75% milk share in Vietnam. In addition to strong domestic distribution with the network of 183 agencies spreading over 64/64 provinces, cities, and Vinamilk products are exported to many countries such as United States, France, Canada, Poland, Germany, area of Middle- East and Southeast Asia.

Vietnam Dairy Products JSC (Vinamilk) is a Vietnam-based food manufacturer. Company is mainly engaged in manufacturing, marketing, and distribution of dairy products, especially milk of various forms and other derived products, as well as nutrition food and non-alcoholic beverages. It also provides packaging and logistics services, offers other technical supports to cultivation and breeding processes to farmers, and operates a healthcare polyclinic. Through subsidiaries, the Company is
also involved in real estate investment activities. During the year ended December 31, 2008, company has divested its joint venture in brewery manufacturing. Company has three subsidiaries and two affiliates operating in dairy products, food production materials, and real estate.

Vinamilk’s always offers you products of most quality, nourishing and savory to your health. You will not have to worry when using Vinamilk’s products. All ages, objects are suitable to Vinamilk. During the past time, Vinamilk hasn’t stopped innovating technology, investing modern machine and equipment assembly lines enhancing work of management and product quality in order to meet increasingly high demand of consumers.

**a. Main Business:**

- Processing and trading canned milk, milk powder, cereal with milk powder, biscuits, fresh milk, soybean milk, fruit juice and other products from milk;
- Technology food, accessory equipment, chemical and raw materials trading;
- Real estate;
- And other business categories allowed under business registration.

**b. Major products:**

- Condensed milk;
- Fresh milk, Yomilk, Susu;
- Milk powder – Cereal with milk powder;
- Yoghurt;
- Fresh fruit juice, Soybean milk, pure water;

**c. Market Position:**

- Domestic market: Vinamilk’s product groups have been in competition with many trademarks such as Nestle, Gerber (Germany), Dutch Lady, F&N, Pepsi, Unipresident, Dutch Mill, Hanoi milk, ELOVI, Nutifood, Tan Viet Xuan... However, with the advantage of finance potential, technology, new product development ability
that suitable to customer’s interest, as well as being a familiar trademark to Vietnamese people, Vinamilk’s market share will be growing in the years to come.

- Oversea market: Vinamilk’s products have been exported to markets of many countries in the world: United States, EU, Australia, Iraq, and Thailand...

Vision: Vinamilk’s will be the fastest and sustainable growing healthy dairy and food company by building a long-term competitive advantaged product portfolio across the scale.

Mission: Vinamilk’s continues to expand its existing geographical coverage and product portfolios to maintain its sustainably dominant position in the local market and maximizing its shareholder value.

Task: Vinamilk’s Group produces and trades in products good for the health of consumer together with proper flavor and international standard. The objective of the company: the objective of the company is to produce the best drinking products with various trademarks with 183 agencies spreading over 64/64 provinces, cities of Vietnam.

Business Philosophy: is Vinamilk’s wish to be the most favorite product in all areas, territories. Therefore, they meditate that quality and creation is the companion of Vinamilk’s. Vinamilk’s considers customers our focus and commit to meet all demands of customers. Vietnam Dairy Products Joint Stock Company’s quality policy always satisfies customers with high-quality, safe, and diverse products, the best service and competitive prices.

Vinamilk’s brands: Vinamilk’s Corporation provides you with high quality, nutritious and delicious products for your health. Currently our brand is leading the market, with groups of Vinamilk’s brand: Condensed milk, Dielac, V-fresh... offering more than 200 dairy products. We specialize in producing internationally recognized quality standards across all our products and aim at satisfying our customers’ needs perfectly every time.
Human Resources: The total number of Vinamilk’s staff is more than 3000 including foreign expert, engineers and workers who has been trained in their particular fields in universities, colleges all over the country and 90% of them have working experience in companies, big corporations currently in operation in Vietnam. Among those who participate in production, more than 300 engineers, experts, professionally skilled employees have been trained on the spot by foreign experts during the process of installing and putting into operation technical lines.

1.2.2. BigC Supermarket

Address: 222 Tran Duy Hung St., CauGiay Dist., Hanoi, Vietnam. Big C Supercenter operates business in the form of "Hypermarket" or "Supercenter", a modern retail business which is managed under the umbrella of Casino group. It is one of the major retailers in the world, with over 200,000 employees working in more than 11,000 stores, in Vietnam, Thailand, Argentina, Uruguay, Brazil, Colombia, France, Madagascar and Mauritius. Today, Big C has a total of 20 stores all around Vietnam.

a. Big C reflects the two most important elements of the business and strategies for success

b. Big C refers to the large size of our stores and the wide selection of merchandise we offer. Big C currently stocks over 40,000 items to meet every customer's needs.

c. C refers to our loyal customers, who are the key to the success of our business.

Big C Supercenter

At Big C, the majority of the space is devoted to the sale of consumer goods at low prices and good quality. Products available in a Big C store can be divided into 5 main categories, as follows:
a. **Fresh Food**: meats, seafood, fresh fruits and vegetables, delicatessen, frozen food, dairy products, bakery.

b. **Dry Food**: seasonings and condiments, beverages, soft drinks, liquor, snacks, personal stuffs, cleaning products, pet food and accessories.

c. **Clothing and Accessories**: men’s, women’s, children’s and infant’s clothing as well as shoes and handbags.

d. **Electric Appliances**: a wide range of electric appliances including fridge, washing machine, air conditioner, kitchen appliances, home entertainment equipment, computers and IT equipment.

e. **Home Décor and Accessories**: furniture, kitchenware, plastic storage items and utensils, decorative items, home improvement, maintenance tools and supplies, automobile and motorcycle accessories, sporting goods and toys.

**Big C Shopping mall**

Big C Shopping mall provides rental space located both inside and outside of Big C building to let the entrepreneurs do business within Big C. Nonetheless, goods and services providing must be different from the goods sold in Big C. Therefore, customers visiting Big C could find a great range of products and services available at a single destination, enhancing the overall shopping experience. Most of the operators that lease space at Big C Shopping mall can be divided into 4 main categories:

a. **Food and Beverage**: restaurants, franchises food outlets, food court

b. **Entertainment**: cinemas, karaoke booths and kid’s playground.

c. **Specialty Stores**: book shops, fashion boutiques, electronics shops, mobile phone shops.
1.3. Problem Identification

In order to achieve the company’s vision “Vinamilk’s will be the fastest and sustainable growing healthy dairy and Vinamilk’s company by building a long-term competitive advantaged product portfolio across the scale”. Competition between different types of dairy goods in the market always want to the customer see the good everything in product quality and impact on good to human being life. Vinamilk’s must improve service and more attract as many foreign customers as possible because nowadays Vinamilk’s still not be known too much with foreign market and the problem of "how customers choose the best product" has been considerable attention of researchers.

But there are many types of milk are sold in the market and the customer does not know which to select the appropriate type of milk with their economic and financial conditions. Problem is about customer loyalty is one of the main purposes of Vinamilk’s company. The researcher wants to find out the influence of the brand name, price, product quality attribute both primary three factors influence on customer loyalty in not only domestic market but also international market.

1.4. Statement of Problem

Topic: the research is about to analyze the correlation of main factors most influence on customer loyalty in Vietnam’s market. Related to the current issues, researcher chooses to be more focus to find the answer of these following questions:

1. Is there a significant influence of brand name, price, and product quality on customer loyalty in Vietnam’s market?
2. Which independent variables (brand name, price, and product quality) influence the most of customer loyalty in Vietnam’s market?
1.5. **Research Objectives**

The author conducts this research in order to four objectives:

1. To find the influence of brand name and customer loyalty on purchase decision in Vietnam’s market.
2. To find the influence of price and customer loyalty on purchase decision in Vietnam’s market.
3. To find the influence product quality and customer loyalty on purchase decision in Vietnam’s market.

So this study will then focus on, product quality, price and brand name that most effect to customer loyalty in Vietnam’s market.

1.6. **Significance of Study**

Based on the objectives of research, this research is meant to be able to give benefit and contribution both in academic and professional practice.

a. **For the researcher**

This study expected to give broader knowledge and understanding regarding the connection between dominant factors most influence on customer loyalty of Vinamilk’s products how increasing the value of domestics’ product when exporting to other countries.

Gain more knowledge and experiences about research.

b. **For the student**

To understand the dominant factors that influence on customer loyalty not only Vinamilk’s product but also the same products of other research.
This study is to explore the relations between variables that affect the buying decision of customer loyalty. Understanding of variables such as brand name, price, and product quality will be able to help further understand how these variables affect the decision making of consumer.

c. For the manufacturer

This study will help the present marketing managers to better reposition their branding and advertising strategy to capture the correct target market to boost the sales in times where economy are at a challenge.

With such study, the impact on advertisement is clearly an influential media to promote branding of products and variables that influence buying decisions is surely a focus to ensure the marketing communications are done correctly and effectively. Ensuring effective execution of strategy are by understanding how variables such as pricing, quality, perceived societal status and brand loyalty can influence customer loyalty.
1.7. Theoretical Framework

*Figure 1.1 Theoretical Frameworks*

![Diagram showing theoretical framework with nodes for brand name, price, product quality, and customer loyalty]

*Source: Self-constructed*

Figure 1.1 explains the field of study that the author would like to observe. There are three dominant factors most influence on customer loyalty actually it has some more factors also influence but the researcher wants to find out the influence of the variables taken which are three factors: brand name, price, and product quality effect to customer loyalty of Vinamilk’s products in Vietnam’s market.

1.8. Scope and limitation of the study

In order to be more focus on main point of problem investigated, there are limitations established as follow:
1. This research is intended to examine the influence of main factors: brand name, price, and product quality most influence on customer loyalty in Vietnam’s market.

2. The sample chosen was a country, Vietnam in particular. Specially, this research is investigated in BigC Supercenter and BigC Supermarket so the population from which samples are collected is unknown. People are coming and leaving at the same time. Collecting a hundred respondents is only a relatively to reflect all population’s attribute as well as the factors of a brand name, price, and product quality on customer loyalty rating which will be represent for all population.

1.9. Assumption and Hypothesis

Based on the problem statement, there three independent variables and one dependent variable will be tested and evaluated. Those are brand name, price, and product quality most influence on customer loyalty in Vietnam’s market. The relationship between these variables can be displayed below:

*Figure 1.2: Relationship Model Hypothesis*

Source: Self-developed
Hypothesis Development

Three hypotheses have been developed for this study based on dependent and independent variables are given below:

H1: Brand Name has strongly influence on customer loyalty in Vietnam’s market

H2: Price strongly has influence on customer loyalty in Vietnam’s market

H3: Product Quality has strongly influence on customer loyalty in Vietnam’s market.

1.10. Definition of Term

**Customer Loyalty:** consumers or buyers of goods and services tend to react or behave when purchasing products that they like and they always buy the products.

**Brand Name:** is one of the brand elements which help the customers to identify and differentiate one product from another.

**Quality:** is the degree to which all the services delivered meet the expectation of the customers as a result of promise from service communicated.

**Products:** A good, idea, method, information, object, or service that is the end result of a process and serves as a need or want satisfier. It is usually a bundle of tangible and intangible attributes (benefits, features, functions, uses) that a seller offers to a buyer for purchase.

**Demand:** is the want or desire to possess a good or service with the necessary goods, services, or financial instruments necessary to make a legal transaction for those goods or services.

**Supply:** The total amount of a product (good or service) available for purchase at any specified price.
**Customer Satisfaction:** can be defined as the extent to which a service perceived performance as satisfaction.

**Dependent variable:** The Y variable in a regression modeling which the elements that is being predicted.

**Independent variable:** The X variable(s) in a regression modeling which the elements is used to predict the dependent variable.

**Marketing:** the total of activities involved in the transfer of goods from the producer or seller to the consumer or buyer, including advertising, shipping.
CHAPTER II:

LITERATURE REVIEW

2.1. Brand Name

Brand means the symbol, sign and name of the product. In the changing world brands have become more important for the purchasing. Brand name selection is critical decision for the customers. Companies try to enhance the image of the brand name and this image increase the loyalty of the brand. More brand loyalty leads to repurchase behavior of the consumer. Various researchers defined brand name in different ways. So relationship theory of brand suggests that, brand is a tool that connects customers and suppliers to the firm and is a mean to sustain such relationship in long run (Davis, Oliver and Brodie, 2000; Chang and Chieng, 2006). Brand affects and helps customers to choose a good brand that satisfied their needs and wants and to choose the right product and firm for any specific or given product or service. Furthermore, brand name and how to develop that loyalty at the passage of time more efficiently and effectively that firm and customers both behave loyal toward each other (Schultz and Bailey, 2000).

2.1.1. Brand Awareness

Brand awareness is how customers know and understand brand of products. Brand awareness refers to how aware customers and potential customers are of your business and its products (Tara and Brian, 2007). For example, after its introduction of Apple Company, surveys found that more than 90% of US consumers had heard about the Iphone as a result of advertising and new reports. This is exceptionally high brand awareness. Ultimately, achieving successful brand awareness means that their brand is well known and is easily recognizable. Brand awareness is crucial to differentiating their product from other similar products and competitors. In other words, brand awareness is covered in most texts on advertising measurement; it is a
central part of the popular hierarchy of effects advertising model and marketing managers claim it as an important goal of their communications activities (Kelly, 1991).

Rossiter and Percy (1987) describe brand awareness as being essential for the communications process to occur as it precedes all other steps in the process. Without brand awareness occurring, no other communication effects can occur. For a consumer to buy a brand they must first be made aware of it. Brand attitude cannot be formed, and intention to buy cannot occur unless brand awareness has occurred (Rossiter & Percy 1987; Rossiter et al. 1991). In memory theory, brand awareness is positioned as a vital first step in building the “bundle” of associations which are attached to the brand in memory (Stokes 1985). The brand is conceptualized as a node in memory which allows other information about the brand to be “anchored” to it (Aaker 1991b). The conceptualization of a network of brand associations in memory with the brand as a central core has been put forward by many others (e.g. Keller 1993; Holden 1993; Holden & Lutz 1992).

Brand awareness is a necessary condition for the success of a brand (Esch, 2005). Brand awareness can be defined as the strength of the brand in the consumer's memory and is measured in terms of the different ways in which a consumer can remember the brand (Aaker, 2002). Only if adequate brand awareness exists a brand will be considered in the purchase decision, an anchor created for embedding brand-specific associations, and familiarity and liking generated among the users (Esch, 2004; Didascalou et al, 2009). Brand awareness (recognition) at the first level exists if on being shown individual elements of the brand (brand name, brand logo) the user recognizes something already perceived (Keller, 2003). If the user fails to recognize the individual elements of the brand, there is no brand awareness. Active brand awareness exists if on the mention of a product category the user remembers a brand without having been presented beforehand with brand-specific features. The next level (intensive brand awareness) contains those actively known brands occupying
first place in the awareness scale. The highest level comprises dominant brands that occupy an exclusive position (Aaker, 2002), in other words, cases in which users remember only one brand in the particular product category. So that brand awareness is important elements deemed to be decisive (Keller, 2003).

2.1.2. Brand Choice

Understanding how importance the brand choice will influence to consumer buying behavior so the researcher wants to express deeply the concept of brand choice. According to Stephen King, 1973, p.37 “a product is something that is made in a factory; a brand is something that is bought by a customer. A product can be copied by a competitor; a brand is unique. A product can be quickly outdated; a successful brand is timeless.” As he said a brand is more than just a product name or logo. Brand is extremely important for sales. For example, just about every household will buy a television at some time, thus for business it is important that these households buy their television brand. Why does a customer buy one certain television? Is the reason for customer’s choice the low price, the size of the screen or perhaps style and reputation? There are so many brands, with hundreds of different attributes, and every brand has its own unique combination of attributes. Yet, one brand sells many more televisions than the other, and further to this some brands have a completely different customer base than others. Therefore it can be said that brand choice is not a completely random choice (Howard & Seth, 1969). In this study, brand choice is the final choice a customer makes after considering several options on many attributes. The customer will choose the product which is the most valuable to him or her (Borden, 1964). Therefore it is very important to know exactly what attributes are taken into consideration when a customer chooses between brands. Researchers have made many lists of different attributes that should be able to determine customer brand choice.
2.1.3. Brand Image

Brand image is the current view of the customers about a brand. According to Vineeth, MBA (2007) *brand created in continuously developing brand relationships where the customer forms a differentiating image of a product or service based on all kinds of brand contacts that the customer is exposed to*. Brand image is a unique set of associations in the minds of customers concerning what brand stands for and the implied promises the brand makes. Brand image is the image of a good or service which is formed in the customer’s mind. In other words, *brand image often influence a customer’s expectation and consequently satisfaction with a product or service*. *Brand image pertains to the perception or mental picture a customer holds of brand and formed through his/ her response, whether reasoned or emotional* (Dohni, D. and Zinkhan, G.M, 1990), to brand-related stimuli, including communication with other people and advertisements (Padgett and Allen, 1997). The objective is to arouse a positive affective response to the brand in the customers, such that they buy brands for their physical attributes and functions (Levy,S.J., and Glick, I.O), and their symbolic meanings associated with the brand (Gardner, B.G and Levy, S.J., 2005) product or service. During its formation, the customer’s experiences, feelings and trust will influence the image (O’Cass, A. and Grac, D., 2003). As a customer-oriented concept, brand image reflects the customer’s perspective what he /she receives from brand and relies on his/ her experience with it. Therefore, positive can promote positive experiences and instill positive feelings and trust in the customer.

2.2. Product Quality

Product is a good, idea; method, information, object or service created as a result of a process and serves a need or satisfies a want. It has combination of tangible and intangible attribute (benefits, features, functions, uses) that a seller offers a buyer for purchase. Not only product is thing which customers can buy but also product contributes the company have positioning, set of image in customer’s mind, earn profit for the company. *According to the Kotler and Armstrong (2010); “Product is*
anything that can be offered to a market for attention, acquisition, use or consumption that might satisfy a want or need.” Quality is conformance to requirements (Crosby, 1996). Quality is the comparison of perceived performance and expected performance (Kang, 2006). Product quality can be critically defined from two different perspectives, namely objective quality and the perceived quality (Brunso et al. 2005). Objective quality refers to the technical, measurable, and verifiable nature of products or services, processes, and quality controls. This includes product features, product performance, and durability amongst others. While subjective or perceived quality refers to the consumers’ value judgments or perceptions of quality. Product quality encompasses the features and characteristics of a product or service that bears on its ability to satisfy stated or implied needs. In other words, product quality is defined as “fitness for use” or conformance to requirement” (Russell and Taylor, 2006).

2.2.1. Product Style and Design

Appearance, size, color, and structure of product are almost called product style and design. In marketing concept and total quality management (TQM), product style and design considerably contributes value to consumers. According to Kotler and Armstrong (2004, p284) mentioned that it is another way to add customer value is through distinctive product style and design. He believed that “design is a larger concept than style. A sensational style may grab attention and produce pleasing aesthetics, but it doesn’t necessarily make the product perform better. Unlike style, design is more than skin deep – it goes to the very heart of a product. Good design contributes to a product’s usefulness as well as to its look”. Researchers all agree that with a good style and design product can easily attract attention, psychologically improve product performance, create a competitive advantage against competitors and partially pave for the foundation of perceived quality. In addition, it is impossible to refuse a product which has better style and design in assumption that it has same contents, same quality made by other factors. On the other hand, appearance, size,
color and structure of product are likely to be referred to as packaging which involves designing and producing the container and wrapper for a product.

### 2.2.2. Packaging

Packaging can be defined quite simply as an extrinsic element of the product (Olson and Jacoby (1972)) – an attribute that is related to the product but doesn’t form part of the physical product itself. “Packaging is the container for a product – encompassing the physical appearance of the container and including the design, color, shape, labeling and materials used” (Arens, 1996). According to Kotler& Armstrong (2004), traditionally the main function of the package was to contain and protect the product, packaging is the process of designing, covering, and wrapping the product into something in order to looks goods, giving identity to product and protects the product from harmful object. Modernly, numerous factors have created a new era product packaging: especially in food and beverage industry because package can physically and psychologically connect with other quality factors to the whole perceived quality of product.

### 2.2.3. Product Choice

Product choice of customer it means that the choice which product to make is a fundamental decision by firm. Despite this, most theoretical models of firm behavior take product choice by the firm as given or the treat entry into a product market to be the same as the decision to creat a firm. Product choice can be depend on some factors influence it because the choice product of customer they will see how quality of product, the price, all of them are suitable for their condition or not. When buying a product or service, consumers like the widest possible choice. According to Richard T. Watson (2001) “Information age consumers are more interested in perfect choice than perfect competition. They want a wide product selection, choice in how they buy, and customization of products and services to fit their preferences.” With many goods and service the customers have so many chances to choose which
products they want such as: cloths, foods, furniture, in wherever consumers want to choose and how they purchase (e.g. a regular retail outlet, outlet mall, mail order or online shopping is popular. Besides, a positive side of perfect choice is that it moves customers away from focusing on price because customized products are not standardized, and thus alternatives are not so readily comparable. Furthermore, customers are often willing to pay for customization, and thus it can be a more profitable business strategy than staying in price competitive market.

2.3. Price:

There are many different concepts of price. In the economic and trade we use the following concept: "Price is the amount that buyers are willing to pay in exchange for goods or services that they need." Customer's ability to purchase first of all depends on their current financial capability, so it is limited. Prices that people use to buy and sell on the market are called market prices. Market prices are a very versatile element to regulate all business activities of the supplier as well as the customer's consumption for one or a group of products or services. Demand for goods and services are influenced by many factors in addition to price, but usually when immediate price increase of goods or services that will reduce down and vice versa.

Cadogan and Foster (2000), price is probably the most important consideration for the average consumer. Consumers with high brand loyalty are willing to pay a premium price for their favored brand, so, their purchase intention is not easily affected by price. In addition, customers have a strong belief in the price and value of their favorite brands so much so that they would compare and evaluate prices with alternative brands (Evans et al., 1996; Keller, 2003). Consumers’ satisfaction can also be built by comparing price with perceived costs and values. If the perceived values of the product are greater than cost, it is observed that consumers will purchase that product. Loyal customers are willing to pay a premium even if the price has increased because the perceived risk is very high and they prefer to pay a higher price to avoid the risk of any change (Yoon and Kim, 2000). Basically, long-term
relationships of service loyalty make loyal customers more prices tolerant, since loyalty discourages customers from making price comparison with other products by shopping around. Price has increasingly become a focal point in consumers’ judgments of offer value as well as their overall assessment of the retailer (De Ruyter et al., 1999).

According to Bucklin et al. (1998), price significantly influences consumer choice and incidence of purchase. He emphasized that discount pricing makes households switch brands and buy products earlier than needed. Price is described as the quantity of payment or compensation for something. It indicates price as an exchange ratio between goods that pay for each other. Price also communicates to the market the company’s intended value positioning of its product or brand. Price consciousness is defined as finding the best value, buying at sale prices or the lowest price choice (Sproles and Kendall, 1986). Additionally, consumers generally evaluated market price against an internal reference price, before they decide on the attractiveness of the retail price.

### 2.4. Customer Loyalty

Customer loyalty is all about attracting the right customer, getting them to buy, buy often, buy in higher quantities and bring company even more customers. Customer loyalty is one of the most frequently discussed subjects in the marketing and service literature (Eshghi et al., 2007; Heskett and Sasser, 2010). Customer loyalty is customer repeating purchase intention to some specific products or services in the future (Jones et al., 1995). It is making customers feel committed: When the benefits are meaningful to them, they will stay on and buy the products again (Grossman, 1998). Loyalty is used to describe the willingness of a customer to continue patronizing a firm’s goods and services over a long period of time and on a repeated and preferably exclusive basis, and voluntarily recommending the firm’s products to friends and associates (Lovelock, 1996). Customer loyalty is the result of
an organization, creating a benefit for customers so that they will maintain and increasingly repeat business with the organization (Anderson and Jacobsen, 2000).

Customer loyalty provides the foundation for a company’s sustained competitive edge. Different researchers have given credence to the reason why developing customer loyalty is beneficial to firms, including GSM providers. Developing and increasing loyalty is a crucial factor in companies’ growth and performance (Reichheld, 1996 and Lee and Cunningham, 2001). Customer loyalty is one of the key factors and can help a company achieve long-term success (Andres, 2007). The significance of customer loyalty is that it is closely related to the company’s continued survival and to strong future growth Fornell, (1992). Hence, for a company to maintain a stable profit level when subscription level has reached saturation point, the market is mature and competition is fierce, a defensive strategy which strives to retain existing customers is more important than an aggressive one Fornell, (1992) and Ahmad and Buttle, (2002). Ndubisi (2005) and Pfeifer (2005) point out that the cost of serving a loyal customer is five or six times less than a new customer. Walsh et al. (2005) state that is better to look after the existing customer before acquiring new customers.

2.4.1. Word of Mouth

According to Debaix and Vanhamme (2003) “Word of Mouth is the most important informal means of communication between consumers. It is defined as the informal communication directed at other consumers about ownership, or characteristics of particular goods and services and/or their sellers”. Word of mouth is more reliable and trustworthy than commercial sources of information controlled by companies (e.g. advertising, sponsorship), word of mouth the message flow tends to be two-way so that word of mouth is a perfect kind of communication, and on the other hand, word of mouth provides information about products and services for potential consumers. Derbaix, C. and J. Vanhamme, 2003, there are two forms of word of mouth: negative and positive. “Positive word of mouth occurs when good
news testimonials and endorsements desired by the company are uttered and negative word of mouth is the mirror image. Negative word of mouth is also considered to be one of the forms of customer complaining behavior”. Therefore, word of mouth is the transfer of information about brand or a company among potential consumers. In fact, based on the levels of satisfaction with a brand or company, people use word of mouth as a personal communication. Word of mouth is the oldest form of media that spreads information about firm’s products or services among individuals and it is outside of the controllable marketing mix.
CHAPTER III

METHODOLOGY

3.1. Research Method

In this research, research objective which is to explain the effect of brand name, price and product toward customer loyalty. According to Bryman and Bell (2007), there are two types of research methods which are commonly used. The first is qualitative method. Quality method is a naturalistic, interpretative approach concerned with understanding the meanings of certain observed phenomena or action. It examines, analyzes and interprets observations for the purpose of discovering underlying meanings and patterns of relationship in a manner that doesn’t involve mathematical models. Qualitative research also provides explanation of reasons and associations between social variables. The data in this type of analysis is not form of numbers (Ritchie and Lewis, 2003; Royse, 1999).

Qualitative process of inquiry has the goal of understanding a social or human problem from multiple perspectives. Qualitative research is conducted in a natural setting and involves improve of building a complex and holistic picture of the phenomenon of interest (Mason and Marchal, 1996). Common data used in qualitative method are words (e.g. from interview), pictures (e.g. from video), or objects (e.g. from artifact). Unlike, qualitative method, quantitative method uses numbers to prove or disprove a notion or hypothesis. The process of measurement is central to quantitative research because it provides the fundamental connection between empirical observation and mathematical expression of quantitative.

Quantitative research uses data that structured in the form of numbers or that can be immediately transported into numbers (Ross, 1999). It is controlled, exact approach to research. For example, it uses statistical tools, e.g. mean ratings, correlation, and regression….etc. to analyze data. In addition, (Bryman and Bell
(2007)) mentioned that the aim of qualitative research is completed and detailed description while for the quantitative research; the aim is just classify features, count them and construct statistical models in attempt to explain what is observed. As stated in chapter I the purpose of this research are investigating the effect of brand name, price and product toward customer loyalty. On the other hand, the perceived factor of product was rate by customers based on scale which was represented by number (scale from 1 to 5). In order to test the hypothesis, the method used is regression analysis. Multiple regression analysis is chosen because there are two independent variables of X which are Brand Name (X₁), Price (X₂), and Product Quality (X₃) and one dependent variable of Y is customer loyalty (Y). By using the regression analysis, the researcher can be able and understand the relationship between variables either dependent or independent. Besides, regression analysis also used to predict the value of one variable to another variable. It means that regression analysis makes the prediction of dependent variable using independent variables (Lind, Marchal&Wathen, 2010).

The hypotheses will be tested using SPSS 16.0 application software which will make the process of calculation and testing much faster and easier. Alternative software is using Microsoft Excel to make possible charts. Both of them are also very important in improving productivity of research. Statistical tools such as percentage, f-test and t-test were used for analyzing. As a matter of course, quantitative method was highly recommended to use. As mentioned, each method has different uses and different attributes but two of them have a same basic aim. That is how research problems are solved with reality and authenticity.

There is no perfect research for all area but appropriate method is highly appreciated for a certain area. A right methodology is closely associated with research area, leads to a right direction to get empirical findings (Bryman and Bell, 2007). In general, there will be many arguments when a method is proposed but the common one is that there is no ultimate methodology for doing any research both
methods carry out both advantages and disadvantages. Kvale (1989) advised that the combination between two methods was highly recommended for researching any subjects. In this research, using quantitative method helped the researcher to manipulate quantitative data which has been collected from sample and as proposed by Bryman and Bell, 2007, the findings were mostly associated and practiced with already written principles and rules.
3.2. Research Framework

*Figure 3.1 Research Framework*

- Literature Review
- Problem Identified
- Problem Statement
- Research Design
- Data Pilot
- Validity Checking
- Reliability Checking
- Data Collection
- Data Analysis
- Conclusion

*Source: Self-constructed*
3.3. Research Instrument

3.3.1. Abstract

Research Instrument using in this study included questionnaire which is used to get primary data, interview and field research which is studied carefully for getting topics, as well as suggesting literature for the research. Research instrument was supplementary tools that were chosen and used by the research to make the research more systematic and easy to conduct. This study has identified a number of brand name, price, product quality that affect to customer loyalty, to obtain the high proportion data; this research will use quantitative survey method. A survey performed by questionnaire gains quantitative information. This enable statistical treatment for proving significance of customer loyalty for consumer “Vinamilk’s products”, the answers to the questions could explain which reference group factors are diving consumers the most.

The objective of this study is to describe and explain the correlation between three factors influence brand name, price and product quality on customer loyalty. Quantitative survey and questionnaire are applied as the instrument in this research. The survey questionnaire used in this study was self-constructed. Therefore, pilot test was applied in one group of respondents which did not included in the study sample size. During the process, each item in the questionnaire was analyzed in term of its content and consistency; and word construction as well as style format. In addition, the research also asked his advisor’s advises about the questionnaire, after that the researcher revised the questionnaire to be clear, simple and short.

3.3.2. Questionnaire Design

The research instrument used by the researcher was the questionnaire. The questionnaires were distributed according to Google Drive on November 06, 2012 and were collected on November 20th, 2012 and these questions were adapted from
Wong Foong Yee and YahyahDidek in faculty of economics (2008) .The question consists of two sections of questions. There are section A and section B, in the questionnaires. Section A, measurement used is nominal scale which is split data into mutual exclusive and collectively exhausted categories (Sekaran, 2006). It is designed to gather respondent demographic details such as gender, age, level education, and marital status, and occupation, monthly income while section B measurement used is ordinal scale, the respondents’ selection which measure four major items. The purpose of the questionnaire is to obtain the major information which is described such as brand name, price, and product quality. Scale that will be used s categorical scale in section B which respondents is asked to tick one answer from question 1 to question 26 at the space provided. The respondents were asked to indicate their degree of agreement or disagreement on several features. A five point lanker – type scale will be used with 1= “strongly agree” to “strongly disagree” The following are the details:

**Table 3.1: Relative Grading Systems for Each Dimension**

<table>
<thead>
<tr>
<th>PART</th>
<th>Variable</th>
<th>Number of Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Personal Information</td>
<td>7</td>
</tr>
<tr>
<td>B</td>
<td>Brand Name</td>
<td>1 - 7</td>
</tr>
<tr>
<td></td>
<td>Price</td>
<td>8 - 10</td>
</tr>
<tr>
<td></td>
<td>Product Quality</td>
<td>11 - 20</td>
</tr>
<tr>
<td></td>
<td>Customer Loyalty</td>
<td>21 - 26</td>
</tr>
<tr>
<td></td>
<td>Total number of questionnaires</td>
<td>26</td>
</tr>
</tbody>
</table>

The respondents were asked to score each statement based on rating scale that the researcher provides depending on the respondent perception. The figure and regulations are shown below. Give checklist to the answer.
Consumers who participated in this survey were given scales from 1 to 5 to rate for each sub-variable. Totally there were 26 sub-variables. The effectiveness was built based on Likert scale and considered as below:

**Table 3.2 Likert Scaling**

<table>
<thead>
<tr>
<th>Scale rating</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>2</td>
<td>Disagree</td>
</tr>
<tr>
<td>3</td>
<td>Neutral</td>
</tr>
<tr>
<td>4</td>
<td>Agree</td>
</tr>
<tr>
<td>5</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

*Source: Trochim (2008)*

Due to purpose of the research, these 26 rating questions were the most important part of the questionnaire. Results from those questions were processed using statistical treatment in chapter IV to draw the final conclusions that answer the research questions.

### 3.3.3. Data Collection Procedure

The method of data collection for this study is quantitative. Questionnaire will be used as primary data collection method refers to information that is developed or gathered for the research project at hand (Burns and Bush, 2006: 146). Questionnaire was distributed using the e-mail, and Facebook. The advantage of using mail questionnaire survey is that they are efficient and relative inexpensive (Chadwick,
Another advantage is easy to administer, can reach out globally, fast delivery and respondent can answer at their convenience, as with the mail question, (Sekaran, 2006) and another way that the questionnaire was given face to face to consumers who have ever used Vinamilk’s products in order to have enough experience to evaluate. The data was collected in BigC Supercenter and Supermarket with random shoppers who have ever used Vinamilk’s product. Explanations will be given to students on how to complete the questionnaires. The questionnaire will be distributed to respondents which the name of the respondents given from the initial respondents which took place in BigC Supercenter and Supermarket, Hanoi, Vietnam from November 06 to November 20th, 2012 with help of personal relationships of the researcher as supporters. The aim of the survey is to analyze the factors brand name, price and product quality most influence on customer loyalty in behavior in the place where this product are available.

### 3.3.4. Types of Variables

In principle, research is measuring the social or natural phenomena. Examining the existing data more appropriate called a report instead of doing research. However, the lowest in the scale of the report can also be expressed as a form of research (Lind, Marchal&Wathen, 2010). In this research, the writer examined based on existing data, in order determine the correlation between variables researched. There are the Independent variables, the variables that affect other variable that is going to be tested, and the dependent variable, the variable that is affected by other variables:
Because there are four (4) variables in this research that 3 of X correlated to 1 Y, Multiple Regression will be used to analyze the data. Regression analysis is a technique for modeling and analyzing several variables, when the focus is on the relationship between a dependent variable and one or more independent variables (Lind, Marchal & Wathen, 2010). Moreover, multiple regression analysis enables us to understand how the typical value of the dependent variable changes when any one of the independent variables is varied, while the other independent variables are held fixed (Barry Render, Ralph Stair & Michael Hanna 2006).

Multiple Regression analysis is not only widely used for predicting and forecasting but also to understand which among the independent variables are related to the dependent variable, and to explore the forms of these relationships (Mark L. Berenson, David M. Levine & Timothy C. Krehbiel, 2009). So in order to find correlation between variables researched, the author will use Multiple Regression method.
For the process of analyzing the data, the researcher will use SPSS 16 and Microsoft Excel software for statistic purpose. It makes the calculation can be done easily by this software. For making the report or book of this research Microsoft Word was used to make diagram and framework.

The combination between Microsoft Excel 2007 and SPSS (Statistic Package for Social Science) version 16.0 were used to process statistical data for questionnaires.

a) Microsoft Excel

Researcher also helped by basic software in Microsoft Office for inputting or sometimes used for processing the data.

b) SPSS (Statistic Package for Social Science)

SPSS it helps in terms to analyze the data where is prove conclusion formed as numerical measurement of data gathered and inputted. This data is helpful in processing the data while there are many equations or formulas that really hard of calculated it manually. Moreover, the data gained is not just one or two data.

3.4. Sample Design

According to Roscoe (1975) in the book Research Methods for Business: A Skill Building Approach of the author Uma Sekaran; rules of thumb for determining sample size:

1. Sample sizes larger than 30 and less than 500 are appropriate for most research.
2. Where samples are to be broken into subsamples (ex: male/female, etc), a minimum sample size of 30 for each category is necessary.
3. In multivariate research (including multiple regression analysis), the sample size should be several times (preferably 10 times or more) as large as the number of variables in the study.
4. For simple experimental research with tight experimental controls (matched pairs, etc) successful research is possible with samples as small as 10 to 20 in size.

From the third rule, the researcher estimated that this research has totally five variables (including four independent variables and one dependent variable) times 10, so the minimum sample size this research must be collected should be 50.

3.4.1. Size of Population

In this research, the population is taken from customers who are using the Vinamilk’s products in Vietnam with a total of 130 respondents. The researcher must take 30 samples before to check validity and reliability tests. The real size of sample for survey will be selected from the population after validity and reliability test.

3.4.2. Margin of Error

Margin of error is percentage allowance for non-precision or error because the uses of sample instead of the population. There are usually 0.01 or 0.05 (1% or 5%) in this kind of research. Although the margin of error 0.01 is accurate than margin of error 0.05, the researcher prefer 0.05 for this research. Meaning the level of error is 5% and the research has 95% confidence level.

3.4.3. The Actual Sample Size

Because this research is about consumer buying behavior in Vietnam and case study in Hanoi, Vietnam, while the researchers stay in Indonesia during thesis period, so that the researcher has to use Google Doc to distribute questionnaires back to Vietnam. After try to spread questionnaire, the actual sample size of this research was 100.
3.4.4. The Respondents

The respondents for this research are Vinamilk’s customers in BigC supermarket and BigC supercenter, Hanoi, Vietnam. Based on the information has be mentioned in the previous section, there are totally 100 respondents were included in this research.

3.5. Data Analysis Technique

Descriptive Statistic is the statistical technique that being used in the analysis of this research. Frequency and percentage is type of analysis that being used in this research. The data obtained from questionnaires are all facts. Statistical package the social sciences (SPSS) version 16.0 was used to analyze the data collection in this study. For data processing, four statistical techniques were used for different purposes. These included frequency, descriptive statistics, validity and reliability test, multiple regression analysis.

3.5.1. Frequency Analysis.

The frequency analysis has purpose to measure the pattern of respondent’s background. In section A (gender, age, education level, marital status, and occupation, monthly income) will analyze using frequencies and percentages.

3.5.2. Mean

A linear regression analysis of the data can be based on the Likert mean sores. The arithmetic mean is the “standard” average often simply called the “mean” and is common for no distinction to be made for the different rigors inherent among the various disciplines. The characteristic that is common to the entire mean variations is the need to quantify some sense of central tendency. As Likert scale is numeric data, arithmetic mean is an appropriate way to present the central tendency of Likert data. The formula of Arithmetic Mean i
\[ \bar{x} = \frac{\sum x_i}{n} \]

Where

\( \bar{x} \): is the mean

n is the number of observations and

\( \sum x_i \) is the sum of all the observations

3.5.3. Validity Test

Validity construction is very important to get the testing validity. The validity of a scale may be defined as the extent to which difference in observed scale scores reflect true differences among objects on the characteristic being measured, rather than systematic or random error. There were two main things which need to get the validity test: content and construct validity (NareshK.Malhotra, 2004)

a. Content Validity

For the content validity was done through the judgments of a panel of persons on how well the instrument meets the standards. For this research, the questionnaire has been revised and approved for this content validity by thesis advisor.

b. Item Validity (Construct Validity)

Items validity was tested by using Pearson Product Moment. In this case the writer would compare between r computations with r table. The r computation must be greater than r table in order to obtain validity in each item. If the r computation was less than r table, then the item was invalid.

The coefficient of correlation of Pearson Product Moment can be calculated base on the actual values of X and Y. The formula is:
**Formula 3.1: Validity Test**

\[
r' = \frac{n(\Sigma XY) - (\Sigma X)(\Sigma Y)}{\sqrt{n \Sigma x^2 - (\Sigma x)^2}(n \Sigma y^2 - (\Sigma y)^2)}
\]

Where:

- \(n\) = the number of paired observations
- \(\Sigma X\) = the X variable summed
- \(\Sigma Y\) = the Y variable summed
- \(\Sigma X^2\) = the X variable squared and the squares summed
- \(\Sigma Y^2\) = the Y variable squared and the squared summed
- \((\Sigma X^2)\) = the X variable summed and the sum squared
- \((\Sigma Y^2)\) = the Y variable summed and the sum squared

To check validity of the questionnaire, the \(r\) computation must be greater than \(r_{\text{table}}\) in order to obtain validity in each construct. If the \(r\) computation is less than \(r_{\text{table}}\), the construct is invalid.

**3.5.4. Reliability Test**

This research is using Split-Half Method since it will be measured the similar questions or to which respondent can answer. In addition, reliability can be defined as the extent to which measures are free from random error (Malbotra & Peterson, 2006). The instruments are shown if it is high shown that there high reliability in internal consistency tense, means there is similarity among the items Correlation that can be used to know the correlation from Split Half Method through Spearman Brown formula:
Formula 3.2: Reliability Test

\[
\text{Reliability of scores on total test} = \frac{2 \times \text{reliability for } T_1 \text{test}}{1 + \text{reliability for } T_2 \text{test}}
\]

3.6. Multiple Regression and Data Analysis

3.6.1. Classical Assumption Testing

The estimation method used in this research is the Ordinary Least Square (OLS) method. Least Square method determines a regression equation by minimizing the sum of the squares of the vertical distance between the actual Y values and the predicted values of Y (Lind, Marchal & Wathen, 2010). This method is chosen because it is the most powerful and popular methods of regression analysis. Moreover, it is also simpler mathematically. The use of this mathematic has to meet several distribution (Mark L. Berenson, David M. Levine & Timothy C. Krehbiel, 2009).

3.6.1.1. Normality Test

It is assumed in multiple regression that residuals (predicted minus observed values) are distributed normally. Even though most tests are quite robust with regard to violation of this assumption, it is always a good idea, to review the distributions of the major variables of interest. This test can be done by producing histograms for the residual as well as normal probability plots, in order to inspect the distribution of the residual values (Barry Rende, Ralph Stair & Michael Hanna, 2006).

The normality test also can be done by using SPSS statistical software and can be viewed in the graph of Normal Probability Plot (NPP) that is a graphical device to study the shape of the Probability Density Function (PDF). NPP is used to assess how well empirical data approximates a particular theoretical distribution (Mark L. Berensonm David M. Levine & Timothy C. Krehbiel, 2009). In this case a linear
relationship distribution; the data can also be plotted on the probability scale by plotting the cumulative probabilities of the data under the assumed distribution against their expected probabilities.

3.6.1.2. Multicollinearity Test

Multicollinearity is the correlation among the independent variables which makes it difficult to make inferences about the individual regression coefficients and their individual effects on the dependent variables. Another reason for avoiding correlated independent variable is they may lead to erroneous results in the hypothesis tests for the individual independent variables. In practice, it is nearly impossible to select the independent variables that are completely unrelated or not correlated in some degree (Lind, Marchal & Wathen, 2010). Multicollinearity problems arise if there is perfect relationship or certainly among the few independent variables or all variables in the model. In cases of serious multicollinearity, regression coefficients are no longer showing pure effect on independent variables in the model. Multicollinearity does not affect the multiple regression equation’s ability to predict the dependent variable. However, it might show unexpected results on the relationship between each independent variables and the dependent variable (Marchal L.Berenson, David M. Levine & Timothy C. Krehbiel, 2009).

If multicollinearity is presented in a multiple regression model, the model is still good for prediction, but interpretation of individual coefficient is not valid. There are many methods to detect the presence of multicollinearity, in this research the writer would like to do a test on the variables with the measurement of the Variance Inflation Factor (VIF) (Lind, Marchal & Wathen, 2010).
Formula 3.3: Variance Inflation Factor model

\[ VIF = \frac{1}{1 - R^2_j} \]

*Source: (Lind, Marchal & Wathen, Statistic Techniques in Business and Economics, 2010)*

The term \( R^2_j \) refers to the coefficient of determination, where the selected independent variables is used as a dependent variable and the remaining independent variables are used as independent variables. A VIF greater than 10 is considered unsatisfactory, indicating that the independent variable should be removed from the analysis. When VIF is under 10, it means that there is no multicollinearity problem aroused (Lind, Marchal & Wathen, 2010).

3.6.1.3. Heteroscedasticity Test

One of the classic assumptions of the regression model is that the disturbance variance is constant, or homogeneous, across observation. If this assumption is violated, the errors are said to be “heteroscedasticity”. Heteroscedasticity often arises in the analysis of cross sectional data and time series data (Lind, Marchal & Wathen, 2010).

If heteroscedasticity exist in the regression model, the variance and standard error will tend to increase as the t value will not get lower than the actual t value. The consequences are the t – test and F – test will inaccurate and fail to reject the null hypotheses (Mark L. Berenson, David M. Levine & Timothy C. Krehbiel, 2009).

A simple test for heteroscedasticity is to plot the standardized residuals (on vertical axis) against the dependent variable (horizontal axis). If no heteroscedasticity occurs, the plot will appear to spread randomly. If a systematic pattern (wave, straight, narrow, widen) appears in the scatter plot then heteroscedasticity exists (Mark L. Berenson, David M. Levine & Timothy C. Krehbiel, 2009).
3.6.2. Regression Analysis:

According to the Basic Business Statistic book established 2009 by Mark L. Berenson, David M. Levine & Timothy C. Krehbiel, multiple regression models is used for estimating or forecasting the value of variable Y, which calculated using several variables that affect Y. The research on relationship between 1 dependent variable (Y) with four other independent variables (X₁, X₂, and X₃) used to understand the relationship between them. According to Barry Render, Ralph m, Stair, Jr, Michael E. Hanna (2006), in any regression model, there is an implicit assumption (which can be tested) that a relationship exists between the variables. In order to decide whether to reject or accept the hypothesis, random error \( e = 5 \) that can be predicted. The result from this regression analysis will be used to accept or to reject the hypothesis as to observe whether there is any effect or not between dependent and independent variables. Referring to the research objective to examine how significance the correlation between brand name, price, product and service quality in Vietnam’s market, the underlying multiple regression model will be used:

\[
Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e
\]

\textit{Equation 3.1 = Multiple Linear Regression Model}

Source: Mark L. Berenson, David M. Levine & Timothy C. Krehbiel, Basic Business Statistic, 2009

Where,

Y = Consumer Buying Behavior

X₁ = Brand Name

X₂ = Price

X₃ = Product Quality
\[ \beta_0 = \text{Intercept / Constant (value of Y when } x = 0) \]

\[ \beta_{1,2,3,4} = \text{Regression coefficient of the } i^{th} \text{ independent variable} \]

\[ e = \text{Random Error} \]

However, in order to finish the regression model to see the correlation between the variables, there are some tests including measuring the regression model to test the validity of the data which are normality test & classic assumption tests.

**3.7. Testing the Hypothesis**

**3.7.1. Testing the Model for Significance**

**3.7.1.1. F-test**

To determine if there is a linear relationship between X and Y, a statistical test (F-test and T-test) is performed. The null hypothesis is that there is no linear relationship between the two variables (i.e., \( \beta = 0 \)), and the alternate hypothesis is that there is a linear relationship (i.e., \( \beta \neq 0 \)). If the null hypothesis can be rejected, then we have proven that a linear relationship does exist.

F-test determines whether there is a significant relationship between the dependent variable and the entire independent variables. The F-test statistic is equal to the regression mean square (MSR) divide by the error mean square (MSE) that is represent by formula below:

**Formula 3.4: F-test**

\[
F = \frac{[R^2/k]}{[(1 - R^2)/(n - k - 1)]}
\]

*Source: Lind, Marchal&Wathen, Statistic Techniques in Business and Economics, 2010*

Where:
F = Statistic test for F distribution

R² = Coefficient of determination

k = Number of independent variables in the model

n = Number of sample period

Alternatively, F is the ratio of mean square for the model divided by mean square for error (Residual). To reject or not to reject the hypothesis is by seeing each of significance levels. If the level of significance (sig.F) is less than α (0.05), H₁ is accepted. On other hand, if the level of significance (sig.F) is more than α (0.05), H₀ is accepted. It means simultaneously all independent variables do not affect dependent variable significantly.

3.7.1.2. t-test

The T-test is applied to determine the partial relationship between each independent variable (coefficient) and the dependent variable. The null hypothesis is that the coefficient of X (i.e., the slope of the line) is 0. If the significance level for the T-Test is low (significance level α used is 0.05), we reject H₀ and conclude there is a linear relationship, and vice verse (Lind, Marchal&Wathen, 2010).

H₀: β = 0, if Significant T > 0.05, accept H₀

H₁: β ≠ 0 if Significant T < 0.05, reject H₀

The strength of the relationship between two numerical variables was measured using correlation coefficient (r), the test for the existence of correlation is using t test:
Formula 3.5: t-test

\[ t = \frac{b_j - \beta_j}{S_{b_j}} \]

(Source: Lind, Marchal & Wathen, Statistic Techniques in Business and Economics, 2010)

Where: \( t \) = statistic test for t distribution,

\( b_j \) = sample slope,

\( \beta_j \) = slope of the population

\( S_{b_j} \) = standard error of the slope

3.7.2. Testing the Partial Correlation

Correlation test is conducted to find out the correlation between one independent variable partially to the dependent variable. The result can be shown in the Pearson correlation table. The positive sign gives information on the increase of the values of one variable relative to the increase value of another variable, and vice versa (Mark. L. Berenson, David M. Levine & Timothy C. Krehbiel, 2009).

3.8. Limitations

During the research period, despite the researcher’s effort to reduce the distortion as much as possible, several difficulties have not been solved yet. There are limitations encountered as follows:

1. This research was done by conducted in BigC supercenter and BigC supermarket in Hanoi, Vietnam so the representativeness of the sample for the whole population is not high.
2. Almost all of the analysis, the forecasts, and the conclusions in the research were drawn by a student with limited realistic knowledge of the field, basing on collected data, survey result, and other analysts’ opinions.
CHAPTER IV

ANALYSIS OF DATA AND INTERPRETATION OF RESULTS

4.1. General Description of Research Object.

This chapter shows the result of the research through data analysis and the interpretation of the result which explain factors determinant influence consumer buying behavior in Vietnam’s market. In this chapter, the comprehensive analysis of the data gathered, and the result of quantitative analysis will be presented. The quantitative analysis covers the descriptive statistic of research variables, classic assumptions test, and data analysis that includes the result of multiple linear regressions, the partial and simultaneous test of independent variables, and discussion on the influence of independent variables toward dependent variable (Render, Stair & Hanna, 2006).

Tables, figures and charts will be presented in order to further visualize the result of data analysis. The data analysis that used to find correlation between dependent and independent variables are done by using SPSS 16.0 and all the data analysis will show the result, tables and charts.

4.1.1. Gender

Based on the respondent gender such male and female so the result of the analysis the data could be seen the figure 4.1 below:
Although gender is not the factor which is considered as a variable in this research but it is obviously wrong to say that gender has no effect on consumer behavior. The purpose of presenting description of gender as well as other respondents’ attributes in this chapter does not exceed a plain description. However, it does have effect for other objectives in case that data in this research will have been analyzed again for different aspects related to this topic. Questionnaire was delivered to 100 randomly chosen respondents who were 54 females and 45 males. This gender description is presented above.

4.1.2. Age

Based on the respondent age level, so the result of the analysis the data could be seen the figure 4.2 below:
Figure 4.2 Respondent’s profile: Age

Figure 4.2 describe about the age the respondent. For this question I got information that the highest percentage of age is related to the age group < 20 years old where they are 43% of respondents and the lowest percentage of age is related to the age groups > 35 years old where they are 5% and more is 6% belong to the age group 30-35 years old. This means all the respondents in period age from < 20 years old to 21-25 years old.

4.1.3. Education Level

Based on the respondent of education level, so the result of the analysis the data could be seen in the figure 4.3 below:
Based on the figure 4.3 level of education, most of the respondents are bachelor student, where 61% of the respondents are studying degree and 29 % respondents are studying bachelor and other respondents (6%) are belonging to Diploma to the Master and PhD level.

4.1.4. Occupation

Also with respondent from occupation, so the result of the analysis the data could be seen in the figure 4.4 below:
The researcher mentioned about the occupation related the customers to shows the sample that they are and how do they do. In this figure 4.5 we can see student who most using Vinamilk’s products where they are 52% and after is housewife where they are 26%. It can be stated that the Vinamilk’s products is favored by them and those are left they are using products but not too much where they are: employee is 10%, teacher is 5% and the last businessman is 7%.

Source: Self-constructed
4.1.5. **Income Monthly**

Buying the products many or not must be based on the customers income because it is consumer goods is really have positive advantages for their health. With type of Vinamilk’s products, based on the data collected from 100 respondents most of customers have income below 1.000.000 VND where they are 48% and then for customers have income 2.000.000 to 3.000.0000 VND where they are and the rest of income (3 million to 6 million VND) belong to 12%, 6 million to 9 million VND has 5% and the last one is higher 10 million VND has 5%.

So the result of the respondent from income monthly could be showed in figure 4.5 as follow:

**Figure 4.5: Respondent’s profile: Income Monthly**

![Income Distribution](image)

*Source: Self-constructed*
4.2. Validity and Reliability Test

4.2.1. Validity Test

In this study, validity testing was using the Pearson’s product moment coefficient correlation to study item validity, the formula will be used in this research will check the validity of questionnaire questions. The validity items come from comparing r computation and r table comes from the r-value product moment. The item of questionnaire valid if the r computation is bigger than r table, otherwise if it is smaller than r table, the item of questionnaire is invalid, and should be deleted from questionnaire.

The researcher used 30 respondents as the sample pilot testing in order to verify the question validity, from the table above, show that the r table for N = 30 with df = n = n – 2 = 28 is 0.306 for significance level 5%. Consequently, the r table will be used to compute the item validity is 0.306 to be valid and items which have r computation less than 0.306 will invalid and there were deleted from the questionnaire before being distributed to the respondents (Table: Critical Value in Appendices).

Table 4.1: Result of 24 items for Validity Checking

<table>
<thead>
<tr>
<th>No</th>
<th>Items</th>
<th>r_computation</th>
<th>r_table</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand Name (X_i)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BR01</td>
<td>0.740</td>
<td>0.306</td>
<td>Valid</td>
<td></td>
</tr>
<tr>
<td>BR02</td>
<td>0.613</td>
<td>0.306</td>
<td>Valid</td>
<td></td>
</tr>
<tr>
<td>BR03</td>
<td>0.342</td>
<td>0.306</td>
<td>Valid</td>
<td></td>
</tr>
<tr>
<td>BR04</td>
<td>0.593</td>
<td>0.306</td>
<td>Valid</td>
<td></td>
</tr>
<tr>
<td>BR05</td>
<td>0.769</td>
<td>0.306</td>
<td>Valid</td>
<td></td>
</tr>
<tr>
<td>BR06</td>
<td>0.516</td>
<td>0.306</td>
<td>Valid</td>
<td></td>
</tr>
<tr>
<td>BR07</td>
<td>0.501</td>
<td>0.306</td>
<td>Valid</td>
<td></td>
</tr>
</tbody>
</table>
From the table 4.1 the result of validity testing for the questionnaire of study as shown above that the result is VALID ($r_{test} > r_{score}$).

**Table 4.2: Results of 24 items for validity checking**

<table>
<thead>
<tr>
<th>Item-Total Statistics</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Price (X2)</strong></td>
<td>PR01</td>
<td>0.548</td>
<td>0.306</td>
<td>Valid</td>
</tr>
<tr>
<td>PR02</td>
<td>0.625</td>
<td>0.306</td>
<td>Valid</td>
<td></td>
</tr>
<tr>
<td>PR03</td>
<td>0.689</td>
<td>0.306</td>
<td>Valid</td>
<td></td>
</tr>
<tr>
<td><strong>Product Quality (X3)</strong></td>
<td>PQ01</td>
<td>0.757</td>
<td>0.306</td>
<td>Valid</td>
</tr>
<tr>
<td>PQ02</td>
<td>0.667</td>
<td>0.306</td>
<td>Valid</td>
<td></td>
</tr>
<tr>
<td>PQ03</td>
<td>0.531</td>
<td>0.306</td>
<td>Valid</td>
<td></td>
</tr>
<tr>
<td>PR04</td>
<td>0.679</td>
<td>0.306</td>
<td>Valid</td>
<td></td>
</tr>
<tr>
<td>PQ05</td>
<td>0.672</td>
<td>0.306</td>
<td>Valid</td>
<td></td>
</tr>
<tr>
<td>PQ06</td>
<td>0.803</td>
<td>0.306</td>
<td>Valid</td>
<td></td>
</tr>
<tr>
<td>PQ07</td>
<td>0.793</td>
<td>0.306</td>
<td>Valid</td>
<td></td>
</tr>
<tr>
<td>PQ08</td>
<td>0.785</td>
<td>0.306</td>
<td>Valid</td>
<td></td>
</tr>
<tr>
<td>PQ09</td>
<td>0.784</td>
<td>0.306</td>
<td>Valid</td>
<td></td>
</tr>
<tr>
<td>PQ10</td>
<td>0.692</td>
<td>0.306</td>
<td>Valid</td>
<td></td>
</tr>
<tr>
<td><strong>Customer Loyalty (Y)</strong></td>
<td>CL01</td>
<td>0.776</td>
<td>0.306</td>
<td>Valid</td>
</tr>
<tr>
<td>CL02</td>
<td>0.675</td>
<td>0.306</td>
<td>Valid</td>
<td></td>
</tr>
<tr>
<td>CL03</td>
<td>0.727</td>
<td>0.306</td>
<td>Valid</td>
<td></td>
</tr>
<tr>
<td>CL04</td>
<td>0.625</td>
<td>0.306</td>
<td>Valid</td>
<td></td>
</tr>
<tr>
<td>CL05</td>
<td>0.625</td>
<td>0.306</td>
<td>Valid</td>
<td></td>
</tr>
<tr>
<td>CL06</td>
<td>0.689</td>
<td>0.306</td>
<td>Valid</td>
<td></td>
</tr>
</tbody>
</table>

*Source: Data Processing Result of SPSS 16.0*
<table>
<thead>
<tr>
<th></th>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Item Deleted</th>
<th>Corrected Item-Total Correlation</th>
<th>Cronbach's Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>BR01</td>
<td>97.1333</td>
<td>258.947</td>
<td>.740</td>
<td>.955</td>
</tr>
<tr>
<td>BR02</td>
<td>96.9667</td>
<td>265.344</td>
<td>.613</td>
<td>.956</td>
</tr>
<tr>
<td>BR03</td>
<td>97.0667</td>
<td>275.926</td>
<td>.342</td>
<td>.958</td>
</tr>
<tr>
<td>BR04</td>
<td>97.0667</td>
<td>266.409</td>
<td>.593</td>
<td>.956</td>
</tr>
<tr>
<td>BR05</td>
<td>96.8333</td>
<td>265.109</td>
<td>.769</td>
<td>.955</td>
</tr>
<tr>
<td>BR06</td>
<td>97.0667</td>
<td>271.651</td>
<td>.516</td>
<td>.957</td>
</tr>
<tr>
<td>BR07</td>
<td>97.1333</td>
<td>269.982</td>
<td>.501</td>
<td>.957</td>
</tr>
<tr>
<td>PR01</td>
<td>97.0667</td>
<td>269.237</td>
<td>.548</td>
<td>.956</td>
</tr>
<tr>
<td>PR02</td>
<td>97.0333</td>
<td>265.826</td>
<td>.625</td>
<td>.956</td>
</tr>
<tr>
<td>PR03</td>
<td>97.4333</td>
<td>260.116</td>
<td>.689</td>
<td>.955</td>
</tr>
<tr>
<td>PQ01</td>
<td>97.2333</td>
<td>257.702</td>
<td>.757</td>
<td>.954</td>
</tr>
<tr>
<td>PQ02</td>
<td>97.1000</td>
<td>265.679</td>
<td>.667</td>
<td>.955</td>
</tr>
<tr>
<td>PQ03</td>
<td>97.0333</td>
<td>270.792</td>
<td>.531</td>
<td>.956</td>
</tr>
<tr>
<td>PQ04</td>
<td>97.0000</td>
<td>264.690</td>
<td>.679</td>
<td>.955</td>
</tr>
<tr>
<td>PQ05</td>
<td>97.0333</td>
<td>268.309</td>
<td>.672</td>
<td>.955</td>
</tr>
<tr>
<td>PQ06</td>
<td>97.1000</td>
<td>260.990</td>
<td>.803</td>
<td>.954</td>
</tr>
<tr>
<td>PQ07</td>
<td>97.0333</td>
<td>255.689</td>
<td>.793</td>
<td>.954</td>
</tr>
<tr>
<td>PQ08</td>
<td>96.8333</td>
<td>257.799</td>
<td>.785</td>
<td>.954</td>
</tr>
<tr>
<td>PQ09</td>
<td>97.1000</td>
<td>257.817</td>
<td>.784</td>
<td>.954</td>
</tr>
<tr>
<td>PQ10</td>
<td>97.0667</td>
<td>265.375</td>
<td>.692</td>
<td>.955</td>
</tr>
<tr>
<td>CL01</td>
<td>97.2000</td>
<td>259.890</td>
<td>.776</td>
<td>.954</td>
</tr>
<tr>
<td>CL02</td>
<td>96.9667</td>
<td>261.895</td>
<td>.675</td>
<td>.955</td>
</tr>
<tr>
<td>CL03</td>
<td>97.1667</td>
<td>259.109</td>
<td>.727</td>
<td>.955</td>
</tr>
<tr>
<td>CL04</td>
<td>97.0333</td>
<td>265.826</td>
<td>.625</td>
<td>.956</td>
</tr>
<tr>
<td>CL05</td>
<td>97.0333</td>
<td>265.826</td>
<td>.625</td>
<td>.956</td>
</tr>
<tr>
<td>CL06</td>
<td>97.4333</td>
<td>260.116</td>
<td>.689</td>
<td>.955</td>
</tr>
</tbody>
</table>

Source: Data Processing Result of SPSS 16.0

4.2.2. Reliability Test
The result of reliability testing is shown in table 4.3 as follows:

\[
\begin{array}{|c|c|}
\hline
\text{Cronbach's} & \text{N of Items} \\
\hline
\text{Alpha} & 26 \\
\hline
\end{array}
\]

*Source: Data Processing SPSS 16.0*

Table 4.3 indicates that the alpha value of every items in this study. The acceptance of customer loyalty scale appeared to have good internal consistency $\alpha = 0.957$, which is greater than the generally accepted value of 0.8, the generally accepted value. With regard to the above table, the value of Cronbach’s Alpha for all the statements, variables are above 0.9 which reflects how well the items in were positive correlate to each other since the value was really close to 1 (0.957).

### 4.3. Classical Assumption Testing

The multiple regression analysis is preceded with classical assumption test to make sure there is no data problem. After that, the regression coefficients are shown on the regression output.

#### 4.3.1. Normality Test:

It is assumed in multiple linear regression that residuals are distributes normally to create the validity of the data. This data can be done by producing histograms for the residual as well as normal probability plots, in order to inspect the distribution of the residual values (Render, Stair & Hanna, 2006). The normality test should be done for every residual, especially the dependent variable.
Figure 4.6 Normal P-P plot of Regression Standard Residual

Figure 4.6 show that the actual data plot (represented by the dots) is spreading approximately surrounding the diagonal direction of the line telling the distribution is normal. Besides the normal probability plot, normality test can also be measured by seeing the histogram. To test the normality of the variables, it can be done by comparing a histogram of the residual to a normal probability curve. The result of the histogram of the residual should be bell shape and resembles and the normal distribution (Render, Stair, Hanna, 2006).
The histogram in figure 4.2 shows the curve was formed a proper bell shape in the center, neither skewed to the left of the right which means the data have variation of value make it normally distributed which can be used to approximate various discrete probability distribution and eligible to conduct the research.

4.3.2. Multicollinearity Test:
One of classic assumption of the linear regression is no perfect multicollinearity exists in the model. The multicollinearity in the regression model can be assumed if there is a perfect linear relationship between a few or all of the independent variables in the model. One method of measuring multicollinearity is the Variance Inflation Factor (VIF) for each independent variable. According to Barry Render, Ralph Stair and Michael Hanna (2006), a variable has high collinearity(multicollinearity) if it has VIF value more than 10 or it has tolerance tend to approach 0.

In this research, the multicollinearity test was conducted by SPSS 16.0 software and the result is shown in the following table:

Table 4.4 Multicollinearity Test

<table>
<thead>
<tr>
<th>Coefficientsa</th>
<th>Coefficientsa</th>
<th>Coefficientsa</th>
<th>Coefficientsa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>t</td>
<td>Sig.</td>
<td>Tolerance</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>.798</td>
<td>.427</td>
<td></td>
</tr>
<tr>
<td>BRA</td>
<td>3.062</td>
<td>.003</td>
<td>.481</td>
</tr>
<tr>
<td>PQA</td>
<td>3.108</td>
<td>.002</td>
<td>.651</td>
</tr>
<tr>
<td>PRA</td>
<td>2.011</td>
<td>.047</td>
<td>.450</td>
</tr>
</tbody>
</table>

a. Dependent Variable: CLA

Source: Data Processing Result of SPSS 16.0

Table 4.4 show both independent variables have VIF values at BRA = 2077, PRA = 1.537, PQA = 2.223 of tolerance which mean there is no multicollinearity exist in the model since VIF value are below 10. Alternatively t, the null hypothesis is accepted
and alternative hypothesis is rejected. It means there is not existence of perfect linear relationship among all or some independent variables. The results give more confidence that the coefficient estimated are more precise.

4.3.3. Heterocedasticity Test

Heterocedasticity test of the regression model to measure that whether the disturbance variance is constant, or homogeneous, across observation. The result of the test can be seen by looking at the distribution of residual values towards the predicted values in the scatter plot. If the distribution spread randomly and does not make any systematic pattern such as increasing or decreasing pattern, then the heterocedasticity assumption is fulfilled. In order to test the heterocedasticity, the scatter plot is constructed as follow:

Figure 4.8 Scatter Plot for Heterocedasticity test Scatter Plot

Source: Data Processing Result of SPSS 16.0
Based on the figures 4.8 the data are normally distributed, the points spread each other with the condition of the point is under 0, above 0 and not made a pattern so there is no heteroscedasticity. If the points are tendencies to make a pattern, it means the data are not normally distributed and considered to become heteroscedasticity. For this figure the result was shown by the Scatter Plot. The points were spread each other, tendencies to become homoscedasticity and normally distributed.

*Figure 4.9 Brand name (BRA) toward customer loyalty (CLA)*

Based on the figures 4.9 the dots in the brand name plot were distributed randomly and spread around the area ranged from – 1.00 to 1.00 in both horizontal and vertical line of the graph. It means there is no heteroscedasticity between the brand name and customer loyalty in Vietnam’s market. In the table 4.8 shows brand name (X1) has significant influence on customer loyalty. This is showed by the t-value result which is 3.062 and significant t = 0.003. In this study also explained that brand name effect correlated positively with the consumer buying behavior which is
B = 0.441 means that if brand name increase by 1%, the consumer buying behavior also will be increased by 0.441.

**Figure 4.10 Price (PRA) toward customer loyalty (CLA)**

Based on figure 4.10 shown that there is no heterocedasticity because the pattern of plot is spread randomly without any systematic pattern between two variables, and the plot is too closed with together so the residual plotted on the graph above are scattered one another. Hence, the null hypothesis that stated there is no heterocedasticity accepted, it means that t-test and F-test are accurate and valid.

**Figure 4.11 Products Quality (PQA) toward Customer Loyalty (CLA)**
4.4. Multiple Linear Regression Model

In examining the influence of five variables: four independent variables and one dependent variable, the multiple linear regression model concepts were used to construct the following equation:

\[ Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + e \]

According to the calculation of regression analysis of brand name, price and product quality influence on customer loyalty in Vietnam’s market, the researcher find out:

**Equation 4.1 – Output Multiple Linear Regression Model**

Customer Loyalty = 0.357 + 0.441BRA + 0.306PRA + 0.163PQA + e
Where:

\[ Y = \text{Customer Loyalty} \]
\[ X_1 = \text{Brand Name} \]
\[ X_2 = \text{Price} \]
\[ X_3 = \text{Product Quality} \]
\[ B_0 = \text{Intercept / Constant (value of Y when x = 0)} \]
\[ e = \text{Random Error} \]

(Source: Data Processing Result of SPSS 16.0)

Based on the equation, interpretation can be drawn as follow:

a) From the table 4.6, the relationship between brand name (BRA) and customer loyalty (CLA) is 0.441 which means if brand name increase in one percent (1%), the customer loyalty will be increase by 0.441. Because the sig value of brand name is 0.003 which is greater than the p – value 0.05, the researcher conclude that there is significant correlation between brand name and customer loyalty. So, the first hypothesis stated that brand name has strongly influenced customer loyalty is supported, it accepts the alternative hypothesis and reject the null hypothesis.

b) Meanwhile, the second independent variable, price (PRA). Table 4.6, the relationship between price and customer loyalty is 0.306 which means when there is an increasing in price one percent (1%), CLA (customer loyalty) will be increased in the amount of 0.306, the p – value shown in table is 0.306 which is far smaller than 0.05 is 0.002. It means that there is strongly influenced of price and customer loyalty. So, the second hypothesis stated price has strongly influenced customer loyalty is accepted, it reject null hypothesis and accepts the alternative hypothesis.
c) The third independent variable is product quality. From table 4.6 the relationship between product quality (PQA) and CLA is 0.163 which means if product quality increase in one percent (1%), the customer loyalty value will be also increase by 0.163. Because the sig value of product is 0.047 which is greater than the p-value 0.05, the researcher conclude that product quality has moderate influenced of product and customer loyalty is supported, it accepts the alternative hypothesis and rejects the null hypothesis.

4.5. Measuring the Variability of Regression Model

A regression equation can be developed for any variables X and Y, even random numbers. There are two ways to know that the model is actually helpful in predicting Y based on X:

4.5.1. Coefficient Determinant (R²)

In multiple regressions, the coefficient of determination (R²) represents the proportion of the variation in dependent variable (Y) that is explained by the set of independent variables. The higher R² means the bigger the independent variable can impact the dependent variable (Render, Stair & Hanna, 2006).

\[ R^2 \]

\( Table \ 4.5 \ Model \ Summary \)

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Change Statistics</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.701a</td>
<td>.491</td>
<td>.475</td>
<td>.38734</td>
<td></td>
<td>.000</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), PRA, PQA, BRA
Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Change Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.701a</td>
<td>.491</td>
<td>.475</td>
<td>.38734</td>
<td>.000</td>
</tr>
</tbody>
</table>

b. Dependent Variable: CLA

*Source: Data Processing Result of SPSS 16.0*

Table 4.5 shows that the coefficient determination $R^2$ value of the regression model is 0.475. It means that 47.5% of the variation of customer loyalty as dependent variable is explained by the variation of independent variables brand name, price, and product quality, whereas the other 52.5% is explained by other factors.

Moreover, table 4.6 also shows that the value of Standard Error of the Estimate (SEE) is 0.38734 while on Descriptive Statistic table the value of Standard Deviation (STD) is 0.53479. The value of Standard Error if the Estimation is lower than Standard Deviation (SEE < STD) mean the value of SEE is good to be used as a prediction value to show how big the customer loyalty is.

### 4.5.2. Coefficient of Correlation

Pearson correlation between customer loyalty and three factors are brand name, price, and product quality are as follows. The coefficient of correlation measures the strength of linear relationship between four variables. Table 4.6 of Pearson correlation shows the strength of linear relationship between X and Y variables. Sugiyono et al. mentioned that according to Sugiyono et al., there could be a perfect positive correlation between two variables, which is represented by +1.0 (plus 1), or a perfect negative correlation which would be -1.0 (minus 1). However, neither of
these will be found in reality when assessing correlations between any two variables expected to be different from each other. For score 0.8 and above, it can be interpreted as a very strong relationship, 0.6 to 0.799 score considered having a strong relationship, 0.4 to 0.599 as moderate, 0.200 to 0.399 as having a weak relationship and lastly 0.000 to 0.199 deem to have very weak relationship. The value of r and its meaning is indicated in the figure 4.13 below:

**Figure 4.12 Interpretation for value “r” being proposed by Sugiyono, (2002)**

<table>
<thead>
<tr>
<th>“r” value</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000 – 0.199</td>
<td>Very weak relationship</td>
</tr>
<tr>
<td>0.200 – 0.399</td>
<td>Weak relationship</td>
</tr>
<tr>
<td>0.400 – 0.599</td>
<td>Moderate relationship</td>
</tr>
<tr>
<td>0.600 – 0.799</td>
<td>Strong relationship</td>
</tr>
<tr>
<td>0.800 - 1.000</td>
<td>Very strong relationship</td>
</tr>
</tbody>
</table>

The result of the gathered data’s correlation analysis could be seen in table 4.6 following:

**Table 4.6: Correlation**

<table>
<thead>
<tr>
<th>Correlations</th>
<th>CLA</th>
<th>BRA</th>
<th>PQA</th>
<th>PRA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>CLA</td>
<td>1.000</td>
<td>.621</td>
<td>.571</td>
</tr>
<tr>
<td></td>
<td>BRA</td>
<td>.621</td>
<td>1.000</td>
<td>.521</td>
</tr>
<tr>
<td></td>
<td>PQA</td>
<td>.571</td>
<td>.521</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>PRA</td>
<td>.603</td>
<td>.705</td>
<td>.565</td>
</tr>
<tr>
<td>Sig. (1-tailed)</td>
<td>CLA</td>
<td>.</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>
Table 4.6 indicates the correlation between brand name (BRA) and customer loyalty (CLA) is 0.621 shows the strong positive relationship between those two variables. Meanwhile, the correlation between price (PRA) and (CLA) is .0603 shows the strong positive relationship between those two variables. And the third is with the correlation between product (PQA) and (CSA) is 0.571 also shows the moderate positive relationship between those two variables. The positive correlation means that the increasing of one variable will increase the value of another variable and vice versa. The significant value of correlation coefficient is 0.000 it means that all of four independent variables have correlation relationship with dependent variable.

4.6. Hypothesis Testing Result:

This research uses multiple linear regression analysis because the model has four variables. The hypothesis testing is done through F-test and t-test. The effect of independent variables individually toward dependent variable will be conducted using the partial t-test. On the other hand, F-test will be used to test the effect of all independent variables toward dependent variable simultaneously. Each independent variable is significant if p-value is less than 0.05.
According to the coefficient of determination in table 4.5 shows that the coefficient determination $R^2$ value of the regression model is 0.475. It explains that 47.5% of the variation customer loyalty as dependent variable is explained by the variation of independent variables brand name, price, and product quality, whereas the other 52.5% explained by other factors are excluded from the model.

4.6.1. F-test

F-test is conducted in order to test whether all independent variables have simultaneous affect the dependent variables.

Given the hypothesis:

$H_0: \beta_1 = \beta_2 = \beta_3 = \beta_4 = 0$ (There is no significant influence from three factors which are brand name, price, and product quality simultaneously toward customer loyalty).

$H_a: \text{at least one } \beta_j \neq 0$ (There is significant influence from three factors which are brand name, price, and product quality simultaneously toward customer loyalty).

ANOVA table below shows the value of F calculation. If the probability value is $\leq 0.05$, $H_0$ is rejected which means the brand name, price, product quality in the regression model can influent the customer loyalty.

\[
\begin{array}{|c|c|c|c|c|c|}
\hline
\text{Model} & \text{Sum of Squares} & \text{df} & \text{Mean Square} & F & \text{Sig.} \\
\hline
1 & \text{Regression} & 13.911 & 3 & 4.637 & 30.908 & .000^a \\
& \text{Residual} & 14.403 & 96 & .150 & \\
& \text{Total} & 28.314 & 99 & & \\
\hline
\end{array}
\]

a. Predictors: (Constant), PRA, PQA, BRA

b. Dependent Variable: CLA
F-Test is to test the significance of the overall multiple regression models. This test determines whether there is a significant linear influence of dependent variable and all the independent variables. By using 5% as the level of significance, the F-test results from table 4.7 from shown that F calculated is in the value of 30.908 with the significant sig = 0.000 < 0.05, it reject the $H_0$ hypothesis. It can conclude that at least one of the independent variables (brand name, price, and product quality) has significant influence of dependent variable (customer loyalty).

4.6.2. t-test

The t-test is conducted in order to test the significant of each independent variable towards the dependent variable. In this research, t-test is done to examine whether the three factors which are brand name, price, and product quality variables individually influent customer loyalty in Vietnam’s market. Manually, this t-test can be done by comparing the calculated t and the t-table, but since the data processing is using SPSS software, the t-test is based on the significant (sig) value of each independent variable which is brand name, price, and product quality. The table 4.9 will show the results of t-test:

*Table 4.8 Coefficients*

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Tolerance</td>
</tr>
</tbody>
</table>


From table 4.8 above the hypothesis t-test results are shown following:

a. $H_0_1$: Brand Name of Vinamilk’s product has no significant influence on customer loyalty.
   $H_a_1$: Brand Name of Vinamilk’s product has significant influence on customer loyalty.

b. $H_0_2$: Price of Vinamilk’s product has no significant on customer loyalty.
   $H_a_2$: Price of Vinamilk’s product has significant on customer loyalty.

c. $H_0_3$: Product quality of Vinamilk’s has no significant on customer loyalty.
   $H_a_3$: Product quality of Vinamilk’s has significant on customer loyalty.

$H_0$: $\beta_1=\beta_2=\beta_3=\beta_4=0$ (There is no independent variables (brand name, price and product quality) has the most influence on dependent variable (consumer buying behavior)).

$H_a$: At least one $\beta_i \neq 0$ (At least one of the independent variables (brand name, price and product quality) has the most influence on dependent variable (consumer buying behavior)).

The p-value is significant at 0.05 and following with table 4.9 output of t-test can be seen:

<table>
<thead>
<tr>
<th></th>
<th>(Constant)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>.357</td>
<td>.447</td>
<td>.798</td>
</tr>
<tr>
<td></td>
<td>BRA</td>
<td>.441</td>
<td>.144</td>
<td>.321</td>
</tr>
<tr>
<td></td>
<td>PQA</td>
<td>.306</td>
<td>.099</td>
<td>.280</td>
</tr>
<tr>
<td></td>
<td>PRA</td>
<td>.163</td>
<td>.081</td>
<td>.218</td>
</tr>
</tbody>
</table>

a. Dependent Variable: 
CLA

Source: Data Processing Result of SPSS 16.0
After F-test, researcher concluded that the regression model is accepted to present dependent variable by independent variables. While, which predictors are significant in model toward dependent variable, the write should use t-test is able to regard as simple regression to test the significance between two means. The researcher conducts 95% confidence level. All of independent variables (brand name, price and product and service quality) in total of four have significant (sig) values which are greater comparing to the p-value: BRA has (sig) value of 0.003, PRA has (sig) value of 0.002, PQA has (sig) value of 0.047 are below 0.05.

Among them, there is only one independent variable that has (sig) value of variable is 0.000 which is quite far below the p-value of 0.05 (comparing with the residual ones (price, product quality) including brand name. This result means that brand name and price has the most influence on customer loyalty.

4.7. Partial Correlation:

The table 4.9 t-test is continuously used to analyze this part:

1. Regression test of brand name (BRA) and customer loyalty (CLA):
   - The p-value is significant at 0.05 and according to table 4.9 output of t-test; brand name has as the first independent variable \((X_1)\) has significant (sig) value of 0.003 which is far below the p-value of 0.05. This result means the brand name \((X_1)\) partially has significant influence to customer loyalty \((Y)\).
   - The coefficient regression 0.441 is positive. It means that the better the brand name is, the more customer loyalty will be also. It can be concluded that the first null hypothesis \(H_{01}\) states there is significant influence of brand name and customer loyalty is rejected and the first alternative hypothesis \(H_{a1}\) is accepted.
2. **Regression test of price (PRA) and customer loyalty (CLA):**

- The p-value is significant at 0.05 and according to table 4.9 output of t-test the second independent variable (X₂) to be tested is price variable can be seen from table 4.9 that the significant (sig) value of this variable is 0.002 which is below the p-value of 0.05. This result means the price (X₂) partially has significant influence to customer loyalty (Y).
- The coefficient regression 0.306 is positive. It means that the better the price is, the more customer loyalty will be. It can be conclude that the second null hypothesis H₀₂ states there is significant influence of price and customer loyalty is rejected and the second alternative hypothesis Hₐ₂ is accepted.

3. **Regression test of product quality (PQA) and customer loyalty (CLA)**

- The third independent variable (X₃) to be tested is product quality can be seen from table 4.9 that the significant (sig) value of this variable is 0.047 which is below the p – value of 0.05. This result means that product quality (X₃) has significant influence customer loyalty (Y). The coefficient regression 0.163 is positive. It means that the better the product quality is, the more customer loyalty will be. It can be conclude the third null hypothesis is H₀₃ states there is significant influence of product quality and customer loyalty is rejected and the third alternative hypothesis Hₐ₃ is accepted.

4.8. **Interpretation Results:**

In general, the consumer food industry in Vietnam is growing strongly with the needs of customers increased significantly. Can say that Vinamilk’s products are made from natural materials contribute to the use of the food is very convenient and good for the health of customers and it is a famous brand for dairy industry in Vietnam with other brands competing with each other. So it is sure that dairy companies to take special attention to the customers and consumer needs to be able to offer their products to customers and create loyalty from customers. Researchers want to find
out the main factors affecting the customer loyalty of consumers, also with other factors and in particular it is the case in Vinamilk's products in BigC supermarket and Big C Supercenter, Hanoi, Vietnam.

From the result of regression analysis, table 4.5 show the value $R^2$ is 0.475 which means 47.5% of the variation in customer loyalty as dependent variable is explained by the variation of independent variables brand name, price, and product quality, whereas the other 52.5% is explained by other variables that are included in the regression equation model. In other words, the independent variables (brand name, price and product quality) are able to explain the variability of dependent variable (customer loyalty).

In terms of simultaneous influent (F-test) the data analysis shows that both independent variables have significant influence toward the dependent variable. It is obvious due to table 4.8 the F calculated is in the value of 30.908 with the significant (sig) value of 0.000 which was far below the p-value of 0.05. It means that despite in the t-test all of independent variables, brand name, price, product quality have simultaneously have influence on the customer loyalty in Vietnam’s market.

After testing the simultaneous influence of brand, price, product quality toward customer loyalty, the data was processed to t-test which tests the partial influence of each variable. Different results from each variable are elaborated as follow:

1. **Brand Name variable:**

The probability value of brand name is 0.003 which is quite lower than 0.05 has indicated there is significant correlation between brand name and customer loyalty. Moreover, the value of parametric coefficient of brand name in the amount 0.441 which means it has positive relationship so when brand name increases one percent will result the increases of 0.441 of customer loyalty.

2. **Price variable:**
The probability value of price variable is 0.002 which is higher than the p-value of 0.05 has proved that there is significant correlation between price and customer loyalty. Besides, the parametric coefficient of price is in the amount of 0.306 which means it has positive correlation with the customer loyalty so when the price increase 1% will result the increase of customer loyalty of 0.306 also.

3. Product Quality variable:

The probability value of financial benefits variable is 0.047 which is far lower than 0.05 has indicated there is significant correlation between product quality and customer loyalty. Moreover, the value of parametric coefficient of product quality variable in the amount of 0.163 which means the relationship between those two is positive. In another words, with the value of 0.163 it means when product quality increases one percent will result the increase of 0.163 of customer loyalty.

Moreover, table 4.9 the multiple linear regressions also shows that when brand name, price, and product quality are equal to zero, the customer loyalty will be in a constant amount of 0.357.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusions.

This research is about to find the significant influence of three factors that affect to customer loyalty in Vietnam’s market, in case study Vinamilk’s products in BigC
supermarket and BigC supercenter, Hanoi, Vietnam. Researcher found three independent variables which are brand name, price, product quality and one dependent variable is customer loyalty was also the aim of this study.

Based on the analysis from the previous chapters, there are several conclusions which can be generated as follows:

1. **Is there a significant influence of brand name, price, and product quality toward customer loyalty in Vietnam’s market?**

   Based on the result of F-test, the researcher can conclude that there is significant influence of three factors which are brand name, price and product quality toward customer loyalty in Vietnam’s market. The score of significant value for this test is 0.000, so the null hypothesis is $H_0$ is rejected and alternative hypothesis is accepted which means that all the independent variables do affect the dependent variable. In other words, the brand name, price, and product quality have significant impact to customer loyalty in Vietnam’s market.

2. **Which independent variables (brand name, price, and product quality) influence the most of customer loyalty in Vietnam’s market?**

   According to t-test, the p-value of brand name (BRA) is 0.003 which is greater than 0.05. This result means the brand name has significant correlation toward the customer loyalty. With the price variable (PRA) is 0.002 which is also greater than 0.05 and the same with product quality (PQA) is 0.047. Therefore, researcher has to accept all independent variables in regression model because the significance between customer loyalties (CLA) with all three factors is brand name (BRA), price (PRA), and product quality (PQA) is very strong.
Table of correlation also stated that the correlation between brand name (BRA) and customer loyalty (CLA) with the value of 0.621 shows the strong positive relationship between those two variables. Meanwhile, the correlation between price (PRA) and (CLA) is .0571 shows the strong positive relationship between those two variables. And the third is with the correlation between product (PQA) and (CLA) is 0.603 also shows the strong positive relationship between those two variables. The positive correlation means that the increasing of one variable will increase the value of another variable and vice versa. Therefore, the researcher can conclude that the all of three factors has positive correlation with customer loyalty.

3. Forecasting Model:

For the forecasting process, this research have resulted a multiple linear regression equation model that can be used for predicting the customer loyalty when it comes to the effects of brand name, price, product and service quality.

\[
\text{Customer Loyalty} = 0.357 + 0.441\text{BRA} + 0.306\text{PRA} + 0.163\text{PQA} + e
\]

\textit{Equation 4.1 – Output Multiple Linear Regression Model}

\textit{Source: Data Processing Result of SPSS 16.0}

The equation can be explained as follow:

- The value of the constant (\(\beta_0\)) is 0.357 which shows the value of customer loyalty when the value of brand name, price, and product quality is zero.
- The value of coefficient (\(\beta_1\)) or brand name is 0.441 which has positive relationship with the customer loyalty. Means the value of brand name increase, the value of customer loyalty will increase also.
- The value of coefficient (\(\beta_2\)) or price is 0.306 which has positive relationship with the customer loyalty. Means the value of price increase, the value of customer loyalty will increase.
The value of coefficient ($\beta_3$) or product quality is 0.163 which has positive relationship with the customer loyalty. Means the value of product increase, the value of customer loyalty will also increase.

In the Coefficient of Determination presented with $R^2$, the value showed is 0.475 which means 47.5% of the variation in customer loyalty can be explained by the variation of independent variables brand name, price, and product quality. The other 52.5% is influence by other factors.

5.2. Recommendations

After conducting the study, the researcher has several recommendations that can be used as consideration regarding the effects of brand name, price, and product quality to customer loyalty.

5.2.1. Recommendation next researcher

Nothing is perfect in this world, neither this research. Although the researcher has tried to best conduct this research, there are some obstacles that he has faced and would like to give some suggestion to the next researcher to avoid the same mistake. It is recommended for the next researchers to have more reliable data and large population so the variation of the dependent variable can only explained 47.5% reliably by the variation of independent variables. So it is suggested that the researcher should have longer observation period in order to have more samples. The more samples can be collected, the clearer and more reliable linear regression model can be constructed.

The purpose of this research is only to analyze the effect of factors determine influence customer loyalty in Vietnam’s market. These independent variables can only explain 47.5% the variation of customer loyalty as dependent variable. Therefore, it is recommended to the next researchers to include more independent
variables such as: promotion, place, people, etc...to conduct more valuable researches which contain the factors that can explain 100% of the customer loyalty.

5.2.2. Recommendation for industries and companies

Based on the finding of the study, researcher forwards the following recommendation to Vinamilk’s company in particular:

- Promote and building the brand name and brand image of Vinamilk’s products.
- Enhance the service of quality to suitable with customers demand.
- Create strategy to attract customers buy the Vinamilk’s products more and more.
- Managing the materials and packaging safety to maintain the quality of products and guarantee the health of customers when they buy the products.
- Make opportunity for the customers like discount, promotion and give special presents who like buying many products of Vinamilk’s company.
- Open the program to encourage the customers’ part in and cooperate to charity some poor people.

5.2.3. Recommendation for future research

In the research, if there will be some researches interested in quality improvement and comparison, the following recommendation is given:

1. Customer Loyalty is affected by many factors, not only based on those factors which the researcher mentioned to fully access. There are many factors which can be explained by culture, education and so on. And those factors also play very important role in this topic.
2. This research is only a case study, it is suggested for the future research to elaborate the research in a bigger volume of population and sample so that researchers can get a more exact and full understanding about the topic.
3. It is recommended to do the research in combination of marketing’s influence and other company’s strategies to understand more the affect.