# FACTORS INFLUENCING REPURCHASES INTENTION FOR LUBRICANTS 

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# Thematic paper entitled <br> <br> FACTORS INFLUENCING REPURCHASES INTENTION <br> <br> FACTORS INFLUENCING REPURCHASES INTENTION FOR LUBRICANTS 

 FOR LUBRICANTS}

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## ABSTRACT

The research aimed 1) to identify the factors that affect repurchase intention for Lubricants 2) to understand factors that affect repurchase intention for Lubricant. It is quantitative research, where data were collected through questionnaires during September to October 2020 via online platform. The samples of the population occupying car and decision maker in Lubricants purchasing total of 232 samples. The data was statistically analyzed collected through using descriptive statistics such as percentage, mean, standard deviation. And the test results using the Chi - Square statistic to summarize the relationship between two variables, and Correlation statistics Contingency Coefficient (C) at the significance level of 0.05 . The results using statistical computer program. The research found that: the most influential factor on the repurchase intention is customer satisfaction with the beta of 0.540 , followed by brand equity with the beta of 0.244 and price with the beta of 0.106 , so customer satisfaction has the stronger effect on the repurchase intention than other variables. The more customer satisfies with the lubricant product they have bought. The higher satisfaction, the higher possibility of their repurchase intention. In order to make the customer satisfy with lubricant product, there are 4 variables that need to be focused on which are brand equity, perceived quality, price and promotion since these are the variables that has a positive influence to customer satisfaction.

## KEY WORDS: REPURCHASE INTENTION / CUSTOMER SATISFACTION / PROMOTION/ PERCIEVED QUALITY / LUBRICANT

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## CHAPTER I INTRODUCTION

### 1.1 Macro Background

Lubricants are meant to help relieve machinery or engines of friction which occurs due to the intense movement of various parts. It is, however, a wide misconception that all lubricants are the same and can be interchanged. That is not true. Not all lubricants would function in one particular way and differ according to the application. As per the primary purpose of reducing friction, it is essential for full functionality thus maintenance is as important as dialysis for a patient who suffers from kidney failure. To be effective, lubricant characteristics meet intense requirements providing them to play a leading role in machinery life. Lubricants help in different ways like prevention of corrosion, high and low-temperature resistant, and preventing toxic levels to occur. It is the most common and popular form of lubricant and a massive industry is run on it. Motor oil is used for all engines and different kinds of machinery. It helps preserve engine performance and aids the excessively strenuous conditions faced during functionality. It helps reduce the wear and tear while prolonging life with consistent use. Used typically in bigger machinery, it is also used in, for example, heavy-duty lifting machinery where parts mesh with gears creating lifting thrust. The additives used here are defined as the lubricants general application and have direct effects on their performance and quality. There two forms of this grade of lubricants which are:

1. Extreme Pressure (EP) Lubes: for heavy-load equipment
2. Synthetic: for usage where metal wear and tear are of concern.
3. Synthetic EP: a combination of both.
4. Synthetic Polyglycol: non-petroleum-based fluids (for industrial usage)
5. Compound: high viscosity and enhanced lubrication
6. Food Grade: for the food and beverage manufacturing industry

Lubrication is crucial for the control of friction and wear by adding a friction-reducing film between the moving surfaces. The lubricant which is used can either be a fluid or solid substance. Substances which are generally used to lubricate a surface are lube oil and grease which are the most common forms of lubricants available. The type of lubricant used is determined by the application. There are different types of lube oils for different applications such as automobile, industrial, marine and others. With industries and technologies undergoing a radical change in the last century, liquid, and non-liquid are the two basic types of lubricants. Liquid has a ninety percent oil base which contains a variety of liquids in its molecular makeup. It has a strong resistance threshold to corrosion and eliminates corrosive risks along with contamination. Non Liquids can be constructed with grease and other substances which are readily utilized for plumbing issues and other applications. Some of the key roles that lubricant plays in the automobile applications are as follows: 1) Reduce friction 2) Transfer heat 3) Prevent corrosion 4) Protect against wear 5) Carry away contaminants 6) Transmit power 7) Act as a seal Now let's find out more about the types of lubricants used in automobiles which are:

1. Engine Oil: This is the most common form of automotive lubricant that you would see being used in automobiles. It consists of base oils enhanced with various additives, particularly anti-wear additives, detergents, dispersants, and for multi-grade oils, viscosity index improvers. Motor oil is used for lubrication of internal combustion engines. The main function of motor oil is to reduce friction and wear on moving parts and to clean the engine from sludge and varnish. It also neutralizes acids that originate from fuel and from oxidation of the lubricant, improves sealing of piston rings, and cools the engine by carrying heat away from moving parts.
2. Gear Oil: This oil is generally used for transmissions, transfer cases, and differentials in automobiles, trucks, and other machinery. Gear oil usually has a high viscosity and contains extreme pressure (EP) additives that consist of phosphorus sulfur compounds, to cope with the sliding action of hypoid bevel gears and combat wear.
3. Greases: Grease is used in the suspension and steering joints to prevent any premature wear and tear. It is made from oil and thickeners. The lubricating oil can be petroleum or synthetic and can vary in viscosity. Additionally, anti-wear and extreme pressure additives can be added to formulate greases for specific applications,
such as, high speed bearings, very cold or very hot conditions, open gears, extreme loads or high moisture conditions, to name a few. Thickeners can be combined or formulated with additional chemicals to produce more complex thickeners for specific applications that require high tolerance for extremely high temperatures like disc brakes in some vehicles which uses this type of grease for its wheel bearings.
4. Brake Fluids: Brake fluids are used in all automobile applications to maintain and improve the performance of brake systems. Brake system plays a crucial role in the safety of cars and trucks so it is extremely important to keep brakes in great condition to maintain its high performance. Brake fluids are not oils it is made from ethylene glycols and anticorrosion additives. Ethylene glycols can withstand the high operating temperatures of automobile brake systems and that will keep the brakes in good operating conditions.
5. Hydraulic Oil: A hydraulic system is any system that requires force activation from one point to another. Some examples of hydraulic systems in a vehicle is the power-steering system. Hydraulic oils usually made from base oils and additive package to combat wear and corrosion.

These are some of the important and most commonly used applications of lubricants in the automobile industry. It is extremely important for you to check the authenticity of the lubricants before you buy them. You should only buy the high quality genuine products from the market. The global lubricant additives market is expected to register a CAGR over 3\% during the forecast period. Environmental concerns are a major factor in lubricant formulation and use. Lubricant additives are vital ingredients in modern lubricants and are driving the market. Growing global automotive fleet is expected to drive the demand for the market during the forecast period. Extended oil change intervals in machinery and automobiles is likely to hinder the market's growth. Growing popularity of high-performance lubricants in Asia-Pacific is projected to act as an opportunity for the market in future. Overall demand for lubricants in ASEAN was estimated at slightly more than 3,100 kilotons in 2019. Indonesia accounted for about one-third of the regional lubricants demand due to its largest vehicle parc and large industrial sector. Thailand followed with a share of slightly more than one-fifth of the overall regional demand in 2019. Thailand's lubricants market is very competitive, with 150 to 170 brands. Singapore was the third-largest market due to its huge appetite for marine lubricants. If marine
lubricants are excluded, Singapore's demand for lubricants will be close to that of Cambodia. The lubricants market in Lao PDR and Cambodia are import-driven, with no significant indigenous capacity for lubricants blending. Even in Myanmar, lubricants demand is mostly fulfilled by foreign suppliers. Automotive lubricants accounted for a larger share than industrial lubricants because the region is not as industrialized as western countries. Countries such as Cambodia, Lao PDR, and Myanmar do not have a welldeveloped manufacturing sector, and their agriculture sector is also not as mechanized as in other parts of the world. Cambodia and Lao PDR do not have an automotive manufacturing base but only a few assembly plants and are largely import driven markets. Myanmar has limited production of passenger cars and commercial vehicles. Indonesia, Thailand, Malaysia, and Vietnam are considered relatively more industrialized than Cambodia, Lao PDR, and Myanmar. Thailand is the largest automotive producer in ASEAN. The Philippines is primarily considered a newly industrialized country, which has an economy in transition, from one based on agriculture to one based more on services and manufacturing.

On further dividing the automotive segment into consumer and commercial segments, the industrial segment appeared to be the largest because of huge demand for marine lubricants in Singapore. The high population of two-wheelers in this region explains why the consumer automotive lubricants segment had a higher share than the commercial automotive lubricants segment. The total vehicle parc in select ASEAN countries was estimated to range between 250 million and 300 million units in 2019. Indonesia had the largest vehicle population among ASEAN members, and it represented one of the largest two-wheeler markets in the world. Two-wheelers are a key mode of transportation for the lower- and middle-class population across various developing Asian countries. These vehicles are not only used for personal use but also by businesses for providing services such as food delivery, transportation and courier services. In most countries, the population of two-wheelers is more than that of passenger cars, but in Malaysia, the car population exceeds that of two-wheelers. Engine oil dominated the market and is expected to grow during the forecast period, as it is widely used to lubricate internal combustion engines. Growing prominence for bio-lubricants is likely to act as an opportunity in the future. Asia-Pacific dominated the market across the world, with the largest consumption coming from the countries, such as China and India. The
growth of automotive and industrial sectors in recent years, together with the increasing urbanization, has created substantial demand for automotive and manufacturing related products throughout Asia-Pacific. The lubricant additives market is partially consolidated. Key players in the lubricant additives market include Evonik Industries AG, Chevron Corporation, Infineum International Limited, The Lubrizol Corporation, and Afton Chemicals, among others. Process oil was the largest industrial oil category in the major ASEAN countries in 2019. High demand for process oil is essentially due to a large demand for rubber process oils in Indonesia, Malaysia, and Thailand. Process oil is followed by industrial engine oil, which is closely followed by hydraulic fluids. A large part of industrial engine oil is constituted by marine engine oil, which has high demand in Indonesia, Thailand, and the Philippines. It is also the largest engine oil type in Cambodia and Myanmar. The most significant demand for metalworking fluids comes from Thailand, where a considerable percentage of this demand is coming from transportation equipment manufacturing.

Nevertheless, the overall lubricants demand in the select countries in ASEAN is expected to grow at a moderate compound annual growth rate (CAGR) of $2.0 \%$ from 2019 to 2029. The growth rate is expected to be higher for the period 2024 to 2029 as the economies would have recovered from COVID-19's negative impact by 2024; after that, industrialization and urbanization will pick up momentum. COVID-19, which caused prolonged lockdowns, could push the lubricants market downward by $7 \%$ to $17 \%$ in 2020 in comparison to the demand in 2019.

### 1.2 Micro Background

Thailand automotive industry has been significantly developed for over 50 years. The industry contributed $12 \%$ of the GDP1 with more than 1.94 million vehicles produced and worth USD 27 billion in 2016. These successes ranked the country as the largest automotive producer in Southeast Asia and 12th in the world. As an "Automotive Hub of Asia", Thailand continuously accelerates its next-generation automotive industry to follow the S-Curve promotion with higher value-added production and also strives for alignment of automotive industrial policy to align with environmental protection policy. Due to the increase in vehicle sales and ownership in Thailand, the demand for automotive
lubricants has also increased, driving the overall market size of the Thai lubricants industry to maintain a growth trend. From the perspective of import and export data, the number of imported lubricants in Thailand is much larger than the number of exports. The imported products are mainly high-quality and high-efficiency lubricants, while the export lubricants are primarily low-end products. Experts from the Special Committee of the Thai Lubricants Enterprise Alliance stated that the production capacity of the Group III base oils and substantial-quality base oils in Thailand are insufficient, especially the low-viscosity 3 \# and 4 \# oils are inadequate and can only be solved by importing base oils. With the promotion of energy conservation and environmental protection policies, low-end products that do not meet environmental protection requirements will be gradually eliminated, especially CF-4 grade oil products will withdraw from the market after 2020. Products that meet environmental standards will increasingly become the mainstream of the market, and the proportion of new lubricants and special lubricants for electric vehicles will further increase. Foreign auto aftermarket groups are chained and highly concentrated, and Thailand's auto repair and maintenance chain have also begun to rise. Those who gain auto repair and maintenance aftermarkets have the automotive lubricant market. Manufacturers of automotive lubricants must transform from wholesale-oriented products to dealers to the integration of dealer-auto repair and maintenance shops. Otherwise, the living space will become smaller and smaller. For example, Shell Lubricant Company has established its Shell maintenance smart store. By digitally upgrading all business processes, it has provided users with experiential services and won future business opportunities.

In the face of huge market demand, many international brands have entered the Thai high-end lubricant market, and their market share has continued to expand. With such fierce competition, it is urgent to improve the quality of domestic lubricants continuously, and in this process, selecting proper lubricant additives is a crucial step to success. Lithium 12-hydroxystearate is the primary raw material of grease. Improving its quality and using restrictions will be the most critical step to improve the quality of the oil. Lubricants is growing in every single year. Reporters wrote the articles about market in Thailand. There are 3 mains types or grades of Lubricants: Mineral, SemiSynthetic, Synthetic. Market share are divided to five major companies: PTT Lubricant, Shell, Castrol, Chevron. In Thailand Lubricants Market has high competition. Each
brand competing based on several criterions such as price, brand image, quality, marketing campaign, innovation.

Mr. Nuttapong Asavathongkul, Director of Srithepthai Marketing company limited mentioned that Overall lubricants market in Thailand is very interesting. The value of purchasing is approximately 650 million liters per annum. The market growth $3-4 \%$ a year. In 2016, there is report mentioned that lubricants market in Thailand will grow and reach over 500 million liters in 2021. "Thailand Lubricant Consumption is expected to Reach over 500 million liters by 2021: Ken Research"

Furthermore, The lubricants industry is well on its way to becoming a global business. Major international firms like ExxonMobil, Shell, BP, and Chevron, even Thai National Oil Company; PTT are getting even larger and account for an even more significant market share of the global lubricants business. Competitive strategy concerns what a firm is doing to gain sustainable competitive advantage. The objectives of this study is to establish the competitive strategies employed by major automotive lubricants, examine characteristic of automotive lubricant buyers, analyze the different consumer factors and also trust factor that influence consumer behaviors and develop competitive marketing mix 4 Ps to analyze consumer behavior. Therefore, this research is beneficial for current players and new entries to compete with others effectively.

### 1.3 Objectives

In this study, there are 2 main objectives;

1. To identify the factors that affect repurchase intention for Lubricants
2. To understand factors that affect repurchase intention for Lubricants

## CHAPTER II

## LITERATURE REVIEW

### 2.1 Brand Equity

Brand equity is regarded as a very important concept in business practice as well as in academic research because marketers can gain competitive advantages through strong brands (Aaker, 1998; Keller, 1993, 2000). Many companies develop marketing strategies to improve their sales and to make their brands stand out among competitive ones. For most firms, the goal of marketing success is to generate a brand, which can differentiate their companies (Jung \& Sung2008). A brand has also been defined as a: distinguishing name and symbol (such as a logo, trademark, or package design) intended to identify the goods or services of either one seller or a group of sellers, and to differentiate those goods or services from those of competitors (Aaker, 1991, p. 7). from others Brand equity is regarded as a very important concept in business practice as well as in academic research because marketers can gain competitive advantages through strong brands (Aaker, 1998; Keller, 1993, 2000). Brand equity has been one of the most popular and potentially important marketing concepts since the 1980s (Keller, 1998). Since late 1980s there has been a frenzy of mergers and acquisitions in which brands have played the primary role. Increasingly, as the movement of brand valuation shifts from the developed economies to other areas of the world, especially to the emerging economies, the branding question changes considerably (Roth, 1995). Solomon and Stuart (2002), for instance, explained brand equity as the value that abrand has for a particular organization or company. As they put it: for a firm, brand equity provides a competitive advantage, because it gives the brand the power to capture and hold onto a larger share of the market and to sell at prices with higher profit margins (Solomon and Stuart, 2002, p. 273). Aaker (1991) equates brand equity with the following elements: brand loyalty, brand awareness, perceived quality, brand association, and other proprietary brand assets. According to Yoo and Donthu (2001), and Washburn and Plank (2002), however, brand equity, specifically consumer-based brand equity,
can be measured according to four According to Washburn and Plank (2002), the element of other proprietary brand assets is not appropriate to measure consumer-based brand equity. Here, consumer-based means that "cognitive and behavioral brand equity at the individual consumer level through a consumer survey" (Yoo and Donthu, 2001, p. 2). It is important to examine which of the brand equity elements is important for consumers to recognize brand value and also, to make a purchase decision.

Despite the divergence of opinions and perspectives, a reasonable agreement concerning the definition of brand equity has been reached, which, in general sense, 'is defined in terms of the marketing effects uniquely attributable to the brand - for example, when certain outcomes result from the marketing of a product or service because of its brand name that would not occur if the same product or service did not have that name' (Keller, 1993, p. 1). The specific marketing effects related to brand equity can be analyzed at the level of firm outcomes, such as brand market share, revenue, and premium prices, or at These two levels of analyses are clearly linked because changes in firm outcomes, such as sales volume and profit, are usually aggregated consequence of consumer-based brand equity, such as brand image and attitude (cf. Ailawadi et al., 2003; Keller, 1998). Because of this relevance to strategic managerial decisions, much effort has been put into defining and measuring-based brand equity.The brand equity concepthas been mentioned in more than one of the previously analyzed models. But what exactly is brand equity? Brand equity, as first defined by Farquhar (1989), is "the 'added value' with which a given brand endows a product" (p. 24). Apart from Farquhar's first definition of brand equity, other definitions have appeared. According to Lassar, Mittal, and Sharma (1995), brand equity has been examined from a financial (Farquhar, Han, and Ijiri 1991; Simon and Sullivan 1993; Kapferer 1997, Doyle 2001b), and a customerbased perspective (Keller 1993; Shocker, Srivastava, and Rueckert 1994; Chen 2001). In other words, financial meaning from the perspective of the value of the brand to the firm, and customer-based meaning the value of the brand for the customer which comes from a marketing decision-making context (Kim, and Kim, 2003). Brand equity has also been defined as "the enhancement in the perceived utility and desirability a brand name confers on a product" (Lassar, Mittal and Sharma 1995, p.13). High brand equity is considered to be a competitive advantage since: it implies that firms can charge a premium; there is an increase in customer demand; extending a brand becomes easier;
communication campaigns are more effective; there is better trade leverage; margins can be greater; and the company becomes less vulnerable to competition (Bendixen, Bukasa, and Abratt 2003). In other words, high brand equity generates a "differential effect", higher "brand knowledge", and a larger "consumer response" (Keller 2003a), which normally leads to better brand performance, both from a financial and a customer perspective.

### 2.2 Perceived Quality

Perceived quality is the "core/primary" facet across the CBBE framework (Aaker, 1996; Farquhar, 1989). It is not the real quality of the product but the customer's perception of the Overall quality or superiority of the product (or service) with respect to its intended purpose, relative to alternatives (Zeithaml, 1988). Perceived quality lends value to a brand in several ways: high quality gives consumers a good reason to buy the brand and allows the brand to differentiate itself from its competitors, to charge a premium price, and to have a strong basis for the brand extension (Aaker, 1991). Marketers across all product and service categories have increasingly recognized the importance of perceived quality in brand decisions (Morton, 1994). Kotler (1991) notes the intimate connection among product and service quality, customer satisfaction, and company profitability Based on the above definition and the suggested relationship of perceived quality (Tang \& Hawly, 2009) and brand equity in the literature, the following hypothesis is formulated:

Perceived quality has a greater influence in a customer's purchasing process and in brand loyalty. This influence is very important when customers are in a condition, which makes them unable to make an analysis of the quality. Perceived quality can be used as a helping tool when company intends to utilize a pricing strategy with premium price and further extend a brand in several markets (Aaker, 1991). It is an essential characteristic for every brand; perceived quality defines a customer's perception and the product's quality or superiority. The perceived quality provides fundamental reason to purchase. It also influences brand integration and exclusion to consideration set before final selection. A perceived quality provides greater beneficial opportunity of charging a premium price. The premium raises profit and gives a resource to reinvest in the
brand. Perceived quality will enable a strong brand to extend further and will get a greater success possibility than a weak brand.

### 2.3 Price

From Kotler \& Keller (2006) journal, they said that the price is a significant aspect to consider for the consumers' intentions to purchase. Besides, they also pronounce that price consciousness drives the way in founding the repurchase intention credentials. However, Broekhuizen and Alsem (2002) claimed that customers would be willing to pay at the superior price for modified products since consumers sight it as a better way in order to fulfill their needs. Taking the greatest bearing on the cost-effectiveness to the profitable proportion of the company concerned, the price is one key important variable in the structure to consider. There exists division between the price deals together with price. Moreover, some of the researchers such as Aaker (1991) also mentioned that there is the negative effect of the consumers' behavioral intention towards the price deals.

### 2.4 Promotion

It is said that sales promotion term is difficult to define at the moment concerning techniques \& tactics. Moreover, the sales promotion is an instrument which the company use to accomplish marketing communication objectives of the company together with the necessary component for marketing planning (Blattberg RC, Neslin SA, 1990). Besides, sales promotion is just a short expression on the scheme in order that they can develop a demand. Correspondingly, the special marketing offering will be provided extra return rather than what consumers receive from the sales and increase the higher stimulus on sales (Banerjee, 2009). Furthermore, sales promotion contains several methods which they designed to achieve a short term sales increase, so this is a tool that mostly use for a short period only. Also, it uses less cost to grab the attention than using the advertisement for customers, so this is a method for attracting customers then keep them loyal to the company (Ndubisi, 2006). Sales promotion has a strong ability to improve assessment and it can carry onward upcoming transactions of sales to the company.

### 2.5 Customer Satisfaction

Referring to Oxford dictionary, term of "satisfaction" can be described as a someone emotion or mood about preference. Also, it can be something that provides pleasure, joy, cheerfulness and so on and it can fulfill the needs. (Crowther, Kavanagh, \& Ashby, 1995). Moreover, satisfaction as a typical is the thing that can satisfy or accomplish to business sectors as well as the customers, so customer satisfaction is the work that flattering and attracting the business world as a common thing. Moreover, customer satisfaction can be defined in the different meaning by several experts in the marketing field such Richard L. Oliver, Philip Kotler, Johnson and Fornell etc. and they are all come from different part of the world, so this can be implied that the customers and business sectors are concerned at everywhere in the world regarding the customer satisfaction for both products and services fields. In addition, a different explanation or conceptualization of the word of customer satisfaction approaches from the expectancy disconfirmation theory. (McQuitty, Finn, \& Wiley, 2000) Richard L. Oliver has developed this concept of disconfirmation theory. During the research in 1980, he mentioned that there is different level of the satisfaction which counted from the performance and expectation (Oliver, 1980). It's said that customer satisfaction can grow the business in the long-term, so this is a key factor to work on (Gilbert and Veloutsou, 2006).

### 2.6 Repurchase intention

Dodd, Monroe \& Grewal (1991) offered the definition of the term of the repurchase intention as the willingness of the customers on the products or services whether they will buy it. Regarding Zeithaml (1988), it mentioned that the intention to purchase of the customers is established on by perceived benefits and value. Besides, Schiffman \& Kanuk (2000) specified on their paper that the intention to purchase of the customer is the possibility of purchasing the product or service, and advanced purpose of intention shows higher possibility. Moreover, intention to purchase of the customer differs by customers' value perception, quality of the product that customers can feel, extrinsic characteristics, and intrinsic characteristics. Furthermore, consumers will only buy some products or services when they have the positive attitudes as well as positive impression. Therefore, the intention to buy is be able to interpreted as the
likelihood of purchase on the products or services. Assael (1998) mentioned that the intention to buy is the response of the customers for the specific objects before making the purchase.

### 2.7 Conceptual Framework (7)



Figure 2.1 Conceptual Framework

Regarding the hypothesis above, there are 5 factors with 9 hypotheses to see the causes and effect in each factor.

H1: Brand Equity has a positive effect on customer satisfaction.
H2: Perceived quality has a positive effect on customer satisfaction.
H3: Price has a positive effect on customer satisfaction.
H4: Promotion has a positive effect on customer satisfaction.
H5: Brand Equity has a positive effect on repurchase intention.
H6: Perceived quality has a positive effect on repurchase intention.
H7: Price has a positive effect on repurchase intention.
H8: Promotion has a positive effect on repurchase intention.
H9: Customer Satisfaction has a positive effect on repurchase intention.

## CHAPTER III MATERIALS AND METHODS

### 3.1 Population Sample

The qualified respondents for this study is Thai citizens who live in Thailand, so that we can reach the target respondents appropriately and the respondents must have the experience consuming Lubricant. So that we are able to identify the brand usage whether it will be represent the real market. Besides, there will be 232 respondents with the age above 20 years old since they can make their own decision making without parents.

### 3.2 Data Collection and Sample Size

This study will use the theory of sample size from Hair et al. (2010) to calculate the appropriate sample size. They suggest that the sample size should be determined up to 10-20 times per variable. The variable in this research is 6 variables, so the sample size would be minimum at 120 samples, calculated from $(6 \times 20=120)$. To prevent the error, researchers determined the proper sample size of 200 respondents.

According to the formula, the sample size of this study would be 232 samples as researcher need to cope with some errors, so from using 250 sample sizes, we change to use 232 sample sizes instead. From those 232 respondents will be person whose age above 18 years old and have at least the experience consuming lubricants products, the qualified respondents will be those who are Thai citizen and live in Bangkok at least 6 months. Also, the language in this study will be communicate in Thai language in order that it will be suitable and easier for Thai nationality. The survey will be distributed through online platform which is the quantitative research method since it will be the most appropriate method for online survey. Moreover, reverse question and screening questions will be applied to the questionnaire in order to ensure that there will be no biased answers. In total, there are 10 parts of the questionnaire which the first part will
be the screening questions, followed by another 6 parts of different variables which are brand equity, perceived quality, price, promotion, customer satisfaction, and repurchase intention with the scale answer of 5 points which are strongly disagree (1), disagree (2), neutral (3), agree (4) and strongly agree (5) and the last part will be the personal information so that researcher is able to use for sub analysis.

### 3.3 Data Analysis

According to quantitative analysis, it consists of frequency which shows respondent profile and consumer behavior, reliability analysis on 6 factors which are brand equity, perceived quality, price, promotion, customer satisfaction, and repurchase intention. Furthermore, average mean score of each question for all factors will be showed to see the important factors related to consumers' perception. Also, T-test analysis using male and female attribute to analyze the differences among these 2 subgroups while ANOVA test will be applied with 5 aspects which are consumption frequency, age, education, occupation, and monthly household income that can tell the differences between these range of groups. Last but not least, regression analysis will be used to identify the cause and effect of each factors related to customer satisfaction and repurchase intention in the context of lubricants consuming.

## CHAPTER IV

## RESULT

### 4.1 Frequency

In this part, the result will be divided into 2 parts which are respondent profile and consumer behavior. According to the respondent profile, it consists of different kinds of personal information which are gender, age, monthly household income, education, and occupation and consumer behaviors.

Table 4.1 Gender

|  | Gender | Frequency | Percent |
| :--- | :---: | :---: | :---: |
| Male |  | 130 | 56.0 |
| Female |  | 102 | 44.0 |
|  | Total | $\mathbf{2 3 2}$ | $\mathbf{1 0 0 . 0}$ |

Table 4.2 Age

|  | Age | Frequency | Percent |
| :--- | :---: | :---: | :---: |
| 20-29 years |  | 53 | 22.8 |
| 30-39 years | 68 | 29.3 |  |
| 40-49 years |  | 72 | 31.0 |
| 50 and above |  | 39 | 16.8 |
|  | Total | $\mathbf{2 3 2}$ | $\mathbf{1 0 0 . 0}$ |

According to table of gender and age, we have a record of 232 samples with 130 males and 102 females which can be accounted as percentage of 56.0 and 40.0 respectively and the age range between 40-49 years old is the majority of this study which can be accounted for $31.0 \%$, followed by $29.3 \%$ of 30-39 years old, $22.8 \%$ of 20-29 years old, and the rest are those whose age above 50 years old which can be accounted for $16.8 \%$.

Table 4.3 Education

|  | Education | Frequency | Percent |
| :--- | :---: | :---: | :---: |
| High school |  | 71 | 30.6 |
| Bachelor |  | 124 | 53.4 |
| Master |  | 37 | 15.9 |
|  | Total | $\mathbf{2 3 2}$ | $\mathbf{1 0 0 . 0}$ |

Table 4.4 Occupation

|  | Occupation | Frequency |
| :--- | :---: | :---: |
| Employee | 75 | Percent |
| Business owner | 62 | 32.3 |
| Professionals | 16 | 26.7 |
| Housewife | 20 | 6.9 |
| Retirement | 8 | 8.6 |
| Unemployed | 2 | 3.4 |
|  | Other | $\mathbf{4 9}$ |

In perspective of the respondents' education, the majority of them are Bachelor for $53.4 \%$, followed by High school with $30.6 \%$ and $15.9 \%$ of Master. With the occupation, most of the respondent work as an employee for $32.3 \%$, followed by Business owner, Other, Housewife, Professionals, Retirement and Unemployed for $26.7 \%, 21.1 \%, 8.6 \%, 6.9 \%, 3.4 \%$ and $0.9 \%$ respectively.

Table 4.5 Household Income

| Household Income | Frequency | Percent |
| :--- | :---: | :---: |
| Less than 10,000 THB (D-) | 8 | 3.4 |
| $10,000-18,000 \mathrm{THB}(\mathrm{D})$ | 23 | 9.9 |
| $18,001-24,000 \mathrm{THB}(\mathrm{C}-)$ | 31 | 13.4 |
| $24,001-35,000 \mathrm{THB}(\mathrm{C})$ | 49 | 21.1 |
| $35,001-50,000 \mathrm{THB}(\mathrm{C}+)$ | 39 | 16.8 |
| $50,001-85,000 \mathrm{THB}$ (B) | 33 | 14.2 |
| $85,001-160,000 \mathrm{THB}(\mathrm{A})$ | 26 | 11.2 |
| More than $160,000 \mathrm{THB}(\mathrm{A}+)$ | 23 | 9.9 |
| Total | $\mathbf{2 3 2}$ | $\mathbf{1 0 0 . 0}$ |

Regarding the definition of socio-economic class from The National Statistical Office (NSO), A+ class is between the household income of "more than 160,000 THB", A class is about " $85,001-160,000 \mathrm{THB}$ " of household income, B class is between the household income of " $50,001-85,000 \mathrm{THB}$ ", C+ class is around the household income of "35,001-50,000 THB", C class has the household income between "24,001-35,000 THB", C- class is about "18,001-24,000 THB" of household income, D class has the household income "10,000-18,000 THB" and plus with D- class has the household income "less than $10,000 \mathrm{THB}$ ". Regarding the table of household income, it has quite good spreading though all rage of the income option, SES C has the highest frequency of $21.1 \%$, followed by SES C+, B, C-, A, A+, D and D- which has the percentage of $16.8 \%, 14.2 \%, 13.3 \%, 11.2 \%, 9.9 \%, 9.9 \%$ and $3.4 \%$ respectively.

Table 4.6 Frequency Usage

| Frequent usage | Frequency | Percent |
| :--- | :---: | :---: |
| Less than 1,000 k.m. per month (Light usage) | 84 | 36.2 |
| 1,000-2,000 k.m. per month (Medium usage) | 82 | 35.3 |
| More than 2,000 k.m. per month (Heavy usage) | 66 | 28.4 |
| Total | $\mathbf{2 3 2}$ | $\mathbf{1 0 0 . 0}$ |

This study also records the vehicle usage by measure the distance which drive per month of respondents within 3 type of users which are heavy, medium and light usage and most of respondents are in the subgroup of light usage for $46.2 \%$, followed by medium usage of $35.3 \%$ and $28.4 \%$ of heavy usage.

Table 4.7 Brand's User

| Brands' user | Frequency | Percent |
| :--- | :---: | :---: |
| PTT | 48 | 20.7 |
| Bangchak | 8 | 3.4 |
| Shell | 40 | 17.2 |
| Chevon/ Caltex | 11 | 4.7 |
| Castrol | 27 | 11.6 |
| Valvoline | 45 | 19.4 |
| Esso Mobile | 5 | 2.2 |
| Others | 48 | 20.7 |
|  | $\mathbf{2 3 2}$ | $\mathbf{1 0 0 . 0}$ |

In perspective of the respondents Brand's user the majority of them are PPT and other brand was equal for $20.7 \%$, followed by Valvoline with $19.4 \%$, Shell with $15.9 \%$, Castrol with $11.6 \%$, Chevon/Caltex with $4.7 \%$, Bangchak with $3.4 \%$ and $2.2 \%$ of Esso Mobile.

### 4.2 Reliability Analysis

Reliability is the correlation of an item, scale, or instrument with a hypothetical one which truly measures what it is supposed to. There are 6 factors that have been tested on reliability analysis and the cut-off criteria are between 0.60-0.80. By convention, a lenient cut-off of 0.60 is common in exploratory research; alpha should be at least 0.70 or higher to retain an item in an "adequate" scale; and a cut-off of 0.80 for a "good scale".

## Table 4.8 Reliability

|  | Cronbach's Alpha | $\mathbf{N}$ of Items |
| :--- | :---: | :---: |
| Brand Equity | .867 | 5 |
| Perceived Quality | .901 | 5 |
| Price | .777 | 8 |
| Customer Satisfaction | .939 | 8 |
| Promotion | .885 | 5 |
| Repurchase intention | .931 | 6 |

The result of reliability analysis for all factors are between $0.60-0.80$ which can meet the criteria we set which is a good result meaning that these factors are truly measured and it can be used for further analysis.

### 4.3 Descriptive Statistic

In descriptive statistics, it shows the mean score of each statement and factor from the scale of 1 to 5 which 1 being the least agreement while 5 being the most agreement with the given statements of each factor.

Table 4.9 Brand Equity

| Brand Equity | N | Mean |
| :--- | :---: | :---: | :---: |
| BE1: Even if another brand has the same features as my selected | 232 | 4.01 |
| brand, I would prefer to buy it. <br> BE2: Even if another brand has the same price as the brand that I | 232 | 4.07 |
| usually use, I would still buy it. <br> BE3: If I have to choose among product brands, This brand is <br> definitely my choice. | 232 | 3.92 |
| BE4: If another brand is not different from the brand that I usually | 232 | 4.24 |
| use in any way, it seems smarter to purchase the same.  <br> BE5: No matter what, I don't change my mind from this brand. 232 | 3.57 |  |
| $\quad$ Brand Equity | $\mathbf{2 3 2}$ | $\mathbf{3 . 9 6}$ |

For descriptive statistic in perspective of brand equity, the highest mean score is the statement of BE4: If another brand is not different from the brand that I usually use in any way, it seems smarter to purchase the same., followed by BE2: Even if another brand has the same price as the brand that I usually use, I would still buy it with mean of 4.07 and BE1: Even if another brand has the same features as my selected brand, I would prefer to buy it. with mean of 4.01 which these top 3 statements have higher mean score than overall brand equity mean score which is 3.96 . This table shows that people think that it would be smarter to purchase products and services from the lubricant brand they usually use if there is nothing different from other brands and the brand are not just the product to them, so it can be implied that lubricant has quite strong brand equity since people doesn't think just the products and service provided but it's something more about the brand.

Table 4.10 Perceived Quality

| Perceived Quality | N | Mean |
| :--- | :---: | :---: |
| PQ1: This brand consistently performs better than all other brands. | 232 | 4.03 |
| PQ2: I always count on this brand for consistent high quality. | 232 | 4.27 |
| PQ3: Compared to other brands, this brand is of very high quality. | 232 | 4.14 |
| PQ4: The product of this brand has a long lifetime. | 232 | 4.03 |
| PQ5: I trust the quality of products from this brand. | 232 | 4.25 |
| Perceived Quality | $\mathbf{2 3 2}$ | $\mathbf{4 . 1 5}$ |

Regarding the descriptive analysis of perceived quality, the statement that has highest mean score is PQ2: I always count on this brand for consistent high quality with the mean of 4.27, followed by PQ5: I trust the quality of products from this brand. and PQ3: Compared to other brands, this brand is of very high quality with the mean of 4.25 and 4.14 respectively. However, there are only 2 statements which are above the overall mean of perceived quality which are PQ2 and PQ5. Anyway, all the statements have above 4 points which can be implied that people are trusted and confident in the standard quality of the product their usually use.

Table 4.11 Price

| Price | N | Mean |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| P1: The price of a product is a good indicator of its quality. | 232 | 3.70 |  |  |  |
| P2: Generally speaking, the higher the price of a product, the higher | 232 | 3.70 |  |  |  |
| the quality. |  |  |  |  |  |
| P3: The old saying "you get what you pay for" is generally true. | 232 | 3.96 |  |  |  |
| P4: I think the low price may lead to low quality. | 232 | 3.27 |  |  |  |
| P5: The price paid for this product was reasonable. | 232 | 4.07 |  |  |  |
| P6: This product of this brand was correctly priced. | 232 | 4.00 |  |  |  |
| P7: I think the price is the first consideration when I am going to buy | 232 | 3.46 |  |  |  |
| lubricant. |  |  |  |  |  |
| P8: I compare prices of many brands before buying. | 232 | 3.87 |  |  |  |
| Price |  |  |  | $\mathbf{2 3 2}$ | $\mathbf{3 . 7 5}$ |

In the descriptive analysis for price factor, the most agreeable statement is P5: The price paid for this product was reasonable with the mean of 4.07 , followed by P6: This product of this brand was correctly priced with mean of 4.00 and P3: The old saying "you get what you pay for" is generally true with mean of 3.96. Moreover, all top 3 statements in this factor have higher mean score comparing with the overall mean score of price factor. From the data, price is also one factor that people first consider about it when purchasing lubricant and they perceived that price of the lubricant nowadays is affordable and value for money.

Table 4.12 Customer Satisfaction

| Customer Relationship Management | N | Mean |
| :--- | :---: | :---: |
| CS1: I like this brand. | 232 | 4.18 |
| CS2: I am satisfied with the performance of this brand. | 232 | 4.27 |
| CS3: This brand is easy to find. | 232 | 4.22 |
| CS4: Overall, I am satisfied with my experience in this brand. | 232 | 4.31 |
| CS5: I have obtained several benefits derived from this brand. | 232 | 4.06 |
| CS6: I am sure I made the correct decision in buying this brand. | 232 | 4.22 |
| CS7: The product I received was pleasant. | 232 | 4.25 |
| CS8: I am content with the product of this brand. | 232 | 4.25 |
| Customer Satisfaction | $\mathbf{2 3 2}$ | $\mathbf{4 . 2 2}$ |

Descriptive statistic of customer satisfaction (CS) shows that CS4: Overall, I am satisfied with my experience in this brand with the mean score of 4.27 , followed by CS2: I am satisfied with the performance of this brand with the mean score of 4.27 and the equal of CS7: The product I received was pleasant and CS8: I am content with the product of this brand with the mean score of 4.25 . These data show that people who the experience consuming the lubricant agree the most with four of the statements above, the higher mean score, the more they agree with the statements, people is quite loyal to their lubricant as well.

Table 4.13 Promotion

| Promotion | N | Mean |
| :--- | :---: | :---: |
| PO1: The promotion encourages me to purchase the product. | 232 | 3.98 |
| PO2: Giveaway is attracting me to buy the product. | 232 | 3.84 |
| PO3: I'm generally sensitive to the promotion of the product. | 232 | 3.81 |
| PO4: The large price discount is very tempting for me. | 232 | 3.94 |
| PO5: The drawing lucky money and getting reduction are full of fun. | 232 | 3.88 |
| $\quad$ Promotion | $\mathbf{2 3 2}$ | $\mathbf{3 . 8 9}$ |

For descriptive statistic of sales promotion, the most agreeable statement is PO1: The promotion encourages me to purchase the product with the mean score of 3.98, followed by PO4: The large price discount is very tempting for me with the mean score of 3.94, and PO5: The drawing lucky money and getting reduction are full of fun with the mean score of 3.88 . From the table, it's clearly seen that people is influenced by the sales promotion because it makes them to purchase the products and they also like the promotion deal.

Table 4.14 Repurchase intention

| Repurchase intention | N | Mean |
| :--- | :---: | :---: |
| RI1: I have a high purchase interest in this product. | 232 | 4.12 |
| RI2: I definitely intend to buy this product. | 232 | 4.11 |
| RI3: I probably will buy this product. | 232 | 4.12 |
| RI4: I always buy this product. | 232 | 3.88 |
| RI5: If you were in the market today for this product/brand, I likely to | 232 | 4.11 |
| purchase this brand. |  |  |
| RI6: I am willing to buy the product from this brand in the future. | 232 | 4.10 |
| Repurchase intention | $\mathbf{2 3 2}$ | $\mathbf{4 . 0 7}$ |

Regarding the descriptive statistic of repurchase intention, the highest mean is RI1: I have a high purchase interest in this product and RI3: I probably will buy this product is high with the equally mean score of 4.12 , followed by RI2: I definitely intend
to buy this product and RI5: If you were in the market today for this product/brand, I likely to purchase this brand with the equally mean score of 4.11 , and RI6: I am willing to buy the product from this brand in the future with the mean score of 4.10. From the table, it shows that there is high possibility that people will consider purchasing products and services from lubricant in the near future.

Table 4.15 Overall Descriptive Statistic

| Descriptive Statistic | Mean | N of Items |
| :--- | :---: | :---: |
| Brand Equity | 3.96 | 5 |
| Perceived Quality | 4.15 | 5 |
| Price | 3.75 | 8 |
| Customer Satisfaction | 4.22 | 8 |
| Promotion | 3.89 | 5 |
| Repurchase intention | 4.07 | 6 |

The table of overall descriptive statistics shows that people mostly agree with the statements of customer satisfaction with the overall mean score of 4.22 , followed by perceived quality which has the overall mean score which is 4.15 , so descriptive statistic shows that product quality which make customer satisfaction can influence people decision making process to purchase the most while price has the least overall mean score which is 3.75 , so price might not be the major consideration factors of the consumers. However, this is only the data from descriptive statistic, it should be look further in another analysis.

### 4.4 T-Test Analysis

This analysis is the most commonly used method to analyze and evaluate the differences in mean between 2 subgroups and our analysis uses gender to see the differences of means from each statement.

Table 4.16 T-Test - Price Factor

| Independent Samples Test |  |  |  |  |  |  |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: |
|  |  | Levene's Test for <br> Equality of Variances | t-test for Equality of Means |  |  |  |
|  |  | F | Sig. | t | df | Sig. (2-tailed) |
| P5: The price paid <br> for this product <br> was reasonable. | Equal variances <br> assumed <br> Equal variances <br> not assumed | 2.333 | .128 | -2.169 | 230 | .031 |
|  |  |  |  |  |  |  |

According to T-test analysis (Table 4.16) for price factor, it shows the differences among gender male and female of 1 statements which is "P5: The price paid for this product was reasonable" with T value is $(-2.169)$ and Sig. (2-tailed) is 0.031 , so this mean that there is the difference among gender male and female in this statement. In addition, mean of female with 4.20 for P 2 statement is higher than males' mean which is 3.97 , so it shows that female think the price of product should be reasonable rather than male.

Table 4.17 T-Test - Sales Customer Satisfaction Factor


According to T-test analysis (Table 4.4.2) for customer satisfaction factor, there is 1 statements that found the differences among gender male and female which is "CS5: I have obtained several benefits derived from this brand with T value is ( -1.988 ), Sig. (2-tailed) is 0.048 , mean of 3.96 for male, and mean of 4.19 for female, so female is more likely to seek the benefits which brand derived rather male.

Table 4.18 T-Test - Promotion Factor

| Independent Samples Test |  |  |  |  |  |  |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Levene's Test for <br> Equality of Variances | t-test for Equality of Means |  |  |  |
|  |  | F | Sig. | t | df | Sig. (2- <br> tailed) |
| PO1: The promotion <br> encourages me to <br> purchase the product. | Equal variances <br> assumed | 4.505 | .035 | -2.885 | 230 | .004 |
|  | Equal variances <br> not assumed |  |  | -2.970 | 229.999 | .003 |

Table 4.18 T-Test - Promotion Factor (cont.)

| Independent Samples Test |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Levene's Test for Equality of Variances |  | t-test for Equality of Means |  |  |
|  |  | F | Sig. | t | df | Sig. (2- <br> tailed) |
| PO2: Giveaway is attracting me to buy the product. | Equal variances assumed Equal variances not assumed | 11.420 | . 001 | -3.928 -4.069 | $\begin{gathered} \hline 230 \\ 229.292 \end{gathered}$ | .000 .000 |
| PO3: I'm generally sensitive to the promotion of the product. | Equal variances assumed Equal variances not assumed | 12.691 | . 000 | $\begin{aligned} & -4.636 \\ & -4.800 \end{aligned}$ | $\begin{gathered} 230 \\ 229.397 \end{gathered}$ | .000 .000 |
| PO4: The large price discount is very tempting for me. | Equal variances assumed Equal variances not assumed | 1.396 | . 239 | $\begin{aligned} & -2.455 \\ & -2.493 \end{aligned}$ | $\begin{gathered} 230 \\ 226.883 \end{gathered}$ | $\begin{aligned} & .015 \\ & .013 \end{aligned}$ |
| PO5: The drawing lucky money and getting reduction are full of fun. | Equal variances assumed Equal variances not assumed | 10.101 | . 002 | $-4.614$ $-4.765$ | $230$ $229.811$ | $.000$ $.000$ |
| Group Statistics |  |  |  |  |  |  |
|  |  | Gender | N | Mean | Std. <br> Deviation | Std. Error Mean |
| PO1: The promotion encourages me to purchase the product. |  | Male | 130 | 3.82 | 1.045 | . 092 |
|  |  | Female | 102 | 4.19 | . 817 | . 081 |
| PO2: Giveaway is attracting me to buy the product. |  | Male | 130 | 3.59 | 1.192 | . 105 |
|  |  | Female | 102 | 4.15 | . 883 | . 087 |
| PO3: I'm generally sensitive to the promotion of the product. |  | Male | 130 | 3.52 | 1.202 | . 105 |
|  |  | Female | 102 | 4.18 | . 895 | . 089 |
| PO4: The large price discount is very tempting for me. |  | Male | 130 | 3.79 | 1.119 | . 098 |
|  |  | Female | 102 | 4.14 | . 985 | . 098 |
| PO5: The drawing lucky money and getting reduction are full of fun. |  | Male | 130 | 3.61 | 1.103 | . 097 |
|  |  | Female | 102 | 4.22 | . 840 | . 083 |

According to T-test analysis (Table 4.4.3) for sales promotion factor, there are 5 statements that found the differences among gender male and female which are "PO3: I'm generally sensitive to the promotion of the product", "PO2: Giveaway is attracting me to buy the product", "PO5: The drawing lucky money and getting reduction are full of fun". "PO1: The promotion encourages me to purchase the product" and "PO4: The large price discount is very tempting for me".

PO3 statement, T value is (-4.636), Sig. (2-tailed) is 0.000 , mean of 3.52 for male, and mean of 4.18 for female, so female is more promotion sensitively rather male. For PO2 statement, T value is (-3.928), Sig. (2-tailed) is 0.000 , mean of 3.59 for male, and mean of 4.15 for female, so this statement is more appeal to female which female is more persuaded to purchase the products by giveaway promotion. For PO5 statement, T value is ( -4.614 ), Sig. (2-tailed) is 0.000 , mean of 3.61 for male, and mean of 4.22 for female, so this statement is more appeal to female which female is more persuaded to purchase the products by drawing lucky money and getting reduction are full of fun. For PO1 statement, T value is ( -2.885 ), Sig. (2-tailed) is 0.004 , mean of 3.82 for male, and mean of 4.19 for female, so this statement is more appeal to female which female is more encourage to purchase the products by promotion. Lastly, PO 4 T value is $(-2.455)$, Sig. (2-tailed) is 0.015 , mean of 3.79 for male, and mean of 4.14 for female, so female is generally sensitive to the price of lubricant rather than male. Regarding the T-test for sales promotion, it clearly sees that female is more attract by the promotion more than male since female has higher mean score for all significant all statements.

Table 4.19 T-Test - Repurchase intention Factor


According to T-test analysis (Table 4.4.4) for customer repurchase intention factor, RI3 statement which is "I probably will buy this product" shows the significantly different among male and female gender with the T value of (-2.395) with Sig. (2-tailed) of 0.039 it shows that female think that it is possible to buy lubricant products rather than male since female has higher mean score of 4.25 while male has mean score of 4.02 . And followed by PI6 statement which is "I am willing to buy the product from this brand in the future" shows the significantly different among male and female gender with the T value of (-2.068) with Sig. (2-tailed) of 0.031 . When looking at the result of group statistic, it shows that female think that it is possible to buy lubricant products rather than male since female has higher mean score of 4.25 while male has mean score of 3.98.

### 4.5 One-Way ANOVA

### 4.5.1 Age Group

This one-way ANOVA analyzes the age range subgroup of 20-29 years old, 3039 years old, 40-49 years old, and 50 years old with all 6 factors which are brand equity, perceived quality, price, customer satisfaction, promotion and repurchase intention.

Table 4.20 ANOVA model - Age Group

| ANOVA |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sum of <br> Squares | df | Mean <br> Square |  | F | Sig. |
| PO5: The drawing lucky Between Groups <br> money and getting Within Groups <br> reduction are full of fun. Total |  |  | $\begin{gathered} 9.682 \\ 239.693 \\ 249.375 \end{gathered}$ | $\begin{gathered} 3 \\ 228 \\ 231 \end{gathered}$ |  | $\begin{aligned} & 3.227 \\ & 1.051 \end{aligned}$ | 3.070 | $0 \quad .029$ |
| Post Hoc Tests <br> Multiple Comparisons Bonferroni |  |  |  |  |  |  |  |  |
| Dependent Variable | (I) How old are you? | (J) Ho are | Mean Difference (I-J) | Std. <br> Error | Sig. | 95\% Confidence Interval |  |  |
| PO5: The drawing lucky money and getting reduction are full of fun. | $40-49 \text { years }$ | $20$ | . $527{ }^{*}$ | . 186 | . 032 | . 03 |  | 1.02 |

From the data, it shows the significantly different with the sig of 0.000 between 20-29 years old and 40-49 years old and above subgroup in the statement of PO1: The drawing lucky money and getting reduction are full of fun. According to the Bonferroni table, it shows that subgroup of 40-49 years old tend to drawing lucky money and getting reduction are full of fun the most among other age range subgroups and less than 20 years old subgroup with the mean difference of 0.527 .

### 4.5.2 Education Group

This one-way ANOVA analyzes the education subgroup of High school, Bachelor and Master graduated with all 6 factors which are brand equity, perceived quality, price, customer satisfaction, promotion, and repurchase intention.

Table 4.21 ANOVA - Education Group


From the data, it shows the significantly different with the sig of 0.023 between education subgroup in the statement of P5: The price paid for this product was reasonable. According to the Bonferroni table, Master degree graduated people give more importance to the statement than subgroup of High school people with mean difference of 0.448 significantly.

### 4.5.3 Occupation Group

This one-way ANOVA analyzes the occupation subgroup of Employee, Business owner, Professional, Housewife, Unemployed and other with all 6 factors which are brand equity, perceived quality, price, customer satisfaction, promotion, and
repurchase intention. Although there is no significant interaction between the among factors, it is still interesting and important to determine.

### 4.5.4 Household Income Group

This one-way ANOVA analyzes the monthly household income subgroup of lower than 10,000 THB (D-), 10,001 - 18,000 THB (D), 18,001 - 24,000 THB (C-), $24,001-35,000$ THB (C), 35,001 - 50,000 THB (C+), 50,001 - 85,000 THB (B), $85,001-160,000 \mathrm{THB}(\mathrm{A})$, and more than $160,000 \mathrm{THB}(\mathrm{A}+)$ with all 6 factors which are brand equity, perceived quality, price, customer satisfaction, promotion, and repurchase intention.

Table 4.22 ANOVA model - Household Income Group 1


Post Hoc Tests
Multiple Comparisons
Bonferroni

| Dependent <br> Variable | (I) What is your monthly household income? | (J) What is your monthly household income? | Mean <br> Difference <br> (I-J) | Std. <br> Error | Sig. | 95\% Confidence Interval |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Lower <br> Bound | Upper <br> Bound |
| P5: The price | 35,001-50,000 | 85,001-160,000 | .769* | . 202 | . 005 | -1.41 | -. 13 |
| paid for this | THB (C+) | THB (A) |  |  |  |  |  |
| product was |  | more than | .785* | . 209 | . 006 | -1.45 | -. 12 |
| reasonable. |  | 160,000 THB |  |  |  |  |  |
|  |  | ( $\mathrm{A}+$ ) |  |  |  |  |  |

From the data, it shows the significantly different with the sig of 0.000 between frequency usage subgroup in the statement of P5: The price paid for this product was reasonable. According to the Bonferroni table, subgroup of $35,001-50,000$ THB (C+) gives more importance to the statement than subgroup of 85,001 - 160,000 THB (A) and more than $160,000 \mathrm{THB}(\mathrm{A}+)$ with mean difference of 0.769 and 0.785 respectively.

Table 4.23 ANOVA model - Household Income Group 2


From the data, it shows the significantly different with the sig of 0.007 between monthly household income subgroup in the statement of P6: This product of this brand was correctly priced. According to the Bonferroni table, subgroup of 85,001 160,000 THB (A) gives more importance to the statement than subgroup of $35,001-$ $50,000 \mathrm{THB}(\mathrm{C}+)$ with mean different of (-.717).

### 4.5.5 Distance do you drive per month

This one-way ANOVA analyzes the frequency usage subgroup of heavy user (more than $2,000 \mathrm{~km}$. per month), medium user ( $1,000-2,000 \mathrm{~km}$. per month), and light user (Less than 1, 000 km . per month) with all 6 factors which are brand equity, perceived quality, price, customer satisfaction, promotion, and repurchase intention.

Table 4.24 ANOVA model - Distance do you drive per month 1


From the data, it shows the significantly different with the sig of 0.034 between frequency usage subgroup in the statement of CS7: The product I received was pleasant. According to the Bonferroni table, subgroup of the medium user gives more importance to the statement than subgroup of light user with mean difference of 0.310 .

Table 4.25 ANOVA model - Distance do you drive per month 2

| ANOVA |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Sum of <br> Squares | df | Mean Square | F | Sig. |
| CS8: I am content with | Between Groups | 3.807 | 2 | 1.903 | 3.154 | . 045 |
| the product of this | Within Groups | 138.189 | 229 | . 603 |  |  |
| brand. | Total | 141.996 | 231 |  |  |  |

## Post Hoc Tests <br> Multiple Comparisons

Bonferroni

| Dependent <br> Variable | (I) How distance do you drive per month? | (J) How distance do you drive per month? | Mean <br> Difference (I-J) | Std. <br> Error | Sig. | 95\% Confidence Interval |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Lower <br> Bound | Upper <br> Bound |
| CS8: I am content | More than | Less than 1,000 | .320* | . 128 | . 039 | . 01 | . 63 |
| with the product | 2,000 k.m. per | k.m. per month |  |  |  |  |  |
| of this brand. | month |  |  |  |  |  |  |
|  | (medium user) |  |  |  |  |  |  |

From the data, it shows the significantly different with the sig of 0.000 between frequency usage subgroup in the statement of CS8: I am content with the product of this brand. According to the Bonferroni table, subgroup of the medium user gives more importance to the statement than subgroup of light user with mean difference of 0.320 significantly.

### 4.6 Regression Analysis (6)

Table 4.26 Regression Analysis of Customer Satisfaction

| Model Summary |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | $.754^{\mathrm{a}}$ | .568 | .561 | .45867 |

a. Predictors: (Constant), Mean PO, Mean PQ, Mean P, Mean BE

|  | ANOVA $^{\mathbf{b}}$ |  |  |  |  |  |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: |
|  | Model | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 62.844 | 4 | 15.711 | 74.681 | $.000^{\text {a }}$ |
|  | Residual | 47.755 | 227 | .210 |  |  |
|  | Total | 110.599 | 231 |  |  |  |
|  |  |  |  |  |  |  |

a. Predictors: (Constant), PO, PQ, P, BE
b. Dependent Variable: CS

a. Dependent Variable: Customer Satisfaction

According to table of 4.6.1 Regression Analysis of Customer Satisfaction, F value is 74.681 and sig. value is 0.000 , so this indicates that the regression model is usable. Besides, the model summary showed R Square 0.568 that means the predictor independent variables of this study can explain the change in dependent variable for 56.8\%.

Furthermore, this above figure shows the cause and effect of brand equity, perceived quality, price, and promotion towards customer satisfaction which can be demonstrated that there are 4 factors which has the significant influence towards
customer satisfaction which are brand equity, perceived quality, customer relationship management, and sales promotion. Among these 4 significant factors, perceived quality is the most influential factor with customer satisfaction with the standardized coefficients beta of 0.370 , followed by Brand equity, Price, and Promotion with the standardized coefficients beta of $0.321,0.139$, and 0.132 respectively.

Table 4.27 Regression Analysis of Repurchase intention

| Model Summary |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Model | R | R Square Adj | ed R Square Std | rror of the | imate |
| 1 | . $843{ }^{\text {a }}$ | . 711 | . 705 | . 42086 |  |
| a. Predictors: (Constant), Mean_CS, Mean_PO, Mean_P, Mean_BE, Mean_PQ |  |  |  |  |  |
| ANOVA ${ }^{\text {b }}$ |  |  |  |  |  |
| Model |  | Sum of Squares | df Mean Square | F | Sig. |
| 1 | Regression | 98.558 | 519.712 | 111.287 | . $000{ }^{\text {a }}$ |
|  | Residual | 40.030 | 226 . 177 |  |  |
|  | Total | 138.588 | 231 |  |  |
| a. Predictors: (Constant), Mean_CS, Mean_HC, Mean_P, Mean_SP, Mean_BE, Mean_CRM, Mean_PQ <br> b. Dependent Variable: Repurchase intention |  |  |  |  |  |


|  |  | Coefficients ${ }^{\text {a }}$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Model | Unstandardized Coefficients |  | Standardized Coefficients | t | Sig. |
|  |  | B | Std. Error | Beta |  |  |
| 1 | (Constant) | -. 262 | . 209 |  | -1.258 | . 210 |
|  | Brand Equity | . 244 | . 048 | . 266 | 5.121 | . 000 |
|  | Perceived Quality | . 031 | . 061 | . 029 | . 512 | . 609 |
|  | Price | . 128 | . 055 | . 106 | 2.310 | . 022 |
|  | Sales Promotion | . 053 | . 033 | . 060 | 1.584 | . 115 |
|  | Customer Satisfaction | . 604 | . 061 | . 540 | 9.924 | . 000 |

a. Dependent Variable: Repurchase intention

According to table of 4.6.2 Regression Analysis of Repurchase intention, $F$ value is 111.287 and sig. value is 0.000 , so this indicates that the regression model is usable. Besides, the model summary showed R Square 0.711 that means the predictor independent variables of this study can explain the change in dependent variable for $71.1 \%$.

Referring to the above table, it shows the cause and effect relationship of brand equity, perceived quality, price, promotion and customer satisfaction towards repurchase intention and there are 2 factors that are not significant influence to repurchase intention which are perceived quality and promotion since sig. is over 0.05 . On the other hand, there are remaining 3 factors which has the significant effect to the repurchase intention which are customer satisfaction, brand equity and price. In addition, customer satisfaction is the most influential factor for repurchase intention with the standardized coefficients beta of 0.540 , followed by brand equity with the beta of 0.266 and price is the least influential factor to repurchase intention as well as customer satisfaction with the beta of 0.106 .

## CHAPTER V DISCUSSION

### 5.1 Gender

According to 4.1.1 table of gender and age in previous chapter, we have a record of 232 samples with 130 males and 102 females which can be accounted as percentage of 56.0 and 40.0 respectively. This study uses T-test analysis to test the differences among gender of male and female with each variable which are brand equity, perceived quality, price, customer satisfaction, promotion and repurchase intention. Hence, it found out that there are some differences among male and female gender with only some of variables which are price, promotion, customer satisfaction, and repurchase intention. In perspective of price, there are 1 statements which found the differences between gender however, both male and female have different perception on the price factor which females are more perceive that The price paid for this product was reasonable than male but males tend to compare reasonable price before making the purchase. Additionally, there is 1 statements of customer satisfaction variable that show significant differences in CS5: I have obtained several benefits derived from this brand. The result shows that females give more important to these statements than males significantly. This result can be supported by the study fromYazdanifard and Lim (2014) and Herstein and Tifferet (2012). So female have obtained several benefits derived from brand. Could be assumed that women have higher levels of brand commitment than men, retailers should promote high quality brands for their female customers. Since women have higher levels of impulse buying in comparison to men, and since impulse buying is triggered by sensual cues, retailers can accentuate sensory cues in stores whose products tend to appeal to women.

Additionally, there are 5 statements of promotion variable that show significant differences which are PO1: The promotion encourages me to purchase the product, PO2: Giveaway is attracting me to buy the product, PO3: I'm generally sensitive to the promotion of the product, PO 4 : The large price discount is very
tempting for me and PO5: The drawing lucky money and getting reduction are full of fun, so quiet significant that females are more attracted with the sales promotion rather than males. This result can be supported by the study from Saleh (2013), Chopra (2014), and Koca and Koc (2016). Lastly, repurchase intention also has the differences among gender which are PI3: I probably will buy this product and PI6: I am willing to buy the product from this brand in the future, so it shows that female sees this statement more appeal than male. This result can be supported by the study from Melnyk \& van Osselaer, (2012).

Despite the research efforts, gender identity and its related consumer behavior is still an understudied area. The future study should focus on understanding the relevance of contexts as an important variable for gender identity. In addition, it is important to use a dynamic approach to understand gender as a comprehensive concept and examine the interaction between different aspects of gender identity, and the interactions lead to different consumer perception and choice. Furthermore, as the boundaries of men and women are becoming permeable in consumption, it would be interesting to explore how consumers maintain the balance between the dichotomous pole of masculine and feminine gender identity and understand the difference between men and women as they create gender-related self-image. In addition, gender identity closely relates to cultural change. Whereas popular culture shapes gender identity and creates gender-related consumption, there is also an urgency of anti-gender activities, genderism, that calls for genderless consumption. It is important that future research investigate the factors that drive genderism and its role in modifying consumption. Finally, how gender affect social marketing might be another research area, and the role gender identity plays in conflicts in consumption is an important aspect that calls for future exploration.

### 5.2 Age

In the perspective of age, the age range subgroup of 20-29 years old, 30-39 years old, 40-49 years old, and 50 years old with all 6 factors which are brand equity, perceived quality, price, customer satisfaction, promotion and repurchase intention. However, from these 6 variables, it shows the significant differences among age range subgroup with only 1 variables which are promotion. The direction of the result it shows
that subgroup of 40-49 years old tend to drawing lucky money and getting reduction are full of fun the most among other age range subgroups and less than 20 years old. With this result, it can be supported by the study from Zhu, Wang, Li, Liu and Zhu, (2017).

### 5.3 Education group

In the perspective of age, the education subgroup of High school, Bachelor and Master graduated with all 6 factors which are brand equity, perceived quality, price, customer satisfaction, promotion, and repurchase intention. However, from these 6 variables, it shows the significant differences among age range subgroup with only 1 variable which are price. The direction of the result, it shows the significantly different with the sig of 0.023 between education subgroup in the statement of P5: The price paid for this product was reasonable. According to the Bonferroni table, Master's degree graduated people give more importance to the statement than subgroup of High school people. With this result, it can be supported by the study from Moyo and Masuku (2018)

### 5.4 Household Income

In term of household income subgroup, this study analyzes the monthly household income subgroup of lower than 10,000 THB (D-), 10,001-18,000 THB (D), 18,001 - 24,000 THB (C-), 24,001 - 35,000 THB (C), 35,001 - 50,000 THB (C+), 50,001 - 85,000 THB (B), 85,001 - 160,000 THB (A), and more than 160,000 THB (A+) with all 6 factors Moreover, the result shows only price factor was significant differences in perspective of household income but it can be grouped into 2 groups which in the statement of P5: The price paid for this product was reasonable. According to the Bonferroni table, subgroup low income gives more importance to the statement than subgroup high income and this result can be supported by the study from Leibtag, and Kaufman (2013) and Horsky (1990). On the other hand, there are some factors which show that high income is more concerned on correctly price more than subgroup low income.

### 5.5 Frequency of usage

In term of frequency of usage subgroup, this study analyzes the frequency usage subgroup of heavy user (more than $2,000 \mathrm{~km}$. per month), medium user ( $1,000-$ $2,000 \mathrm{~km}$. per month), and light user (Less than $1,000 \mathrm{~km}$. per month) with all 6 factors which are brand equity, perceived quality, price, customer satisfaction, promotion, and repurchase intention. The result shows that only customer satisfaction variables that significant differences in perspective of frequency of usage but it can be grouped into 2 groups which in the statement of CS7: The product I received was pleasant and CS8: I am content with the product of this brand. According to the Bonferroni table, subgroup of the medium user gives more importance to the statement than subgroup of light user and this result can be supported by the study from Jewell and Unnava (2004).

### 5.6 Factors Affecting Customer Satisfaction

For factors affecting the customer satisfaction, this study found that brand equity has positive influence on customer satisfaction with beta of 0.370 and significance of 0.000 , so this result shows that brand equity has a positive effect on the customer satisfaction and people think that brand equity is the once factor that can be lead to customer satisfaction with lubricant. This result can be supported by the study from Ahmad and Sherwani (2015), which can be supported by the study from Namin (2017), Susanty and Kenny (2015) and Ghezelbash \& Khodadadi (2017).

However, this study still found that brand equity has a positive influence on the customer satisfaction with the beta of 0.321 and the significance of 0.000 , so price and promotion also have a positive influence with the beta of 0.139 the significant 0.012 and beta of 0.132 the significant 0.004 . This result can be supported by the study from Yulisetiarini and Diah (2013).

### 5.7 Factors Affecting Repurchase intention

For the repurchase intention variable, this study has tested 5 variables with this variable including the brand equity, perceived value, price, promotion and customer satisfaction variable. It found that the cause and effect relationship of brand equity, perceived quality, price, promotion and customer satisfaction towards repurchase intention and there are 2 factors that are not significant influence to repurchase intention which are perceived quality and promotion. Also, it found that brand equity has a positive influence on the repurchase intention with the beta of 0.244 and the significance of 0.000 , so people will purchase lubricants product with the brand they have they used. This result can be supported by the study from Buil, I Martínez, and de Chernatony (2013). Furthermore, another variable which significant result as well as positive influence on the repurchase intention is price with the beta of $(0.106)$ and the significance of 0.022 , so people's purchase decision making still involve with price meaning that those who purchase products and services with reasonable price. The result can be supported by the study from Yulisetiarini and Diah (2013).

Lastly, customer relationship management has a positive influence on the repurchase intention variable with the beta of 0.540 and the significance of 0.000 , so customer relationship management is one concern of the customers which is involved with the repurchase intention. This result can be supported by the study from Kuo, Wu, and Deng (2009) and Ali (2016).

## CHAPTER VI CONCLUSION

### 6.1 Conclusion

In conclusion, this study has 2 main objectives which the result can identify and answer all the objectives, so this study become successful as it can fulfill all objectives. The first objective is to understand factors that affect repurchase intention for Lubricants and the result show that there are 3 variables which show a positive influence on the repurchase intention which are brand equity, price and customer satisfaction. From these 3 variables, the most influential factor on the repurchase intention is customer satisfaction with the beta of 0.540 , followed by brand equity with the beta of 0.244 and price with the beta of 0.106 , so customer satisfaction has the stronger effect on the repurchase intention than other variable. The more customer satisfies with the lubricant product they have bought. The higher satisfaction, the higher possibility of their repurchase intention.

### 6.2 Recommendations for Lubricant brand

In order to make the customer satisfy with lubricant product, there are 4 variables that need to be focused on which are brand equity, perceived quality, price and promotion since these are the variables that has a positive influence to customer satisfaction. In the variable of price and promotion, there is the difference in the subgroup of household income which low income concern more on this variable, so it's important to communicate about the benefit and perceived value that customer will received was reasonable with the price. However, price and promotion is the least influential factor effecting to the customer satisfaction and repurchase intention, so it should be the last priority to execute for the customers.

In the variable of perceived quality, this variable is the most influential factor effecting the customer satisfaction and it has a positive influential to the repurchase
intention, so quality of the product is the most important factor for the customers with positive effect with the repurchase intention as well. Besides, price is another variable which is influent to both customer satisfaction and repurchase intention, so the price should be exercised to make customer more wroth and satisfy as well as attract them to purchase.

Lastly, the most influential factor for repurchase intention is customer satisfaction, so what make the customer satisfy with lubricant product, there are 4 variables that need to be focused on which are brand equity, perceived quality, price and promotion. Hence, fulfilling these 4 variables can help the lubricant to satisfy their customers. Additionally, there are the significant differences among age, gender, and household income subgroup are more concern on the customer satisfaction, so this target segment should be the main target.

### 6.3 Limitation and Opinion for Future Research

However some limitation should be noted. Study limitations due to constraints on research design or methodology, and these factors may impact the findings of your study. The first limitation is that most of the samples in this study are only 232. Sampling errors occur when a probability sampling method is used to select a sample, but that sample does not reflect the general population or appropriate population concerned.

For the opportunity in the future research study, the scope of study can be enlarge to collect the sample in the nationwide, so that it can be well-represent the whole country in the context of burger fast-food restaurants which can also compare the result by using the region as a subgroup to see the differences among them, so the result can show more insightful to understand what people in different regions think. Furthermore, the research might be added another variable such as channel and purchase places, services that customer receives, usage behavior, maintenance behavior, so these variable would help to see more insightful relationship among other variable which can help to see further direction to go.

Lastly, Scientific research adopts qualitative and quantitative methodologies in the modeling and analysis of numerous phenomena. The qualitative methodology intends to understand a complex reality and the meaning of actions in a given context. On the
other hand, the quantitative methodology seeks to obtain accurate and reliable measurements that allow a statistical analysis. Both methodologies offer a set of methods, potentialities and limitations that must be explored and known by researchers.

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APPENDICES

## Appendix A: Certificates of Approval (COA)



## วิทยาลัยการจัดการ มหาวิทยาลัยมหิดล

โทรศัพท์ 0-2206-2000 โทรสาร 0-2206-2090
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วันที่ $\mathbf{7}$ มกราคม 2564
เรื่อง หนัสสือรับรองการอบุมัตโครง่ร่งงารวิจัยสารนิพนธ์

เรียน ประธานกรรมการจริยธรรมการวิจัยในคนชุดกลาง มหาวิทยาลัยมหิดล
หนังสืออบับนี้ขอรับรองว่า นักคึกษาหลักสูตรการจัดการมหาบัณฑิต (หลักสูตรนานาชาติ) วิทยาลัยารจจัดการ มหาิิทยาลัยมหิดล รหัสประจำดัวนักกีกษา 6249059 นายองิสิทธ์์ คักดัเกษมชัยกุล ได้รับ การอบุม่โโครงร่างการวิจัยสารนิพนธ์ เรื่อง "Factors Influencing Purchases Intention for Lubricants" โดยมี ฝู้ง่วยศาสตราจารย์ ดร. ชนินทร์ อยู่เพชร เป็นอาจารย์ที่ปรีกษาหลัก ทั้งนี้ ได้อนม่ติให้นักีีกษาตังกล่าว จัดทำสารนิพนธ์ได้ต่อไป

จึงเรียนมาเพื่อโปรดทราบ
ขอแสดงความนับถือ
(ผู้ช่วยคคาสตราจารย์ ดร.ธนพล วีราสา)
รองคณดดดงานสนับสนุนการศีกษาและวิชาการ
วิทยาลัยการจัดการ มหาวิทยาลัยมหิดล

## Appendix B: Questionnaire English Version

## Questionnaire

This study's purpose is to indicated the factors which can influence the purchase intention in lubricants and this study can help those who are in the industry see the insightful information in order to execute the right plan to drive their sales from purchase intention. All responses are confidential for a study purpose only.

Part 1: Screening

1. Do you usually drive personal vehicle?YesNo (Terminate)
2. Which channel that you purchase lubricants from?RetailerAutomobile repair shopsCar dealer repair shopsPetrol Station
3. Select brand that you the most frequent purchase?PTTBangchakShellChevron / CaltexCastrolEsso MobileValvolineOthers
$\qquad$
Please answer the following questions regarding the answer in question part 2

## Part 2: Brand Equity

Please specify how much do you agree with these statements from 1 to 5,1 means strongly disagree and 5 means strongly agree;

| Brand Equity Section | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Even if another brand has the same features as my <br> selected brand, I would prefer to buy it. |  |  |  |  |  |
| Even if another brand has the same price as the brand <br> that I usually use, I would still buy it. |  |  |  |  |  |
| If I have to choose among product brands, This brand is <br> definitely my choice. |  |  |  |  |  |


| Brand Equity Section | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| If another brand is not different from the brand that I usually <br> use in any way, it seems smarter to purchase the same. |  |  |  |  |  |
| No matter what, I won't change my mind from this brand. |  |  |  |  |  |

## Part 3: Perceived Quality.

Please specify how much do you agree with these statements from 1 to 5,1 means strongly disagree and 5 means strongly agree;

| Perceived Quality Section | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| This brand consistently performs better than all other <br> brands. |  |  |  |  |  |
| I always count on this brand for consistent high quality. |  |  |  |  |  | 年

## Part 4: Price

Please specify how much do you agree with these statements from 1 to 5,1 means strongly disagree and 5 means strongly agree;

| Price Section | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| The price of a product is a good indicator of its quality. |  |  |  |  |  |
| Generally speaking, the higher the price of a product, the <br> higher the quality. |  |  |  |  |  |
| The old saying "you get what you pay for" is generally true. |  |  |  |  |  |
| I think the low price may lead to low quality. |  |  |  |  |  |
| The price paid for this product was reasonable. |  |  |  |  |  |
| This product of this brand was correctly priced. |  |  |  |  |  |
| I think the price is the first consideration when I am going <br> to buy lubricant. |  |  |  |  |  |
| I compare prices of many brands before buying. |  |  |  |  |  |

## Part 5: Customer Satisfaction.

Please specify how much do you agree with these statements from 1 to 5,1 means strongly disagree and 5 means strongly agree;

| Customer Satisfaction Section | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| I like this brand. |  |  |  |  |  |
| I am satisfied with the performance of this brand. |  |  |  |  |  |
| This brand is easy to find. |  |  |  |  |  |
| Overall, I am satisfied with my experience in this brand. |  |  |  |  |  |
| I have obtained several benefits derived from this brand. |  |  |  |  |  |
| I am sure I made the correct decision in buying this brand. |  |  |  |  |  |
| The product I received was pleasant. |  |  |  |  |  |
| I am content with the product of this brand. |  |  |  |  |  |

## Part 6: Promotion

Please specify how much do you agree with these statements from 1 to 5,1 means strongly disagree and 5 means strongly agree;

| Promotion | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| The promotion encourages me to purchase the product. |  |  |  |  |  |
| Giveaway is attracting me to buy the product. |  |  |  |  |  |
| I'm generally sensitive to the promotion of the product. |  |  |  |  |  |
| The large price discount is very tempting for me. |  |  |  |  |  |
| The drawing lucky money and getting reduction are <br> full of fun. |  |  |  |  |  |

## Part 7: Purchase Intention.

Please specify how much do you agree with these statements from 1 to 5,1 means strongly disagree and 5 means strongly agree;

| Re-Purchase Intention Section. | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| I have a high purchase interest in this product. |  |  |  |  |  |
| I definitely intend to buy this product. |  |  |  |  |  |
| I probably will buy this product. |  |  |  |  |  |
| I always buy this product. |  |  |  |  |  |
| IIf you were in the market today for this productbrand, I |  |  |  |  |  |
| likely to purchase this brand. |  |  |  |  |  |

## Part 8: Personal Information Section.

1. How distance do you drive per month?Less than 1, 000 k.m. per month.1,000-2,000 k.m. per month.more than 2,000 k.m. per month.
2. What is your gender?Male.Female.
3. How old are you?Less than 20 years20-29 years.
$\square 30-39$ years.40-49 years.50-59 years.More than 60 years
4. What is your highest level of education?High schoolUndergraduatePostgraduate
5. What is your occupation?EmployeeBusiness ownerProfessional i.e Doctor, Lawyer, Teacher, Engineer etc.HousewifeRetirementTransport driverUnemployedOther $\qquad$
6. What is your monthly household income?
$\square$ Less than 10,000 THB
$\square 18,001-24,000$ THB
$\square 24,001-35,000$ THB
$\square 35,001-50,000$ THB
$\square 50,001-85,000$ THB
$\square 85,001-160,000$ THB
$\square$ More than 160,000 THB

## Appendix C: Questionnaire Thai Version

## แบบสำรวจ

ตั้งใจซื้อสินค้าในส่วนของน้ำมันหล่อลื่น เครื่องยนต์ และการศึกษาครั้งนี้สามารถช่วย ผู้ที่อยู่ในอุตสาหกรรมนี้ได้รับข้อมูลที่เป็นประโยชน์ในการวางแผนเพื่อเพิ่มยอดขาย ทุกคำตอบจะ ถูกเก็บเป็นความลับเพื่อใช้ในการศึกษาเท่านั้น

ตอนที่ 1 : แบบสอบถามคัดเลือก

1. โดยปกติคุณขับรถส่วนตัว หรือไม่?ไม่ใช่ (ปิดสัมภาษณ์)
2. คุณเลือกซื้อน้ำมันเครื่องจากที่ไหน?
$\square$ ร้านค้าทั่วไป
$\square$ อู่ซ่อมรถทั่วไป
$\square$ ศูนย์บริการของยี่ห้อรถยนต์ เช่นศูนย์เบนซ์ ศูนย์ฮอนด้า (ปิดสัมภาษณ์)
$\square$ ปั้มน้ำมันเครื่องที่มีบริการ เช่นปั้มเชลล์
3. คุณเลือกซื้อน้ำมันเครื่องยี่ห้อใดบ่อยที่สุด?
$\square$ ปตท.บางจากเชลล์ $\square$ เชพรอน คาล์เท็ก ตราดาวคาสตรอลวาโวลีนเอสโซ่ โมบิลอื่น ๆ $\qquad$

กรุณาตอบคำถามต่อไปนี้โดยนึกถึงยี่ห้อน้ำมันเครื่องที่คุณซื้อบ่อยที่สุด
ตอนที่ 2: คุณค่าของตราสินค้า
กรุณาให้คะแนนความเห็นด้วยจาก $1-5$ กับข้อความต่อไปนี้ ซึ่ง 1 หมายถึงไม่เห็นด้วยอย่างยิ่ง และ 5 หมายถึงเห็นด้วยอย่างยิ่ง

| ด้านคุณค่าของตราสินค้า | 1 | 2 | 3 | 4 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| แม้ว่ายี่ห้ออื่นมีสิ่งที่เหมือนกับยี่ห้อที่จันเลือก ฉันยังคงเลือกซื้อ สินค้าจากยี่ห้อที่ฉันเลือก |  |  |  |  |  |
| แม้ว่ายี่ห้ออื่นมีราคาที่เหมื่อนกันยี่น้อที่ฉันเลือก ฉันยังคงเลือกซื้อ สินค้าจากยี่ห้อที่ฉันเลือก |  |  |  |  |  |
| ถ้าฉันต้องเลือกซื้อสินค้าจากหลายยี่ห้อ ยี่น้อที่ฉันเลือกยังคงเป็น ยี่ห้อเดิม |  |  |  |  |  |
| ถ้ายี่ห้ออื่นไม่ได้มีอะไรแต่ต่างจากยี่ห้อที่ฉันเลือกเลย มันเป็นสิ่งที่ ฉลาคที่เลือกซื้้อจากยี่ห้อเดิม |  |  |  |  |  |
| ไม่มีอะไรมาเลี่ยนใจนันจากียห้อที่ฉันเลือกได้ |  |  |  |  |  |

ตอนที่ 3: การรับรู้ถึงคุณภาพ
กรุณาให้คะแนนความเห็นด้วยจาก $1-5$ กับข้อความต่อไปนี้ ซึ่ง 1 หมายถึงไม่เห็นด้วยอย่างยิ่ง และ 5 หมายถึงเห็นด้วยอย่างยิ่ง

| ด้านการรับรู้ถึงคุณภาพ | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| ยี่ห้อนี้มีประสิทธิภาพดีกว่ายี่ห้ออื่น |  |  |  |  |  |
| ฉันวางใจในยี่ห้อนี้เรื่องคุณภาพ |  |  |  |  |  |
| หากเปรียบเทียบกบั่ยี่ห้ออื่นๆ ยี่ห้อที่ฉันเลือกยังคงมี <br> คุณภาพสูงกว่า |  |  |  |  |  |
| สินค้าของยี่ห้อนี้มีอายุการใช้งานได้ยาวนาน |  |  |  |  |  |
| ฉันเชื่อคุณภาพของสินค้าจากยี่ห้อนี |  |  |  |  |  |

ตอนที่ 4: ราคา
กรุณาให้คะแนนความเห็นด้วยจาก $1-5$ กับข้อความต่อไปนี้ ซึ่ง 1 หมายถึงไม่เห็นด้วยอย่างยิ่ง และ 5 หมายถึงเห็นด้วยอย่างยิ่ง

| ด้านราคา | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| ราคาของสินค้าเป็นเครื่องบงชื้คุณภาพของสินค้านั้น |  |  |  |  |  |
| โดยทั่วไปแล้ว ราคาของสินค้าสูงมักมีคุณภาพที่สูง |  |  |  |  |  |
| มีคำที่พูดกันว่า คุณจะได้รับในสิ่งที่คุณจ่าย |  |  |  |  |  |
| ฉันคิดว่าราคาถูกมักจะมีคุณภาพที่ต่า |  |  |  |  |  |
| ราคาที่ฉันซื้อสินค้ามา สมเหตุสมผล |  |  |  |  |  |
| สินค้าของยี่ห้อนี้ตั้ตราคาได้เหมาะสมแล้ว |  |  |  |  |  |
| ฉันคำนึงถึงราคามาเป็นสิ่งแรกเมื่อฉันจะซื้อน้ำมันเครื่อง |  |  |  |  |  |
| ฉันเปรียบเทียบราคาของหลายยี่ห้อก่อนตัดสินใจซื้อ |  |  |  |  |  |

ตอนที่ 5: ความพึงพอใจของลูกค้า
กรุณาให้คะแนนความเห็นด้วยจาก $1-5$ กับข้อความต่อไปนี้ ซึ่ง 1 หมายถึงไม่เห็นด้วยอย่างยิ่ง และ 5 หมายถึงเห็นด้วยออยางยิ่ง

| ด้านความพึงพอใจของลูกค้า | 1 | 2 | 3 | 4 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ฉันชอบยี่ห้อนี้ |  |  |  |  |  |
| ฉันรู้สึกพอใจกับประสิทธิภาพของอี่ห้อนี้ |  |  |  |  |  |
| ยี่ห้อนี้หาซื้อได้งาย |  |  |  |  |  |
| โดยรวมเล้วฉันรู้สึกพอใจกับประสบการณีที่ใช้ยู่ทือนี้ |  |  |  |  |  |
| ฉันได้รับประโยชน์มากมายจากยี่ห้อนี้ |  |  |  |  |  |
| จันมั่นใจว่าฉันตัศสินใจถูกต้องที่เลือกซื้อจกกยี่ห้อนี้ |  |  |  |  |  |
| สินค้าที่ฉันได้รับเป็นที่น่าพึงพอใจ |  |  |  |  |  |
| สินค้าของยี่ห้อนี้ทำให้ฉันพึงพอใจ |  |  |  |  |  |

ตอนที่ 6: โปรโมชั่น
กรุณาให้คะแนนความเห็นด้วยจาก $1-5$ กับข้อความต่อไปนี้ ซึ่ง 1 หมายถึงไม่เห็นด้วยอย่างยิ่ง และ 5 หมายถึงเห็นด้วยอย่างยิ่ง

| ด้านโปรโมชั่น | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| โปร โมชั่นสนับสนืนให้ฉันซื้อสินค้า |  |  |  |  |  |
| แถม ดึงคูดให้ฉันซิ้อสินค้า |  |  |  |  |  |
| โดยปกติเล้ว ฉันถูกกระตุ้นได้ง่ายจากโปร โมชั่น |  |  |  |  |  |
| การลคราคาอย่างมาก มันล่อใจให้ฉันซื้อมาก |  |  |  |  |  |
| การจับฉลากได้ส่วนลดหรือเงินสด เป็นสิ่งที่น่าสนุก |  |  |  |  |  |

ตอนที่ 7: ความตั้งใจในการซื้อ
กรุณาให้คะแนนความเห็นด้วยจาก $1-5$ กับข้อความต่อไปนี้ ซึ่ง 1 หมายถึงไม่เห็นด้วยอย่างยิ่ง และ 5 หมายถึงเห็นด้วยอย่างยิ่ง

| ด้านความตั้งใจในการซื้อ | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| ฉันรู้สึกสนใจมากที่จะซื้อสินค้านี้ |  |  |  |  |  |
| ฉันตั้งใจอย่างแน่นอนที่จะซื้อสินค้านี้ |  |  |  |  |  |
| ฉันอาจจะซื้อสินค้านี้อีก |  |  |  |  |  |
| ฉันซื้อสินค้านี้ตลอดเวลา |  |  |  |  |  |
| ถ้าฉันอยู่ในร้านค้าวันนี้ ฉันน่าจะซื้อยี่ห้อเดิม |  |  |  |  |  |
| ฉันจะซื้อสินค้าจากยี่ห้อนี้ในอนาคตอีก |  |  |  |  |  |

## ตอนที่ 8: ข้อมูลส่วนตัว

1. คุณขับรถประมาณวันละกี่กิโลเมตร?
$\square$ น้อยกว่า 1,000 กิโลเมตร ต่อเดือน
$\square$ ตั้งแต่ $1,000-2,000$ กิโลเมตร ต่อเดือน
$\square$ มากกว่า 2,000 กิโลเมตร ต่อเดือน
2. กรุณาระบุเพศ
$\square$ ชาย
$\square$ หญิง
3. คุณมีอายุเท่าไหร่?น้อยกว่า 20 ปี
$\square$ 20-29 ปี30-39 ปี40-49 ปี50-59 ปีมากกว่า 60 ปี
4. ระดับการศึกษาสูงสุดของคุณอยู่ระดับใด?ปริญญาตรี
$\square$ ปริญญาโท และ สูงกว่า
5. คุณประกอบอาชีพอะไร?
$\square$ พนักงานบริษัท
$\square$ ธุรกิจส่วนตัวผู้เชี่ยวชาญในวิชาชีพ เช่น หมอ ทนาย ครู วิศวกร ฯลฯแม่บ้านเกษียณ
$\square$ คนขับรถขนส่งว่างงานอื่น ๆ $\qquad$
6. รายได้ครอบครัวต่อเดือนของคุณอยู่ในระดับใด?$10,000-18,000$ บาท$18,001-24,000$ บาท
$\square 24,001-35,000$ บาท
$\square 35,001-50,000$ บาท$50,001-85,000$ บาท
$\square 85,001-160,000$ บาทมากกว่า 160,000 บาท

[^0]:    Asst. Prof. Duangporn Arbhasil, Ph.D.
    Dean
    College of Management
    Mahidol University

[^1]:    Teerapong Pinjisakikool,
    Ph.D.
    Committee member

