

南華大學管理學院企業管理學系管理科學碩士班

碩士論文

Master Program in Management Sciences

Department of Business Administration

College of Management

Nanhua University

Master Thesis

忠誠度計劃對蒙古“Tes Petroleum”有限責任公司加油站客
戶惠顧的影響

The Effect of Loyalty Program on Customer Patronage of Gas
Stations in "Tes Petroleum" LLC in Mongolia

米格瑪

Otgonsaikhan Myagmar

指導教授：范惟翔 博士

Advisor: Wei-Shang Fan, Ph.D.

中華民國 110 年 6 月

June 2021

南 華 大 學
企業管理學系管理科學碩士班
碩 士 學 位 論 文

忠誠度計畫對蒙古”Tes Petroleum”有限責任公司加油站客戶惠顧的影響
The effect of Loyalty Program on Customer Patronage of gas stations in "Tes
petroleum" LLC in Mongolia

研 究 生：米格瑪 (Myagmarsaikhan Myanmar)

經考試合格特此證明

口試委員：郭美貝
黃國忠
范惟新

指導教授：范惟新

系主任(所長)：黃國忠

口試日期：中華民國 110 年 06 月 21 日

MBA recommendation letter

準碩士推薦函

本校企業管理學系管理科學碩士班研究生 米格瑪 本系修業 年，已經完成本系碩士班規定之修業課程及論文研究之訓練。

1、在修業課程方面：米格瑪君已修滿36學分，其中必修科目：研究方法、管理科學、行銷管理專題、企業倫理專題等科目，成績及格(請查閱碩士班歷年成績)。

2、在論文研究方面：米格瑪君在學期間已完成下列論文：

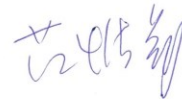
(1)碩士論文：忠誠度計劃對蒙古“Tes Petroleum”有限責任公司加油站客戶惠顧的影響

(2)學術期刊：2020 应用科学与管理研究

本人認為米格瑪君已完成南華大學企業管理學系管理科學碩士班之碩士養成教育，符合訓練水準，並具備本校碩士學位考試之申請資格，特向碩士資格審查小組推薦其初稿，名稱：忠誠度計劃對蒙古“Tes Petroleum”有限責任公司加油站客戶惠顧的影響，以參加碩士論文口試。

顧的影響

指導教授：



中華民國：2021/06/07

ACKNOWLEDGEMENT

I would like to take this opportunity to express my gratitude to everyone who has helped me throughout my MBA path. My supervisors, review panels, friends, and international students have all been quite supportive, and I consider myself fortunate. Without their invaluable assistance, I would not have made such remarkable progress during my Master's program. It was a fantastic, new, and quite different way of living than Mongolia. Firstly, I would like to thank my advisor, Professor Fang Wei Shang, for allowing me to complete this study research with his guidance and support at all levels. If I do not acknowledge the careful direction, I will have difficulty finishing my thesis. Without his inputs, this result would not exist. I also want to express my gratitude to my wonderful family and friends for supporting me physically, financially, and mentally while I was in Taiwan. Finally, I would like to take this occasion to express my gratitude to all of the helpful faculty members of the International Business Administration Department.

南華大學管理學院企業管理學系管理科學碩士班

109 學年度第 2 學期碩士論文

論文題目：忠誠度計劃對蒙古 “Tes Petroleum” 有限責任公司加油站客戶惠顧的影響

研究生：米格瑪

指導教師：范惟翔 博士

論文摘要內容：

這項研究對於檢查這些因素的特徵以更好地解釋客戶滿意度以及調查這些因素如何影響客戶的光顧很重要，因此，進行這項研究是為了進一步了解客戶對忠誠度計劃的惠顧的“Tes petroleum” LLC 有限責任公司的未來，本研究試圖確定忠誠度計劃、品牌形象、服務質量和客戶滿意度影響，以及前景理論。對烏蘭巴托“Tes petroleum” LLC 有限責任公司的 354 名受訪者進行了問卷調查。使用 SPSS 26 版本對數據進行分析。該模型的結果表明忠誠度計劃，品牌形象，服務質量和客戶滿意度對客戶惠顧有顯著的積極影響。

關鍵詞：忠誠度計劃、客戶滿意度、客戶惠顧、品牌形象、服務質量

Title of Thesis: The Effect of Loyalty Program on Customer Patronage of Gas Stations in "Tes Petroleum" LLC in Mongolia

Department: Master Program in Management Sciences, Department of Business Administration, Nanhua University

Graduate Date: June, 2021

Degree Conferred: M.B.A

Name of Student: Otgonsaikhan Myagmar

Advisor: Shang-Fan Wei, Ph.D.

Abstract

This study is important to examine the characteristics of the factors in order to better interpret customer satisfaction and to investigate and how these factors influence the patronage of customers. Therefore, this study was conducted to further inform the future of the "Tes petroleum" LLC of customer patronage for a loyalty program. This study attempts to determine a loyalty program, brand image, service quality, and customer satisfaction effects, and the prospect theory. A sample of 354 respondents of "Tes petroleum" LLC in Ulaanbaatar was given questionnaires. Data were analyzed using SPSS 26 version. The findings of this model indicated a loyalty program, brand image, service quality, and customer satisfaction have significant positive influences on customer patronage.

Keywords: Loyalty program, Customer Satisfaction, Customer Patronage, Brand image, Service quality, "Tes Petroleum" LLC

TABLE OF CONTENTS

MBA recommendation letter.....	I
ACKNOWLEDGEMENT	II
論文摘要內容.....	III
Abstract	IV
TABLE OF CONTENTS	V
LIST OF FIGURES.....	VII
LIST OF TABLES	VIII
CHAPTER ONE INTRODUCTION	1
1.1 Research Background and Motivation	1
1.2 Research Objective	3
1.3 Research Procedure.....	3
1.4 About “Tes Petroleum” LLC	4
CHAPTER TWO LITERATURE REVIEW	5
2.1 Customer Satisfaction	5
2.2 Customer Patronage.....	6
2.3 The Relationship between Each Variable and Customer Satisfaction .	7
2.3.1 <i>Loyalty Program and Customer Satisfaction</i>	7
2.3.2 <i>Brand Image and Customer Satisfaction</i>	8
2.3.3 <i>Service Quality and Customer Satisfaction</i>	10
2.3.4 <i>Customer Satisfaction and Customer Patronage</i>	11
CHAPTER THREE RESEARCH METHODOLOGY	13
3.1 Research Model	13
3.2 Data Collection Methods	14
3.2.1 Size Sample	15
3.3 Measurement.....	15
3.4 Data Analysis	17

3.4.1 <i>Descriptive Statistical Analysis</i>	17
3.4.2 <i>Factor Analysis and Reliability Tests</i>	17
3.5 Inference Statistics Analysis Methods.....	18
CHAPTER FOUR DATA ANALYSIS	21
4.1 Descriptive Statistic Analysis	21
4.1.1 <i>Characteristics of Respondents</i>	21
4.1.2 <i>Measurement Results for Relevant Research Variables</i>	23
4.2 Factor Analysis and Reliability Tests	24
4.2.1 <i>Customer Satisfaction</i>	24
4.2.2 <i>Loyalty Program</i>	25
4.2.3 <i>Brand Image</i>	26
4.2.4 <i>Service Quality</i>	26
4.3 Different Test.....	27
4.4 Regression Analysis (Hypothesis Test).....	30
CHAPTER FIVE CONCLUSION AND SUGGESTION	33
5.1 Research Conclusion.....	33
5.2 Research Suggestion	34
5.3 Research Limitations	34
REFERENCES	35
APPENDIX Consumer Demographics	42

LIST OF FIGURES

Figure 1.1 Petroleum Products Imported in 2016	1
Figure 1.2 Research procedure.....	4
Figure 3. 1 Research Framework	13
Figure 3. 2 Sample Size.....	15



LIST OF TABLES

Table 3. 1 Distribution of Sample Sizes.....	14
Table 3. 2 Questionnaire Items	16
Table 4. 1 The Characteristics of 354 Respondents.....	22
Table 4. 2 Descriptive Analysis for Questionnaire Items	23
Table 4. 3 Factor Analysis and Reliability Test Result of Customer Satisfaction	25
Table 4. 4 Factor Analysis and Reliability Test Result of Loyalty Program..	25
Table 4. 5 Factor Analysis and Reliability Test Result of Brand Image	26
Table 4. 6 Factor Analysis and Reliability Test Result of Service quality	27
Table 4. 7 The result “Factors” on “Gender”	27
Table 4. 8 Result of Gender	28
Table 4. 9 The result of Marital Status.....	28
Table 4. 10 The Difference in “Factors” on “Marital status”	28
Table 4. 11 The Difference in “Factors” on “Age”	29
Table 4. 12 The Difference in “Factors” on “Education”	29
Table 4. 13 The Difference in “Factors” on “Income”	30
Table 4. 14 The Difference in “Factor” on the advantage of a Company	30
Table 4. 15 Relationship between “Independent Factors” and “Customer Satisfaction”	31
Table 4. 16 Result of Hypothesis Test	32

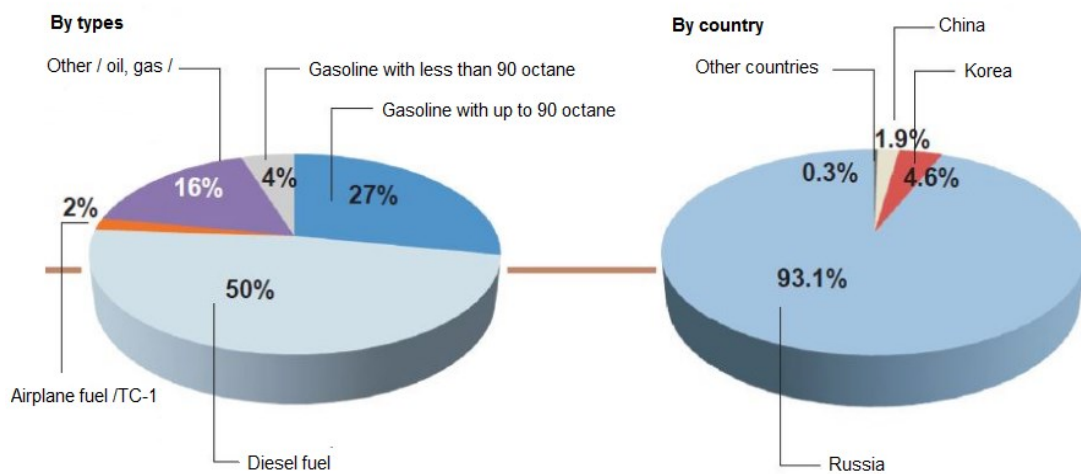
CHAPTER ONE INTRODUCTION

1.1 Research Background and Motivation

Mongolia, being a relatively small country in the economy, has always been dependent on neighboring countries China and Russia. The economic and trade collaboration between China, Russia, and Mongolia turned to hard currency settlement in the early 1990s. Mongolia is importing mostly all types of equipment, electronics, and food products mostly from China, and at present, Mongolia imports 100% of its oil products. Hence, imports 93% of a sign of energy, petroleum products from Russia. Because Mongolia does not produce the majority of consumption final products.

In terms of the structure of imports of petroleum products, 27% of gasoline with more than 90 octanes, about 4% of gasoline with less than 90 octanes, 50% of diesel fuel, 2% of jet fuel, other / oil and lubricants, fuel oil, gas / 17% - accounted for. More than 93 percent of total imports come from Russia, about 4.6 percent from the Republic of Korea, 2 percent from China, and the rest from other countries. Mongolia's consumption of petroleum products has increased by 66% in the last five years.

Figure 1.1 Petroleum products imported in 2016



Source: Mineral Resources and Petroleum Authority

It is estimated that with an average increase of one vehicle in Mongolia, fuel consumption will increase by 1.8 tons or 6 liters per day. In our country, the majority of gasoline consumption is private cars and private vehicles. However, the majority of diesel fuel consumption is accounted for by high-capacity equipment such as trucks and mining machinery. The main factors influencing the consumption of diesel fuel include wholesale or mining, the railway sector, retail sales or road transport, and private consumption, and the starting point for the oil product sector market process is a customer's decision.

However, the majority of diesel fuel consumption is accounted for by high-capacity equipment such as trucks and mining machinery. The main factors influencing the consumption of diesel fuel include wholesale or mining, the railway sector, retail sales or road transport, and private consumption, and the starting point for the oil product sector market process is a customer's decision.

As a result, seeking to understand what a customer desires is more difficult than listening to a customer. However, conducting a monthly customer satisfaction survey is a better way to establish a loyalty program of a consumer's lifelong patronage. To understand the needs of the consumer, the gas company must identify the factors that motivate the customer to initiate a transaction with the organization and continue to do business with that firm in the future. According to the theory, customer satisfaction is defined as: "the patronage lifetime values of all of its consumers as a result, acting more relevantly in response to customer satisfaction depending on customer ability to understand to create their loyalty. As result, there is a direct correlation between customer and sales, because the oil product market improves as the customer satisfaction improves.

This study chose the operating “Tes Petroleum” Limited Liability Company (LLC) in Ulaanbaatar. "Tes Petroleum" LLC must understand that loyalty program, rewards, service quality, and customer satisfaction are impact customer patronage as the most affected factor. According to, this research on how to increase customer satisfaction and as well as what factors have a direct or indirect effect on customer patronage. We present findings of our research, which was conducted using the loyalty program of “Tes Petroleum” LLC, a Mongolian petroleum company, as the case company in this study.

1.2 Research Objective

The research’s objective aims to understand the impact factors on customer satisfaction and customer patronage in “Tes Petroleum” LLC as the following:

1. To determine loyalty program impact on customer satisfaction and customer patronage
2. To find out brand image impact on customer satisfaction and customer patronage
3. To determine service quality impact on customer satisfaction and customer patronage

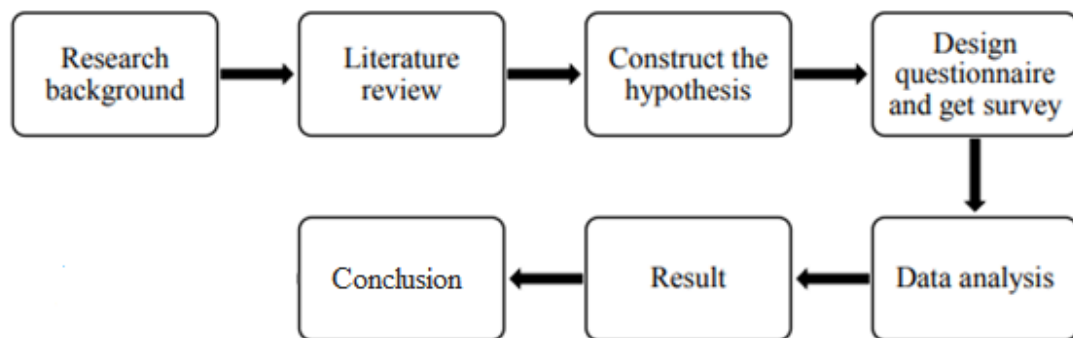
1.3 Research Procedure

The research identifies that how loyalty program, brand image and service quality impact on customer satisfaction and customer patronage. The framework offers theoretical backgrounds in customer satisfaction and customer patronage, the theory of all dependent and independent variables decision making as mentioned above.

This study is using the questionnaires to collect the data and analyzed by quantitative research model using SPSS 26. Describes the process of

conducting research is undertaken following six steps. First of all, the research problem should be identified clearly. Thereby, the author can determine the objective of the research. After that, continue by constructing the questionnaire before issuing it to the customer. After collecting the survey, it's necessary to process and analyze the data. Lastly, considerations and directions of future studies are discussed based on the statistical result.

Figure 1.2 Research procedure



1.4 About “Tes Petroleum” LLC

“Tes Petroleum” is the branch company of "Oin Birj" LLC. “Tes Petroleum” LLC was established in 2000 in Mongolia. "Tes Petroleum" LLC launched the loyalty program in 2016 which is including loyalty card, discount and electronic records filing (ERF) system. It was very first reform in Mongolian oil sector. Also, most of the user of loyalty program has chosen " Tes Petroleum" LLC. According to the company statistic of 2017, "Tes Petroleum" LLC, loyalty program cardholders reached 187.940 and total gas stations was eighty. On the company statistic of 2019 cardholders already reached 313.232 and total gas station was 107. The total 31 gas stations are operating in capital city of Mongolia and other 76 gas stations operating in 21 provinces in Mongolia. In these years it increased much and more than 70% of this amount use loyalty card of "Tes Petroleum" LLC expected to increase in the long run.

CHAPTER TWO LITERATURE REVIEW

This chapter discusses the studied regarding the four constructs and related theories. The flow of the construct as loyalty program, brand image, service quality, customer satisfaction, and customer patronage among variable. After that relationship between each variable will be shown.

2.1 Customer Satisfaction

Tanner and Raymond (2010) defined customer satisfaction is a commonly used marketing term that is critical to any company's success in today's customer-driven global economy. It is a significant factor in the literature review. Consumer satisfaction is a predictor of customer loyalty and repurchase intentions. As a result, happy customers are more inclined to stick with a company.

Mittal and Kamakura (2001) agree with the above theorem customer satisfaction is a key factor in the formation of customer's desires for future purchases. Furthermore, the satisfied customers would probably talk to others about their good experiences but on the other side, unsatisfied customers would talk to others about their bad experiences. It showed that social communication mouth-to-mouth conversation is one of the most important things to focus on. Customer satisfaction is directly linked to the needs of the customer.

Therefore, satisfaction is the feeling that a person receives after receiving a product or service that meets or exceeds his or her expectations. Satisfaction is also a mixture of perceived performance and relative degree of expectations. Consumer satisfaction with a purchase is determined by how well the product and service performance in comparison to customer expectations.

Customer satisfaction is achieved when the product and service performance meet or exceeds expectations. Customer happiness is a critical strategic consideration that has a direct impact on profits, profitability, and future cash flows. As a result, internal elements that may affect consumer contentment adequately identified in order to investigate customer satisfaction.

2.2 Customer Patronage

Kenneth et al. (2015) are defined customer patronage as a person or thing that eats or uses something or a person who buys goods and services for personal consumption or usage. The quality process and its management positivity affect customer's perception, which in return, enhance their purchase.

Hence, repurchase behavior enhances the overall sales of the enterprise, which finally leads to increased profitability of the firm (Kenneth, 2015). Several studies see customer patronage as the means through which organizations rate her sales volume, volume of transactions, profit margin, customer loyalty, repeat purchase and customer retention levels most authors. Another authors defined, there won't be patronage without a customer, by definition customer patronage is the process whereby a person or group buys something for personal or immediate consumption Adiele et al. (2015). An organization relates well with its customers to increased customer patronage through service quality and service personnel. Therefore, there is a positive relationship between customer satisfaction and customer patronage. So, this study was trying to figure out the relationship between customer satisfaction and customer patronage. Furthermore, the research will confirm to impact on customer satisfaction and customer patronage.

2.3 The Relationship between Each Variable and Customer Satisfaction

2.3.1 Loyalty Program and Customer Satisfaction

The term “loyalty program” encompasses a variety of marketing tactics such as discounts, gifts, exclusive deals, faster service, and advance notice of sales. Loyalty programs are ubiquitous and are in widespread use in the retail, travel, and services industries to name a few. Considering these perspectives on loyalty, it is not surprising that loyalty program customer membership has proliferated in recent years as gas stations attempt to engender loyalty in their customers (Ferguson and Hlavinka, 2007). As mentioned earlier, loyalty program benefits are found in a variety of forms, such as discounts or points that can be redeemed for merchandise. One of the most common forms a retailer uses to reward customers in the loyalty program is by giving them a loyalty card that can be used to purchase merchandise. Generally, the direct beneficiary of the loyalty program is the customer and organization.

Loyalty programs are designed to improve customer’s satisfaction and commitment (Broekhuizen and Peelen, 1997). The effectiveness and the relevancy of loyalty program are measured through the achievement of certain levels of customer’s satisfaction threshold (Keh and Lee, 2006). Loyalty programs give away benefits or the perceived value to the members as a token of appreciation for their loyalty to the organization. For that reason, the benefits of customer loyalty program can be divided into hard and soft benefits. The hard benefits are the monetary benefits in the forms of rebates, special discounts and coupons meanwhile the soft benefits are the non-monetary benefits (Mulhern and Duffy, 2004). Also revealed that loyalty programs were instrumental to ensure customers satisfaction and to retain their loyalty (Bahri-Ammari and Bilgihau, 2014). Therefore, loyalty programs

mediate the relationship between customer satisfaction and customer patronage. Other literature further revealed that the loyalty program was the antecedent of customer satisfaction (Soderlund and Colliander, 2015) and customer satisfaction is the antecedent of customer loyalty Kandampully et al. (2015). Vesel and Zabkar (2009) suggested that a loyalty program is of customer satisfaction that tends to conform to and cognition of the customer.

2.3.2 Brand Image and Customer Satisfaction

According to the American Marketing Association (2013), a brand is defined as "a word, prototype, name, logo, or any other characteristics that differentiates one company's product from others."

The brand is an intangible and conditional asset for a company which has a capability to generate profitability of the firm and compromise the functional and emotional value (Martisiute, 2010). Besides, Nandan (2005) suggested that brand has become a concept throughout every individual imagination and that might be represented as visual term or logo which can identify the items from the competing products' goods. A brand is also the negotiation of a product's packaging, promotion, advertisements, and overall presentation in addition to a specific product (Pepe et al. 2011). From the standpoint of customers, brand is a guarantee of dependability and capital appreciation in consumer products (Roman et al. 2005). Furthermore, Fennis and Pruyn (2006) claimed that customers would prefer to purchase while using goods from reputable brand names in order to draw attention to their behaviors in various situational point of views.

Similarly, as mentioned by, Keller (2003) defined that "brand image is the collection of assumptions, concepts, and impressions that an individual possesses about an item. Furthermore, Koo (2003) stated that brand image is beneficial in driving customer satisfaction, brand value, brand attitude, and

consumption patterns. According to Faircloth (2001), brand image was conceptualized and operationalized in various ways.

On the other hand, a favorable brand image in the mass market is very important in order to enhance the market share of the company. The above facts could help organizations or marketers identify the strengths and weaknesses of a specific brand, as well as consumer perceptions of their services or products. Customers' thoughts and feelings are observed to become one of the major factors that influence their purchasing behaviors (Berry, 2000). According to Dick and Basu (1994), the success of a brand can raise customer awareness of the brand's dignity and thus optimize the company's profitability through their purchases of products and services from the company. To summarize, brand image can generate values in terms of assisting consumers to anticipate information, generating reasons to decide to buy, distinguishing the brand from competitors, providing good feelings, and providing a foundation for connections.

Roth (1995) explained that the brand image held by customers was the reaction mixed with marketing programs by the manufacturer. Magid and Cox (2006) also thought that brand image included customer responses to brand name, sign, or impression and also represented the symbol of the product quality. The included the customer responses to the brand name, sign, or impression, and also represented the symbol of the product quality. The effect of brand image and company reputation on customer loyalty was tested by Cretu and Brodie (2007) who concluded that the image of the brand positively affected the perceived value in the eyes of customers.

Aaker (1991) and Rory (2000) pointed out that, with the construction of good brand image, customers were likely to increase the satisfaction of usage, and would like to recommend to others. Graeff (1996) mentioned that, when the customer's self-image was more similar to the brand image, customer

satisfaction would be affected. Romaniuk and Sharp (2003) found a positive relationship between brand image and customer satisfaction. Below many scholars and researchers also confirmed the positive relations between brand image and customer satisfaction.

2.3.3 Service Quality and Customer Satisfaction

The definition of quality may vary from person to person and from situation to situation. The definitions of service quality vary only in wording but typically involve determining whether perceived service delivery meets, exceeds, or fails to meet customer expectations majority authors. Service quality is commonly noted as a critical prerequisite and determinant of competitiveness for establishing and sustaining satisfying relationships with customers.

Attention to service quality can make an organization different from other organizations and gain a lasting competitive advantage (Boshoff and Gray, 2004). In particular, consumers prefer service quality when the price and other cost elements are held constant (Turban, 2002).

They proposed service quality to be a function of pre-purchase customer expectations, perceived process quality, and perceived output quality. Based on their statement in 1985, they then suggested that service quality is determined by differences between customers' expectation of the service and their perceptions of the service experience. Parasuraman (1988) define service quality as the degree and direction of discrepancy between the consumer's perceptions and expectations, or the extent to which a service meets or exceeds customer expectations. The quality of a service depends on that service consistently conforming to customers' expectations (Mevvis and Janiszewski, 2002). Parasuraman et al. (1988) projected a service quality model that identified perceived service quality into three dimensions: tangibility, reliability and assurance.

1. Tangibles involve the appearance of physical facilities, including the equipment, personnel, and communication materials.

2. Reliability involves the ability to perform the promised service dependably and accurately.

3. Assurance involves the knowledge and courtesy of employees and their ability to convey trust brand. This assurance includes competence, courtesy, credibility, and security.

According to this conceptualization, Herington and Weaven (2009), one of the main elements determining customer satisfaction is the customer's perception of service quality. Customer satisfaction is described as the result of a comparison of the customers' expectations and his or her subsequent perceived performance of service quality. Revised studies indicated the evidence to promote this relationship between customer satisfaction and service quality Yee et al. (2011). Nevertheless, there were also debates about the causal relationship between customer satisfaction and service quality. Specifically, there are three major positions about this relationship in the literature Brady et al. (2002). First, as indicated above, service quality is described as an antecedent to customer satisfaction Naik et al. (2010), and Olorunniwo et al. (2006). Second, some researchers promote that customer satisfaction is the cause of service quality (Bitner, 1990). The third position of the service quality- satisfaction relationship discusses that neither satisfaction nor service quality may be antecedent to the other (Dabholkar, 1993), and McAlexander et al. (1994).

2.3.4 Customer Satisfaction and Customer Patronage

The sole purpose of every business is to "Create Customer" (Drucker, 1973) adding more opined that the only economic and social justification existence of any business existence is to create customer satisfaction. According to Anderson and Sullivan (1993) customer expectations of

satisfaction lead to an increase in tendencies to purchasing a particular brand. Therefore, customer satisfaction increases company market shares and assists eateries to customer patronage as well as sales volume.

Therefore, as the active component of customer attitudes, patronage indicates the eventual actual purchase of a company's goods or services by the consumer. Though, patronage could be assessed either through patronage intention, or repeat purchase (Nwulu and Asiegbu, 2015). According to Rahmanand et al. (2014) observed a direct positive relationship between customer satisfaction and its repurchase intention. However, studies by Kivela et al. (2011), Sulek, and Hensley (2014) have indicated that for tremendously competitive industries, like banking, to sustain customer patronage, customer satisfaction should be primarily prioritized. Accordingly, Arnold, Tae, and Douglas cited in Olise et al. (2015) asserted that location, price, brand image, fast checkout, personnel friendliness, and courtesy, are critical determinants of customer patronage. Therefore, if a company or organization supported the customer patronage of customers, it can increase their sales and profits. On the other hand, the customers are king, if they satisfied with the services and products, they will be company's loyal customers forever. On the basis of said above studies conducted, we formulate the hypothesis.

CHAPTER THREE RESEARCH METHODOLOGY

3.1 Research Model

The objectives of chapter three are to explain the framework model. The framework for this study is shown in Figure 3.1, the aims are to examine the relationship among loyalty program, brand image, service quality and customer satisfaction. This chapter covers the research strategy and methodology used in this study, including the questionnaire design, sampling design, data collection methods, and data analysis procedures. According to our hypotheses for this study include:

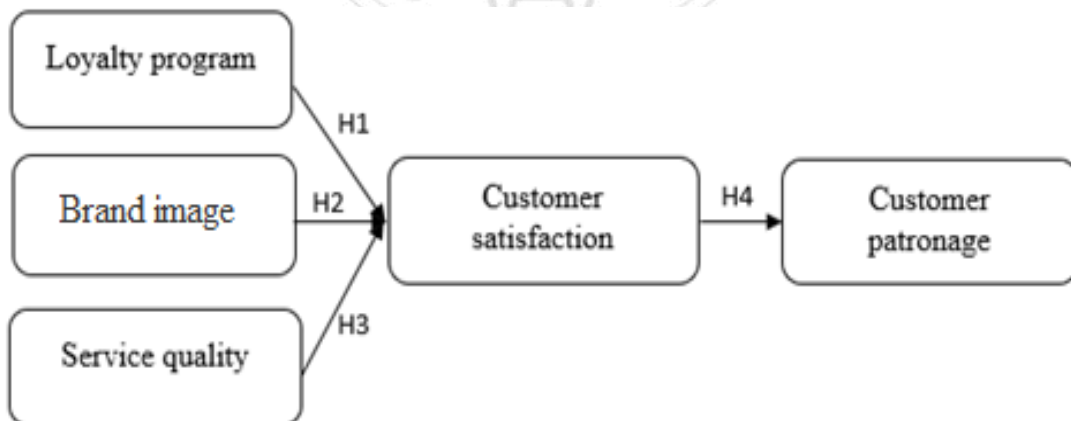
H1: Loyalty program is an impact customer satisfaction and customer patronage.

H2: Brand image is positively affecting customer satisfaction and customer patronage.

H3: Service quality are positively affecting customer satisfaction and customer patronage.

H4: Customer satisfaction has a positive relationship with customer patronage.

Figure 3. 1 Research Framework



3.2 Data Collection Methods

In this study, the data collected from customers of “Tes Petroleum” LLC in Ulaanbaatar Mongolia. And aims to examine the factors that impact customer satisfaction and inferred that customer satisfaction would directly or indirectly impact customer patronage. The questionnaires were translated to Mongolian with English and then sent by Facebook to the respondents. That questionnaire developed a format including English and Mongolian. So there doesn't confusion about questions from respondents.

For considering the demographic characteristics that might the reason cause the significant difference in the variables, six pieces of personal information of the survey participants are considered for descriptive analysis: which includes gender, marital status, age, education level, income, “Tes Petroleum” LLC. Because these can affect exists in adopting the results of these researches on the demographic factors that influence customer satisfaction. Therefore, these researches empirical evidence of examining the demographic factors that influence on customer satisfaction among the customers of “Tes Petroleum” LLC in Mongolia. "Tes Petroleum" LLC is divided into five administrative regions. As a result, the sample was divided into five administrative regions. The five administrative regions are present in detail in Table 3.1 presents the scope of this research in detail. The process of the empirical study is illustrated as which resulted in total of 354 respondents.

Table 3. 1 Distribution of Sample Sizes

Region	(Number of Consumers)	Number of gas station
Ulaanbaatar	200,468	31
Western	18,794	27
Eastern	25,059	11
Southern	31,323	14

Northern	37,588	24
Total	313,232	107

Source: Original study

3.2.1 Size Sample

The sample size is a small percentage of a population's units that is representative of the full population (Saunders et al. 2009). Smaller sample sizes are often regarded to be more representative of a study population (Gravetter & Forzano, 2011).

Figure 3. 2 Sample Size

Result

Sample size: 354

This means 354 or more measurements/surveys are needed to have a confidence level of 95% that the real value is within $\pm 5\%$ of the measured/surveyed value.

Confidence Level:

Margin of Error:

Population Proportion: Use 50% if not sure

Population Size: Leave blank if unlimited population size.

Source: Calculator. Net

3.3 Measurement

This study has studied four research constructs and added few questions about “Tes Petroleum” LLC after that the interrelationship among these variables also is assessed. The basic constructs are customer satisfaction, loyalty program, brand image, service quality, and background information of “Tes Petroleum” LLC. The last construct is identifying the operation of the company. Each construct has its operational conceptions, and measurement items, and the appendix tables present the questionnaire items for this study.

A structured questionnaire was used to obtain the information. The questionnaire was designed to measure nominal, ordinal, interval, and ratio scales, which are the most common types of scales. Likert's 5 Point Scale was used to create the questions. On a five-point scale, such as strongly agree, agree, neutral, disagree, and strongly disagree, the purpose was to ascertain how much a respondent agreed with each item; the items were given values ranging from 1 to 5 in that sequence. The data were analyzed using the IBM SPSS 26 software, which included sampling frequency, mean, standard deviation, reliability, regression analysis, T-test, factor analysis, and ANOVA. There were several sections to the questionnaire, including demographic characteristics of respondents and company and main section. The relationship between an independent variable and dependent variables of the research framework is discussed in the second part.

Table 3. 2 Questionnaire Items

Customer Satisfaction	
1	I am very satisfied with the value of offerings in product quality and service
2	I am satisfied with the price of offerings
3	I am satisfied with the company around its convenience
4	I'm satisfied this company operation
Brand Image	
1	I know well this company product
2	I confident when I buy the product
3	I recommend this product to a friend and family
Service Quality	
1	I prefer to buy gasoline from the company, which represents good quality.
2	I perceive the product quality of this brand channel as higher than other company`s
3	I perceive it as convenient that buying at the gas station close to my home or working place.

4	I prefer equipment capacity
5	I prefer service is trustworthy
Loyalty Program	
1	I prefer loyalty program operation is regular.
2	I prefer to use a loyalty program
3	I prefer loyalty program benefit
Advantage of “Tes Petroleum” LLC	
1	Clients service quality is good
2	Quality of product is good
3	Quick service
4	Product's price is acceptable

Source: Original Study

3.4 Data Analysis

3.4.1 Descriptive Statistical Analysis

Descriptive statistical analysis was designed to represent the mean and standard deviation of each research variable in order to better understand the features of each variable. Means, standard deviation, frequency, percentage, and other descriptive statistical analyses were reported. It may describe the means and standard deviations of each analysis variable.

3.4.2 Factor Analysis and Reliability Tests

The factor analysis which is one of the multivariate statistical analysis methods is used in order to ensure that the required data set which constitutes the statistical analysis part of the study is edited and reduced to the desired size. The factor analysis is a multivariate statistical analysis method developed by Spearman at the beginning of the 20th century that turns a large number of interrelated variables into a few significant and mutually independent factors (Gorsuch, R. L, 1983).

Factor analysis is a statistical method for describing variability between associated variables in terms of a smaller number of unobserved variables known as factors. Factor analysis looks for joint fluctuations in response to hidden variables that aren't visible. The identified variables are represented as linear combinations of potential components plus "error" terms. The KMO value for each quantity is larger than 0.6, and the quantity of Factor loading for each quantity is larger than 0.5, indicating that the factor analysis is significant and acceptable.

3.5 Inference Statistics Analysis Methods

Inferential statistical analysis infers properties of a population, for example by testing hypotheses and deriving estimates and compares this research data with other samples or previous research. This research uses statistical models called the Generalized Linear model and include T-tests, ANOVA (Analysis of Variance), regression analysis and various other models that result in straight-line (linear) probabilities and results.

1. T-test

A t-test is also known as Student's t-test. It is a statistical analysis technique that was developed by William Sealy Gosset in 1908 as a means to control the quality of dark beers. A t-test used to test whether there is a difference between two independent sample means is not different from a t-test used when there is only one sample. However, if there is no difference in the two sample means, the difference will be close to zero. A t-test is an inferential measurement used to determine whether there is a significant difference between the approaches for two groups that may be distinguished by unique characteristics. In a sense, the t-esteem indicates how many standard units the techniques for the two meetings differ. In this study, it was

applied to compare the differences between male and female in the two constructs: gender, marital status.

2. ANOVA test

Analysis of variance (ANOVA) is a statistical procedure concerned with comparing the means of several samples. The ANOVA test of the hypothesis is based on a comparison of two independent estimates of the population variance Montgomery, D.C., and Runger, G.C. (2003). ANOVA is the most commonly quoted advanced research method in the professional business and economic literature. This technique is very useful in revealing important information particularly in interpreting experimental outcomes and in determining the influence of some factors on other processing parameters. The original ideas of analysis of variance were developed by the English statistician. A critical p-esteem suggests that in any case, one set of means is fundamentally different from the others. In this study, it was applied to compare the differences between demographic variables of the respondents in the four constructs: age, education, income and background information of “Tes Petroleum” LLC.

3. Regression Analysis (hypothesis test)

The earliest form of regression was the method of least squares, which was published by Legendre in 1805, and by Gauss in 1809. Gauss published a further development of the theory of least squares in 1821, including a version of the Gauss–Markov theorem.

Regression analysis is a set of statistical processes for estimating the relationships between variables in statistical modeling. When the focus is on the relationship between a dependent variable and one or more independent variables (or 'predictors,' it includes a variety of techniques for modeling and

analyzing multiple variables. Regression analysis, in more detail, explains how the typical value of the dependent variable (or 'criterion variable') changes when one of the independent variables is changed while the other independent variables remain constant. Analysis of Regression the P-value is less than 0.05, indicating that the result is statistically significant. Alternatively, the P-value will be greater than 0.05, indicating that the result is not statistically significant.



CHAPTER FOUR DATA ANALYSIS

The study's findings are presented in this chapter. The first section is a descriptive analysis of the respondents, which includes response rates, respondent characteristics, and variable measurement results. The results of factor analysis and reliability tests of measurement scales, which include principal component factors analysis, Cronbach's alpha, coefficient, and item to total correlations, are presented in the second section. The results of data analysis associated with each research hypothesis testing will be presented in the final section.

4.1 Descriptive Statistic Analysis

4.1.1 Characteristics of Respondents

Questionnaires were collected from 354 customers of “Tes Petroleum” LLC. Table 4.1 displays the demographic characteristics of the survey. It shows that 61% of respondents are male while 39% of respondents are female. The result shows that 72.3% of respondents are married while 27.7% of respondents are single. The majority of respondent's age was 31-45 (44.4%) and following by 46-59 (22.6%). About education 2.5% of respondents had an elementary school, 10.2% of the respondents had a secondary school, 17.8% of respondents were high school, 50% bachelor's degrees, and 19.5% master's and doctor higher degrees. The respondent's income of month 800,000-1,200,000¥ (48.6%) and following by 500,000-800,000¥ (26%). 50% of respondents agreed that “Tes Petroleum” product's price is acceptable and have quick service (23.7%). The detailed respondent's characteristics were conferred in Table 4.1.

Table 4. 1 The Characteristics of 354 Respondents

Item	Description	Frequency	Percentage
Gender	Female	138	39
	Male	216	61
Marital status	Married	256	72.3
	Single	98	27.7
Age	18-30	85	24
	31-45	157	44.4
	46-59	80	22.6
	60-70	31	8.8
	More than 70	1	3
Education	Elementary School	9	2.5
	Secondary School	36	10.2
	High School	63	17.8
	Bachelor	177	50
	Master and Doctor	69	19.5
Income	500,000-800,000	92	26
	800,000-1,200,00	172	48.6
	1,200,000-1,500,000	61	17.2
	1,500,000-1,800,000	15	4.2
	more than 1,800,000	14	4
Advantage of “Tes Petroleum” LLC	Clients service quality is good	65	18.4
	Quality of product is good	28	7.9
	Product's price is acceptable	177	50
	Quick service	84	23.7

Source: Original Study

4.1.2 Measurement Results for Relevant Research Variables

Table 4. 2 Descriptive Analysis for Questionnaire Items

		Total	
		Mean	Standard Deviation
Customer Satisfaction			
CS1	I am highly satisfied with the value of offerings in product quality, service	3.51	.703
CS2	I am satisfied with the price of offerings	3.46	.698
CS3	I am satisfied with the company around its convenience	3.45	.713
CS4	I am satisfied this company operation	3.44	.732
Brand Image			
BI1	I know well this company product	3.50	.695
BI2	I confident when I buy the product	3.54	.722
BI3	I recommend this product to a friend and family	3.52	.703
Service Quality			
SQ1	I prefer to buy gasoline from the company, which represents good quality.	3.47	.858
SQ2	I perceive the product quality of this brand channel as higher than other company's	3.53	.801
SQ3	I perceive it as convenient that buying at the gas station close to my home or working place.	3.51	.801
SQ4	I prefer equipment capacity	3.56	.788
SQ5	I prefer service is trustworthy	3.53	.814
Loyalty Program			
LP1	I prefer loyalty program operation is regular.	3.54	.702
LP2	I prefer to use a loyalty program	3.56	.716
LP3	I prefer loyalty program benefit	3.58	.737

Source: Original study

4.2 Factor Analysis and Reliability Tests

Several data purification processes are used in this study to verify the dimensionality and reliability of the constructs, including factor analysis, correlation analysis, and coefficient alpha analysis, as well as internal consistency analysis (Cronbach's alpha). The eigenvalue had to be greater than 1 for principal component factor analysis and varimax rotated method to extract the relevant factors.

- Factor Loading > 0.6
- Kaiser Meyer Olkin Measure of Sampling Adequacy (KMO) > 0.5
- Bartlett's test Sig. < .05
- Eigen Value > 1
- Explained Variance (accumulative) > 0.6
- Cronbach's Coefficient alpha (α) > 0.7
- Item- to- total Correlation: Higher than 0.5

4.2.1 Customer Satisfaction

There are the total four items in this construct using to explain the customer satisfaction, which is listed in table 4.3. In general, all item's factor loading is higher than 0.6 between each item, item CS2 has the highest Factor loading is 0.940, which indicates the highest relation to constructing customer satisfaction. Construct's Eigenvalue is 3.472 higher than 1. The reliability test showed all variables are significant when the item-to-total correlations of all items are above 0.5. Contributing to the high value of Cronbach's coefficient alpha is 0.949.

Table 4. 3 Factor Analysis and Reliability Test Result of Customer Satisfaction

Research Construct	Research Items	Factor Loading	Eigen Value	Accumulative Explained	Item-to-total correlation	Cronbach's α
Customer satisfaction KMO=0.861 BTV=0.000	CS2	0.940	3.472	86.790	0.859	0.949
	CS4	0.934			0.892	
	CS3	0.931			0.877	
	CS1	0.921			0.880	

Source: Original Study

4.2.2 Loyalty Program

There are the total three items in this construct using to explain the loyalty program, which is listed in table 4.4. In general, all item's factor loading is higher than 0.6 between each item, item LP2 has the highest Factor loading is 0.956, which indicates the highest relation to constructing loyalty program. Construct's Eigenvalue is 2.710 higher than 1. The reliability test showed all variables are significant when the item-to-total correlations of all items are above 0.5. Contributing to high value of Cronbach's coefficient alpha is 0.946.

Table 4. 4 Factor Analysis and Reliability Test Result of Loyalty Program

Research Construct	Research Items	Factor Loading	Eigen Value	Accumulative Explained	Item-to-Total correlation	Cronbach's α
Loyalty program KMO=0.771 BTV=0.000	LP2	0.956	2.710	90.346	0.9	0.946
	LP3	0.951			0.889	
	LP1	0.944			0.875	

Source: Original Study

4.2.3 Brand Image

There are the total three items in this construct using to explain the brand image, which is listed in table 4.5. In general, all item's factor loading is higher than 0.6 between each item, item BI3 has the highest Factor loading is 0.948, which indicates the highest relation to constructing brand image. Construct's Eigenvalue is 2.650 higher than 1. The reliability test showed all variables are significant when the item-to-total correlations of all items are above 0.5. Contributing to the high value of Cronbach's coefficient alpha is 0.934.

Table 4. 5 Factor Analysis and Reliability Test Result of Brand Image

Research Construct	Research Items	Factor Loading	Eigen Value	Accumulative Explained	Item-to-Total correlation	Cronbach's α
Brand Image KMO=0.765 BTV=0.000	BI3	0.948	2.650	88.347	0.851	0.934
	BI2	0.938			0.861	
	BI1	0.934			0.880	

Source: Original Study

4.2.4 Service Quality

There are total five items in this construct using to explain the service quality, which is listed in table 4.6. In general, all item's factor loading is higher than 0.6 between each item, item SQ5 has the highest Factor loading is 0.958, which indicates the highest relation to constructing service quality. Construct's Eigenvalue is 4.450 higher than 1. The reliability test showed all variables are significant when the item-to-total correlations of all items are above 0.5. Contributing to the high value of Cronbach's coefficient alpha is 0.969.

Table 4. 6 Factor Analysis and Reliability Test Result of Service quality

Research Construct	Research Items	Factor Loading	Eigen Value	Accumulative Explained	Item-to-Total correlation	Cronbach's α
Service quality KMO=0.902 BTV=0.000	SQ5	0.958	4.450	89.005	0.930	0.969
	SQ3	0.956			0.930	
	SQ4	0.942			0.908	
	SQ1	0.941			0.907	
	SQ2	0.921			0.878	

Source: Original Study

4.3 Different Test

1. T-test

There are two groups including gender and marital status.

Table 4. 7 The Result “Factors” on “Gender”

Gender		Mean	Mean Std. Deviation	Std. Error Mean
Customer Satisfaction	Female	3.40	.767	.065
	Male	3.50	.585	.040
Loyalty Program	Female	3.45	.779	.066
	Male	3.57	.775	.039
Brand Image	Female	3.45	.930	.079
	Male	3.57	.638	.043
Service Quality	Female	3.52	.799	.068
	Male	3.59	.598	.041

In the table 4.8 shows the different factors of gender. All factors are significant.

Table 4. 8 Result of Gender

Factors and Items	Each Factor	
	t- value	p- value
Customer Satisfaction	-1.528^{***}	0.005
Loyalty Program	-1.72^{***}	0.001
Brand Image	-1.431^{***}	0.000
Service quality	-0.889^{***}	0.001

Significant value ^{***} $p < 1\%$, ^{**} $p < 5\%$, ^{*} $p < 10\%$

Source: Original Study

Table 4. 9 The Result of Marital Status

Gender		Mean	Mean Std. Deviation	Std. Error Mean
Customer Satisfaction	Single	3.39	.677	.068
	Married	3.49	.657	.041
Loyalty Program	Single	3.47	.670	.068
	Married	3.54	.662	.041
Brand Image	Single	3.47	.755	.076
	Married	3.54	.772	.048
Service Quality	Single	3.52	.695	.070
	Married	3.58	.679	.042

Source: Original Study

Table 4.10 shows the different factors of marital status. All factors are not significant.

Table 4. 10 The Difference in “Factors” on “Marital status”

Factors and Items	Each Factor	
	t- value	p- value
Customer Satisfaction	-1.25	0.508
Loyalty Program	-0.933	0.745
Brand Image	-0.725	0.961

Service Quality	-0.711	0.372
-----------------	--------	-------

Significant value *** $p < 1\%$, ** $p < 5\%$, * $p < 10\%$

Source: Original Study

2. ANOVA test

The ANOVA test used a significant difference between the means of more than two groups. This study has four groups of questions are age, education, income, and company. All factors are not significant.

Table 4. 11 The Difference in “Factors” on “Age”

Factors and Items	Each Factor	
	F- value	P- value
Customer Satisfaction	0.772	0.544
Loyalty Program	1.405	0.212
Brand Image	1.585	0.178
Service quality	0.616	0.651

Significant value *** $p < 1\%$, ** $p < 5\%$, * $p < 10\%$

Source: Original Study

Table 4.12 indicates the difference factors on Education. In the table, all factors are significant.

Table 4. 12 The Difference in “Factors” on “Education”

Factors and Items	Each Factor	
	F- value	P- value
Customer Satisfaction	13.729***	0.000
Loyalty Program	10.408***	0.000
Brand Image	6.112***	0.000
Service Quality	10.504***	0.000

Significant value *** $p < 1\%$, ** $p < 5\%$, * $p < 10\%$

Table 4.13 shows the differences in factors between Income. All factors were significant on the table.

Table 4. 13 The Difference in “Factors” on “Income”

Factors and Items	Each Factor	
	F- value	P- value
Customer Satisfaction	2.925**	0.021
Loyalty Program	3.557***	0.007
Brand Image	2.578**	0.037
Service Quality	4.795***	0.001

Significant value *** $p < 1\%$, ** $p < 5\%$, * $p < 10\%$

Source: Original Study

Table 4.14 indicates the differences in factors between the advantage of a company. All factors were not significant on the table.

Table 4. 14 The Difference in “Factor” on the advantage of a Company

Factors and Items	Each factor	
	F- value	P- value
Customer satisfaction	0.111	0.954
Loyalty program	0.1	0.96
Brand Image	2.402	0.067
Service Quality	0.351	0.789

Significant value *** $p < 1\%$, ** $p < 5\%$, * $p < 10\%$

Source: Original Study

4.4 Regression Analysis (Hypothesis Test)

Regression analysis was used to the relationship between independent variables and the dependent variables. The research model has three independent variables (loyalty program, brand image and service quality) that are expected to influence the dependent variable (customer satisfaction). In this study, the customer satisfaction completely explains customer patronage. The table 4.15 indicates the result of the regression analysis. You can see the results from table 4.15.

Table 4. 15 Relationship between “Independent Factors” and “Customer Satisfaction”

Independent factor	Model 1 Beta (β)	Model 2 Beta (β)	Model 3 Beta (β)	Overall
Loyalty program	.766***			.237***
Brand Image		.797***		.350***
Service quality			.791***	.362***
<i>R</i> ²	0.587	0.636	0.626	.747
<i>Adj-R</i> ²	0.586	0.635	0.625	.745
<i>F</i>	501.293	614.637	588.637	343.956
<i>P-value</i>	.000	.000	.000	.000
<i>VIF range</i>	1	1	1	2.5-2.8
<i>D-W</i>	1.984	1.830	1.911	1.972

Note: 1. **p*<.05, ***p*<.01, ****p*<.001, β: Standardized coefficient

As shown in Table 4.15 the independent variable (loyalty program, brand image, and service quality) were regressed with the dependent variable (customer satisfaction) completely explained customer patronage. According to regression analysis in Table 4.15 the loyalty program of value *R*² is 0.587 which shows that a 58% variation in the customer satisfaction is explained by the loyalty program factor and remaining by other factors. The value of Beta = 0.766 at a significance level of <0.001 showed the strong positive impact of loyalty program factor on customer satisfaction based on of Beta value and its significance. So, this hypothesis (H1) is supported.

A brand image, the value of *R*² is 0.636 which shows that 63% variation in the customer satisfaction is explained by the brand image factor and remaining by other factors. The value of Beta = 0.797 at a significance level of <0.001 showed the strong positive impact of the brand image factor on customer satisfaction based on Beta value and its significance. So this hypothesis (H2) is supported.

In the service quality, the value of R^2 is 0.626 which indicates that 62% variation in the customer satisfaction is explained by the service quality factor and remaining by other factors. The value of Beta = 0.791 at a significance level of <0.001 showed the strong positive impact of development factor on customer satisfaction based on of Beta value and its significance. Therefore, this hypothesis (H3) is supported.

Table 4.16 shows a summary of the hypothesis; all factors positively affect customer satisfaction. As a result, all hypothesis are supported.

Table 4. 16 Result of Hypothesis Test

Hypothesis	Beta	R^2	p- value	Result
LP \longrightarrow CS	0.766	0.587	<0.001	Supported
BI \longrightarrow CS	0.797	0.636	<0.001	Supported
SQ \longrightarrow CS	0.791	0.626	<0.001	Supported

Note: CS= customer satisfaction, LP= loyalty program, BI= brand image, SQ= service quality.

CHAPTER FIVE CONCLUSION AND SUGGESTION

5.1 Research Conclusion

As mentioned in Chapter 1, the primary objective of this study is to including to research background and motivation, research objective, and the procedure of the study.

Based on Chapter 2 is a literature review of a loyalty program, brand image, service quality, customer satisfaction, customer patronage.

Chapter 3 shown the research methodology, research framework, and data analysis procedures.

Chapter 4 presented the results of the research.

Chapter 5 will be the chapter summarizes the results of the research that were obtained.

The main purpose of this study is to determine the characteristics of factors and investigate factors influencing the patronage of customers. Therefore, loyalty programs, brand image, service quality factors are influence the customer satisfaction of "Tes Petroleum" LLC, in Mongolia. The research results indicated that customer satisfaction is essential to the company. It also promotes customer patronage and increases sales and profits. According to numerous studies, they provided strong evidence to suggest that customer satisfaction can completely explain the customer patronage rate.

Based on the research findings, all hypotheses are supported. T-test result shows that female customers were satisfied because of a loyalty program, brand image, service quality, and customer satisfaction more than male customers. ANOVA test results show that education, income these two factors have contributed to customer satisfaction. Regression results indicated that customer satisfaction factors have contributed to the importance of customer patronage.

Although the results of this study were good enough. Besides, “Tes Petroleum” LLC should focus on employee development and provide regular training to improve its customer patronage operation.

5.2 Research Suggestion

The research findings showed that the "Tes petroleum "LLC has customer patronage from including satisfaction development.

Therefore, "Tes petroleum "LLC needs to improve and re-examine the human resources strategies regarding the training programs in order to make the workers feel supported to handle their work problems by encouraging them with the needed training programs.

The results also showed customer satisfaction was found to be an important factor that enhances the intentions of customer patronage among "Tes petroleum "LLC. The top management of "Tes petroleum "LLC needs to cultivate a good, positive environment for purchasers. Moreover, a loyalty program, brand image, and service quality have found to be a significant effect on customer satisfaction.

5.3 Research Limitations

The current study has limitations. The first, study covers only one area (Ulaanbaatar in Mongolia).

Second, the number of respondents has 354 that was limited. Therefore, this research survey can't use base on paper and interviews. An online survey has a high risk and respondents are possible to fill fake.

Therefore, the future study will focus to use multiple delivery channels (Paper questionnaires, telephone interviews, in-person interviews, etc.) for the survey to enhance data quality. Future researchers are imperative to extend the study to more areas in the countryside, some cities, and sample sizes. Also, use more types of customers that are for improving their result relevance.

REFERENCES

1. Aaker D (1991), Manage Brand Equity, New York: The Free Press.
2. Adiele, K., D., Grend, M. & Aloy Chinedu, E. (2015), Physical Evidence and Customer Patronage: An Empirical Study of Nigeria Banking Sector, Journal of Economics, Management and Trade, Vol.7, pp.188-199.
3. A.M. Legendre. (1805), New methods for determining the orbits of comets.
4. Anderson, E.W. & Sullivan, M. W. (1993), The antecedents and consequences of customer satisfaction for firm, Marketing Science, Vol.12, No.2, pp.125-143.
5. Bahri-Ammari, N. (2014), The role of Loyalty Program (LP) in establishing brand attachment and word-of-mouth intentions: an empirical investigation in the mobile sector, International Journal of Customer Relationship Marketing and Management (IJCRMM), Vol. 5, No. 3, pp.49–68.
6. Ben NS. (2003), The determinants of the Tunisian banking industry profit margin, Panel Evidence and Department of Finance.
7. Berry LL. (2000), Cultivating service brand equity, Journal of the Academy of Marketing Science, Vol.28, No.1, pp.128-137.
8. Bitner, M. J. (1990), Evaluating service encounters: The effects of physical surroundings and employee responses, Journal of Marketing, Vol.54, No.2, pp.69-82.
9. Boshoff, C., & Gray, B. (2004), The relationships between service quality, customer satisfaction and buying intentions in the private hospital industry, South African journal of business management, Vol.35, No.4, pp.27-37.

- 10.Brady, M. K. & Cronin, J. Jr. (2001), Some new thoughts on conceptualizing perceived service quality: A hierarchical approach, Journal of Marketing, Vol.65, pp.34-49.
- 11.Broekhuizen, I., & Peelen, E. (1997), Rewarding loyal customers, Magazine for Marketing, pp.52-56.
- 12.C.F. Gauss. (1821), Theory of combination observation.
- 13.Cretu & Brodie. (2007), The influence of brand image and company reputation where manufacturers market to small firms: A customer value perspective, Industrial Marketing Management, Vol.36, No.2, pp.230-240.
- 14.Cronin, J. J., & Taylor, S. A. (1992), Measuring service quality; a re-examination and extension, The Journal of Marketing, Vol.56, No.3, pp.55-68.
- 15.Dabholkar.P. (1993), A Measurement of Service Quality for Retail Stores: Scale Development and Validation, Journal of the Academy of Marketing Science, Vol.24, No.1.
- 16.Dick, A., & Basu, K. (1994), Customer Loyalty: Toward and Integrated Conceptual Framework, Journal of Academy of Marketing Services, Vol.22, No.2, pp.99-113.
- 17.Drucker, P. F. (1973), Management: Tasks, Responsibilities, practices, New York: Harper and Row.
- 18.Faircloth JB, Capella LM & Alford BL. (2001), The effect of brand attitude and brand image on brand equity, Journal of Marketing Theory and Practice, Vol.9, No.3, pp.61–74.
- 19.Fennis BM & Pruyn TH. (2006), You are what you wear: Brand personality influences on consumer impression formation, Journal of Business Research, Vol.60, pp.634-639.

20. Ferguson, R. & Hlavinka, K. (2007), The COLLOQUY loyalty marketing census: sizing up the US loyalty marketing industry, Journal of Consumer Marketing, Vol.24, No.5, pp.313-321.
21. Goddard, J., Molyneux, P., & Wilson, J. (2004), The profitability of European Banks: a cross-sectional and dynamic panel analysis, Manchester School, Vol.72, No.3, pp.363–381.
22. Gorsuch, R. L. (1983), Factor Analysis. 2nd ed. Hillsdale, NJ: Lawrence Erlbaum.
23. Graeff TR. (1996), Using Promotional Message to Manage the Effects of Brand and Self-Image on Brand Evaluations, Journal of Consumer Marketing, Vol.13, No.3, pp. 4-18.
24. Gravetter, F. J., & Forzano, L. B. (2011), Research method for the behavioral sciences, California: Cengage Learning.
25. Herington, C., & Weaven, S. (2009), E-retailing by banks: E-service quality and its importance to customer satisfaction, European Journal of Marketing, Vol.43, No.9, pp.1220-1231.
26. Kandampully, J., Zhang, T. & Bilgihan, A. (2015), Customer loyalty: a review and future directions with a special focus on the hospitality industry, International Journal of Contemporary and Hospitality Management, Vol.27, No.3, pp.379–414.
27. Keller KL. (2003), Building, measuring, and managing brand equity, New Jersey: Pearson Education.
28. Keh, H. T., & Lee, Y. H. (2006), Do Reward Programs Build Loyalty for Services? The Moderating Effect of Satisfaction on Type and Timing or Rewards, Journal of Retailing, Vol.82, No.2, pp.127-136.
29. Kenneth, Miebaka D. Grend, & Ezirim Aloy Chinedu. (2015), Physical Evidence and Customer Patronage: An Empirical Study of Nigeria

- Banking Sector, Journal of Economics, Management and Trade, Vol.7, No.3, pp.188-99.
- 30.Kivela, J., Inbakaran, R., & Reece, J. (2011), Consumer research in the restaurant environment, Part 1: A conceptual model of dining satisfaction and return patronage, International Journal of Contemporary Hospitality Management, Vol.11, No.5, pp.205-222.
- 31.Koo DM (2003), Inter-relationships among store images, store satisfaction, and store loyalty among Korea discount retail patrons, Asia Pacific Journal of Marketing and Logistics, Vol.15, No.4, pp.42–71.
- 32.Kosmidou, K., Pasiouras, F., Doumpos, M., & Zopounidis, C. (2006), A Multivariate analysis of the financial characteristics of foreign and domestic banks in the UK, Omega, Vol.34, No.2, pp.189- 195
- 33.Magid, J. M., Cox, A. D., & Cox, D. S. (2006), Quantifying brand image: Empirical evidence of trademark dilution, Vol.43, No.1.
- 34.Martisiute S, Gabriele V & Dainora, G. (2010), Product or Brand? How Interrelationship between Customer Satisfaction and Customer Loyalty Work, European Journal of Interdisciplinary Studies, pp.5-15.
- 35.Mc Alexander, J. H., Kaldenberg, D. O., & Koenig, H. F. (1994), Service quality measurement, Journal of Health Care Marketing, Vol.14, No.3, pp.34-40.
- 36.Meyvis, T. & Janiszewski, C. (2002), Consumers' Beliefs about Product Benefits: The Effect of Obviously Irrelevant Product Information, Journal of Consumer Research, Vol.28, pp.618-635.
- 37.Mittal, V., & Kamakura, W. A. (2001), Satisfaction, repurchase intent, and repurchase behavior: Investigating the moderating effect of customer characteristics, Journal of Marketing Research, Vol.38, No.1, pp.131-142.

38. Montgomery, D.C., & Runger, G.C. (2003), *Applied Statistics and Probability for Engineers*.
39. Mulhern, T. & Duffy, D. (2004), Building Loyalty at Things Remembered, *The Journal of Consumer Marketing*, Vol.21, No.1, pp.62-66.
40. Naik, C. N. K., Gantasala, S. B., & Prabhakar, G. V. (2010), SERVQUAL and customer satisfaction and behavioral intentions in retailing, *European Journal of Social Sciences*, Vol.17, No.2, pp.200-213.
41. Nandan, S. (2005), An exploration of the brand identity–brand image linkage: A communications perspective, *Journal of brand management*, Vol.12, No.4, pp.264-278.
42. Nwulu, C. S. & Asiegbu, I. F. (2015), Advancement inclination behaviors and University academic staff patronage of deposit money Banks in Port Harcourt, *International Journal of Research in Business Studies & Management*, Vol.2, No.6, pp.94-104.
43. Olise, M., Okoli, M. I. & Ekeke, J. N. (2015), Factors influencing customers' patronage of fast food restaurants: A study of selected customers of fast food in Anambra State, Nigeria, *International Journal of Economics, Commerce and Management*, Vol.3, No.11, pp.686-701.
44. Oliver, L. (1999), Whence consumer loyalty? *Journal of Marketing*, Vol.63, No.4, pp.33-44.
45. Olorunniwo, F., Hsu, M. K., & Udo, G. J. (2006), Service quality, customer satisfaction, and behavioral intentions in the service factory, *Journal of Services Marketing*, Vol.20, No.1, pp.59-72.
46. Parasuraman, A., Zeithaml, V.A. & Berry, L. L. (1988), SERVQUAL: A multiple item scale for measuring customer perceptions of service quality, *Journal of Retailing*, Vol.64, pp.12-40.

47. Pepe MS, Russell A & Paul D. (2011), The Impact of Private Label Brands on Customer Loyalty and Product Category Profitability, Journal of Product and Brand Management, Vol.20, No.1, pp.27-36.
48. Rahman, M. S., AbdelFattah, F. A. & Mohamad, O. B. (2014), Service quality and customers' patronage decision of Healthcare Insurance Products: In-depth interview approach, International Journal of Academic Research in Business & Social Sciences, Vol.4, No.7, pp.526-544.
49. Romaniuk J & Sharp B. (2003), Measuring brand perceptions: Testing quantity and quality, Journal of Product and Brand Management, Vol.11, No.3, pp.218-229.
50. Roman K, Maas J & Nisenholtz.M. (2005), How to advertise: What works, what doesn't-and why, London: Kegan page.
51. Rory P. & Morgan (2000), A Consumer-Orientated framework of brand equity and loyalty, International journal of marketing research, Vol.42, No.1, pp.65-78.
52. Roth MS. (1995), Effects of global market conditions on brand image customization and brand performance, Journal of Advertising, Vol.24, No.4, pp.55-72.
53. Saunders M., Lewis P. & Thornhill A. (2009), Research Methods for Business Students, 5th edit, Pearson Education Limited.
54. Söderlund, M. & Colliander, J. (2015), Loyalty program rewards and their impact on perceived justice, customer satisfaction, and patronize intentions, Journal of Retailing and Consumer Services, Vol.25, pp.47-57.
55. Sulek, J. M., & Hensely, R. L. (2014), The relative importance of food, atmosphere and fairness of wait, Cornell Hotel & Restaurant Administration Quarterly, Vol.45, No.3 pp.235-247.

56. Tanner, J., & Raymond, M. A. (2010), Customer Satisfaction, Loyalty, and Empowerment, Flat World Knowledge.
57. Telnet Press Release: Akpan I (2009), Cross channel integration and optimization in Nigerian banks, Vol.20, pp.1-4.
58. Turban & Efrain (2002), Electronic Commerce: A Managerial Perspective, New York: Prentice Hall.
59. Vesel, P., & Zabkar, V. (2009), Managing customer loyalty through the mediating role of satisfaction in the DIY retail loyalty program, Journal of Retailing and consumer Services, Vol.16, No.5, pp.396-406.
60. Yee, R. W. Y., Yeung, A. C. L., & Cheng, T. C. E. (2011), The service-profit chain: An empirical analysis in high-contact service industries. International Journal of Production Economics, Vol.130, No.2, pp.236-245.

Websites

1. <https://www.calculator.net/sample-size-calculator.html>
2. <https://mrpam.gov.mn/article/94/>

APPENDIX

Consumer Demographics /Хэрэглэгчийн Демографи /

1. What is your gender? / Таны хүйс? /
 - A. Male /эрэгтэй/
 - B. Female /эмэгтэй/

2. How old are you? / Та хэдэн настай вэ? /
 - A. 18-30
 - B. 31-45
 - C. 46-59
 - D. 60-70
 - E. More than 70

3. What is your marital status? / Гэр бүлийн байдал? /
 - A. Single /ганц бие/
 - B. Married /гэрлэсэн/

4. What is your education? / Та ямар боловсрол эзэмшсэн бэ? /
 - A. Elementary /бага сургууль/
 - B. Secondary /дунд сургууль/
 - C. High school /ахлах сургууль/
 - D. Bachelor /баклавр/
 - E. Master and Doctor /мастер болон доктор/

5. What is your approximate household income per month? / Таны өрхийн нэг сарын орлого хэд вэ? /
 - A. 500,000-800,000₮
 - B. 800,000-1,200,000₮

- C. 1,200,000-1,500,000₮
- D. 1,500,000-1,800,000₮
- E. More than 1,800,000₮

6. How do you feel about the idea of Tes petroleum a gas station generally?

/ Тэс петролиум ШТС-ын талаар та ерөнхий ямар сэтгэгдэлтэй байдаг вэ?

- A. Clients service quality is good /Ажилчид нь боловсон, соёлтой үйлчилгээтэй/
- B. Quality of product is good / Бүтээгдэхүүний чанар сайн /
- C. Product's price is acceptable / Зах зээлд тохирсон үнэ санал болгодог /
- D. Quick service / Хурдан шуурхай үйлчилгээтэй /

Section 1: Consumer Satisfaction / Хэрэглэгчийн сэтгэл ханамж /

Please take a short look on the questions below related to the consumer satisfaction and then circle the level of agreement on each the item below based on your opinion.		Levels of Agreement				
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	I am highly satisfied with the value of offerings in product quality, service (Би санал болгож байгаа үйлчилгээ болон бүтээгдэхүүнд маш их сэтгэл ханамжтай байдаг)	1	2	3	4	5
2	I am satisfied with the price of offerings (Би санал болгож буй бүтээгдэхүүний үнэд сэтгэл ханамжтай)	1	2	3	4	5
3	I am satisfied with the company around its convenience (Компани болон тэдний үйлчилүүлэгчидээ үзүүлдэг тав тухтай байдалд сэтгэл ханамжтай байдаг)	1	2	3	4	5

4	I'm satisfied this company operation (Би компаний явуулж буй үйл ажиллагаа, үйлчилгээнд сэтгэл ханамжтай байдаг)	1	2	3	4	5
---	--	---	---	---	---	---

Section 2: Brand Image / Брэнд /

Please take a short look on the questions below related to the reward and promotion and then circle the level of agreement on each the item below based on your opinion.		Levels of Agreement				
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	I know well this company product (Би компаний бүтээгдэхүүнүүдийг маш сайн мэднэ)	1	2	3	4	5
2	I confident when I buy the product (Би компаний бүтээгдэхүүнийг худалдаж авахдаа итгэлтэй байдаг.)	1	2	3	4	5
3	I recommend this product to a friend and family (Би гэр бүл болон найзууддаа энэ бүтээгдэхүүнийг санал болгоно.)	1	2	3	4	5

Section 3: Service Quality/ Үйлчилгээний Чанар /

Please take a short look on the questions below related to the loyalty card and then circle the level of agreement on each the item below based on your opinion.		Levels of Agreement				
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	I prefer to buy gasoline from the company, which represents good quality. (Би Тэс петролеум компаний шатахуун чанартай учраас би худалдаж авахыг илүүд үздэг)	1	2	3	4	5
2	I perceive the product quality of this brand channel as higher than other company`s (Би Тэс петролеум компаний бүтээгдэхүүнийг бусад компанийхаас илүү чанартай гэж ажигласан)	1	2	3	4	5
3	I perceive it as convenient that buying at the gas station close to my home or working place. (Би Тэс петролеум компаны салбарууд манай гэр болон ажлын газартай ойрхон хаанаас худалдаж авахад тохиромтой гэж үзсэн)	1	2	3	4	5
4	I prefer equipment capacity (Би тоног төхөөрөмжийн хүчин чадлыг илүүд үздэг)	1	2	3	4	5
5	I prefer service is trustworthy (Би найдавртай үйлчилгээг илүүд үздэг)	1	2	3	4	5

Section 4: Loyalty Program / Үнэнч Хэрэглэгчийн Хөтөлбөр/

Please take a short look on the questions below related to the loyalty program and then circle the level of agreement on each the item below based on your opinion.		Levels of Agreement				
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	I prefer loyalty program operation is regular. (Би хэрэглэгчдэд зориулсан үнэнч байдлын тогтмол үйлчилгээг илүүд үздэг)	1	2	3	4	5
2	I prefer to use a loyalty program (Би үнэнч байдлын үйлчилгээг ашиглахыг илүүд үздэг)	1	2	3	4	5
3	I prefer loyalty program benefit (Би үнэнч байдлын үйлчилгээний ашиг тусыг илүүд үздэг)	1	2	3	4	5