THE RELATIONSHIP BETWEEN CUSTOMER SATISFACTION AND
CUSTOMER RETENTION ON CAR SERVICE INDUSTRY IN
KAMPHANGPHET PROVINCE: A CASE STUDY OF
KAMPHANGKOLLAKARN CO., LTD.

By
WARARAT THEPSILPAVISUT

A Thesis Submitted in Partial Fulfillment
of the Requirements for the Degree of

Master of Business Administration

Graduate School of Business
Assumption University
Bangkok Thailand

May 2004

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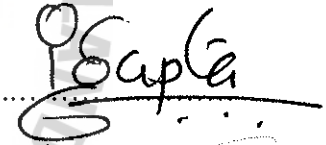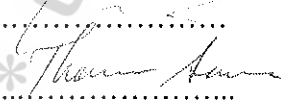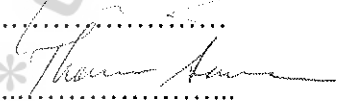
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ABSTRACT

Customer satisfaction with a company's product or service is often seen as the key to a company's success and long-term competitiveness. In the context of relationship marketing, customer satisfaction is often viewed as a central determinant of customer retention. The increasing competition within the car service industry, the evaluation factors of customer satisfaction and customer retention have become very important for Kamphangkollakarn Co.,Ltd and for the researcher. The objective of this study is to identify the factors in service performance, which consists of tangible, responsiveness, reliability and price that effect on customer satisfaction level on auto garage business in Kamphangphet province by using Kamphangkollakarn Co.,Ltd as a case study. Moreover, the objective also encompass to study the relationship between the level of customer satisfaction and customer retention, which consists of repurchase intention, feedback to supplier, and word of mouth.

The researcher selected the number of 217 customers of Kamphangkollakarn Co.,Ltd. The population for this research is the company's customers who are currently using the services at Kamphangkollakarn Co.,Ltd. Data collected in this research were gathered through distributing questionnaires to customers in the company, direct mail, and fax. Respondents were requested to fax back to the researcher. There are three parts in the questionnaires: information about respondents; the information about factors in service performance on satisfaction level; and the information about factors in customer retention. The data were analyzed through SPSS program. Bivariate correlation statistic, the Spearman's rank correlation coefficient is used to test the hypotheses and to proceed the research objectives.

The majority of respondents in this research are between 31-40 years of age, business owners in garage businesses. Most of them provide reasons for choosing the company because of its facilities and because of familiar with the company.

The findings showed that all of the service performance factors, tangible, responsiveness, reliability, and price have significant and positive relationship with the customer retention of Kamphangkollakarn Co.,Ltd. Among those four factors, reliability is the most influential factor affecting customer retention for Kamphangkollakarn Co.,Ltd. the factors following the reliability are responsiveness, price, and tangible respectively.

The research findings have important implications for the managers or owners of auto garage businesses. The managers or owners should focus on these factors and in service quality factors, and use these factors as guidelines for the auto garage operation

As a result of the research in which Kamphangkollakarn Co.,Ltd manager can be used to guide in proposing company's strategy in the future in effective and efficient way in doing business operations.

Future research should incorporate a more extensive multiple-item and behavioral-intentions measure than has been used in this research. And future research should be generalized to study other car service center in other provinces for the benefit of applying solutions and strategies to each service center that will be successful if company delivered value and satisfaction to the customers.

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Specially, I am grateful to my parents who have always been supportive and understanding, without them I would not even have a chance to receive an education. I am thankful to my close friends who have to bear with me through for the troublesome hours writing thesis, listening to my complaints and problems and for everything through the days of hard times and good times.

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CHAPTER 1

Generalities of the Study

1.1 Introduction

Auto Industry in Thailand

The Thai auto industry has come a long way since it first started assembling cars in the past four decades, evolving from the import substitution stage to becoming a truly global player in the 21st century. Thailand has become the third largest automobile exporter in Asia, and that trend is certain to continue. In the next ten years, car markets in the developed countries will be approaching saturation. In the year 2002 Thailand manufactured a total of 584,951 cars, consisting of pick-up 1 ton 374,407 trucks, passenger cars 169,321 and others 41,223 cars compared with the year 2001, the manufacturing rate raising 27.32%.

The highest one is commercial cars, increase 194.39% or 27,220 cars. The next one is pick-up 1 ton, increase 29.40% or 85,058 cars. Follow by passenger cars increase 8.49% or 13,255 cars. (Executive summary on Thai automotive industry in 2002, www.thaiauto.or.th)

From table 1.1 the total vehicles sale in Thailand in the year 2002 was 409,459 cars and the population for the whole kingdom was 62,308,887 when compare the two numbers. In the year 2002 every 152 persons brought a new car. This figure shows that the automotive industry in Thailand has grown significantly (*Source: Ministry of Interior, the brooker group public company limited*).

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The sales of cars in Thailand for the year 2002 are shown in the table 1.1

Table 1.1: The Summary of Commercial Vehicles Sales in Thailand

2002 Sales Record										
Brand Name										
Segment	ISUZU	TOYOTA	NISSAN	MMC	HONDA	MAZDA	HINO	NISSAN-D	FORD	OTHERS	TOTAL
Truck 4-Ton up	1,929	-	-	609	-	-	1,985	338	-	266	5,127
	37.62%	0.00%	0.00%	11.88%	0.00%	0.00%	39.00%	6.59%	0.00%	5.19%	100%
Truck 2-3 Ton	2,371	95	-	258	-	-	1,839	-		-	4,563
	51.96%	2.08%	0.00%	5.65%	0.00%	0.00%	40.30%	0.00%		0.00%	100%
Pick Up 1 Ton	87,383	70,173	29,360	20,516	-	7,185	-	-	19,077		233,694
	37.40%	30.00%	12.60%	8.80%	0.00%	3.10%	0.00%	0.00%	8.20%		100%
Others (Bus, Van,Etc)	106	5,927	2,000	1	-	-	81	31		2,384	10,530
	1.00%	56.00%	18.99%	0.00%	0.00%	0.00%	0.77%	0.29%		22.64%	100%
Commercial Vehicle	91,789	76,195	31,360	21,384	0	7,185	3,905	369	19,077	2,650	253,914
	36.15%	30.01%	12.35%	8.42%	0.00%	2.83%	2%	0.20%	7.51%	1.04%	100%
SUV (Sport Utility Vehicle)	936	3,123	206	3,802	18,802	-	-	-	75	2,248	29,192
	3.00%	11.00%	1.00%	13.00%	64.00%	0.00%	0.00%	0.00%	0.26%	7.7%	100%
Passenger Car	5	50,734	12,788	7,726	35,464	1,042	-	-	1,419	17,175	126,353
	0.00%	40.00%	10.00%	6.00%	28.00%	1.00%	0.00%	0.00%	1.12%	13.59%	100%
Total	92,730	130,052	44,354	32,912	54,266	8,227	3,905	369	20,571	22,073	409,459
	22.65%	31.76%	10.83%	8.04%	13.25%	2.01%	0.95%	0.09%	5.02%	5.39%	100%

Source: www.isuzumotor.com/about/2002.htm

Thai Auto Service Industry

There are two types of auto service in Thailand: after-sale service and auto garage service. After-sale service is the service provided by a car company after purchased such as Honda, Toyota, Ford, Nissan, etc.

Auto garage service is the service provided by private companies, the leader in auto garage such as B-Quik, Vcare Auto Service, Shell Auto Service, and other private garages. The auto service consists of part repair and replacement, including diagnostic service, lube, oil & filter change service, brake system service, vehicle inspection & safety checks, radiator & coolant system service, collision repair,

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engine & transmission service, emission control service, suspension system service, and tires and battery changing service.

Auto service industry is also a part of the automotive industry that has a significant market for development of an advance auto service industry. From fierce competition, this business is effected by the strategies of local and global competitors. However, the auto service business has to improve all activities of products and services to satisfy customers as the key competitive weapon throughout the world. For all firms, having what is best for the customer as the principal goal is the key to concentrate on products and services is often seen as the key to a company's success and long-term competitiveness.

Kamphangkollakarn Co.,Ltd

Kamphangkollakarn Co.,Ltd, an auto garage, is located in Kamphangphet province. The company was founded in 1974 by Mr. Vichit Thepsilpavisut, now the business has moved to the next generation the current managing director is Mr Pornchai Thepsilpaviut.

Kamphangkollakarn Co.,Ltd is a first-class automotive parts repair and replacement specialist. The company specializes in engine and transmission systems and suspension systems. Customers are ensured that all works are performed by trained and certified technicians only; the company also uses the most modern equipment and top quality parts under the standards as the after-sale service of brand companies because the company believe in its highest standards, the company provides its customers with money back guarantee.

The company also advises its customers of any expected damages or potentially dangerous conditions to ensure customer satisfaction and that their cars are working efficiently. At Kamphangkollakarn, the most important person is

always the customer. It is the company's aim to achieve 100% customer satisfaction and exceed their customers' expectation.

Kamphangkollakarn's technicians are trained and certified to perform professional work on all kind of vehicle makes. Its service includes repairing cylinder, camshaft, head and valve assembly, piston assembly, lathing all parts, oil pump, injections, and welding all parts of cars. The company uses the most modern equipment and top quality parts to ensure its customers to receive the best professional, quality work at a competitive price.

Service is a Critical Factor in the Auto Industry

Service is a crucial issue in the strategic, tactical, and operative management of business operation in many organizations, although the actual performance of a service is taking place at an operative level in a service encounter. A service is intangible and heterogeneous; its production, distribution, and consumption are simultaneous processes; a service is an activity or a process. It is a core value created in buyer-seller interactions; customers participate in its production; but it cannot be kept in stock; and there is no transfer of ownership (Gronroos, 2000).

The significance of service area has gained more attention in the business management. For example, Toyota is the third largest automobile producer in the world. It had, as at 1995, 48 production plants distributed all over the five continents of the world. Toyota describes its after-sales objectives as customer satisfaction, customer retention, efficiency in work and job flow, both for the distributor and dealer, and high service absorption for dealers. Its major target groups are all Toyota customers. Although an after-sales department does not exist at Toyota, after-sales activities are taken care of by the service-marketing department, parts, and marketing department. (Ehinlanwo, Zairi, 1996)

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As mentioned above, understanding a customer's perception of the service quality is important for delivering superior service. Researchers had emphasized the importance of service quality a few years ago because of the following problems the car service industry was confronted with:

1) Customer emphasized the service delivering part of a garage, while the companies emphasized their technical knowledge;

2) The customer was not able to judge the delivered service independently due to the difficulty of seeing through the work methods of a car service firm. Therefore the customer had to trust that the given advice is in this interest and that the promised maintenance is carried out the way it is said to be;

3) Owing to strong price competition the profitability of the companies was under pressure;

4) The quality costs in the industry were rather high and varied from 8 to 15 percent of the invoiced work.

These problems gave reasons for developing a high standard of quality for the car service industry. In order to offer superior services, customer satisfaction and customer retention should be uppermost in the mind of all service providers.

1.2 Statement of the Problem

Customer satisfaction with a company's product or service is often seen as the key to a company's success and long-term competitiveness. In the context of relationship marketing, customer satisfaction is often viewed as a central determinant of customer retention (John Wiley & Sons, Inc 1997)

Customer retention is increasingly being seen as an important managerial issue. It has also been acknowledged as a key objective of relationship marketing. (Gronroos 1994; Sheth & Parvatiyar 1994) which refers "to all marketing activities directed toward establishing, developing and maintaining successful relational exchange" (Morgan & Hunt 1994). Additionally Kotler had been stated " The key to customer retention is customer satisfaction" (Kotler 1994)

Only small number of researches has investigated the nature and extent of the relationship between satisfaction and retention itself (Bloemer & Poiesz 1989). Therefore, the statement of the problem related to this research is:

1. What is the effect of factors related to tangibles, responsiveness, reliability and price on customer satisfaction level of Auto Garage business in Kamphangphet province?

2. What are customer satisfaction aspects that are important for customer retention in Auto Garage business in Kamphangephet province?

1.3   Research Objective

The overall objectives of this research are:

1. To study the effect of factors related to tangible, responsiveness, reliability, and price on customer satisfaction level of auto garage business in Kamphangphet province;

2. To study the relationship between the level of customer satisfaction and customer retention on auto garage business in Kamphangphet province.

1.4   Scope of the Research

1. This research focused on the effect of factors in tangibles, responsiveness, reliability and price that related to customer satisfaction level and customer retention.

2. This research is to study the garage business in Kamphangphet province by using Kamphangkollakarn Co.,Ltd as a case study.

3. This research is the study of Kamphangkollakarn Co.,Ltd 's customers during the period of Febuary 2004

1.5   Limitation of Research

This research is limited to identify the factors in service performances which consists of tangibles, responsiveness, reliability and price that related to customer satisfaction level and customer retention which consists of repurchase intention, feedback to supplier, and word of mouth to study the relationship between factors in the customers satisfaction level and customer retention.

Therefore, its finding should be generalized with caution for other factors in service performance not included in the framework of the research. In addition, this

study is also limited to the particular time frame, so that the results cannot be generalized for all times. The researcher focused on specific company in Kamphangphet province so the result may not be generalized and should be applied carefully for the auto service industry. The research also study on the repeated customer therefore the finding could not be generalized to the first time or other customers as a whole.

1.6   Significance of the Study

This research will highlight for the auto garage business in Kamphangphet province. Because customers in Kamphangphet are different from other areas the criteria for purchasing the products or services are also different. Rare researchers have study in this province customer satisfaction and customer retention is new topic for people in this province. Therefore it is a good chance for the researcher to investigate on what customer satisfaction and dissatisfaction is. What factors the customers are concerned with viewing service performance which consists of tangibles, service performance, reliability and price of the auto garage business, and what is the relationship between the level of customer satisfaction and customer retention that are important linkages to a market base strategy and profitability.

The benefits of this research are for the owners or managers of auto garage business as well as those who are interested in investing in this business to improve service operations and retain customers.

1.7   **Definition Terms**

Attribute   is the characteristics or features that an object may or
                                may not have. It can be identified into two classes,
                                intrinsic attributes and extrinsic attributes. Each
                                attribute provides the consumer with a specific
                                benefit that has some degree of utility of that
                                consumer (Mowen and Minor, 1998)

Automobile   is a self-propelled passenger vehicle that usually has
                                four wheels and an internal-combustion engine, used
                                for land transport. Also called car motor.
                                (www.dictionary.com)

Customer   is an individual who purchase product or service
                                from Kamphangkollakarn Co.,Ltd.

Customer Loyalty   a measure of how often, when selecting from a
                                product class, a customer purchases a particular
                                brand. (Gilbert D. Harrell, 2002)

Customer Retention   refers to the ability of the organization to get
                                customers to repurchase or returns in the future.
                                (David 1994)

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Customer Satisfaction   is a customer's positive, neutral, or negative feeling about the value received from an organization's product or service in specific use situations. (Gilbert D. Harrell, 2002)

Feedback to Suppliers   means the extent to which the customer provides feedback to the supplier who has created a particular level of satisfaction.

(Magnus Soderlund, 1998)

Firm Image   image consumers have of a firm will have an impact on their expectations of the service. If they have a high image of the firm, they will have high expectations. If the image is low, expectations will be low. (Davis L.Kurtz, Kenneth E. Clow, Service Marketing)

Price   exchange of value of goods or services in the marketplace. (Gilbert D. Harrell, 2002)

Reliability   refers to the ability to provide the service on time, accurately and dependably. (Parasuraman A, Zeithaml, V.A.Bery, L.L 1985)

Revisited Intention

extent to which the customer intends to purchase again from the supplier who has created a certain level of satisfaction.

(Magnus Soderlund, 1998)

Service

is any act or performance that one party can offer to another that is essentially intangible and does not result in the ownership of anything. Its production may or may not tied to a physical product (Kotler, 2000)

Service Performance

It refers to service delivery that is a process between the customer and a company's employees, it represents a "moment of truth", where the underlying assumption is that the customer's perception of a service encounter is an important element of his/her satisfaction, perception of quality and long-term loyalty. To perform the service, the employee has to meet certain specifications of service. And the management of customer and employee interactions in service encounters and the way through which customers evaluate individual service encounters.

(Pierre Chenet, Caroline Tynan, and Arthur Money 2000)

Service Quality   is the perception result from a comparison of consumer expectation with actual service performance.

(Parasuraman, Zeithaml, and Berry, 1985)

Tangible   refers to the state of facilitating goods, physical condition of the buildings and the environment, appearance of personnel, and condition of equipment.

(Parasuraman A, Zeithaml, V.A.Bery, L.L 1985)

Word of Mouth   refers to the extent to which a customer informs friends, relatives and colleagues about an event that has created a certain level of satisfaction. (Magnus Soderlund, 1998)

CHAPTER 2

Review of Literature and Related Studies

This chapter consists of 4 sections reviewing literature relevant in supporting conceptual framework of this research. The literature review is needed for clearer understanding of the key concepts of independent variables and dependent variable as well as the relationship between those two concepts.

Section 2.1 explains the concepts and theories related to the independent variable – service quality, customer satisfaction, and price. Section 2.2 explains concepts and theories related to the dependent variable - customer retention. Section 2.3 explains the relationship between independent variable and dependent variable. And section 2.4 presents the previous research study.

Customer satisfaction with a company's products or services is often seen as the key to a company's success and long-term competitiveness. In the context of relationship marketing, customer satisfaction is often viewed as a central determinant of customer retention (Thurau and Klee, 1997)

" Customer satisfaction has traditionally been regarded as a fundamental determinant of long-term consumer behaviour." (Oliver, 1980; Yi, 1990)

" The more the satisfied customers are, the greater is their retention." (Anderson and Sullivan, 1993; Formell, 1992)

2.1 Theory Related to the Main Independent Variable

Service Quality

Zeithaml, Parasuraman and Berry have developed a model by which it is possible to measure the perceived service quality. By starting with the introductin of the concept of perceived service quality by Gronroos. From this concept, definition of service quality, as perceived by customers, has been derived, for example: *service quality is a measure of how well the service level delivered matches customer expectation. Delivering quality service conforming to customer expectations on a consistent basis.*

In other words, service quality can be defined as " the extent of discrepancy between customer expectations or desires and their perception". According to Berry et al. customers' expectations are shaped by the following factors: word-of-mouth communication, personal needs of customer, past experience and external communications from the service provider.

Figure 2.1: shows the customer assessment of service quality.

From the research of Zeithaml et al. in a number of service sectors, customers distinguish the following five dimensions when they evaluate service quality:

- *Tangible.* Appearance of physical facilities, equipment, personnel and communication materials.

- *Reliability.* Ability to perform the promised service dependably and accurately

- *Responsiveness.* Willingness to help customers and provide prompt service

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- *Assurance.* Knowledge and courtesy of employees and their ability to convey trust and confidence.

- *Empathy.* Caring, individualized attention, which the firm provides for its customers.

The perceived quality of five dimensions is measured with SERVQUAL. SERVQUAL is an instrument for measuring service quality developed by Berry et al. The measurement compose of two sections: "an expectation of customers containing 22 statements to ensure the general expectations of customers concerning a service, and a perception section containing a matching set of 22 statements to measure customer's assessment of a specific firm within the service category.

Figure 2.1:   Customer Assessment of Service Quality
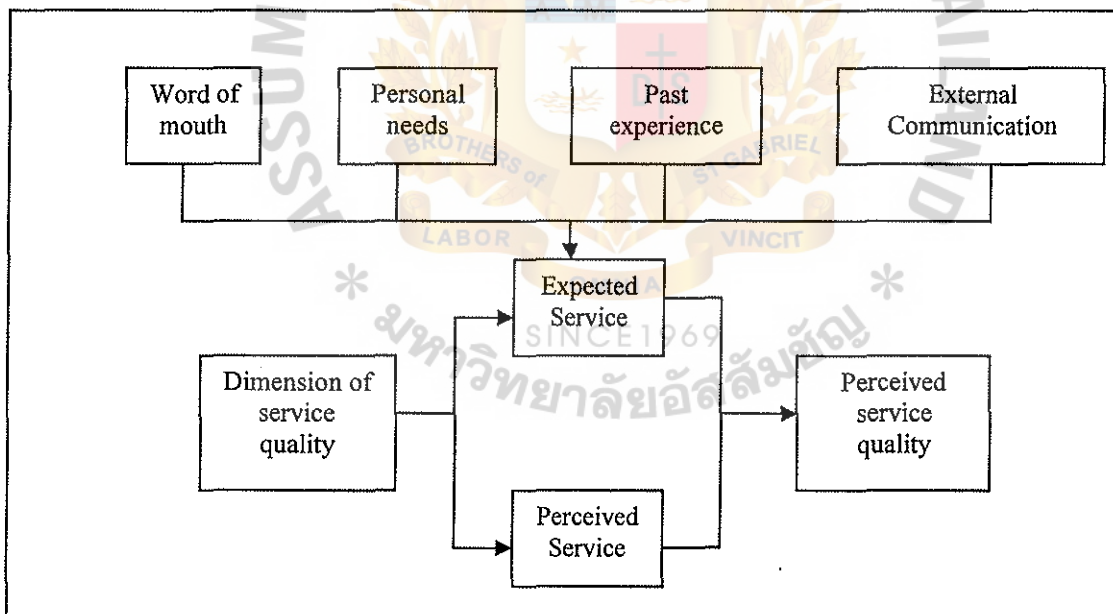
Source : Bouman and Wiele (1992) "Measuring service quality in the car service industry: Building and testing an instrument". International journal of service industry management, vol3 no.4

Theory of Parasuraman on Service Quality

The service quality determinants proposed by Parasuraman et al are described below.

1.Reliability: the ability to provide the pledge service on time, accurately and dependably. For example, in the case of Royal Mail, this means next-day delivery of first class mail and delivery of mail in good condition; and in the case of an insurance company, prompt settlement of the claim; or in case of a university graduate's subject, knowledge.

2. *Responsiveness*: ability to deal effectively with complaints and promptness of the service. For example, in the case of a package tour operator, it could be dealing quickly and effectively with a patron's accommodation problems; or in the case of a car hire company, providing similar or higher-grade substitute car, even when the original car suffers from only a minor problem such as a radio malfunction.

3. *Customization*: the willingness and ability to adjust the service to meet the needs of the customer. This would mean, for example, in the case of a gourmet restaurant, willingness to provide an item that is not on the menu; or in the case of a specialized tour operator, tailoring holiday package to meet the customer's specific requirements.

4. *Credibility*: the extent to which the service is believed and trusted. The service provider's name and reputation, and the personal traits of front line staff all contribute to credibility. For example, in the case of an insurance company, this could mean a positive reputation for settlement of claims.

5. *Competence*: staff should possess the necessary skill, knowledge and information to perform the service effectively. For example, an auto garage should provide the best possible advice to the potential customer. To achieve this, he or

she needs to know the product portfolio well and have the skill to match the product with the customer's needs.

6. *Access*: the ease of approachability and contact. For example, this could involve convenient opening hours, getting through on the telephone and convenient location.

7. *Courtesy*: the politeness, respect, consideration and friendliness shown to the customers by the contact personnel

8. *Security*: the freedom from danger, risk and doubt. It involves physical safety, financial security and confidentiality.

9. *Communication*: keeping customers informed about the service in a language that they can understand and listening to the customers.

10. *Tangibles*: these include: the state of facilitating goods; physical condition of the building and the environment; appearance of personnel; and condition of equipment. Tangibles are more important in high-contact services than low contact services.

11. *Understanding / knowing the customer*: this involves trying to understand the customer's needs and specific requirements; providing individualized attention; and recognizing the regular customer.

Customer Satisfaction

Kotler (1997) defined Satisfaction as "a person's feeling of pleasure or disappointment resulting from comparing a product's perceived performance in relation to his or her expectation". Satisfaction is a function of perceived performance and expectations.

1) If the performance falls short of expectation, the customer is dissatisfied.

2) If the performance matches the expectations, the customer is satisfied.

3) If the performance exceeds expectations, the customer is highly satisfied or delighted.

Expectations are influenced by past buying experience, friends, and associates' advice, and marketers' and competitors' information and promises. If marketers raise expectations too high, the buyer is likely to be disappointed. However, if the company sets expectations too low, it won't attract enough buyers. Most successful companies are raising expectations and delivering performance to match.

Satisfaction and Dissatisfaction

Satisfaction is important because a company's sales come from two basic groups - new customers and retain customers. It usually costs more to attract new customers than to retain current ones, and the best way to retain current customers is to keep them satisfied. Satisfied customers buy a product again, talk favorably to others about the product, pay less attention to competing brands and advertising, and buy other products from the company. Many marketers go beyond merely meeting the expectations of customers - they aim to delight customers. A delighted customer is even more likely to purchase again and to talk favorably about the product and company.

A dissatisfied consumer responses differently. Whereas, on average, a satisfied customer tells 3 people about a good product experience, a dissatisfied customer gripes to 11 people. Clearly, bad word of mouth travels farther and faster

than good word of mouth and quickly damage consumer attitudes about a company
and its products (Kotler, 1996).

Figure 2.2: The Disconfirmation Model of Consumer Satisfaction
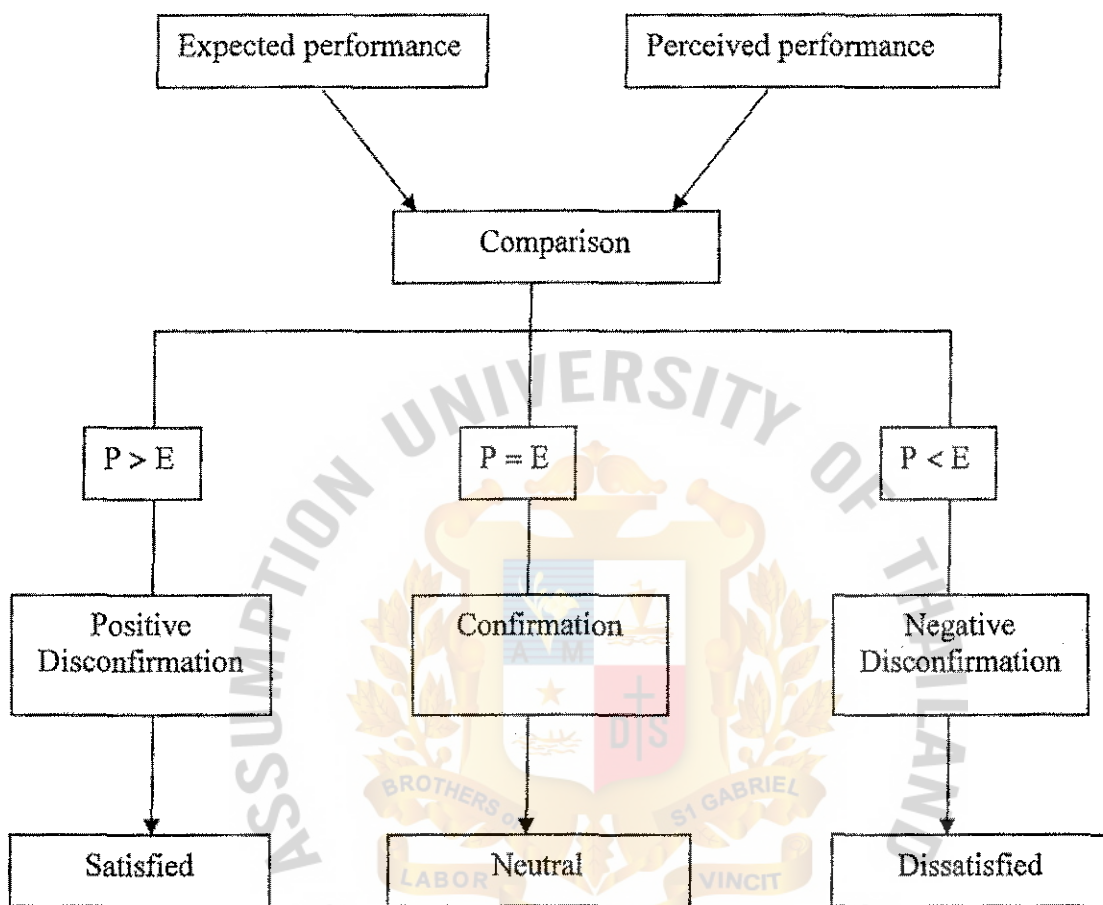
(Source :James L.Walker(1995), "Service encounter satisfaction : Conceptualized"
Journal of Marketing Vol.9 No.1 pp5-13)

Researchers generally agree consumer satisfaction results from a subjective
comparison of expected and perceived attribute levels. The key elements have been
described, with considerable conceptual and empirical support, by the
disconfirmation model (figure 2.2). This model illustrates that consumer
satisfaction is related to both the size and direction of disconfirmation, with three

potential outcomes: negative disconfirmation, positive disconfirmation and confirmation.

The model related satisfaction with customer's pre-purchase expectations and perceptions of service performance. Any differences between expectation and perceived performance is known as disconfirmation. As illustrated, the model is contracted on the basic of comparing perceived performance and expectation,

The model also implies that performance of the services/products is a potent variable as customers compare it with their expectations whereas previous service experience, word of mouth, and various form of marketing communications and awareness of competition shape expectations.

Price

Price refers to the exchange value of good or service in the marketplace. The value of product or service comes from the marketing organization and the buyer, in each case the value is given up and received.

Pricing plays an important role in the allocation of resources in free market economies. Since prices fluctuate according to competitive force, they rise and fall directly influence the amount of goods and services consumers are willing to purchase. Pricing is also critical for the firm. The amount consumers purchase times its price determines the total revenue a company receives. Prices have a dramatic effect in determining the overall profitability of the firm. Consequently, pricing is one of the most important and complex areas of marketing.

In fact, good pricing decision require analyzing what target customers expect to pay even before products are developed, distributed, and promoted. Marketers need to understand ahead of time what customer perceived to be good value. If too much is charged, then customers perceive that they are losing value,

and they will spend their money on other products or purchase the minimum amount necessary. If too little is charged, then the firm can lose money, eventually become uncompetitive, and go out of business.

In service business consumers often use price as one of the inputs into forming expectations of a service and in making purchase decision. If consumers are not familiar with the particular service provider, prices become even more important because of the lack of search qualities. For service high in credence and experience properties, price serves as one of the tangible cues that will indicate to the consumer what to expect.

2.2   Theory Related to the Main Dependent Variable

Nothing may seem more obvious than the need to keep customers coming back. Therefore, customer retention cannot either be overlooked when it comes to strategy development. Any marketing manager can provide you with a market share estimate, but ask for the customer retention rate they may think for a while and come up with a blank stare.

A case study of service companies by Bain & Co. found that customer retention has a more powerful effect on profits than market share, scale economies, and other variables that are commonly associated with competitive advantage. More specifically, Bain found that companies that reduce customer defections by 5% can boost profits from 25% to 85%.

As customer retention goes up, marketing costs go down. Moreover, loyal customers frequently bring in new business. The role of customers as sales-person is especially important in the case of complex products. For example, buying a telecommunications system that will be at the heart of a business is a major risk.

Perspective customers are filled with worries: Will the dealer provide prompt service? Can the system be expanded later? Will the dealer go out of business? To get reliable answers, perspective customers tend to rely on friends and colleagues rather than on salespersons or brochures. (*Designing a Customer Retention, Journal of Business Strategy March/April 1992*)

Therefore, customer retention effects to three types of customer behaviors (Word-of mouth, feedback to supplier, and loyalty)

Word-of-Mouth

Word-of-mouth is defined as the extent to which a customer informs friends, relatives and colleagues about an event that has created a certain level of satisfaction. Hart et al.(1990) claim that " our most recent research suggests that customers who have had bad experiences tell approximately 11 people about it; those with good experience tell just 6". Moreover, Fortune (December 11, 1995) reports that "research shows that people tell only eight friends about a truly satisfying experience. Deliver on the bad experience, though, and amore than 20 people will hear about it". Fisk et al.(1990) make a similar observation. One explanation is offered by theory on the asymmetrical effects of positive and negative events. It claims that under certain conditions, negative events are likely to produce a stronger response than positive events.

However, there are reasons to believe that positive events produce stronger response than negative events under certain conditions. For instance, Holmes and Lett (1977) found that customers with positive experience were, more inclined than those with negative experience to communicate their feeling to others.

Feedback to the Supplier

It is defined as the extent to which the customer provides feedback to the supplier who has created a particular level of satisfaction. The importance of feedback seems clear. For example, complaints aid the supplier in identifying areas where improvements can be made, while compliments suggest areas where the current performance may not need immediate improvements. Consequently, the importance of feedback is stressed by several authors who discuss systems which facilitate the customer's transmission of feedback (cf, Hart et al.,1990). Yet the relationship between customer satisfaction and feedback is severely underresearched. In the empirical study, skewness in the satisfaction variable exists in that a sample of dissatisfied customers is selected. Then, an assessment is made of the extent to which the dissatisfied customers have provided the supplier with feedback (i.e. complaints). A common result is that the propensity among the dissatisfied to forward complaints to the supplier is low. For instance, Kotler (1994, p 470) argues that only about 5 per cent of dissatisfied customers complain.

Loyalty

It refers to as the extent to which the customer intends to purchase again from the supplier who has created a certain level of satisfaction. However, some authors have suggested that the effects of customer satisfaction on loyalty are different depending on the level of satisfaction. For instance, Coyne (1989) argues that the relationship is subject to two critical thresholds. In Coyne's view, the relationship is weak when customer satisfaction is low, moderate when customer satisfaction is intermediate, and strong when customer satisfaction is high. That is to say, a low degree of satisfaction may signal that the supplier should be replaced, whereas the high level of customer satisfaction may signal that it could be useful to

deep the relationship with the supplier. On the other hand, an intermediate level of satisfaction (i.e. a neutral experience) may not signal a need for any particular change.

Theory of Taylor on Customer Retention

Even though it is sometimes seen as less exciting than Customer Acquisition and new product development, Customer Retention is important for delivering profits to the bottom line. Not only do customers need to continue to use your product on a continuous basis, they need to buy other products and services that you offer to them. Current customers are important not only for their purchases, but for their word-of-mouth to help attract new customers. By turning loyal customers into advocates, you significantly reduce Customer Acquisition costs and significantly increase the value of your current customers.

Three key Customer Experience elements drive Customer Retention:

Long term usage and satisfaction: Retain customers who continue to use and enjoy the product.

Buy more products: Sell loyal customers more useful and enjoyable products.

Word-of-mouth: Turn customers into advocates to help you acquire new customers.

Often after companies successfully develop new products and conduct a big marketing launch to acquire new customers, companies do not pay as much attention to retaining those customers as they should. Current customers typically deliver the huge share of a business' profits because they have already been acquired and are more likely to buy new products and services offered to them from the same company. Further, for many businesses, word-of-mouth from current customers drives about half of new Customer Acquisition purchases. So

loyal customers not only continue to pay directly for products and services used on a continuous basis but also help to drive down Customer Acquisition costs by acting as your stealth sales force.

Figure 2.3   Customer Experience Model

Objective: Retain and nurture loyal customers and turn them into advocates
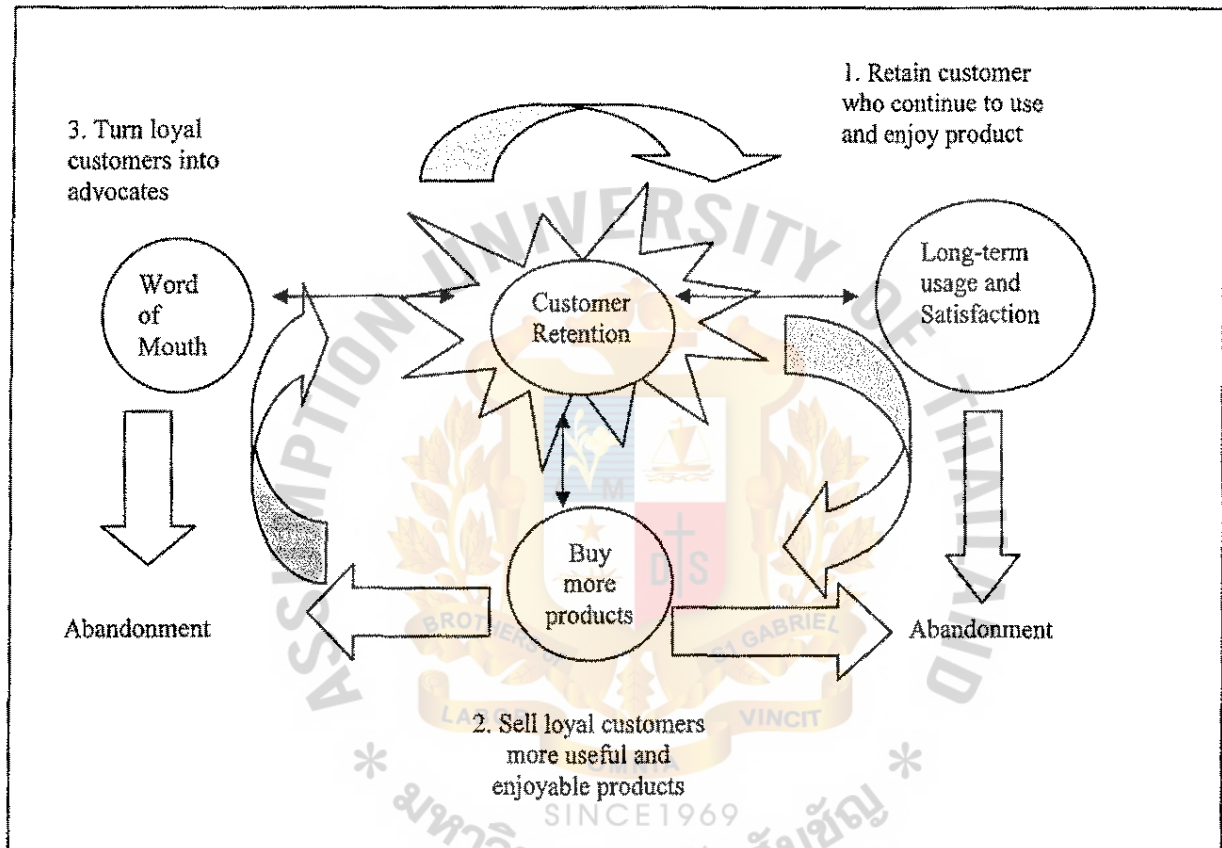
Source : Suzanne Taylor Marketing Strategy Consulting : Building Brands and Business by creating WOW customer Experience. (www.customerretentionmodel.htm)

In order to measure how well you are doing in these areas, it is important to identify the metrics that matter most. The metrics chosen will not only help to determine goals but will also be the yardstick by which success and progress is measured. The metrics must measure something that is important to business results and can be measured accurately, consistently, and efficiently.

Customer retention is a critical component of any business because it delivers the most profits to the bottom line. Abandoned customers need to be

carefully studied so you can understand how to prevent abandonment. Customer research such as segmentation and lifetime value analyses stress on who the best customers are and why. This in turn helps marketers refine their target customer descriptions and marketing communications for customer acquisition. The lifetime value of customers also helps determine how much businesses should be willing to pay to acquire new customers. Finally, current customers certainly drive product development since their needs and wants should be considered a high priority.

2.3   The Relationship between the Independent and Dependent Variables

In recent times, customer satisfaction has gained new attention within the context that shift from transactional marketing to relationship marketing (Gronroos, 1994: Sheth & Parvatiyar, 1994). Which refers " to all marketing activities directed toward establishing, developing, and maintaining successful relational exchanges" (Morgan & Hunt 1994) In many publications, satisfaction has been treated as the necessary premise for the retention of customers, and therefore has moved to the forefront of relational marketing approaches (Rust & Zahorik, 1993). Kotler sums this up when he states: "The key to customer retention is customer satisfaction" (Kotler, 1994)

The conceptual model of the relationship between customer satisfaction and customer retention

The model illustrated in figure 2.4, shows the overview of customer satisfaction and how it link to customer retention. Once goods and services are offered compensatory attribute and non-compensatory attribute should be focus as the might influence on the formation of satisfaction.

In addition, emotional and temporary impression of satisfaction is equated with the customer's appraisal of a concrete product or service experience and likely to change to a more stable and attributes of the product or service. The quality perception of the product or service could be divided into 3 different areas, as it depends on an adaptation of the customer's internal standard which are resigned, stable, and progressive quality perception.

Figure 2.4: The Conceptual Model of the Satisfaction-Retention Relationship
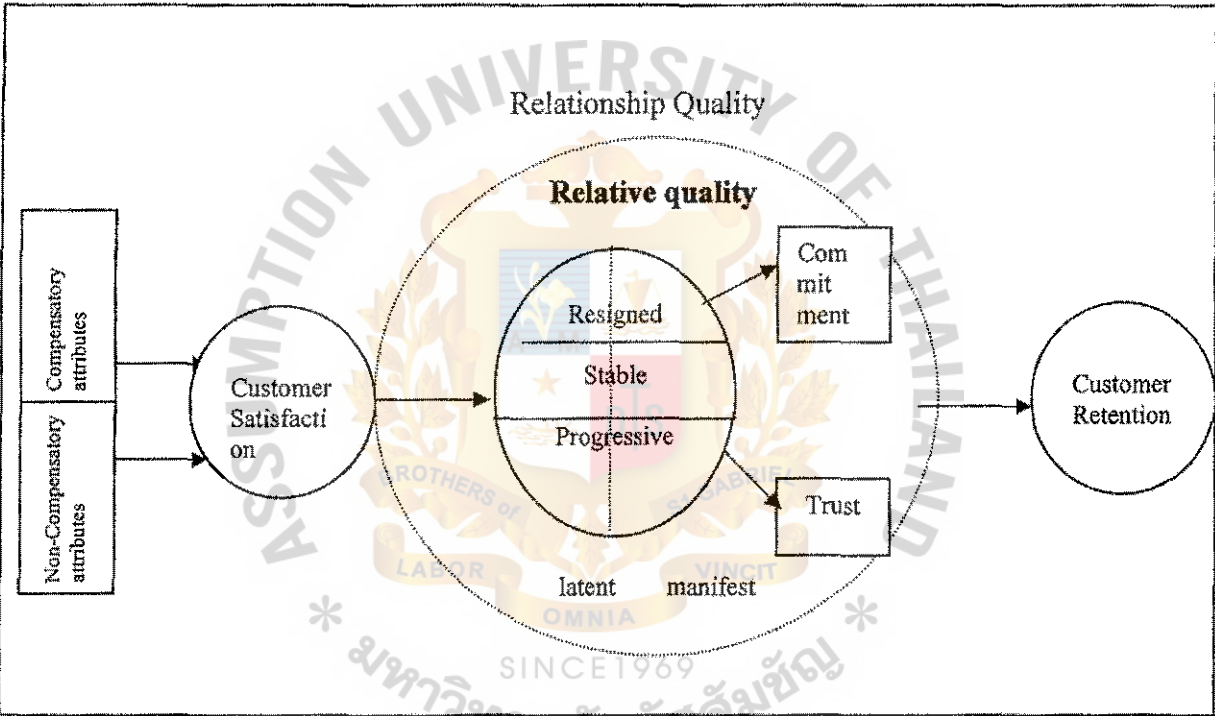
Source : "the impact of customer satisfaction and relationship quality and customer retention: A critical reassessment and model development". Psychology & Marketing Vol,14(8) pp.737-764

Considering from customer's involvement, latent and manifest quality perception are not a significant factors whereas resigned, stable, and progressive quality perception are considered as a more significant factors which would result differently and directly to customer retention. According to this model, it also points a competition-related component of the other products and services. Since the products and services are conceptualized as another level of relationship quality

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which are the customer's trust and commitment. Therefore relationship quality serve as a potent but nonlinear predictor variable for customer retention.

Additionally, from the model showing the general mechanism intrapsychological, contextual, and situational factors should be added in as an optional part of the model as they might influence the re-purchasing.

Figure 2.5:   Schematic Representation of the Postulated Relationship of Customer Satisfaction, Overall Quality Perception, and Customer Retention.
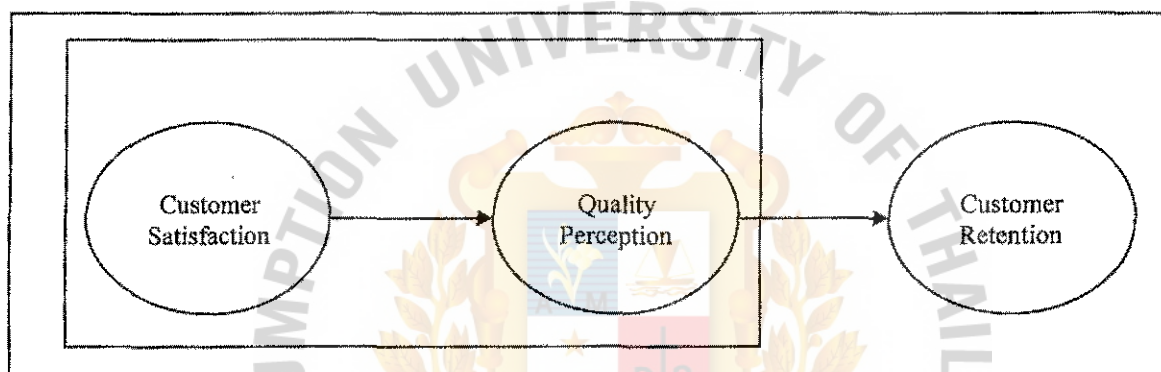
Source : "the impact of customer satisfaction and relationship quality and customer retention: A critical reassessment and model development". Psychology & Marketing Vol,14(8) pp.737-764

Customer satisfaction with a company's products or services is often seen as the key to a company's success and long-term competitiveness. In the context of relationship marketing, customer retention is often viewed as a central determinant of customer retention. Thurau and Klee examine the postulate of a close relation between customer satisfaction and customer retention, and identify that perceived overall quality plays a key role as a mediator in the relationship between satisfaction and customer retention as the figure 2.5

The product and/or service quality perception is seen as the higher order and more stable variable. Thus, satisfaction is regard as a short-term emotional state that

results from an interpersonal comparison of the customer's expectations with the evaluation of a single product or service encounter.

2.4   Empirical Research and Finding

The study of Magnus (1998) on customer satisfaction and its consequences on customer behaviour revisited

The objective of Magnus's study is to indicates the extent to which the relationship is different between the cases of "low" and "high" satisfaction effected to three potential behaviors of consumers : word-of-mouth, feedback to supplier, and loyalty or repurchase intention. The literature suggests that customer satisfaction is believed to be associated with fruitful customer behaviour from the firm's point of view. A positive association has been observed between customer satisfactio and loyalty and between customer satisfaction and the propensity to recommend the supplier's offer to other customers. The questionnaire was tested four key variables: satisfaction, word-of-mouth, feedback, and loyalty.

The study explores how customer satisfaction is related to customer behaviour including either very satisfied customers or very dissatisfied customers. Hypotheses was tested the relationship between customer satisfaction and customer behaviour is different under the condition of low satisfaction and high satisfaction. As a result of all hypotheses tested in this study are different so the explanation is not likely to foster a deep understanding of the pattern. Therefore, future research should address the issue of why different pattern occur given a set of potential factors.

The study of Bourman and Wiele (*1992*) on The Measuring Service Quality in the Car Service Industry in The Netherlands

The objective of the study of Bourman and Wiele are to find out, how can service quality be measured? Which dimensions are distinguished by customers when they evaluate service quality in the car service industry? What is the importance of the different dimensions and how are they related to each other? By testing four key variables: Tangibles, Faith, Customer kindness, and Service Quality.

They developed a questionnaire on the basis of the five SERQUAL for the Dutch car service industry. They tested the three factors that are Customer kindness, Tangible, and Faith with total 48 items under them as the independent variable and service quality as dependent variable. And they set three control questions for analysis as the dependent variable that are 1) whether they would bring their car to this firm the next time they need maintenance 2) whether they would buy their next car with this firm 3) whether they would recommend the firm. The associated between these questions and the three quality scores was calculated with a regression analysis. The result points out that customer kindness influence the dependent variable (service quality) and the other two factors can only influence the dependent variables by way of customer kindness. The measuring instrument of this research is very useful for garage firms due to it measures on a regular basis and it can help in identifying change in the quality of the services delivered. For other organizations the process of developing a measuring instrument should be repeated in the same way, starting by building a questionnaire based on the five quality dimensions as defined by Berry, Parasuraman, and Zeithmal and by adding questions regarding factors, which are expected to be of specific interest according to the basic processes in that business.

The study of Ranaweera and Prabhu *(2003)* on the influence of satisfaction, trust and switching barriers on customer retention in a continuous purchasing setting

This research examines the combined effects of satisfaction, trust and switching barriers on customer retention in a continuous purchasing setting. They develop a framework from four main variables that are satisfaction, trust, and switching barrier to customer retention and find out the relationship between satisfaction, trust, and switching barrier to customer retention. Drawing on this framework develops several hypotheses regarding the main and interaction effects of customer satisfaction, trust and switching barriers on retention. Tests these hypotheses on data from a large-scale mail survey of fixed line telephone users in the UK, finding both customer satisfaction and trust have strong positive effects on customer retention. However, the research also finds out that the effect of trust on retention is weaker than that of satisfaction. Nevertheless, the interaction between trust and satisfaction also has a significant effect on retention, indicating that building both customer satisfaction and trust is superior strategy to a focus on satisfaction alone. Finally, the results show that switching barriers have both a significant positive effect on customer retention as well as a moderating effect on the relationship between satisfaction and retention. While service providers may be able to retain even dissatisfied customers who perceive high switching barriers, argues that ideally, firms should aim at a combined strategy that make switching barrier act as a complement to satisfaction.

While this study had studied on customer satisfaction, trust, and switching barrier as the key driver of retention. Therefore, future research should attempt to build a more complete framework of the factors that influence retention.

Additionally, the results are based on the survey of a single service industry so future research should generalized to other service industries.

CHAPTER 3

Research Frameworks

This chapter was the presentation of justification explanation on how research framework of the relationship between the level of customer satisfaction and customer retention in this study was emerged which focus on the concepts and theories followed was had been discussed in the previous chapter later, the research hypothesis, research variable were presented.

The chapter consists of theoretical framework, conceptual framework, hypothesis, and operationalization of the independent and dependent variables.

3.1   Theoretical Framework

Theoretical framework of this research based on the relationship between customer satisfaction and customer retention, which are defined by three previous researches.

First, the framework of Pipatsirisak (1999), he studied the service strategy by focusing on customer driven, operation base and result-oriented. In the framework, he classified service management into four parts. Those are products quality characteristics, sales, service performance and spare parts characteristics. He also specified the sub-variables for each part in the framework as the factors relates to customer satisfaction in details that will be shown in the next page in the theoretical framework. Pipatsirisak also confirm that this framework will be useful in consideration for response to the customer needs.

Second, the researcher has been developed the variables from the five dimension of the SERVQUAL instrument, by Berry, Parasuraman, and Zeithaml (1988), which appears to be a very useful starting point for measuring service quality in service organizations. The five dimensions of service quality consists of *tangible, reliability, responsiveness, assurance, and Empathy.* As Bourman and Wiele had developed for their research for the Dutch car service industry by came out with three dimensions: Customer Kindness, Tangible, and Faith. For this research the researcher developed the variables by making a list of the important service marks in the car service industry by interviewing customers, employees, and entrepreneur of Kamphangkollakarn Co.,Ltd. Those items had been compared with items found literature and previous researches.

Finally, the framework of Magnus, 1998, he studied the relationship between customer satisfaction and customer retention. He defined the customer retention into three main behaviors; word-of-mouth, feedback to supplier, and revisited intention or loyalty. He studied these three potential behavioural customer satisfactions. He also offered evidence which points to the fact that the form of the relationship between customer satisfaction and each behavioural variable is likely to be different at different level of satisfaction.

Figure 3.1: Theoretical Model (Pipatsirisak 1999)

Independent Variable (X) Service management   **Dependent Variable (Y)**

Product Characteristics

- Efficiency of product

- Convenient & Comfortable usage

- Often convenient usage

- Easy to repair & maintenance

- Easy to drive & comprehensive seeing

- Low fuel consumption

- Safety

- Beauty of body

- Neat of color and joint

Sales

- Pre-sales information provided

- Sales staff's knowledge of product

Service Performance

- Providing a speedy response

- Technical repair & knowledge

- The availability & distance of service center

- Suggestion & distribution of repair & maintenance document

- Frequency of services during the warranty period

- Often visit customers after ending period of warranty

- Attitude of field service rep.

- Driver & technical training support

- Service Charges

- Promised time

- Reasonable waiting time

Spare Parts Characteristics

- Price of Spare parts

- Availability of spare parts

- Availability to keep promise time of back order parts

- Part sales staff knowledge

- Durability

- Responsiveness & courtesy of part staff

Level of Satisfaction

3.2   Conceptual Framework

Figure 3.2: The Conceptual Model

| Independent Variable (X) | Dependent Variable (Y) |

Level of Customer Satisfaction

Tangible
- Modern machines
- Physical facilities appear to be suitable for the type of service provided
- Availability of spare parts

Responsiveness
- Responsiveness of frontline staff
- Provide information about the technical repair & knowledge
- Provide suggestion of repairing & maintenance knowledge
- Reasonable waiting time
- The way to solve problem of employees

Reliability
- Dependability
- Promised time
- The long lasting of repairing

Price
- Price of service
- Price of spare parts

Customer Retention
- Repurchase intention
- Feedback to suppliers
- Word of mouth

In this research, there are four main independent variables and a main dependent variable. Their definitions are as follows:

1. **Satisfaction** is determined by how consumers perceive the service they received compared to what they had expected prior to the service.

2. **Tangible** refers to the state of facilitating goods; physical condition of the building and the environment; appearance of personnel; and condition of equipment.

3. **Responsiveness** refers to the ability to deal effectively with complaints, willingness to help customers, and provide prompt service. Staffs should posses the necessary skill, knowledge, and information to perform the service effectively to achieve this he or she needs to know the product portfolio well and have the skills to match the product with the customer's needs.

4. **Reliability** refers to the ability to provide the service on time, accurately and dependably. Including the freedom from danger, risk, and doubt. It involves physical safety, financial security, and confidentially.

5. **Price** refers to the exchange of value of good or service in the marketplace.

6. **Customer Retention** refers to the ability of the organization to get customers to repurchase or returns in the future.

3.3 **Research Hypothesis**

In this section, the hypotheses are being stated in statistical form null and alternate hypotheses. After defining the important variables and establishing the relationships among them through the theoretical or conceptual framework, it is

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now appropriate to test whether the relationship that have been theorized do in fact hold.

Hypothesis #1: Test of relationship between customer satisfaction related to tangible factors of auto service center and the customer retention.

$H1_0$:   There is no relationship between tangible factors of auto service center and customer retention.

$H1_a$:   There is a relationship between tangible factors of auto service center and customer retention.

Hypothesis #2: Test of relationship between customer satisfaction related to responsiveness factors of auto service center and the customer retention.

$H2_0$:   There is no relationship between responsiveness factors of auto service center and customer retention.

$H2_a$:   There is a relationship between responsiveness factors of auto service center and customer retention.

Hypothesis #3: Test of relationship between customer satisfaction related reliability factors of auto service center and the customer retention.

$H3_0$:   There is no relationship between reliability factors of auto service center and customer retention.

$H3_a$:   There is a relationship between reliability factors of auto service center and customer retention.

Hypothesis #4: Test of relationship between customer satisfaction related to price factors of auto service center and the customer retention.

$H4_0$:   There is no relationship between related to price factors of auto service center and customer retention.

$H4_a$:   There is a relationship between price factors of auto service center and the customer retention.

3.4 Operationalization of the Independent and Dependent Variable

An operational definition is a definition stated in terms of specific testing criteria or operations. That is the definition must specify the characteristics to study and how they are to be observed.

Table 3.1: The operational components of the independent and the dependent variables

Variables	Concept Definition	Operational Components	Level of Measurement
Tangible	It refers to the state of facilitating goods, physical condition of the buildings and the environment, appearance of personnel, and condition of equipment.	• Modern machines • Physical facilities appear to be suitable for the type of service provided • Availability of spare parts	Ordinal Scale

Responsiveness	It refers to the ability to deal effectively with complaints, willingness to help customers, and provide prompt service. Staffs should posses the necessary skill, knowledge, and information to perform the service effectively to achieve this he or she needs to know the product portfolio well and have the skills to match the product with the customer's needs.	• Responsiveness of frontline staff • Provide information about the technical repair & knowledge • Provide suggestion of repairing & maintenance knowledge • Reasonable waiting time • The way to solve problems of employees	Ordinal Scale
Reliability	It refers to the ability to provide the service on time, accurately and dependably. Including the freedom from danger, risk, and doubt. It involves physical safety, financial security, and confidentially.	• Dependability • Promised time • The long lasting of repairing	Ordinal Scale
Price	The exchange of value of good or service in the marketplace.	• Price of service • Price of spare parts	Ordinal Scale

Customer Retention	It refers to the ability of the organization to get customers to repurchase or returns in the future.	• Repurchase intention • Feedback to suppliers • Word of mouth	Ordinal Scale

CHAPTER 4

Research Methodology

This chapter provides an overview of research methodology that is employed in this research study. In the first part, it describes the research method and sample survey, target population, sample size, collection of data, and research instrument/questionnaires, which is used in this research. In the next part, it describes the pre-test and gathering procedures for this research. In the last part, it describes data analysis technique, which is used in this research.

4.1 Method of Research : Sample Survey

This research study uses sample survey as a research method. Sample survey method usually gathers information from a sample of population by use of questionnaire for the primary purpose of collecting data related to the research problem. Sample survey method indicates that the purpose of the contacting respondents is to obtain a representative sample of the target population.

Sample Method

The researcher has used Non-Probability Sampling (Convenient Sampling)

"A sampling technique in which units of the sample are selected on the basis of convenience (Zikmund,2000)."

The researcher used Convenient Sampling that refers to the procedure of obtaining respondents who are most conveniently available. This is a technique use to obtain large number of completed questionnaire quickly and economically (Zikmund, 2000)

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4.2   Target Population

The respondents of this research were customers of Kamphangkollakarn Co.,Ltd which located in Kamphangphet. The table below shows the customer account from 2000 to 2002

Table 4.1: Number of Customer Account of Kamphangkollakarn Co.,Ltd 2000 – 2002

Name	Year 2000	Year 2001	Year 2002
Kamphangkollakarn Co.,Ltd	458	484	505

4.3   Sample Size

According to Agresti & Finlay, (1997) the sample size represents the total selected group for the study. There are three criteria to consider for an appropriate sample size that can represent a certain degree of accuracy, precision, confidence and variability. All of these criteria indicate whether the derived sample could achieve a certain degree of accuracy of estimation. The researcher attempted to have a 95 percent confidence interval (0.95 probability) of the sample size with a tolerance rate of error or margin of error at 5 percent.

From the table 4.1 the customer account in year 2002 of Kamphangkollakarn Co.,Ltd is 505, therefore the sample size is 217 respondents based on the research done by Krejcic & Morgan as shown in table 4.2 below

Table 4.2: Sample Size

Population	Sample size	Population	Sample size	Population	Sample size
10	10	120	92	340	181
15	14	130	97	360	186
20	19	140	103	380	191
25	24	150	108	400	196
30	28	160	113	420	201
35	32	170	118	440	205
40	36	180	123	460	210
45	40	190	127	480	214
50	44	200	132	**500**	**217**
55	48	210	136	550	226
60	52	220	140	600	234
65	56	230	144	650	242
70	59	240	148	700	248
75	63	250	152	750	254
80	66	260	155	800	260
85	70	270	159	850	265
90	73	280	162	900	269
95	76	290	165	950	274
100	80	300	169	1000	278
110	86	320	175	1100	285

(95% confidential level with 5% of tolerance rate)

4.4 **Data Collection**

The researcher distributed questionnaires to customers of Kamphangkollakarn Co.,Ltd during the period of Febuary 2004 to March 2004 on Monday through Saturday from 8:00 – 18:00. As the following process

1) Distributed directly to customers when they come to the company. They were requested to do the questionnaires while they were waiting for their service during Febuarty 15th 2004 to March 15th 2004.

2) During March 15th 2004 to March 20th 2004, the researcher send direct mails or fax the questionnaires to the customers who didn't come to the company on the above period. After that the researcher telephoned to follow up the respondents to sent mail or fax the questionnaires back to the researcher at the marketing department.

4.5 **Research Instruments / Questionnaire**

Primary data was collected by self-administered questionnaires are filled in by the respondents. Forms of questions are closed-ended because it helps respondents to make quick decisions among several alternatives and also help the researcher to control possible answers.

The questionnaire consists of three parts – personal information part, factors of service performance that influencing level of satisfaction, and customer retention part. Form of questions and answers are Thai languages and Five Point Linkert Scale is used to indicate the degree respondents assign to each question. In addition, to collect relevant data from setting questions make easily to analyze reply of respondents by minimizing bias.

This study measures the level of customer satisfaction about service provided by Auto service business in Kamphangphet province by using Kamphangkollakarn

Co.,Ltd as a sample business and study the relationship between level of satisfaction on service performance and customer retention by using some part of determinants of service quality of Parasuraman et al and framework of Magnus,1998 combined together to develop for the conceptual framework for this research. A questionnaire can be separated into three parts.

In part 1) is the information of respondents

In part 2) is a total of 13 questions for measure the level of satisfaction. The five point Likert scale is used as the indicator measuring the degree of the opinions.

In part 3) is a total of 3 questions for measure customer retention of customers of Kamphangkollakarn Co.,Ltd

Table 4.3: Questionnaire

Variables	Question Number
Level of Satisfaction	
Tangible	
Modern machines	Q1. This auto garage has modern machines
Physical facilities appear to be suitable for the type of service provided	Q2. Physical facilities and tools of this auto garage appear to be suitable for the type of service provided
Availability of spare parts	Q3. Availability of spare parts
Responsiveness	
Responsiveness of frontline staff	Q4. Responsiveness of frontline staff
Provide information about the technical repair & knowledge	Q5. Technical repair and knowledge
Provide suggestion of repairing &	Q6. Suggestion of repairing and maintenance

maintenance knowledge	knowledge
Reasonable waiting time	Q7. Reasonable waiting time
The way to solve problems of employees.	Q8. When there is a problem employees can solve the problem properly
Reliability	
Dependability	Q9. This auto garage is dependable
Promise time	Q10. This auto garage provide the service by the time they promise
The long lasting of repairing	Q11. The long lasting of repairing
Price	
Price of service	Q12. Price of service
Price of spare parts	Q13. Price of spare parts
Customer Retention	
Repurchase intention	Q14. I will buy service from this auto garage again
Feedback to supplier	Q15 When I found something that would be beneficial to the Auto Garage I will give feedback to the company immediately.
Word of mouth	Q16. I will recommend this Auto Garage to others.

4.6   Pre-testing

The reliability of the questionnaire was facilitated via a pilot testing process that was undertaken with 30 customers. The main emphasis of the pilot tests was given on the wording of individual items to assure a common understanding across

the respondents. Mistake were collected and adjusted in terms of wording and structuring of the sentences, therefore, communication between the researcher and respondents will not be bias.

Cronbach's alpha is utilized to assess the internal consistency of the level of the satisfaction and customer retention questionnaire. If the grouped construct shows the alpha value greater than 0.8, it is significant reliable. If the alpha value is between 0.6 and 0.8, it is still reliable. Reliability was tested using Cronbach's alpha. (see table 4.4 below).

Table 4.4: Reliability Results

Items	Reliability
Tangible	0.7928
Responsiveness	0.7927
Reliability	0.7723
Price	0.8159
Customer retention	0.6961

4.7 Gathering Procedures

To obtain the required information, both primary and secondary data were employed. The secondary data was gathered from textbooks, Internet, magazine, thesis, journal, and other related researches. The information derived about marketing, management, and consumer behavior in the service performance was used to develop the framework for this study.

Primary data was collected by distributing questionnaires through distribute directly, direct mail and fax to the customers of Kamphangkollakarn Co.,Ltd to test

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the hypothesis. The researcher distributed the questionnaires during Febuary 2004
to March 2004.

After the required data from questionnaire was collected, it was analyzed and
summarized in a readable and easily interpretable from by the Statistical Package
for Social Science (SPSS) program to ensure accuracy.

4.8   Statistical Treatment of Data

The answer of 217 respondents was analyzed by using SPSS software, which
provided research findings based on statistical results such as frequencies, means,
and Bivariate Relationship Analysis.

Test of hypothesis were tested by employing bivariate correlation statistic;
more specifically, the Spearman's rank correlation coefficient, which is non-
parametric test is used to measure on the ordinal scale as described by Zikmund
(1994)

Table 4.5: Statistic used

Hypothesis Number	Concept	Statistic
$H1_0$	There is no relationship between tangibles and customer retention.	Spearman Rho
$H2_0$	There is no relationship between responsiveness and customer retention.	Spearman Rho
$H3_0$	There is no relationship between reliability and customer retention.	Spearman Rho
$H4_0$	There is no relationship between price and customer retention.	Spearman Rho

The Spearman Rank – Order Correlation Coefficient

Spearman's Rank Correlation Coefficient is a technique, which can be used to summarize the strength and direction (negative or positive) of a relationship between two variables. Two things correlate when they vary together.

- **Positive Correlation** – as one variable increases in value so does the other.
- **Negative Correlation** – as one variable goes up, the other goes down.

A Correlation can easily be drawn as a scatter graph, but the most precise way to compare several pairs of data is to use a statistical test. This establishes whether the correlation is really significant or if it could have been the result of chance alone (Cooper and Schnindler, 2001)
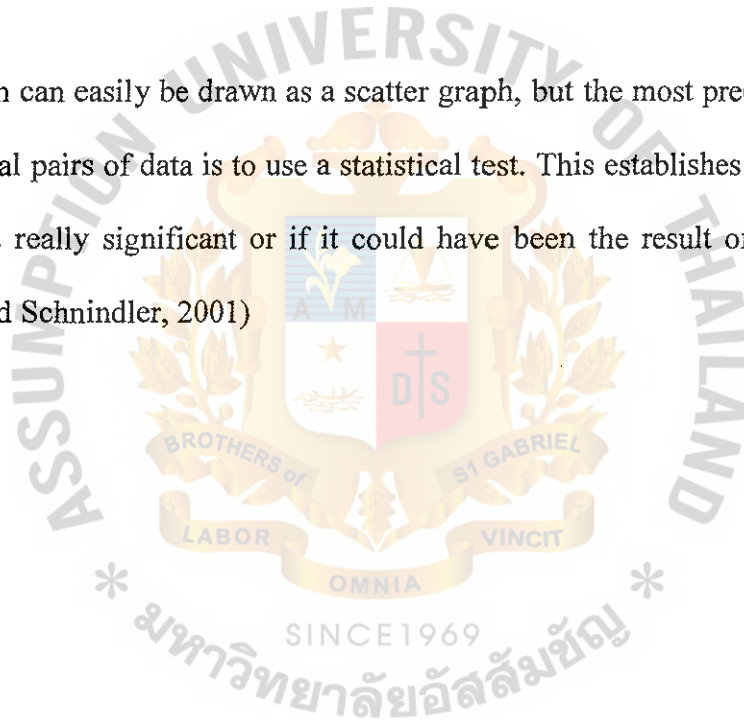
CHAPTER 5

Data Analysis

This chapter presents the finding on the analyses the collected primary data from 217 questionnaires from the target respondents. This chapter divided into three main sections. The first section is the descriptive analysis, the second section is the hypothesis testing and finally the last section is discussion of the result.

5.1   Descriptive Analysis

Descriptive analysis is presented in the form of frequency table that is easy to understand and interpret. This section consists of three parts – profile of respondents, factors that related to level of satisfaction compose of tangible, responsiveness, reliability, and price, and customer retention factors, which consists of repurchase intention, feedback to supplier, and word-of-mouth.

5.1.1   Profile of respondents

Table 5.1: Frequency distribution of age of respondents

age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	under 20 yss	4	1.8	1.8	1.8
	21 - 30 yrs	37	17.1	17.1	18.9
	31 - 40 yrs	86	39.6	39.6	58.5
	41 - 50 yrs	63	29.0	29.0	87.6
	above 50 yrs	27	12.4	12.4	100.0
	Total	217	100.0	100.0	

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From 217 respondents, the largest group of respondents 86 respondents (39.6%) were in the 31-40 years. Age between 41-50 years represented the second largest group 63 respondents (29.0%). The next one were those age between 21-30 years 37 respondents (17.1%) and those age above 50 years old represented 12.4% or 27 respondents and only 4 respondents or 1.8 % of the respondents were those with the age less than 20 years old.

Table 5.2: Frequency distribution of business types of respondents

business

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	School	3	1.4	1.4	1.4
	Garage	146	67.3	67.3	68.7
	Logistic	2	.9	.9	69.6
	Agricuture	21	9.7	9.7	79.3
	Car service Center	18	8.3	8.3	87.6
	Manufacturers	11	5.1	5.1	92.6
	Government office	5	2.3	2.3	94.9
	Others, please specify	11	5.1	5.1	100.0
	Total	217	100.0	100.0	

Majority of respondents, 67.3% or 146 respondents in this research were doing garage business. The 21 respondents or 9.7% were in agriculture business. The 18 respondents or 8.3% were in car service center. The 11 respondents or 5.1% were in manufacturers and also 11 respondents or 5.1% were in other businesses. The 5 respondents or 2.3% are government office. The 3 respondents or 1.4% were in school business. The rest of respondents were logistic accounting only 0.9% or 2 respondents.

Table 5.3: Frequency distribution of reason to choose this auto garage

Multiple Response

Group $REASON Reason to choose this Auto Garage Center
    (Value tabulated = 1)

Dichotomy label	Name	Pct of Count	Pct of Responses	Cases
Near resondent's house	REA1	13	3.4	6.0
Recommendation	REA2	21	5.5	9.7
Familiar with the company	REA3	102	26.6	47.2
Convenience for transportation	REA4	43	11.2	19.9
Facilities	REA5	143	37.3	66.2
Cheap	REA6	22	5.7	10.2
Other	REA7	39	10.2	18.1
Total responses		383	100.0	177.3

1 missing cases; 216 valid cases

Largest group of respondents, 37.3% chose this auto garage because of its facilities, 26.6% chose this auto garage because of familiar with this auto garage, 11.2% chose this auto garage because of the convenience for transportation, 10.2% chose this auto garage because of the other reasons such as good quality of work. 5.7% chose this auto garage because of its cheap in price of service and spare parts, 5.5% chose this auto garage because of recommendation from their friends. The rest reason that respondents chose is near respondent's house accounting as only 3.4%.

5.1.2 Frequency Analyses of Factors Related to Level of Satisfaction

Frequency Analyses of Independent Variable

Table 5.4: Variables under the tangible factors

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
This auto garage has modern machines.	217	3	5	4.37	.539
The physical facilities and tools of this Auto Garage appear to be suitable for the types of service provided.	217	2	5	4.32	.574
Availability of spare parts	217	3	5	4.29	.557
Valid N (listwise)	217				

Note: Frequencies for each variable are given in Table 5.5 to 5.7

Table 5.5: Frequency distribution of tangible (modern machines)

This auto garage has modern machines.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	6	2.8	2.8	2.8
	Satisfied	124	57.1	57.1	59.9
	Most Satisfied	87	40.1	40.1	100.0
	Total	217	100.0	100.0	

Table 5.5 shows the satisfaction level of modern machines 124 respondents or 57.1% were satisfied, 87 respondents or 40.1% were most satisfied, and 6 respondents or 2.8% were neutral. Therefore, the majority and minority of this table were satisfied and neutral respectively. Mean response is 4.37, which mean that respondents were more than satisfied with modern machines used in this auto garage.

Table 5.6: Frequency distribution of tangible (Physical facilities appear to be suitable for the type of service provided)

The physical facilities and tools of this Auto Garage appear to be suitable for the types of service provided.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dis Satisfied	1	.5	.5	.5
	Neutral	9	4.1	4.1	4.6
	Satisfied	127	58.5	58.5	63.1
	Most Satisfied	80	36.9	36.9	100.0
	Total	217	100.0	100.0	

Table 5.6 shows the satisfaction level of the physical facilities appear to be suitable for the type of service provided, 127 respondents or 58.5% were satisfied, 80 respondents or 36.9% were most satisfied, 9 respondents or 4.1% were neutral, and 1 respondent or 0.5% were dissatisfied. Therefore, the majority and minority of this table are satisfied and dissatisfied respectively. Mean response is 4.32, which means that respondents were more than satisfied with the physical facilities and tools that appear to be suitable for the type of service provided of this garage.

Table 5.7: Frequency distribution of tangible (Availability of spare parts)

Availability of spare parts

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	11	5.1	5.1	5.1
	Satisfied	131	60.4	60.4	65.4
	Most Satisfied	75	34.6	34.6	100.0
	Total	217	100.0	100.0	

Table 5.7 shows the satisfaction level of availability of spare parts, 131 respondents or 60.4% were satisfied, 75 respondents or 34.6% were most satisfied, and 11 respondents or 5.1% were neutral. Therefore, the majority and minority of

this table are satisfied and neutral respectively. Mean response is 4.29, which mean that respondents were more than satisfied with the availability of spare parts.

Table 5.8: Variables under the responsiveness factors

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Responsiveness of frontline staff	217	3	5	4.30	.509
Technical repair & knowledge	217	2	5	4.12	.586
Suggestion of repairing & maintenance knowledge	217	2	5	4.12	.556
Reasonable waiting time	217	2	5	4.21	.537
When there is a problem employee can solve the problem properly.	217	2	5	4.06	.664
Valid N (listwise)	217				

Note: Frequencies for each variable are given in Table 5.9 to 5.13

Table 5.9: Frequency distribution of responsiveness (Responsiveness of frontline staff)

Responsiveness of frontline staff

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	5	2.3	2.3	2.3
	Satisfied	141	65.0	65.0	67.3
	Most Satisfied	71	32.7	32.7	100.0
	Total	217	100.0	100.0	

Table 5.9 shows the satisfaction level of responsiveness of frontline staff, 141 respondents or 65.0% were satisfied, 71 respondents or 32.7% were most satisfied, and 5 respondents or 2.3% were neutral. Therefore, the majority and minority of this table are satisfied and neutral respectively. Mean response is 4.30, which mean that respondents were more than satisfied with responsiveness of frontline staff.

Table 5.10: Frequency distribution of responsiveness (Provide information about technical repair & knowledge)

Technical repair & knowledge

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dis Satisfied	3	1.4	1.4	1.4
	Neutral	17	7.8	7.8	9.2
	Satisfied	149	68.7	68.7	77.9
	Most Satisfied	48	22.1	22.1	100.0
	Total	217	100.0	100.0	

Table 5.10 shows the satisfaction level of technical repair & knowledge, 149 respondents or 68.7% were satisfied, 48 respondents or 22.1% were most satisfied, 17 respondents or 7.8% were neutral, and 3 respondents or 1.4% were dissatisfied. Therefore, the majority and minority of this table are satisfied and dissatisfied respectively. Mean response is 4.12, which mean that respondents were more than satisfied with the technical repair & knowledge of this auto garage.

Table 5.11: Frequency distribution of responsiveness (Provide suggestion of repairing & maintenance knowledge)

Suggestion of repairing & maintenance knowledge

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dis Satisfied	1	.5	.5	.5
	Neutral	19	8.8	8.8	9.2
	Satisfied	150	69.1	69.1	78.3
	Most Satisfied	47	21.7	21.7	100.0
	Total	217	100.0	100.0	

Table 5.11 shows the satisfaction level of suggestion of repairing & maintenance knowledge, 150 respondents or 69.1% were satisfied, 47 respondents or 21.7% were most satisfied, 19 respondents or 8.8% were neutral, and 1 respondents or 0.5% were dissatisfied. Therefore, the majority and minority of this table are satisfied and dissatisfied respectively. Mean response is 4.12, which mean

that respondents were more than satisfied with the suggestion of repairing & maintenance knowledge of this auto garage.

Table 5.12: Frequency distribution of responsiveness (Reasonable waiting time)

Reasonable waiting time

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dis Satisfied	1	.5	.5	.5
	Neutral	10	4.6	4.6	5.1
	Satisfied	148	68.2	68.2	73.3
	Most Satisfied	58	26.7	26.7	100.0
	Total	217	100.0	100.0	

Table 5.12 shows the satisfaction level of reasonable waiting time, 148 respondents or 68.2% were satisfied, 58 respondents or 26.7% were most satisfied, 10 respondents or 4.6% were neutral, and 1 respondents or 0.5% were dissatisfied. Therefore, the majority and minority of this table are satisfied and dissatisfied respectively. Mean response is 4.21, which mean that respondents were more than satisfied with the time used for repairing of this auto garage.

Table 5.13: Frequency distribution of responsiveness (The way to solve problem of employee)

When there is a problem employee can solve the problem properly.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dis Satisfied	4	1.8	1.8	1.8
	Neutral	29	13.4	13.4	15.2
	Satisfied	133	61.3	61.3	76.5
	Most Satisfied	51	23.5	23.5	100.0
	Total	217	100.0	100.0	

Table 5.13 shows the satisfaction level of the way to solve problem of employee, 133 respondents or 61.3% were satisfied, 51 respondents or 23.5% were most satisfied, 29 respondents or 13.4% were neutral, and 4 respondents or 1.8%

were dissatisfied. Therefore, the majority and minority of this table are satisfied and dissatisfied respectively. Mean response is 4.06, which mean that respondents were satisfied with the way to solve problem of employees of this auto garage.

Table 5.14: Variables under the reliability factors

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
This auto garage is dependable	217	3	5	4.32	.651
This auto garage provides service by the time they promise	217	3	5	4.28	.575
The long lasting of repairing	213	3	5	4.20	.590
Valid N (listwise)	213				

Note: Frequencies for each variable are given in Table 5.15 to 5.17

Table 5.15: Frequency distribution of reliability (Dependability)

This auto garage is dependable

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	22	10.1	10.1	10.1
	Satisfied	103	47.5	47.5	57.6
	Most Satisfied	92	42.4	42.4	100.0
	Total	217	100.0	100.0	

Table 5.15 shows the satisfaction level of dependability, 103 respondents or 47.5% were satisfied, 92 respondents or 42.4% were most satisfied, and 22 respondents or 10.1% were neutral. Therefore, the majority and minority of this table are satisfied and neutral respectively. Mean response is 4.32, which means that respondents were more than satisfied with the dependability of this auto garage.

Table 5.16: Frequency distribution of reliability (Promised time)

This auto garage provides service by the time they promise

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	14	6.5	6.5	6.5
	Satisfied	129	59.4	59.4	65.9
	Most Satisfied	74	34.1	34.1	100.0
	Total	217	100.0	100.0	

Table 5.16 shows the satisfaction level of promised time, 129 respondents or 59.4% were satisfied, 74 respondents or 34.1% were most satisfied, and 14 respondents or 6.5% were neutral. Therefore, the majority and minority of this table are satisfied and neutral respectively. Mean response is 4.28, which means that respondents were more than satisfied with the promised time of this auto garage.

Table 5.17: Frequency distribution of reliability (The long lasting of repairing)

The long lasting of repairing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	20	9.2	9.4	9.4
	Satisfied	131	60.4	61.5	70.9
	Most Satisfied	62	28.6	29.1	100.0
	Total	213	98.2	100.0	
Missing	9	4	1.8		
Total		217	100.0		

Table 5.17 shows the satisfaction level of the long lasting of repairing, 131 respondents or 60.4% were satisfied, 62 respondents or 28.6% were most satisfied, 20 respondents or 9.2% were neutral, and 4 respondents or 1.8% were not answer in this question. Therefore, the majority and minority of this table are satisfied and

neutral respectively. Mean response is 4.20, which means that respondents were more than satisfied with the long lasting of repairing of this auto garage.

Table 5.18: Variables under the price factors

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Price of service	217	2	5	4.06	.677
Price of spare parts	217	2	5	4.01	.634
Valid N (listwise)	217				

Note: Frequencies for each variable are given in Table 5.19 to 5.20

Table 5.19: Frequency distribution of price (Price of service)

Price of service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dis Satisfied	7	3.2	3.2	3.2
	Neutral	22	10.1	10.1	13.4
	Satisfied	138	63.6	63.6	77.0
	Most Satisfied	50	23.0	23.0	100.0
	Total	217	100.0	100.0	

Table 5.19 shows the satisfaction level of the price of service, 138 respondents or 63.6% were satisfied, 50 respondents or 23.0% were most satisfied, 22 respondents or 10.1% were neutral, and 7 respondents or 3.2% were dissatisfied. Therefore, the majority and minority of this table are satisfied and dissatisfied respectively. Mean response is 4.06, which means that respondents were satisfied with the price of service of this auto garage.

Table 5.20: Frequency distribution of price (Price of spare parts)

Price of spare parts

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dis Satisfied	3	1.4	1.4	1.4
	Neutral	33	15.2	15.2	16.6
	Satisfied	139	64.1	64.1	80.6
	Most Satisfied	42	19.4	19.4	100.0
	Total	217	100.0	100.0	

Table 5.20 shows the satisfaction level of the price of spare parts, 139 respondents or 64.1% were satisfied, 42 respondents or 19.4% were most satisfied, 33 respondents or 15.2% were neutral, and 3 respondents or 1.4% were dissatisfied. Therefore, the majority and minority of this table are satisfied and dissatisfied respectively. Mean response is 4.01, which means that respondents were satisfied with the price of spare parts of this auto garage.

5.1.3 Frequency Analyses of Factors Related to Customer Retention

Frequency Analyses of Dependent Variable

Table 5.21: Variables under customer retention

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
I will buy service from this Auto Garage again	217	3	5	4.38	.573
When I found something that would be beneficial to the Auto Garage I will give feedback to the Auto Garage immediately.	197	2	5	4.02	.658
I will recommend this Auto Garage to others	217	3	5	4.38	.606
Valid N (listwise)	197				

Note: Frequencies for each variable are given in Table 5.22 to 5.24

Table 5.22: Frequency distribution of customer retention (repurchase intention)

I will buy service from this Auto Garage again

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	10	4.6	4.6	4.6
	Agree	115	53.0	53.0	57.6
	Strongly Agree	92	42.4	42.4	100.0
	Total	217	100.0	100.0	

Table 5.22 shows the level of repurchase intention from this auto garage, 115 respondents or 53.0% agree, 92 respondents or 42.4% strongly agree, and 10 respondents or 4.6% were neutral. Therefore, the majority and minority of this table are agree and neutral respectively. Mean response is 4.38, which means that respondents agree to repurchase service and spare parts from this auto garage.

Table 5.23: Frequency distribution of customer retention (Feedback to supplier)

When I found something that would be beneficial to the Auto Garage I will give feedback to the Auto Garage immediately.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	2	.9	1.0	1.0
	Neutral	35	16.1	17.8	18.8
	Agree	118	54.4	59.9	78.7
	Strongly Agree	42	19.4	21.3	100.0
	Total	197	90.8	100.0	
Missing	9	20	9.2		
Total		217	100.0		

Table 5.23 shows the level of the feedback to supplier, 118 respondents or 54.4% are agree, 42 respondents or 19.4% are strongly agree, 35 respondents or 16.1% are neutral, 2 respondents or 0.9% are disagree, and 20 respondents or 9.2% are not answer in this question Therefore, the majority and minority of this table are agree and disagree respectively. Mean response is 4.02, which means that respondents agree to provide feedback to this auto garage.

Table 5.24: Frequency distribution of customer retention (Word of Mouth)

I will recommend this Auto Garage to others

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	14	6.5	6.5	6.5
	Agree	106	48.8	48.8	55.3
	Strongly Agree	97	44.7	44.7	100.0
	Total	217	100.0	100.0	

Table 5.24 shows the level of Word of Mouth of customer in this auto garage, 106 respondents or 48.8% are agree, 97 respondents or 44.7% are strongly agree, and 14 respondents or 6.5% are neutral. Therefore, the majority and minority of this table are agree and neutral respectively. Mean response is 4.38, which means that respondents agree to recommend this auto garage to others.

5.2   Hypothesis testing

In this section, the relationship between four main independent variables (tangible, responsiveness, reliability, and price) and a main dependent variable (customer retention) is examined by using SPSS program. The bivariate correlation is employed to find out the relationship between independent and dependent variables. In this research, the null hypothesis is set as " There is no relationship between independent variable and dependent variable". In this case, the null hypothesis is H_o: $\rho_s = 0$ while H_a: $\rho_s \neq 0$.

5.2.1   Correlation Coefficient

It is necessary to establish the strength of the relationship between ordinal variables. In this case, the researcher cannot assume that these variables have interval properties (i.e., a rating scale), then the appropriate form of assessing

strength of association in this research is Spearman's Rank – Order Correlation Coefficient. Spearman correlation coefficient, denoted as ρ_s, is one of the best known coefficients of association for rank-order data. The coefficient is appropriate when there are two variables per object, both of which are measured on an ordinal scale so that the objects may rank two order series.

5.2.2 Test of Significant and Significant Level

Two-tailed test is employed because the direction of association cannot be determined in advance. Correlation coefficient significant at the 0.05 confident level is used in this research. It is identified with a single asterisk, and those significant at the 0.01 level are identified with two asterisks in case of there being more relations.

5.2.3 Interpretation of Correlation Coefficient

When two variables are correlated the result is a correlation coefficient (ρ_s). A correlation coefficient is a decimal number, between .00 and +1.00, or .00 and – 1.00, which indicates the degree to which two values for one variable are related. Variables are positively correlated (+1.00) if a case with low value for one variable also tend to have low value for the other, and a case with high values on one also tend to be high on the other. Negatively correlated variables (-1.00) show the opposite relation: the higher the first variable the lower the second tend to be. Suppose that the coefficient is near 0.00 it means the two variables is not related to each other. It may say that the case with a value on one variable is no indication of what the other case with a value is on the other variables. It can be explained that one variable in no indication of the variable.

Kinnear (1991) said that if (ρ_s) is bigger than 0.8 the sign of relationship is ignored, the relationship between the variables is very strong. If (ρ_s) is between 0.4 and 0.8, the relationship is a moderate to strong one; and if (ρ_s) is less than 0.4, the relationship is a weak one.

Hypothesis #1: Test of relationship between customer satisfaction related to tangible factors of auto service center and the customer retention.

$H1_o$:   There is no relationship between tangible factors of auto service center and customer retention.

$H1_a$:   There is a relationship between tangible factors of auto service center and customer retention.

Or it can be stated in statistical terms as:

$H1_o$: $\rho = 0$

$H1_a$: $\rho \neq 95\%$ level of significant $(\alpha = 0.05)$

Table 5.25: Tangible and the customer retention

Correlations

			Tangible	customer retention
Spearman's rho	Tangible	Correlation Coefficient	1.000	.293*
		Sig. (2-tailed)	.	.000
		N	217	217
	customer retention	Correlation Coefficient	.293*	1.000
		Sig. (2-tailed)	.000	.
		N	217	217

**. Correlation is significant at the .01 level (2-tailed).

Significant level (2-tailed test) the bivariate test shows the significant value of 0.000 which is less than 0.05, it means **the null hypothesis is rejected and the alternate hypothesis is accepted.** Therefore, there is a relationship between tangible factors and customer retention.

Correlation Coefficient value equates to 0.293, which means there is a positive relationship between tangible and customer retention. The symbol ** means that this is significant at 0.01 level under 2-tailed test which means the result will, by chance, create 1% error.

The result from test shows that **correlation coefficient value of 0.293 indicates that there is a weak relationship between tangible and customer retention.**

Hypothesis #2: Test of relationship between customer satisfaction related to responsiveness factors of auto service center and the customer retention.

H2₀: There is no relationship between responsiveness factors of auto service center and customer retention.

H2ₐ: There is a relationship between responsiveness factors of auto service center and customer retention.

Or it can be stated in statistical terms as:

H1₀: $\rho = 0$

H1ₐ: $\rho \neq$ 95% level of significant ($\propto$=0.05)

Table 5.26: Responsiveness and the customer retention

Correlations

			Responsiveness	customer retention
Spearman's rho	Responsiveness	Correlation Coefficient	1.000	.482*
		Sig. (2-tailed)	.	.000
		N	217	217
	customer retention	Correlation Coefficient	.482*	1.000
		Sig. (2-tailed)	.000	.
		N	217	217

**. Correlation is significant at the .01 level (2-tailed).

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Significant level (2-tailed test) the bivariate test shows the significant value of 0.000 which is less than 0.05, it means **the null hypothesis is rejected and the alternate hypothesis is accepted.** Therefore, there is a relationship between responsiveness factors and customer retention.

Correlation Coefficient value equates to 0.482, which means there is a positive relationship between responsiveness and customer retention. The symbol ** means that this is significant at 0.01 level under 2-tailed test which means the result will, by chance, create 1% error.

The result from test shows that **correlation coefficient value of 0.482 indicates that there is a moderate relationship between responsiveness and customer retention.**

Hypothesis #3: Test of relationship between customer satisfaction related reliability factors of auto service center and the customer retention.

$H3_0$:   There is no relationship between reliability factors of auto service center and customer retention.

$H3_a$:   There is a relationship between reliability factors of auto service center and customer retention.

Or it can be stated in statistical terms as:

$H1_0$: $\rho = 0$

$H1_a$: $\rho \neq$ 95% level of significant ($\propto$=0.05)

Table 5.27: Reliability and the customer retention

Correlations

			Reliability	customer retention
Spearman's rho	Reliability	Correlation Coefficient	1.000	.507*
		Sig. (2-tailed)	.	.000
		N	217	217
	customer retention	Correlation Coefficient	.507*	1.000
		Sig. (2-tailed)	.000	.
		N	217	217

**. Correlation is significant at the .01 level (2-tailed).

Significant level (2-tailed test) the bivariate test shows the significant value of 0.000 which is less than 0.05, it means **the null hypothesis is rejected and the alternate hypothesis is accepted.** Therefore, there is a relationship between reliability factors and customer retention.

Correlation Coefficient value equates to 0.507, which means there is a positive relationship between reliability and customer retention. The symbol ** means that this is significant at 0.01 level under 2-tailed test which means the result will, by chance, create 1% error.

The result from test shows that **correlation coefficient value of 0.507 indicates that there is a moderate relationship between reliability and customer retention.**

Hypothesis #4: Test of relationship between customer satisfaction related to price factors of auto service center and the customer retention.

$H4_o$: There is no relationship between price factors of auto service center and customer retention.

$H4_a$: There is a relationship between price factors of auto service center and the customer retention.

Or it can be stated in statistical terms as:

$H1_0: \rho = 0$

$H1_a: \rho \neq 95\%$ level of significant ($\alpha=0.05$)

Table 5.28: Price and the customer retention

Correlations

			Price	customer retention
Spearman's rho	Price	Correlation Coefficient	1.000	.478*
		Sig. (2-tailed)	.	.000
		N	217	217
	customer retention	Correlation Coefficient	.478*	1.000
		Sig. (2-tailed)	.000	.
		N	217	217

**. Correlation is significant at the .01 level (2-tailed).

Significant level (2-tailed test) the bivariate test shows the significant value of 0.000 which is less than 0.05, it means **the null hypothesis is rejected and the alternate hypothesis is accepted.** Therefore, there is a relationship between price factors and customer retention.

Correlation Coefficient value equates to 0.478, which means there is a positive relationship between price and customer retention. The symbol ** means that this is significant at 0.01 level under 2-tailed test which means the result will, by chance, create 1% error.

The result from test shows that **correlation coefficient value of 0.478 indicates that there is a moderate relationship between price and customer retention.**

5.3   Discussion of the Result

The results from the hypothesis testing show that the effect on customer satisfaction level (tangibles, responsiveness, reliability, and price) have significant relationship with the customer retention in the auto garage business in Kamphangphet. The researcher can explain the rational behind these results in auto garage business like the followings:

Reliability, the most influential factor to customer retention, includes three service aspects: This auto is dependable, provide the service by the time they promise, and the long lasting of repairing. Customer concerns with the faithfulness, punctually, and the capability to repairing as the most important factors for them to come back again.

Responsiveness, is the factor that customer consider to patronage the garage next time. The garage that provides the suggestion of repairing and maintenance knowledge can make customers confident in the company. The garage that keeps the customer waiting for a long time means it is not concerned for personal value time. If the garage is too busy to respond the customer can feel that he has been overlooked and may switch to other garages.

Price, is also important factor when the customer select the garage. Customers often use prices as the one of inputs in forming expectations of a service and in making purchase decision. If consumers are not familiar with the particular service provider price becomes even more important because of the lack of search quality.

Tangibles are related to the appeal of machines, facilities, equipment, and material used by a service firm as well as the appearance of the service employees. The physical design is important because it is the very first thing that the customer

sees. Even before customers begin to evaluate firms, staffs, and service they have already formed initial impression of garage just by walking in the door.

Chapter 6

Summary Finding, Conclusions and Recommendations

This chapter consists of three sections. The first section shows the summary of the respondents profile and the major findings based from the problems and hypotheses. The second section is the conclusion, which the important finding will be discussed. The last section contains recommendation and suggestion for future research.

6.1 Summary of Finding

6.1.1   Summary of Respondent Profile

Age: Among 217 respondents, the majority of respondents 39.6% are in the 31-40 years. The minority 1.8% are the age less than 20 years old.

Business Type: For the business type of respondents, most of respondents are doing garage business accounting for 67.3%. The minority are logistic or 0.9%.

Reason to Choose: Largest group of the respondents 37.3% choose this auto garage because of facilities. Whereas the minority of respondents 3.4% chooses this auto garage because of near respondent's house.

Table 6.1: Summary of Respondents Profile

Profile	Largest group(percentage)	Smallest group (percentage)
Age	31-40 years = 39.6%	Less than 20 years = 1.8%
Business Type	Garage = 67.3%	Logistic = 0.9%
Reason to Choose	Facilities = 37.3%	Near respondent's house = 3.4%

6.1.2 Summary of Hypothesis

From all the four hypotheses, which were tested by the Bivariate Analysis, the results of hypothesis testing at 95% of confidence level in this research., it could imply that all the variables are important factors of the satisfaction level. The significant variables are important to the managers of Kamphankollakarn Co.,Ltd to understand better to know the relationship between the factors in service performance which consists of tangible, responsiveness, reliability, price, and customer retention level in order to adapt it in setter their strategies and objectives.

Table 6.2: Summary of Hypothesis Testing Results

Hypotheses	Statistics Test	Level of Significant	Correlation Coefficient	Results
H_{01}: There is no relationship between tangible factors of auto service center and customer retention.	Spearman Rho	0.000	0.293	Reject H_0

H_{02}: There is no relationship between responsiveness factors of auto service center and customer retention.	Spearman Rho	0.000	0.482	Reject H_0
H_{03}: There is no relationship between reliability factors of auto service center and customer retention.	Spearman Rho	0.000	0.507	Reject H_0
H_{04}: There is no relationship between price factors of auto service center and customer retention.	Spearman Rho	0.000	0.478	Reject H_0

6.2 Conclusion

The main purposes of this research are to identify the factors in service performance that effect on customer satisfaction level and the relationship between the level of customer satisfaction and customer retention on Auto Garage Business in Kamphangphet province.

The conceptual model was established to test the relationship between the level of customer satisfaction, which consists of four main variables (tangible, responsiveness, reliability, and price) and customer retention.

The researcher selected the number of 217 customers of Kamphangkollakarn Co.,Ltd. The population for this research was the company's

customers who are currently using the service at Kamphangkollakarn Co.,Ltd. Data collected in this research were gather through distributing questionnaires by distributing directly through customers while they were waiting for their service, direct mail, and fax and then respondents were requested to fax back to the researcher. There are three parts in questionnaires, which consists of the information of respondents, the information of factors in service performance in the level of customer satisfaction, and the information of customer retention. These data were analyzed through SPSS program. The Bivariate Analysis is used to test the hypotheses and to proceed the research objectives. The statistical tests were significant at the 0.05 confidence level (2-tailed).

From the respondents of this research, it found out that the majority of customers of Kamphangkollakarn Co.,Ltd have the age between 31-40 years old. Most of them are business owners and their business type was auto garage. And the majority give the reason that they chose Kamphangkollakarn Co.,Ltd because of facilities and familiar with the company respectively.

From this research, in the whole picture can be conclude that respondents were satisfied with service performance of Kamphangkollarkan Co.,Ltd which can be explained each factor as the following

Tangible most of respondents were satisfied with tangible factors, which were most satisfied with the modern machine factor followed by physical facilities appear to be suitable for the type of service provided and availability of spare part respectively

Responsiveness most of respondents were satisfied with responsiveness factors, which were most satisfied with the responsiveness of frontline staff, followed by satisfied with reasonable waiting time, technical repair & knowledge, suggestion of repairing & maintenance knowledge, and the way to solve problem of employee respectively.

Reliability most of respondents were satisfied with reliability factors, which were most satisfied with dependable factor, followed by satisfy with promised time factor, and the long lasting of repairing respectively.

Price most of respondents were satisfied with price factors, which were most satisfied with price of service, and price of spare parts respectively.

Customer retention respondents showed their opinion on customer retention factors in the level of agree, which means that respondents will come to purchase from the company absolutely, followed by they would like to recommend the company to others, and they might give feedback to the company if they found something that would be beneficial to the company.

6.3 Recommendation

After having analyzed the results of this research, the researcher would like to provide some recommendations for managers of Kamphankollakarn Co.,Ltd in order to increase the level of customer satisfaction and customer retention.

<u>Hypothesis 1:</u>

Relationship between tangible factors and customer retention

The finding of hypothesis 1 indicated that H_{01} is rejected which means that there is a positive relationship between tangible factors and customer retention (Correlation Coefficient is equal to 0.293). It means that the higher customer satisfied with the tangible factors the higher the customer retention.

<u>Recommendation</u>

Create a professional and modern image the company should create a professional and modern look in the mind of customers. The nature of business is depend heavily on the machines and facilities. The company should increase its capacity by using modern machines like CNC Lathe, CNC Machining, Surface

Grinding Machine, Vertical Milling Machine, and Crankshaft Grinding Machine. The company should also increase its facilities to cover all types of service provided for example tools for changing tires, diagnostic services, and vehicle inspections & safety checks. However, it would take a huge amount of money to do so. The researcher provides this recommendation to be an alternate way for the company and it would be very beneficial for the company to do before the competitors.

Finding the historical data for the usage of spare parts, sale volume of each type of car. In order to determine and set up the stock balance properly. Base on the result of tangible factor, customers are least satisfied with the availability of spare parts. Therefore, the company should try to coordinate with many suppliers both in local and Bangkok to get the spare parts easier and faster. And the company should try to adopt Just-in-time system to reduce the over stock and mange stock sufficiently to the need of different spare part types.

Hypothesis 2:

Relationship between responsiveness factors and customer retention

The finding of hypothesis 2 indicated that H_{02} is rejected which means that there is a positive relationship between responsiveness factors and customer retention (Correlation Coefficient is equal to 0.482). It means that the higher customer satisfied with the responsiveness factors the higher the customer retention.

Recommendation

Focusing on training frontline staff, technicians, and drivers of the company. Because on all of these employees are frontline employees who make contact with customers. Therefore the company should encourage them to improve their knowledge and skill in the repairing the engine of car and other parts very well. All customers that come to the company want to know exactly about the problem of their

cars. Suggestion of repairing & maintenance knowledge are important to customers. Consequently the company should focus on the following skills 1) Accuracy of checking and repairing. 2) Checking each point of checklists carefully. 3) Issuing the order document coverage all details and notify all descriptions and service charge clearly. 4) Stressing on tidiness and truthfulness as a key of service. 5) Lifting up technical repair and knowledge.

Involving consistency of performance and dependability All employees of Kamphangkollakarn Co., Ltd should concern about customers. If customers have some problems, the employees are able to help in solving their problems properly. Customers are always right, whenever something goes wrong or unexpectedly happen the company should apologize and immediately take actions to keep them in control. For example, most of the jobs are engine of car, the engine always consists of many small parts such as bolt, nut, etc. all these small parts are important to the engine if some part are missing the engine cannot work. Therefore, the company should immediately replace a new one to customers if some parts are missing nevertheless the problem is caused by customers. This effort can turn service failure or dissatisfying into overall service satisfaction. After solving the problem the company should find the way to protect this kind of problem later.

Designing the operationing plan in details on standard time for response time, repair & service time and waiting time in each service activity. After the operating plan are set, company should also keep inform and updated this information to customers. Company should keep records of the standard time and actual time in variance further to develop and improvement purpose to speed up the services provided to customers on time and reduce the waiting time.

<u>Hypothesis 3:</u>

Relationship between reliability factors and customer retention

The finding of hypothesis 3 indicated that H_{03} is rejected which means that there is a positive relationship between reliability factors and customer retention (Correlation Coefficient is equal to 0.507). It means that the higher customer satisfied with the reliability factors the higher the customer retention.

<u>Recommendation</u>

<u>**Assurance for the quality standard**</u> the company should show the certification of the quality standard such as TFQS and ISO that the company has to give customers confidence and feel safe in receiving the service. The company should also improve the performance of quality control department to reduce the defection rate.

<u>**Provided service on time**</u> the company should keep promised time for example if employees make an appointment with a customer to repair his car within 4 hours, the car must be finish repairing before 4 hours to create the impression in the customer's mind.

<u>**Adopting a warranty program**</u> the company should provide a warranty for a period of time to ensure the long lasting of repairing the period of warranty depend on each job. For example, spare parts for one month, repairing for 3 months. The company should also sent letters to remind customers on their vehicles specific service & maintenance record. The company may give some exclusive privileges and special offers for them to receive service from the company again.

<u>**Keep inform customers about the detail of repairing**</u> in order to increase the dependability the company should inform all the details of repairing and the spare parts needed for repair to customers. The company should communicate the risk of repairs, keep contact customers when extra repairs are needed and when the repair become more expensive.

Hypothesis 4:

Relationship between price factors and customer retention

The finding of hypothesis 4 indicated that H_{04} is rejected which means that there is a positive relationship between price factors and customer retention (Correlation Coefficient is equal to 0.478). It means that the higher customer satisfied with the price factors the higher the customer retention.

Recommendation

Compensating customers for higher standard of service and enhance quality of products. The garage segments the target group as "Premium" products and services provided to customers when comparing to other garages in Kamphangphet. From the result of research respondents are not totally satisfied with the price of service and spare parts it seems as high price when compare with others. Managers shouldn't set the prices too much higher or lower without a good reason. If the price too low it would just be throwing away profit and it is not regarded as "Premium". If the price too high it would lose customers, unless the company can offer them something they can't get elsewhere. Therefore, managers should charge different prices to different customers for instance, charge different price to customers who purchase repeatedly, or buy add-on, or related products, as a thank you for their loyalty.

Managers should also explain to customers about the high price of service and spare parts. For service the company provides higher quality of service and warranty for the service for a time period. For spare parts managers should try to explain to customers that spare parts in Thailand have many grades and types from genuine parts to counterfeited parts. The prices are varied depend on the brand, quality, durability, and country of origin (ex: parts from china are cheaper than parts from Japan).

Overall Recommendation (Based on researcher knowledge & acquired from interaction with customers)

Use complains to build business As a result of feedback to supplier in customer retention, it found out that the ratio of customers who will make complaint or feedback to the company is still low. Customers usually won't complaint to the company instead they will probably complain to just about everyone else they know and take their business to your competitors next time. Therefore, the company should making follow up calls or mailing satisfaction questionnaires after the service is made. The customers would find that they promptly follow up and resolve a customer's complaint the customer might be even more likely to do business than the average customer who didn't have complaint.

Implementing Customer focus group Managers of Kamphangkollakarn Co.,Ltd should have communication meeting with customers to determine customer satisfaction and to seek information for improvement. Each meeting or informal communication should consist of at least a few customers to let them share ideas and experience with the company and competitors. Actually, customers are the ones who see the competitors are doing more than the company do. This is a great way to feeds the ideas and suggestions from customers.

Benchmarking with the leaders in the industry. Due to the company locate in kamphangphet province the company should improve its performance to differentiate itself from competitors in local area. Benchmarking with the leaders in the industry such as Shell Auto Service, the company's after sale service such as Honda and Toyota is a good chance to establish performance goals and quality improvement projects. Benchmarking is an important ingredient in strategic planning as well as in operational improvement. Long range planning requires organization to continuously change and adapt to the marketplace of today and tomorrow to remain competitive. To

energize and motivate all employees the company must: believe that there is a need for change, determine what it wants to change, and create a picture of how it wants to look after the change.

Suggestion for Future Researchers

This study is about measuring the relationship between customer satisfaction and customer retention on car service industry in Kamphangphet: A case study of Kamphangkollakarn Co.,Ltd by using 16 predictors under five main points: *tangible*: modern machines, physical facilities appear to be in keeping the type of service provided, availability of spare parts, *responsiveness*: responsiveness of frontline staff, technical repair & knowledge, suggestion of repairing & maintenance knowledge, reasonable waiting time, the way to solve problem of employees *Reliability*: Dependability, Promised time, the long lasting of repairing, *price*: price of service, price of spare parts, and *customer retention*: repurchase intention, feedback to supplier, and word-of-mouth.

Structural modeling of the level of the satisfaction and retention and identification of other relevant variables such as efficiency of product, availability of keep promised time of back ordered parts, availability & distance of service center, the cleanliness of building, toilets and sale, are needed to increase broader understanding. All the above variables relate to measure other aspects of business of Kamphangkollakarn co.,Ltd's business. The whole picture of company can be seen broader.

Furthermore, future research should incorporate a more extensive multiple-item behavioral-intentions measure than has been used in this research and examine service quality's impact on specific type of behavioral intentions for both favorable and unfavorable. In this research, favorable behavioral intentions included repurchase intentions and word-of-mouth and unfavorable behavioral intention is feedback to

supplier which including complaining or say negative things. Therefore, it may include more specific behaviors such as say positive things about company and/or agreeably pay a price premium. Unfavorable behavioral intentions should be integrated in further research. Customers perceiving service performance to be inferior are likely to exhibit behaviors signaling that they are poised to leave the company or spend less with the company.

For this research, the scope of this research is especially study Kamphangkollakarn Co.,Ltd in Kamphangphet province. Then future research should be generalized to study other car service center in other provinces for the benefits of applying solutions and strategies to each service center that will be successful if company delivered value and satisfaction to the customers.

Bibliography

Ahmad R., Buttle F. Customer Retention Management : A reflection of theory and practice. *Marketing Intelligence & Planning* Vol.20 No.3 2002 pp.149-161

Anderson E.W., Fornell C., and Rust R.T. Customer Satisfaction, Productivity, and Profitability: Difference Between Goods and Services. *Marketing Science* Vol.16 No.2 1997 pp.129-145

Antonides, Gerrit and Raaij, W.F. Van,. *Consumer Behavior ; A European Perspective, (1998)* Johnson Wiley & Sons, New York

Bolton R.N., Kannan P.K, and Bramlett M.D. Implication of Loyalty Program Membership and Service Experience for Customer Retention and Value. *Journal of Academy of Marketing Science* Vol.28 No.1 pp.95-108

Bouman M. and Wiele T.V. Measuring Service Quality in the car service industry; Building and testing an instrument. *International Journal of Service Industry Management* Vol.3 No.4 1992 pp.4-16

Chenet P., Tynan C., and Money A. The service performance gap: testing the redeveloped causal model *European Journal of Marketing* Vol. 34 No. 3/4 2000 pp.472-497

Cooper R. D. and Schindler S. P. (2001), *The Spearman Rank-Order Correlation Coefficient, Business Research Method, Seventh Edition,* Singapore : Mc Graw – Hill, International Edition.

Curkovic S., Shawnee K. V., and Droge C. An empirical analysis of the competitive dimensions of quality performance in the automotive supply industry *International journal of Operation & Production Management* Vol.20 No.3 2000 pp.386-403

Curasi C.F., Johnson W. & Sons and Kennedy K.N. From prisoners to apostle; a typology of repeat buyers and loyal customer in service businesses. *Journal of Service Marketing* Vol.16 No.4 2002 pp.322-341

Currie N. The UK's Automobile Association : empowering staff for customer retention *Managing Service Quality* Vol.6 No.4 1996 pp.15-19

David L. K. / Kenneth E. C. *Service Marketing (1998)* Johnson Wiley & Sons, New York

DeSouza G. Designing a Customer Retention Plan *The Journal of Business Strategy* March/April 1992 pp.24-28

Dr. Wanichbuncha K., *SPSS for Windows: For all versions (2003).* Chulalongkorn University Bangkok

Eberhard E. Scheuing and William F. Christopher *The Service Quality Handbook* American Management Association, NY

Ehinlanwo O.O. and Zairi M. Best Practice in the car after-sales service : An empirical study of Ford, Toyota, Nissan, and Fiat in Germany – Part 1 *Business Process Re-engineering & Management Journal* Vol.2 No.2 1996 pp.39-56

Ehinlanwo O.O., Zairi M. Best practice in the car after-sales service ; An empirical study of Ford, Toyota, Nissan and Fiat in Germany – Part 2 *Business Process Re-engineering & Management Journal* Vol.2 No.3 1996 pp.39-53

Fitzsimmons, James A., and Mona J., *Service Management for Competitive Advantage, (1994)* McGraw – Hill,

Fitzsimmons, James A. and Mona J., *Service Management : Operation, Strategy and Information Technology, Second Edition (1998)* McGraw – Hill.

George J.M. and Jones G.R. Toward an understanding of customer service quality *Journal of managerial issues* Vol.111 No.2 Summer 1991 pp.220-238

Ghobadian A., Speller S., and Jones M. Service Quality ; Concepts and Models *International Journal of Quality & Reliability Management* Vol.11 No.9 1994 pp.43-66

Hallowell R. The relationship of customer satisfaction, customer loyalty, and profitability ; an empirical study *International Journal of Service Industry Management* Vol.7 No.4 1996 pp.27-42

Harrell D.G. *Marketing : Connecting With Customers, Second Edition (2002)* Prentice Hall Upper Saddle River, NJ

Hayes E.B. *Measuring Customer Satisfaction ; Servey Design, Use, And, Statistical Analysis Method, Second Edition (1998)* ASQ Quality Pr. Milwaukee, WI

Hennig-Thurau T. and Klee A. The impact of Customer Satisfaction and Relationship Quality on Customer Retention ; A Critical Reasssessment and Model Development. Psychology & Marketing Vol.14 No.8 pp.737-764

Jamieson D. Customer Retention : Focus or Failure *The TQM Magazine* Vol.06 No.5 1994 pp.11-13

Kenneth E. C. and John L. B. Managing consumer expectations of low-margin, high-volume services *Journal of Service Marketing* Vol.9 No.1 1995 pp.33-45

Kiff J.S. The lean dealership – a vision for the future: "from hunting to farming". *Marketing Intelligence & Planning* Vol.18 No.3 2000 pp.112-126

Kotler P. (2000), *Marketing Management* Prentice Hall International, New Jersey.

Lovelock, C. H., *Service Marketing, (1998) Reading MA* Prentice Hall Upper Saddle River, NJ

Krejcie R.V. & Mogan D.W. (1970), Determining Sample size for research activities, *Educational and Psychological Measurement.* Vol.No.3 pp.607-610

Mittal B., and Lasser W.M. Why do customers switch? The dynamics of satisfaction versus loyalty. *Journal of Service Marketing* Vol.12 No.3 1998 pp.177-194

Mowen J. C. and Minor N. J. (1998), *Consumer Behavior, Fifth Edition* New Jersey: Prentice Hall International.

Mudie, Peter, and Cotarn A. *The Management and Marketing of Service, Second Edition (1999)* : Butterworth – Heinemann, Oxford

Naresh K. M. *Marketing Research, An Applied Orientation, Third Edition* Prentice Hall, Upper Saddle River, New Jercey

Paul R. T. Ph.D. *Customer Service ; Career Success Through Customer Satisfaction. Second Edition (2003)* Prentice Hall Upper Saddle River, NJ

Pipatsirisak Surachai (1999) *Quality Managemetn Strategy,* Executive Journal, Vol.19 No.3 pp.39-43, Bangkok.

Professor Rumphi S. Na Ayuthaya, *Statistics for research (1983)* Mahidol University, Bangkok

Professor Wongrattana C., *Statistical for Research technique, Eight Edition (2001)* Srinakarinvirot Uninversity, Bangkok

Ranaweera C. and Prabhu J. The influence of satisfaction, trust, and switching barriers on customer retention in a continuous purchasing setting. *International Journal of Service Industry Management* Vol.14 No.4 203 pp.374-395

Schroder G.O., Ouwersloot H., Lemmink J., and Semeijn J. Consumer's trade-off between relationship, service package and price : An empirical study in car industry *European Journal of Marketing* Vol.37 No.1/2 2003 pp.219-242

Sheila K. *Measuring and Managing Customer Satisfaction : Going For the Gold (1998)* ASQ Quality Pr. Milwaukee, WI

Soderlund M. Customer satisfaction and its consequences on customer behaviour revisited ; The impact of different level of satisfaction on word-of-mouth, feedback to the supplier and loyalty. *International Journal of Service Industry Management* Vol.9 No.2 1998 pp.169-188

Sparks B.A. I would have felt better if only...or, how to enhance customer satisfaction following service problems *Journal of quality assurance in hospitality & tourism* Vol3. (1/2) 2002 pp.53-67

Sureshchandar G.S., Chandrasekharan R. The relationship between service quality and customer satisfaction – a factor specific approach *Journal of Service Marketing* Vol.16 No.4 2002 pp.363-379

Svensson G, A generic conceptual framework of interactive service quality *Managing Service Quality* Vol.13 No.4 2003 pp.267-275

Swan J.E., Bowers M.R., and Grover R. Customer involvement in the selection of service specifications *Journal of Services Marketing* Vol.16 No.1 2002 pp.88-103

Urban D.J., Hoffer G.E. The virtual automotive dealership : is it time? Is it legal? *Journal of Consumer Marketing* Vol.16 No.2 1999 pp.137-150

Vavra T.G. The advantage of aftermarketing *The American Salesman*; Burlington; Jun 2003 Vol.48 No.6 pp.24-29

Walker J.L. Service encounter satisfaction ; conceptualized. *Journal of Service Marketing* Vol.9 No.1 1995 pp.10-14

Zeithaml V.A. Service Quality, Profitability, and the Economic Worth of Customers :
What we know and what we need to learn. *Journal of the Academy of Marketing
Science* Vol.28 No.1 pp.67-85

Zikmunc, Wiliam G. (2000), *Business Research Methodology*, sixth edition, Forth
Worth: Dryden Press.

WEBSITE

Website; http;//www.dictionary.reference.com   November 25,2003

Website; http;//www.industry.go.th   Novermber 25,2003

Website; http;//www.thaiauto.or.th   November 1, 2003

Website; http;//www.boi.or.th   October 25,2003

Website; http;//www.smed.or.th   October 15,2003

Website; http;//www.isuzumotor.com   November 27,2003

Website; http;//www.retentionmodel.htm   Febuary 13, 2004

APPENDIX A:

English and Thai Questionnaires

Questionnaire

Customer Satisfaction Measurement of Kamphangkollakarn Co.,Ltd

This questionnaire is designed for an MBA thesis of Assumption University. The study is about **"The relationship between customer satisfaction and customer retention on car service industry in Kamphangphet; A case study of Kamphangkollakarn Co.,Ltd"**

<u>Objective</u> : to measure customer satisfaction level and customer retention. To facilitate specific action that would ensure continued customer satisfaction and improvement. Every opinion of you is valuable information for the development of our service. Thank you very much for your cooperation.

<u>Part I</u>   Demographic Characteristic of Respondents

Please mark ✔ in the blank ( ) for the answer.

What is your age?

____ Under 20 yrs   ____ 21-30 yrs   ____ 31-40 yrs

____ 41-50 yrs   ____ Above 50 yrs

What is your business type?

____ School   ____ Garage   ____ Logistic

____ Agriculture   ____ Car service Center   ____ Second hand car dealer

____ Manufacturers   ____ Government Office   ____ Others, please specify _____

Reason to choose this Auto Garage Center

____ Near respondent's house   ____ Recommendation

____ familiar with the company   ____ Convenience for transportation

____ Facilities   ____ Cheap   ____ Other.........................

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Part II Service Performance

Please put (✔) in the block to show opinion about your level of satisfaction on service

performance you have experienced from Kamphangkollakarn Co.,Ltd.

Service performance

Questions	5 Most Satisfied	4 Satisfied	3 Neutral	2 Dis Satisfied	1 Most dissatisfied
Tangible					
1. This auto garage has modern machines.					
2. The physical facilities and tools of this Auto Garage appear to be suitable for the types of service provided.					
3. Availability of spare parts					
Responsiveness					
4. Responsiveness of frontline staff					
5. Technical repair & knowledge					
6. Suggestion of repairing & maintenance knowledge					
7. Reasonable waiting time					
8. When there is a problem employee can solve the problem properly.					
Reliability					
9. This auto garage is dependable					
10. This auto garage provides service by the time they promise					
11. The long lasting of repairing					
Price					
12. Price of service					
13. Price of spare parts					

Part III Future Purchase Behavior

Please put (✔) in the block to show opinion about The Auto Garage Center

Questions	5 Strongly Agree	4 Agree	3 Neutral	2 Disagree	1 Strongly Disagree
14. I will buy service from this Auto Garage again					
15. When I found something that would be beneficial to the Auto Garage I will give feedback to the Auto Garage immediately.					
16. I will recommend this Auto Garage to others					

แบบสอบถาม

การวัดระดับความพึงพอใจของลูกค้าของบริษัท กำแพงกลการ จำกัด

แบบสอบถามนี้ถูกออกแบบสำหรับการทำวิทยานิพนธ์ของนักศึกษาปริญญาโทมหาวิทยาลัยอัสสัมชัญ การศึกษาเกี่ยวกับ
"ความสัมพันธ์ระหว่างความพึงพอใจของลูกค้าและการรักษาลูกค้าในอุตสาหกรรมการบริการทางด้านยานยนต์
ในจังหวัดกำแพงเพชร กรณีศึกษาบริษัท กำแพงกลการ จำกัด"
<u>จุดประสงค์</u> เพื่อวัดระดับความพึงพอใจของลูกค้า ทำให้ง่ายต่อการปฏิบัติงานและสร้างความพึงพอใจสูงสุดให้แก่ลูกค้า
อย่างต่อเนื่อง และปรับปรุงในส่วนที่บกพร่อง ทุกความเห็นของท่านเป็นข้อมูลที่เป็นประโยชน์ต่อการพัฒนาการบริการของ
บริษัท ทางบริษัทขอขอบคุณทุกท่านที่ให้ความร่วมมือ

<u>ส่วนที่ 1</u> ข้อมูลทั่วไป   โปรดทำเครื่องหมาย ✓ ในช่องว่าง

อายุของท่าน

_____ น้อยกว่า 20 ปี   _____ 21 – 30 ปี   _____ 31 – 40 ปี

_____ 41 – 50 ปี   _____ มากกว่า 50 ปี

ประเภทธุรกิจของท่าน

_____ โรงเรียน   _____ อู่ซ่อมรถ   _____ ขนส่ง

_____ เกษตรกรรม   _____ ศูนย์บริการรถยนต์   _____ จำหน่ายรถมือสอง

_____ โรงงานอุตสาหกรรม   _____ หน่วยราชการ   _____ อื่นๆ โปรดระบุ_____

เหตุผลที่เลือกใช้บริการที่บริษัท กำแพงกลการ จำกัด

_____ ใกล้บ้าน   _____ ได้รับคำแนะนำจากคนรู้จัก   _____ คุ้นเคยกับบริษัท

_____ ความสะดวกในการเดินทาง   _____ การบริการที่ครบครัน   _____ ราคาถูก

_____ อื่นๆ โปรดระบุ_____

ผลงานการบริการ

โปรดทำเครื่องหมาย ✓ เพื่อแสดงระดับความพึงพอใจในการบริการของบริษัทในช่องที่ท่านเห็นด้วยมากที่สุด

คำถาม	5 พอใจ มาก	4 พอใจ	3 เฉยๆ	2 ไม่พอใจ	1 ไม่พอใจ มาก
1. บริษัทบริการด้วยเครื่องจักรที่ทันสมัย					
2. เครื่องมือและสิ่งอำนวยความสะดวกต่างๆ เหมาะสมกับประเภทของงาน					
3. ความมีพร้อมทางด้านอะไหล่					
4. ความรวดเร็วในการให้บริการของพนักงานรับงาน					
5. เทคนิคการซ่อมและความรู้ทางด้านเทคนิค เกี่ยวกับเครื่องยนต์และงานอื่นๆ					
6. คำแนะนำในการซ่อมและการบำรุงรักษา					
7. การใช้เวลาเหมาะสมในการซ่อม					
8. การแก้ปัญหาของบริษัทเมื่อมีปัญหาเกิดขึ้น					
9. ความไว้วางใจได้ของบริษัท					
10. บริษัทสามารถทำงานเสร็จภายในเวลาที่นัดหมาย					
11. ความคงทนจากการซ่อมชิ้นงาน					
12. ราคาด้านการบริการ					
13. ราคาด้านอะไหล่					

แนวโน้มที่จะกลับมาใช้บริการครั้งต่อไป

โปรดทำเครื่องหมาย ✓ ในช่องที่ท่านเห็นด้วยมากที่สุด

คำถาม	5 เห็นด้วย อย่างยิ่ง	4 เห็นด้วย	3 เฉยๆ	2 ไม่เห็น ด้วย	1 ไม่เห็นด้วย อย่างยิ่ง
1. ท่านจะกลับมาใช้บริการกับทางบริษัทอีก					
2. ท่านจะเสนอความเห็นทันทีเมื่อท่านพบสิ่งที่เห็นว่าเป็นประโยชน์ต่อทางบริษัทหรือทางบริษัทควรปรับปรุง					
3. ท่านจะแนะนำการบริการของบริษัทให้กับผู้อื่นที่ท่านรู้จัก					

APPENDIX B:

Reliability Results
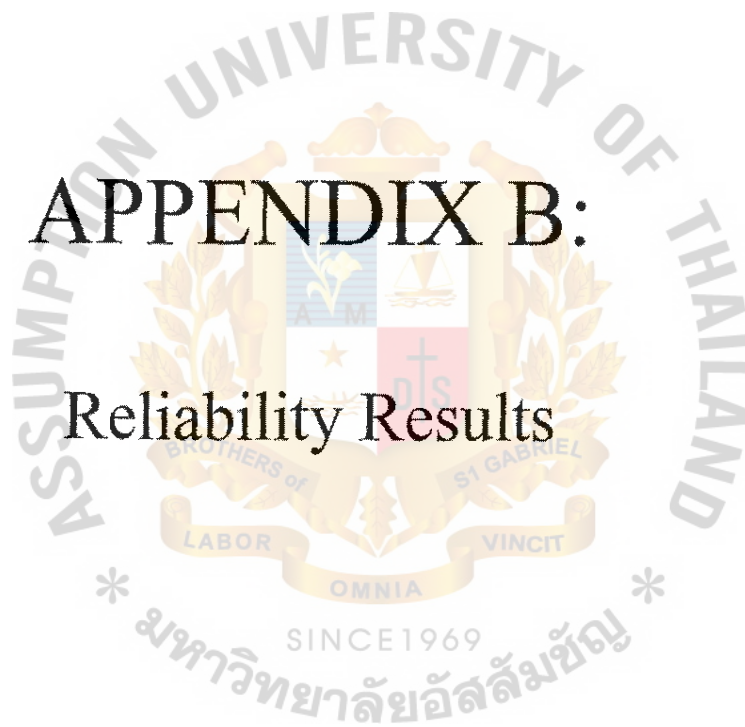
Reliability Analysis

1.Tangible

****** Method 1 (space saver) will be used for this analysis ******

  R E L I A B I L I T Y   A N A L Y S I S   -   S C A L E   (A L P H A)

Reliability Coefficients

N of Cases =   30.0   N of Items = 3

Alpha =   .7928

2.Responsiveness

****** Method 1 (space saver) will be used for this analysis ******

  R E L I A B I L I T Y   A N A L Y S I S   -   S C A L E   (A L P H A)

Reliability Coefficients

N of Cases =   30.0   N of Items = 5

Alpha =   .7927

3. Reliability

****** Method 1 (space saver) will be used for this analysis ******

  R E L I A B I L I T Y   A N A L Y S I S   -   S C A L E   (A L P H A)

Reliability Coefficients

N of Cases =   28.0   N of Items = 3

Alpha =   .7723

4. Price

****** Method 1 (space saver) will be used for this analysis ******

  R E L I A B I L I T Y   A N A L Y S I S - S C A L E   (A L P H A)

Reliability Coefficients

N of Cases =   30.0   N of Items = 2

Alpha =   .8159

5. Customer Retention

****** Method 1 (space saver) will be used for this analysis ******

  R E L I A B I L I T Y   A N A L Y S I S - S C A L E   (A L P H A)

Reliability Coefficients

N of Cases =   28.0   N of Items = 3

Alpha =   .6961

6. Total

****** Method 1 (space saver) will be used for this analysis ******

  R E L I A B I L I T Y   A N A L Y S I S - S C A L E   (A L P H A)

Reliability Coefficients

N of Cases =   30.0   N of Items = 5

Alpha =   .8206

APPENDIX C:
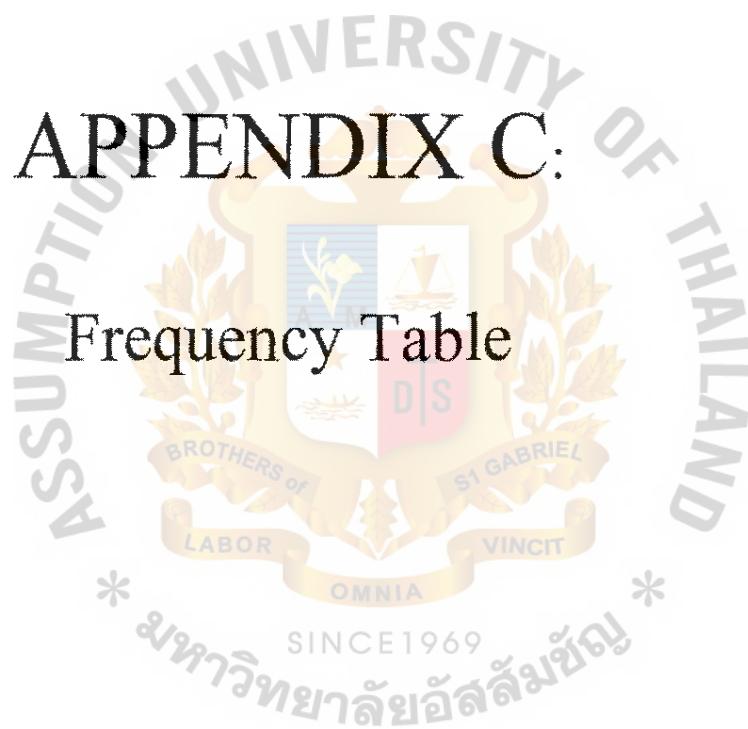
Frequency Table

Frequency Table

age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	under 20 yss	4	1.8	1.8	1.8
	21 - 30 yrs	37	17.1	17.1	18.9
	31 - 40 yrs	86	39.6	39.6	58.5
	41 - 50 yrs	63	29.0	29.0	87.6
	above 50 yrs	27	12.4	12.4	100.0
	Total	217	100.0	100.0	

business

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	School	3	1.4	1.4	1.4
	Garage	146	67.3	67.3	68.7
	Logistic	2	.9	.9	69.6
	Agricuture	21	9.7	9.7	79.3
	Car service Center	18	8.3	8.3	87.6
	Manufacturers	11	5.1	5.1	92.6
	Government office	5	2.3	2.3	94.9
	Others, please specify	11	5.1	5.1	100.0
	Total	217	100.0	100.0	

```
Multiple Response

Group $REASON  Reason to choose this Auto Garage Center
     (Value tabulated = 1)

                                          Pct of   Pct of
Dichotomy label                  Name     Count    Responses  Cases

Near resondent's house           REA1      13       3.4        6.0
Recommendation                   REA2      21       5.5        9.7
Familiar with the company        REA3     102      26.6       47.2
Convenience for transportation   REA4      43      11.2       19.9
Facilities                       REA5     143      37.3       66.2
Cheap                            REA6      22       5.7       10.2
Other                            REA7      39      10.2       18.1
                                         -------   -----      -----
             Total responses             383      100.0      177.3

1 missing cases;  216 valid cases
```

This auto garage has modern machines.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	6	2.8	2.8	2.8
	Satisfied	124	57.1	57.1	59.9
	Most Satisfied	87	40.1	40.1	100.0
	Total	217	100.0	100.0	

The physical facilities and tools of this Auto Garage appear to be suitable for the types of service provided.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dis Satisfied	1	.5	.5	.5
	Neutral	9	4.1	4.1	4.6
	Satisfied	127	58.5	58.5	63.1
	Most Satisfied	80	36.9	36.9	100.0
	Total	217	100.0	100.0	

Availability of spare parts

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	11	5.1	5.1	5.1
	Satisfied	131	60.4	60.4	65.4
	Most Satisfied	75	34.6	34.6	100.0
	Total	217	100.0	100.0	

Responsiveness of frontline staff

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	5	2.3	2.3	2.3
	Satisfied	141	65.0	65.0	67.3
	Most Satisfied	71	32.7	32.7	100.0
	Total	217	100.0	100.0	

Technical repair & knowledge

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dis Satisfied	3	1.4	1.4	1.4
	Neutral	17	7.8	7.8	9.2
	Satisfied	149	68.7	68.7	77.9
	Most Satisfied	48	22.1	22.1	100.0
	Total	217	100.0	100.0	

Suggestion of repairing & maintenance knowledge

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dis Satisfied	1	.5	.5	.5
	Neutral	19	8.8	8.8	9.2
	Satisfied	150	69.1	69.1	78.3
	Most Satisfied	47	21.7	21.7	100.0
	Total	217	100.0	100.0	

Reasonable waiting time

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dis Satisfied	1	.5	.5	.5
	Neutral	10	4.6	4.6	5.1
	Satisfied	148	68.2	68.2	73.3
	Most Satisfied	58	26.7	26.7	100.0
	Total	217	100.0	100.0	

When there is a problem employee can solve the problem properly.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dis Satisfied	4	1.8	1.8	1.8
	Neutral	29	13.4	13.4	15.2
	Satisfied	133	61.3	61.3	76.5
	Most Satisfied	51	23.5	23.5	100.0
	Total	217	100.0	100.0	

This auto garage is dependable

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	22	10.1	10.1	10.1
	Satisfied	103	47.5	47.5	57.6
	Most Satisfied	92	42.4	42.4	100.0
	Total	217	100.0	100.0	

This auto garage provides service by the time they promise

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	14	6.5	6.5	6.5
	Satisfied	129	59.4	59.4	65.9
	Most Satisfied	74	34.1	34.1	100.0
	Total	217	100.0	100.0	

The long lasting of repairing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	20	9.2	9.4	9.4
	Satisfied	131	60.4	61.5	70.9
	Most Satisfied	62	28.6	29.1	100.0
	Total	213	98.2	100.0	
Missing	9	4	1.8		
Total		217	100.0		

Price of service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dis Satisfied	7	3.2	3.2	3.2
	Neutral	22	10.1	10.1	13.4
	Satisfied	138	63.6	63.6	77.0
	Most Satisfied	50	23.0	23.0	100.0
	Total	217	100.0	100.0	

Price of spare parts

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dis Satisfied	3	1.4	1.4	1.4
	Neutral	33	15.2	15.2	16.6
	Satisfied	139	64.1	64.1	80.6
	Most Satisfied	42	19.4	19.4	100.0
	Total	217	100.0	100.0	

I will buy service from this Auto Garage again

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	10	4.6	4.6	4.6
	Agree	115	53.0	53.0	57.6
	Strongly Agree	92	42.4	42.4	100.0
	Total	217	100.0	100.0	

When I found something that would be beneficial to the Auto Garage I will give feedback to the Auto Garage immediately.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	2	.9	1.0	1.0
	Neutral	35	16.1	17.8	18.8
	Agree	118	54.4	59.9	78.7
	Strongly Agree	42	19.4	21.3	100.0
	Total	197	90.8	100.0	
Missing	9	20	9.2		
Total		217	100.0		

I will recommend this Auto Garage to others

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	14	6.5	6.5	6.5
	Agree	106	48.8	48.8	55.3
	Strongly Agree	97	44.7	44.7	100.0
	Total	217	100.0	100.0	

Descriptive Table

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
This auto garage has modern machines.	217	3	5	4.37	.539
The physical facilities and tools of this Auto Garage appear to be suitable for the types of service provided.	217	2	5	4.32	.574
Availability of spare parts	217	3	5	4.29	.557
Valid N (listwise)	217				

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Responsiveness of frontline staff	217	3	5	4.30	.509
Technical repair & knowledge	217	2	5	4.12	.586
Suggestion of repairing & maintenance knowledge	217	2	5	4.12	.556
Reasonable waiting time	217	2	5	4.21	.537
When there is a problem employee can solve the problem properly.	217	2	5	4.06	.664
Valid N (listwise)	217				

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
This auto garage is dependable	217	3	5	4.32	.651
This auto garage provides service by the time they promise	217	3	5	4.28	.575
The long lasting of repairing	213	3	5	4.20	.590
Valid N (listwise)	213				

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Price of service	217	2	5	4.06	.677
Price of spare parts	217	2	5	4.01	.634
Valid N (listwise)	217				

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Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
I will buy service from this Auto Garage again	217	3	5	4.38	.573
When I found something that would be beneficial to the Auto Garage I will give feedback to the Auto Garage immediately.	197	2	5	4.02	.658
I will recommend this Auto Garage to others	217	3	5	4.38	.606
Valid N (listwise)	197				

APPENDIX : D

Nonparametric Correlations Table

Hypothesis Testing

Correlations

			Tangible	customer retention
Spearman's rho	Tangible	Correlation Coefficient	1.000	.293*
		Sig. (2-tailed)	.	.000
		N	217	217
	customer retention	Correlation Coefficient	.293*	1.000
		Sig. (2-tailed)	.000	.
		N	217	217

**. Correlation is significant at the .01 level (2-tailed).

Correlations

			Responsiveness	customer retention
Spearman's rho	Responsiveness	Correlation Coefficient	1.000	.482*
		Sig. (2-tailed)	.	.000
		N	217	217
	customer retention	Correlation Coefficient	.482*	1.000
		Sig. (2-tailed)	.000	.
		N	217	217

**. Correlation is significant at the .01 level (2-tailed).

Correlations

			Reliability	customer retention
Spearman's rho	Reliability	Correlation Coefficient	1.000	.507*
		Sig. (2-tailed)	.	.000
		N	217	217
	customer retention	Correlation Coefficient	.507*	1.000
		Sig. (2-tailed)	.000	.
		N	217	217

**. Correlation is significant at the .01 level (2-tailed).

Correlations

			Price	customer retention
Spearman's rho	Price	Correlation Coefficient	1.000	.478**
		Sig. (2-tailed)	.	.000
		N	217	217
	customer retention	Correlation Coefficient	.478**	1.000
		Sig. (2-tailed)	.000	.
		N	217	217

**. Correlation is significant at the .01 level (2-tailed).