THE STUDY ON CUSTOMER SATISFACTION MEASUREMENT

OF BH COMPANY IN CHINESE MARKET

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OF BH COMPANY IN CHINESE MARKET

Thematic Certificate

To

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Abstract

Title: The Study on Customer Satisfaction Measurement of BH Company in Chinese Market

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   Joseph M. Juran, the great American master of quality, once said, " The twentieth century is the century of productive forces and the twenty-first century is the century of quality." Quality is an eternal theme and quality is defined as " the degree to which inherent characteristics of the entity meet the requirements." In the current new historical period, it is developing from the conformity quality that meets the standard requirements to the adaptive quality that meets the needs of customers, and gradually is developing toward the satisfaction of customers and related parties. And quality is also evolving from a small concept that is single and meets standards to a large concept that is marked-oriented and meets the needs of customers and other related parties.

   Theories and practice of company management and quality management at home and abroad have proved that customers are the bases of the survival and development of companies. If there are no satisfied customers, there is also no market space and no profit. Customer satisfaction is the core of a company's quality management, and is also a company's endless pursuit.

This paper summarized some points after comprehensively analyzing the status quo of customer satisfaction measurement of Chinese companies. That is, companies' understanding of customer satisfaction and the degree of customer satisfaction is shifting from passive to active as well as from negative to positive. At the same time,

companies pay more attention to practice than rational thinking in terms of customer satisfaction. This paper further emphasizes the importance for companies to conduct customer satisfaction measurement.

Based on the survey mode of American Customer Satisfaction Index (ACSI) and Chinese Customer Satisfaction Index (CCSI) and combined with the actual condition of Chinese companies, this paper designs a kind of survey mode that includes seven modules--expected quality, perceived product quality, perceived service quality, perceived value, customer satisfaction, customer complaint and customer loyalty.

Taking BH company as an example, and combining customer satisfaction measurement with the actual conditions of this company, this paper shows detailedly the whole survey process, conducts structural variable analysis, variable impact analysis, customer complaint analysis and customer comment analysis based on the data obtained from the survey and also instructs BH company to make corresponding improvements. The results prove that this method is feasible, for the company has made greater economic and social benefits.

Key Words: customer satisfaction measurement; quality management; empirical analysis

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Finally, thanks to my parents for the education they gave me.

Contents

CHAPTER 1

INTRODUCTION

1.1 The Research Background of Customer Satisfaction Measurement

In 1989, Prof. Fornell of Quality Research Center of the Business School of Michigan University, summarized theoretical research findings and then put forward a logic model of econometrics, i.e., Fornell logical model, based on various factors such as customer expectation, post-purchase perception, purchase price and so on. This model combines the mathematical calculation method of customer satisfaction with customer's psychological perception of purchasing goods or services. The result obtained, using this model, the partial differentiation and the least square, is the Customer Satisfaction Index (CSI). By far, Prof. Fornell's research finding is the most mature customer satisfaction index theory and has been applied widely.

The internal and external environment for companies' survival and development, customers' consuming habits, the update of products and companies' business strategies changed a lot. In this context, the concept of customer satisfaction formed.

Customer satisfaction has a direct impact on the primary source of future revenue streams for most companies (Fornell 1992). Customer satisfaction is believed to lead to profitability. The impact of customer satisfaction for repeat business and customer loyalty is not the same for all industries. Loyal customers are not necessarily satisfied customers, but satisfied customers tend to be loyal customers.

With the market competition increasing, the enterprises focus more on customers than products and the nations pay more concerns on the quality of output than efficiency index of such economic resources as GDP, etc. The customer's satisfaction is just the right index to measure the quality of output from the perspective of customers. The model of customer's satisfaction develops gradually from the original model of GAP to the Structure Equation Model (SEM), which has been widely applied in Sweden, America, Europe, etc. The customer's satisfaction has

become the leading indicative index in economic development, which has a remarkable prediction on such indexes of economic effect as the stock market price and Market Value Added (Liang 2007). The focus of customer satisfaction is the customer and the core is satisfaction. The main method is to improve product and service quality as well as meet and exceed customer needs and expectations through customer satisfaction index measurement; the ultimate goal is to win the market and make profits.

1.2 Research Objectives and Significance

Judging from the experience and effect of economic entities, carrying out customer satisfaction index measurement is of great significance for the improvement of national and regional economic operation quality, product quality, business performance and national life quality.

Since the number of customers of some companies is small and the structure of customers is single, the degree of customer satisfaction can be accurately judged based on customers' comments and their visits. Thus, there is no need for those companies to conduct professional customer satisfaction survey. However, some companies have more complex products, more customers, and more information. Under such circumstances, it is necessary to implement a more standardized customer satisfaction survey. Therefore, for companies, a scientific customer satisfaction survey can help accurately and fully understand expectations and needs, or potential needs of customers and the market. This help companies find room for improvement, so it is conducive to the adjustment of the companies' business strategies, to the improvement of employees' quality, to the continuous improvement and innovation of product quality as well as to the promotion of companies' competitiveness in the market.

1.3 Research Methods

In this paper, the following research methods are adopted.

Literature review. With the help of literatures from the library and the Internet and combined with companies' practice, this paper reviews the relevant

researches on customer satisfaction measurement, seeking out the theoretical findings that are helpful to this research.

Combination of qualitative and quantitative methods.   This paper adopts both qualitative and quantitative methods for identification, evaluation and current situation analysis, providing quantification support for the research in this paper.

Graphical method. A large number of figures and tables are inserted in this paper, playing a guiding or facilitating role in text description.

Survey method. Market survey was conducted to obtain first-hand data of BH company's customer satisfaction.

1.4 Thesis Framework and Main Content

This article mainly includes seven chapters: introduction, literature review, customer satisfaction evaluation of BH company, evaluation scheme of customer satisfaction, customer satisfaction evaluation in BH company, the improvement, conclusion and prospect of BH company after evaluation.

The main contents of the first chapter are the background, purpose, meaning, method, framework, etc. of the dissertation.

Chapter 2 the main contents of literature review are: US, Europe, Chinese customer satisfaction research theory, company scope customer satisfaction research status, customer satisfaction survey method.

Chapter 3 The main content of customer satisfaction evaluation in BH is: current status, current status of the industry, and the status of customer satisfaction evaluation in the company.

Chapter 4 The main contents of the customer satisfaction evaluation scheme of BH are: questionnaire design, investigation plan determination.

Chapter 5 The main contents of customer satisfaction evaluation and analysis are: structural variables analysis, variable relationship analysis, customer complaint analysis, customer opinion analysis.

Chapter 6 The main content of the improvement of BH management

improvement is the improvement measures, the improvement effect.

        Chapter 7 summarizes and looks forward the main contents of: research achievements, insufficiency and prospect.

CHAPTER 2

LITERATURE REVIEW

Many individual companies and some industries monitor customer satisfaction on a continual basis, but Sweden is the first country to do so on a national level (Fornell 1992). The annual Customer Satisfaction Barometer (CSB) measures customer satisfaction in more than 30 industries and for more than 100 corporations. The index is intended to be complementary to productivity measures.

2.1 The research status of the American customer satisfaction

The American Customer Satisfaction Index (ACSI) is a new type of market-based performance measure for firms, industries, economic sectors, and national economies. (Fornell, Johnson & Anderson 1996). An industry ACSI represents an industry's customers' overall evaluation of its market offering, a sector ACSI is an overall evaluation of that sector, and the national ACSI gauges the nation's total consumption experience. Hence, ACSI represents a cumulative evaluation of a firm's market offering, rather than a person's evaluation of a specific transaction.

ACSI is embedded in the system of cause and effect relationships shown in Figure 2.1, which makes it the centerpiece in a chain of relationships running from the antecedents of overall customer satisfaction—expectations, perceived quality, and value—to the consequences of overall customer satisfaction—voice and loyalty. As was indicated, the primary objective in estimating this system or model is to explain customer loyalty.

Customer expectation includes three observed variables: the overall expectation, customer expectation and reliability expectation. The perceived quality includes three observed variables: overall perceived quality, customer perceived quality and reliability perceived quality. Perceived value includes two observed variables: the perception of the quality at a given price and the perception of the price at a given quality; Customer satisfaction includes overall satisfaction, gaps with the

expected products or services and gaps with the ideal products or services. The observed variables of the customer complaints are the formal or informal complaints of the costumers about the products or services; Customer loyalty includes three observed variables: the possibility of repeat purchases, tolerable price increases on the premise of the repeat purchases and price reductions which lead to repeat purchases (Fornell, Liu, Kang& Bai 2005).

Figure 2-1: American Customer Satisfaction Index Model
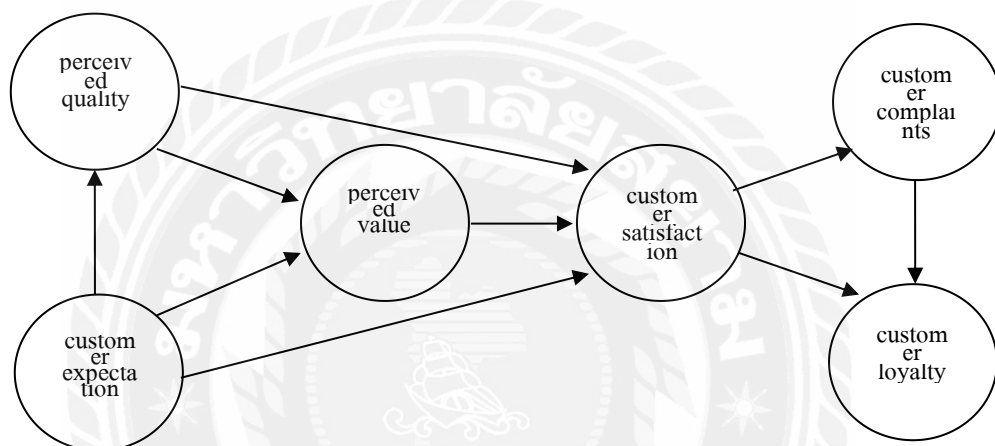
2.2 The research status of the European customer satisfaction

The Technical Committee for the European Customer Satisfaction Index (ECSI) Steering Committee proposed an initial structural equation model involving seven latent variables (see Figure 2.2) aimed at measuring and explaining customer satisfaction and customer loyalty, thereby providing useful information for improving the performance of companies and perhaps even more important serving as a benchmarking tool for comparing and improving the economies of different countries in Europe and for positioning Europe in relation to the USA and countries in Asia (Cassel & Eklof 2001). Compared with the ACSI model, the European model removes the customer complaint variable and adds the company image variable. Various studies have indicated that customer complaint handling has less impact on customer satisfaction and customer loyalty. The company image refers to the customer's impression on the company which has an impact on the customer's expectations,

satisfaction and loyalty. On the measurement of the model, the ACSI model did not measure the product quality and service quality separately only about the durable goods until 1996. However, in the measurement of all industries, the ECSI model uniformly divides the perceived quality into product quality measurement and service quality measurement.

Figure 2-2: European Customer Satisfaction Index Model
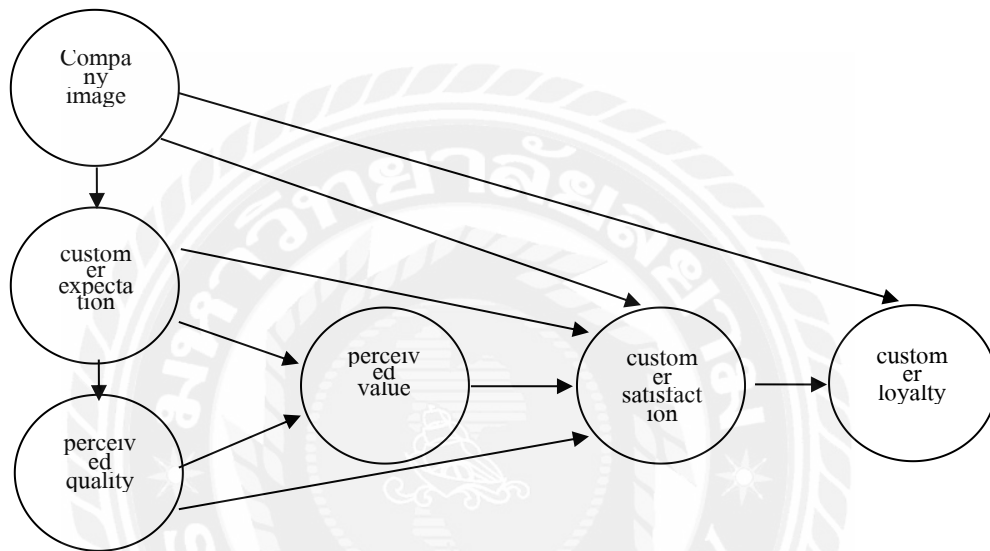
2.3 The research status of the Chinese customer satisfaction

China started the measurement of the customer satisfaction index in the late 1990s. In 1995, Professor Zhao Ping from Tsinghua University introduced this concept into China and then started a systematic research analysis. In 1998, authorized by the State Bureau of Quality and Technical supervision, School of Economics and Management of Tsinghua University organized and developed the research on establishing customer satisfaction index in China (Liu 2002). In 2000, jointly undertook by General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China and the Tsinghua University Research Center of China Company, the national "soft project", "Research on the Construction Method of Customer Satisfaction Index in China", passed the expert achievement appraisal meeting organized by the Ministry of Science and Technology of the PRC in July, 2002, which laid the foundation for establishing a national customer satisfaction

index in China (Tsinghua University Research Center of China Company 2005).

The Chinese Customer Satisfaction Index (CCSI) is a quality measurement method with Chinese characteristics established based on China's national conditions after learning from the American Customer Satisfaction Index (ACSI) and making necessary modifications to the model structure and measurement index system (He 2000). And the customer satisfaction index measurement has been implemented in some areas and some industries in China.

However, so far, China has not yet formally implemented the national-level CSI measurement system and lacks the corresponding regulations and norms. The situation has changed since 2005. And China Association for Quality for the first time released the customer satisfaction measurement norm which changes the situation that china possesses no corresponding regulations and norms. Since then, the work on Chinese customer satisfaction measurement can be implemented under the normative documents (Song & Li 2002).

Based on the researches at home and abroad and national conditions of China, Tsinghua University Research Center of China Company proposed the basic model of Chinese Customer Satisfaction Index (CCSI). The model includes 6 latent variables and 11 relationships (Liu 2001). Among them, the brand image, expected quality, perceived quality and perceived value are the prerequisite variables of the customer satisfaction, while customer loyalty is the outcome variable of the customer satisfaction (Nan, Xiong & Zhang 2003). After comparing with other models, it is not difficult to find that the basic CCSI model is similar to the ECSI model in terms of latent variables, but the relationship among the variables is different. In the basic CCSI model, the brand image has an impact on expected quality, perceived quality, perceived value and customer satisfaction (Wang 2000; Kang 2003).

Based on the basic CCSI model, Tsinghua University Research Center of China Company has combined the different characteristics of various industries. Chinese customer satisfaction measurement model varies depending on the types of

products (or services). The model can be roughly divided into the customer satisfaction model of non-durable consumer goods, the customer satisfaction model of durable goods, the customer satisfaction model of service industry, the customer satisfaction of the government utility and other models (Zhu 2003; Zhang 2002), among which each type can be refined according to the difference of products.

Figure 2-3: The Chinese Customer Satisfaction Index Model
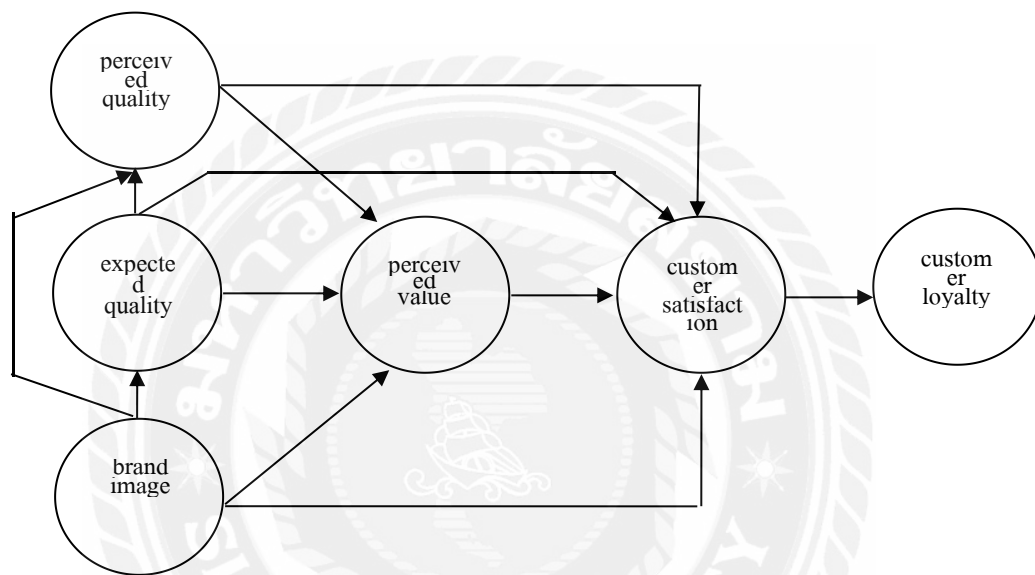
2.4 The status and problems of the company's customer satisfaction measurement

2.4.1 The status of the measurement

At present, most of the companies are aware of the importance, status and significance of the customer satisfaction strategy in the survival and development of the company. In particular, some companies have set up the business philosophy and business purpose of customer satisfaction. For example, a machinery manufacturing company whose business purpose is "high quality products and first-class service make the customers more satisfied" makes good impression on the customers. Another example, an electronic manufacturer sticks to the road of quality and technological benefits, always adheres to the purpose of "customer first, quality first, credit first", strictly follows the certification, actively participates in the international

competitions and is committed to creating satisfactory products and services for customers (Chen 2000).

Many companies value actions and believe that facts speak louder than words so they take practical actions to satisfy customers and they also have done a lot of positive and beneficial explorations in improving the customer satisfaction and loyalty. For example, a machinery manufacturer embodies the idea of "prevention first", highlights the content of "quality improvement" and the pursues the goal of "customer satisfaction". Therefore, in accordance with the quality policy of "quality first, customer first, unremitting efforts, always staying ahead", the company with a high sense of responsibility provides customers with excellent products and services. Taking service as an example, the company not only established nearly 30 service stations or points in all major sales areas, but also made public service promise to customers: ex-factory pass rate is 100%, the Three Guarantees (guaranteed quality, guaranteed quantity and guaranteed repairs) will be implemented once the quality problems occurred during the prescribed period; life-long maintenance services for the products, if necessary, technical services and installation and commissioning services will be provided. All of these steps set up a good factory image for the company, reduce the customers' purchase risks and purchase costs, win the trust of customers and the market, so that the company has been rapidly developed.

2.4.2 Problems

Some companies still do not know enough about the importance of customers and still stick to the principle that " Good wine needs no bush" (Hou 2000), which obviously is a product-oriented business thinking. They only pay much attention to their products without realizing the important influence of competition. If things go on like this, not only will the present market be lost, but also the future market will be lost.

Many company leaders, especially the company's management decision-making level, either lack scientific understanding and accurate grasp of the

essential meaning of some concepts, such as customer, customer satisfaction and customer satisfaction degree, or lack strategic thinking and regard the customer satisfaction degree as a tool of improving performance. Therefore, they claim that "customers first", "users first" and "The customer is always right" with the slogan of customer satisfaction and customer satisfaction degree. However, in practice, still sticking to the "company first" and "company supremacy", they take the sales and profits as the center and simply and one-sidedly pursue the market share and the competitiveness of the company. They also lack the close connection with customers and can hardly satisfy the requirements of customers. What's more, product updating is slow and innovation ability is not strong. In fact, in the fierce market competition, the real competitiveness lies in the number of the satisfied customers and loyal customers owned by the company (Liang 2003; Luo 2002; Yang 2009).

Most of them do not systematically and comprehensively investigate and study the behavior characteristics of customers before and after the purchase. The research on the factors which affect customer satisfaction lays emphasis on the market factors (China Association for Quality 2007), such as the product variety, specifications, market information and so on. While the attention on the non-market factors, such as customer expectations, customer perception and other factors, is not enough.

The understanding of customer satisfaction and customer satisfaction degree mainly stays on the level of the consciousness. There is no thorough research and discussion on how to put customer satisfaction and customer satisfaction degree theory into the entire system of research and development, purchasing, manufacturing, producing, sales and service, and there are no practical and effective strategies (Li 2003).

In the customer satisfaction measurement, some self-flaunt and self-proclaimed companies employ tricky and conceal the true state of affairs from above and below themselves with imprecise purposes; Some mistake the customer

satisfaction rate for customer satisfaction degree; Sometimes the project measurement lacks the factors which customers value most; Sometimes the measurement is just a perfunctory show; Sometimes the measurement lacks the continuity; The validity and credibility of the measurement is suspectable due to the unscientific methods; Sometimes there is no enough accesses to the information obtained from the measurement and so on (Huang & Li 2003).

In general, the company stays at a exploring and trying level in the customer satisfaction. The understanding of the customer satisfaction and customer satisfaction degree is moving from passive to active, from negative to positive; They pay more attention to the practical action of the customer satisfaction rather than to the rational thinking. The theory and practice of market economy show that there is no demand without the customer, there is no market without the demand, and there is no need for the survival of the company without the market (Han & Wei 2001). To win customers and to win the market, the key is to win the customer's mind which means whether customers satisfy or not and the degree of the customer satisfaction (Liu 2003). To some extent, companies that can win customers are invincible.

Therefore, whether from the internal requirements of survival and development or forced by external pressures of competition and challenge, the company must be oriented towards the market, take customers as center, pay attention to customer satisfaction and carry out the company's daily business activities with the guide of customer satisfaction. On the basis of the continues deepening of the reform, the operation focus of the company need to be shift from the original product-oriented related transactions to an market-oriented approach which takes customers satisfaction as center and aims to increase economic benefits.

2.5 Customer Satisfaction Survey Methods

Whether the selection of survey methods is reasonable will directly affect the survey findings. Therefore, the reasonable selection of survey methods is an important part of customer satisfaction survey.

Data collection methods are an integral part of research design. There are several data collection methods, each with its own advantages and disadvantages. Interviewing, administering questionnaires, and observing people and phenomena are the three main data collection methods in survey research (Sekaran 2005).

2.5.1 Interview

One method of collecting data is to interview respondents to obtain information on the issues of interest. Interviews could be unstructured or structured, and conducted either face to face or by telephone or online. Interviewing has the advantage of flexibility in terms of adapting, adopting, and changing the questions as the researcher proceeds with the interviews.

2.5.2 Questionnaire

When the survey is confined to a local area, and the organization is willing and able to assemble groups of employees to respond to the questionnaries at the workplace, a good way to collect data is to personally administer the questionnaires. Questionnaires have the advantage of obtaining data more efficiently in terms of researcher time, energy, and costs.

2.5.3 Observation

Whereas interviews and questionnaires elicit responses from the subjects, it is possible to gather data without asking questions of respondents. People can be observed in their natural work environment or in the lab setting, and their activities and behaviors or other items of interest can be noted and recorded. Observational studies have a formulated research purpose and are systematically planned. Such studies can be structured or unstructured, with the investigator being a participant or nonparticipant in the study setting.

2.5.4 Projective Methods

Certain ideas and thoughts that cannot be easily verbalized or that remain at the unconscious levels in the respondents' minds can usually be brought to the surface through motivational research. This is typically done by trained professionals who

apply different probing techniques in order to bring to the surface deep-rooted ideas and thoughts in the respondents. Familiar techniques for gathering such data are word associations, sentence completion, thematic apperception tests (TAT), inkblot tests, and the like.

The choice of data collection methods depends on the facilities available, the degree of accuracy required, the expertise of the researcher, the time span of the study, and other costs and resources associated with and available for data gathering.

For example, in a customer survey in 2015, a machinery plant adopted simultaneously the personal interview survey method, the telephone interview survey and the mail survey method. For the customers living nearer, the personal interview survey was used; for the customers living far away, the telephone interview survey was adopted; and for the customers that cannot be contacted by telephone, the mail survey was employed. It turned out that the joint use of multiple methods is more effective.

CHAPTER 3

THE EVALUATION PROGRAM OF BH COMPANY'S

CUSTOMER SATISFACTION

3.1 BH Company Profile

BH is located in the Shandong Peninsula blue economic zone and Bohai economic circle intersection of the Yellow River delta hinterland – Binzhou. Products are composed of piston & piston assembly, precision CNC machine and high-tech new material and other related industrial chains, Main product diameter range $\Phi30mm$-$\Phi350mm$, piston variety is more than 1000, annual production capacity is 30 million pieces. BH is the only specialized manufacturer who is able to produce all kinds of pistons widely used in passenger car, marine, engineering etc in China. BH is the largest single piston manufacturer in scale, which occupied 35% comprehensive market share and over 60% share of the high performance combustion engine pistons in China. Oversea customers are throughout North America, Europe, East Asia, Middle East and other areas, Cummins, Caterpillar, GE, VW, Fiat and Kohler are the international high-end customers.

3.2 Industry Status

3.2.1 Market analysis

With the low technical content and low manufacturing threshold, the number of production enterprises following up has increased, and the excess capacity has become more serious, while the heavy and medium - sized truck sales have increased rapidly, and the demand for high - end diesel engine piston market is in short supply.

In the passenger car market, with the increasing demand of the joint venture brand, the opportunities for cooperation with the FAW, Shanghai Volkswagen, SAIC General, Dongfeng Honda and FAW Toyota have increased;

The cost pressure of the piston enterprises is greatly increased, and the profits continue to be diluted: one is the main machinery factory and the distributors

to transfer the pressure of health costs directly to the supporting auto parts enterprises for their own competition; the other is to compete with the main piston enterprises in China in order to compete for the market share, mutual pressure, homogenization competition, and use scale advantage to engage in price war; third is sustained labor cost.

3.2.2 Competition analysis

Through the analysis of the industrial structure of the piston industry, we can see that:

The famous piston manufacturer in the world is also the design developer of the pistons, such as MAHLE, Germany, KS and others have specialized research and development institutions, from the piston design, the test to the performance of the performance of the reliability evaluation of all in the piston manufacturing company;

With the reduction of import duties, the import of high - end products will have a great impact on the same products in China, and the piston - making world's top five companies take various forms of intervention in the market of Chinese automotive piston market and intensify the competition of the piston market;

Germany MAHLE, KS and other complete piston by - products, more suitable for the gradual increase of modular demand, and our piston by - product started late, the product line is not abundant, in the market competition affected;

In order to compete for their own competition, the main machinery factory and the distributors shall transfer the pressure of health to all the supporting auto parts enterprises directly;

Over the long term, the continued increase in the cost of labor, the rise in energy resources, the reform of the RMB exchange rate, the rise of trade protectionism and intense trade friction have resulted in a year - on - year decline in the profits of the piston.

3.2.3 Products and services

According to data and information analysis, the development trend of piston

industry is:

The structural design of the passenger car has been developed gradually from the original combustion gasoline to diesel, and abroad (Europe) has reached 40%;

The piston material of heavy duty truck is developed in the direction of forging steel, ceramic fiber development and aluminum dowel hole.

The diesel - piston emission was designed to Euro Ⅲ and Euro Ⅳ. The piston of the diesel engine developed in the green direction of Euro Ⅳ.
Trend of operation of the piston industry:

Through joint ventures and strategic alliances to overcome trade barriers, enter new markets and carry out global operations and competition;

The piston company takes a large group of roads and uses scale effect to compete in the global scope. The number of manufacturers has decreased significantly and the industrial concentration is high;

High - speed development of information technology and the use of network resources to support the design, production, procurement, sales and service of the pistons;

To apply advanced management techniques and methods to improve operational efficiency and reduce the comprehensive cost;

The development speed of the new product is quickened, the oil - saving and environmental - friendly increase, customer - oriented order to meet the consumer demand;

The strength of professional auto parts chain, traditional agent system faces severe challenge;

All major piston companies have stepped up the operation and investment of the cars and heavy - duty trucks.

3.3 The status quo of customer satisfaction

In the process of homogenization of the products, more market information

is available, and more customers' demand is the basis of the company's invincible position in the future market competition.

Customer satisfaction is the key performance goal of the company. To this end, BH has established a sound customer satisfaction monitoring system, so as to fully grasp the customer's expectation and demand of quality, seek quality improvement and improve the direction, so that the collected information can reflect the customer's satisfaction.

BH has started its own customer satisfaction evaluation since 2000. In 2015, the survey of satisfaction survey, content, frequency, process and so on, formed the company customer satisfaction survey system, and incorporated company program management. In 2016, BH company based on customer and market changes, on the basis of the original investigation on satisfaction survey content and customer's refinement and improvement, and increased third - party investigation, each year from different perspectives to customers to conduct a survey, forming an existing customer satisfaction survey system.

A) BH company compares the survey results with the benchmarking and competitors, finds the advantages and disadvantages of the company, finds the gap to improve, so as to improve the customer satisfaction and loyalty of the company.

B) Customer reviews, service quality tracking, timely availability of feedback information.

C) To actively capture and use customer satisfaction information that can be compared with competitors and / or industry benchmarks.

D) Continuous improvement measures to measure customer satisfaction in order to be suitable for medium and long - term strategic planning and development direction of the Company.

3.4 The Design of Survey Questionnaire

The approach of psychology and consumer behaviour analysis is based on the assumption that satisfaction is a mental condition of the customer. The

performance evaluation of a provided product or service (or some of their characteristics) is quite subjective and for this reason it should be linked with some comparison standards (Grigoroudis & Siskos 2004).

The most important theory for customer satisfaction analysis in the context of consumer behavior concerns the approach of Oliver. According to this particular methodological approach, satisfaction may be defined as a pleasant past-purchasing experience from a product or service given the anti-purchasing expectancy of the customer.

In order to ensure the scientificity and rationality of the questionnaire, the structures of questionnaire ACSI and CCSI were used for reference and the actual conditions of the enterprise were considered in the design process to determine the final customer satisfaction questionnaire survey (see Appendix 1).

The manner in which questions are asked about satisfaction may influence both the response level and distribution (Peterson & Wilson 1992). Most researchers measure satisfaction using a positively presented scale (e.g., "How satisfied are you with ~_?") anchored with "very satisfied"/"completely satisfied" and "very dissatisfied"/"completely dissatisfied."

Sound questionnaire design principles should focus on three areas (Sekaran 2005). The first relates to the wording of the questions. The second refers to planning of issues of how the variables will be categorized, scaled, and coded after receipt of the responses. The third pertains to the general appearance of the questionnaire. All three are important issues in questionnaire design because they can minimize biases in research.

3.5 The Establishment of Survey Plan

3.5.1 Survey Objective

To evaluate BH Company's brand influence, research and development capabilities, perceived product quality, perceived service quality, perceived value, comprehensive strength, customer loyalty and customer satisfaction, and to know

about main engine plants' actual perception of BH Company's products, service and transactions.

To know about the quality of BH Company's competing products and through comparative analysis, to provide reference for BH Company to choose the correct business direction.

3.5.2 Survey Respondents

BH Company's main engine plants and dealers, including strategic customers, key customers and general customers.

3.5.3 Survey Methods

The interview survey method, the telephone survey method and the mystery customer survey method.

3.5.4 Sampling Methods

In order to ensure the representativeness of the sample and based on customer characteristics, stratified sampling is adopted. That is, according their characteristics, customers are divided into several secondary samples, and then some of them are chosen from each secondary sample by simple random sampling to form a new sample. Stratification can improve the accuracy of the estimated value of the overall indicator and it can divide a population with large internal variation into a sub-population with small internal variation. When the number of main engine plants is small, the complete survey is generally adopted. And the accuracy of the survey result can reach to the point that the absolute error dose not exceed 5% when the probability is at 95%.

3.5.5 Sample Size

A sampling survey is conducted among 84 main engine plants and 203 dealers of BH Company. In order to ensure the accuracy of the survey results, the complete survey was conducted among strategic and key customers, and the sampling survey was conducted among general customers.

CHAPTER 4

THE EVALUATION AND ANALYSIS OF BH COMPANY'S

CUSTOMER SATISFACTION

The customer satisfaction analysis approaches consist of several traditional statistical methods, like multiple regression analysis, factor analysis, probit-logit and loglinear models, discriminant and cluster analysis, probability plotting methods, and descriptive statistical analysis (Grigoroudis & Siskos 2004).

Structural equation modeling (SEM) is a tool for analyzing multivariate data that has been long known in marketing to be especially appropriate for theory testing (Savalei & Bentler 2006). Structural equation models go beyond ordinary regression models to incorporate multiple independent and dependent variables as well as hypothetical latent constructs that clusters of observed variables might represent. They also provide a way to test the specified set of relationships among observed and latent variables as a whole and allow theory testing even when experiments are not possible. As a result, these methods have become ubiquitous in all the social and behavioral sciences.

4.1 The Satisfaction Measurement and Analysis of Main Engine Plants as Customers

4.1.1 The Analysis of the Basic Information of the Survey

Figure 4-1: The Analysis of Investigation Area of Main Engine Plants
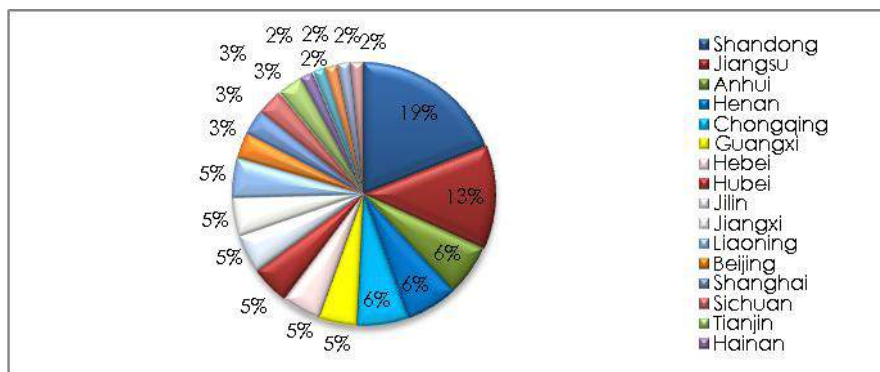
63 main engine plants were investigated successfully, with the number of the total sample being 84.

Figure 4-2: The Distribution of Competitors
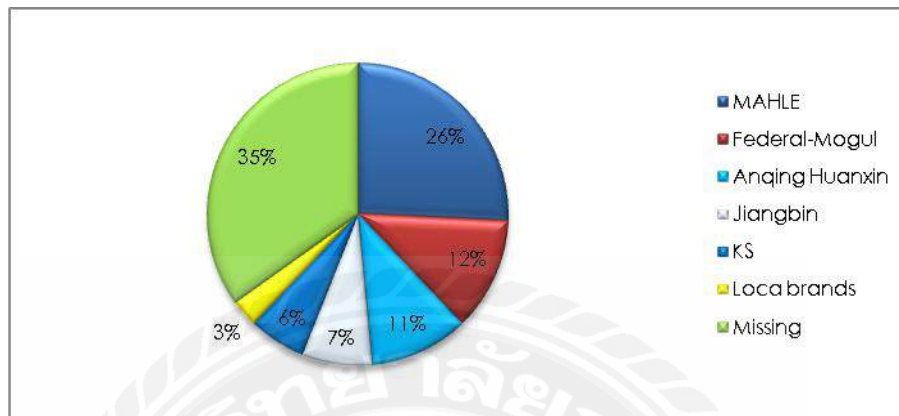
In terms of the competitors, nearly two-thirds (40) of the customers pointed out the competitors and made the comparative evaluation. The rest of the customers did not point out that the major competitors and didn't make the comparative evaluation.

4.1.2 The Analysis of Structure Variables

A full-blown structural equation model solves the problem by representing each construct as a latent variable (also called a factor or structure variable). A latent variable explains the relations among observed variables (indicators) that measure the construct. This prediction does not have to be perfect, so that the reliability of each indicator as a measure of the latent construct can be estimated. The relationships among these constructs constitute the structural part of the model. The measurement part of the model consists of the relationships between the latent variables and their indicators, and the values of these paths are referred to as loadings (Savalei & Bentler 2006).

Figure 4-3: The Analysis of Structure Variables
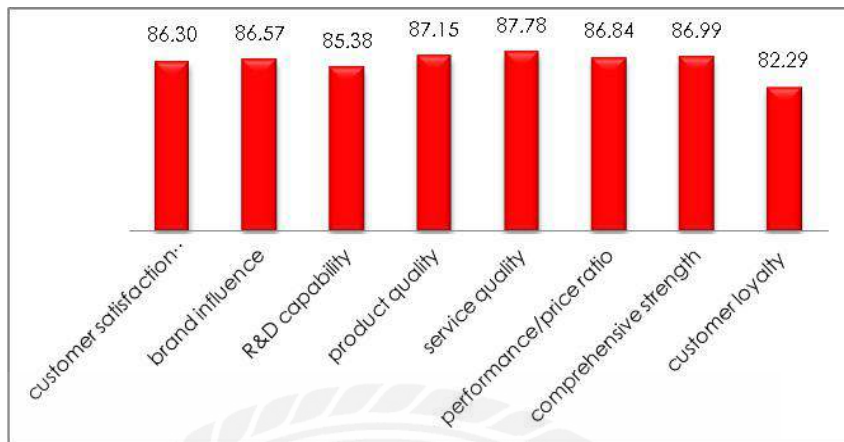
The satisfaction index score of the main engine plants of BH company is 86.30, The score of the brand influence is 86.57, The score of research and development capability is 85.38, The score of product quality given by the main engine plants is 87.15, The score of service quality given by the main engines is 87.78, The score of performance/price ratio given by the main engine plants is 86.84, The score of comprehensive strength is 86.99, The score of loyalty is 82.29. Seen from all the satisfaction indexes, the advantages of product and service quality are obvious, showing that the main engine plants have a very high degree of recognition of the quality of BH company's products and service and think it is BH company's major competitive edges. Compared to previous years, the performance/price ratio has been improved significantly. The index of research and development capability is lower than other indexes, showing that the focus of BH company should be to improve its research and development capability.

4.1.3 The satisfaction analysis of main engine plants as different types of customers

Figure 4-4: The satisfaction analysis of different types of customers

	customer satisfaction index	brand influence	R&D capability	product quality	service quality	performance/price ratio	comprehensive strength	customer loyalty
strategic customers	82.14	82.36	78.49	81.74	83.03	81.18	82.04	84.17
key customers	88.33	87.21	87.55	89.68	90.26	90.08	89.56	81.99
general customers	84.85	87.73	86.17	86.95	86.17	84.60	84.60	76.77
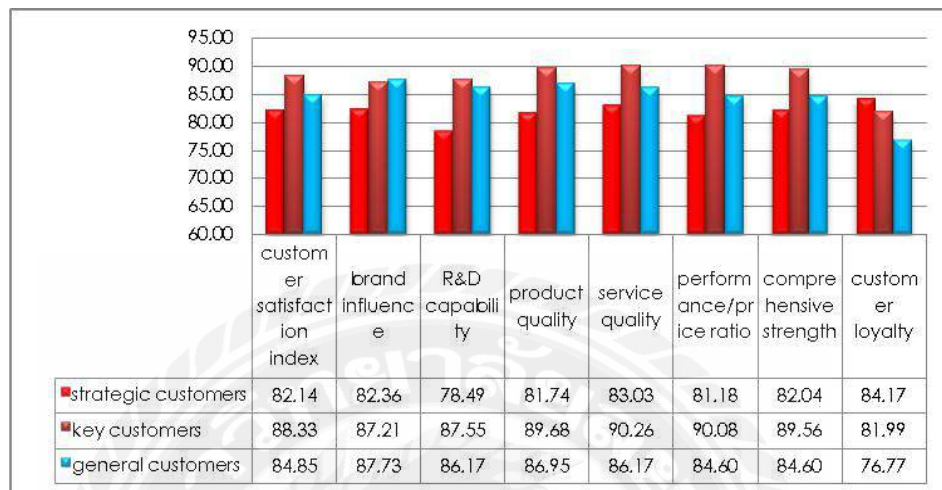
The evaluation on each index given by strategic customers is obviously lower than that of key and general customers, but their loyalty is obviously higher than other types of the customers. It indicates that although the strategic customers have higher requirements on the company's products, services, prices, brands, as well as research and development, they have the closest cooperation with the company. Vast majority of indexes evaluated by the key customers are higher than those evaluated by strategic and general customers.

4.1.4 The Analysis of Observational Variables

4.1.4.1 The analysis of the reasons for cooperation

Figure 4-5: The analysis of the reasons for cooperation
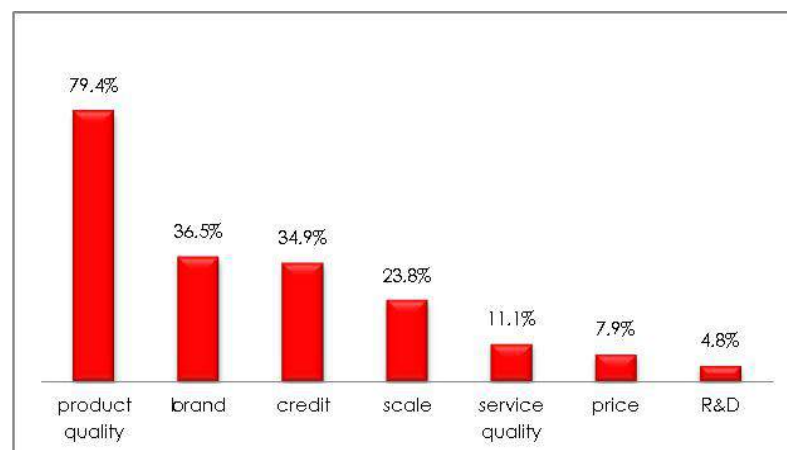
The analysis of the reasons for the cooperation shows that nearly 80% of the main engine plants think that the product quality is the primary factor to attract cooperation, followed by brand, credit, scale, and then service quality, price, and research and development capabilities.

According to the analysis of cooperation reasons, although the product quality of BH company has been highly recognized by majority of main engine plants, the gap of the product quality between the secondary and first brand is very huge. But it also shows that BH company also needs to continue to strengthen itself in the aspects of brand, research and development, services, etc., so that to improve the overall competitiveness.

4.1.4.2 The analysis of brand influence

Figure 4-6: The analysis of brand influence
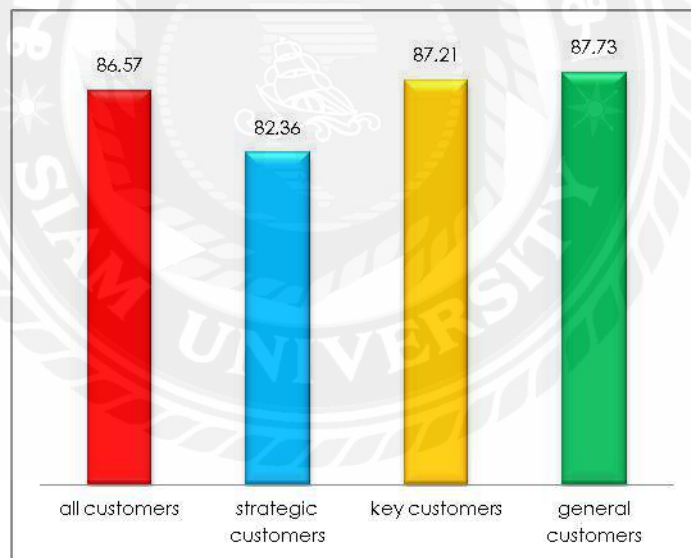
In terms of the brand influence, the evaluation given by strategic customers is the lowest, and the evaluation given by key customers and general customers is more consistent. In terms of improving the brand influence, the main engine plants from different regions put forward the following suggestions: customers in Shandong hope that the company will increase the market promotion efforts, expand the international market, explore new e-commerce and open up the market for small vehicles (such as motorcycles); customers in Jiangsu hope that the company could

actively explore the international market, pay attention to the development of e-commerce, attach importance to the development of agricultural machinery products (Changzhou, Jiangsu).

4.1.4.3 The analysis of research and development capability

Figure 4-7: Figure of the analysis of research and development capability

In terms of the analysis of research and development capability, the expectation of strategic customers is the highest and the evaluation of the key customers is the highest.

In terms of improving research and development capabilities, the main engine plants from different regions put forward the following suggestions: customers in Shandong hope that the company could continue to enhance the development of new products especially the development of middle and high-end products, improve the utilization rate of production capacity and develop new composite materials; customers in Jiangsu hope that the company could actively develop new products and pay more attention to new materials, high-power products, high-end products, agricultural machinery, and family vehicles.

Customers hope that the company could develop middle and high-end products, with particular reference to the following products: agricultural machines, high-power products, family vehicles, ships, and industrial machines.

4.1.4.4 The analysis of the quality of piston product

Figure 4-8: The analysis of the quality of piston product as different types of customers

Figure 4-9: The index analysis of the quality of piston product
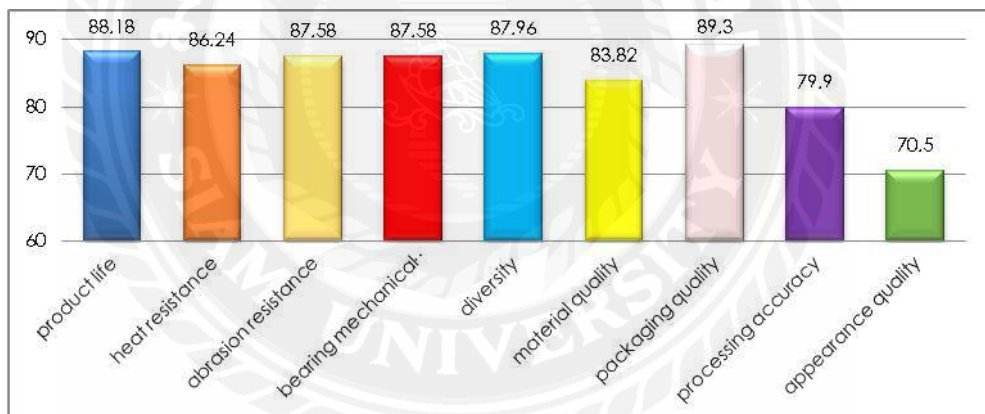
In terms of the quality of piston product, strategic customers' demand of product quality is the highest and evaluation made by the key customers is the highest.

Taken together, the main engine plants hope that BH Company could focus on the overall performance and reliability, improve the abrasion resistance, heat resistance and fatigue resistance, extend the service life by using new materials, improve the surface quality by using new surface treatment technology, improve the capability of controlling the temperature of groove, enhance the technology of processing the piston top, and further improve the piston machining accuracy.

4.1.4.5 The analysis of service quality

Figure 4-10: The analysis of the quality of piston service as different types of customers
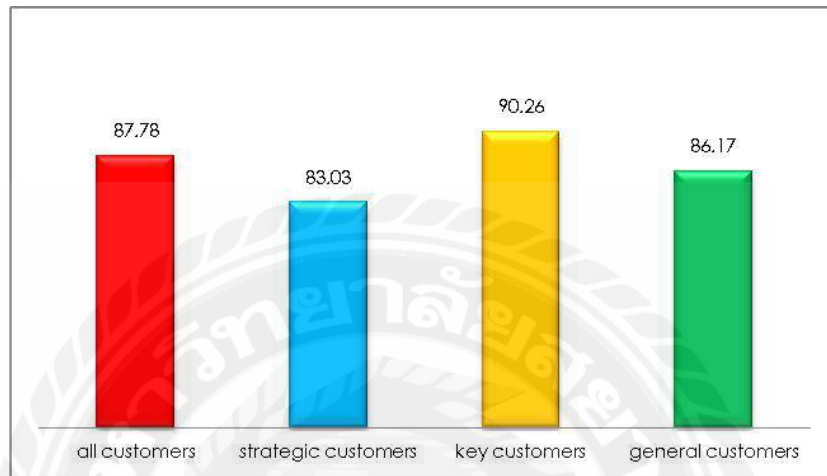
Figure 4-11: The index analysis of the quality of piston service
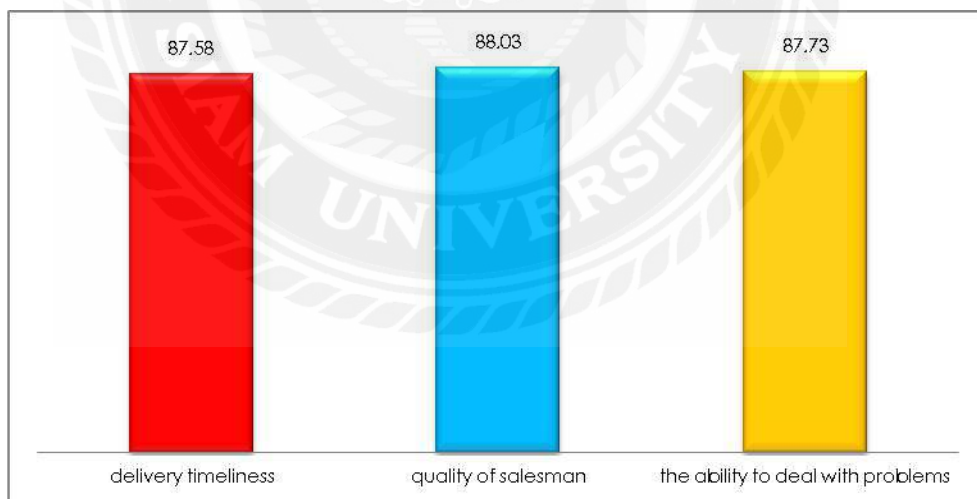
In terms of service quality, the evaluation on quality service given by strategic customers is relatively low, and the evaluation given by key customers is very high.

In terms of the timeliness of delivery, main engine plants believe that BH company needs to improve logistics efficiency, simplify logistics procedures, establish a modern logistics system, and classify the supplies to speed up the delivery.

In terms of the quality of salesman, 35% of the main engine plants point out that the clerks are lack of professional abilities and expertise, and they need to strengthen professional training and improve professionalism; about 8 main engine plants point out that salesman need to enhance communication with customers and they need to know the actual needs of customers timely and initiatively; there are two main engine plants think the service attitude and the patience of the salesman need to be improved.

In terms of the ability to deal with problems, 43% of the main engine plants believe that BH company need to simplify procedures and improve efficiency in handling issues; about 11% of the main engine plants think there are some problems in the methods of handlings problems. For example, some methods are only palliatives which are not targeted and professional enough, moreover, the problems are not solved in depth, etc.; there are two main engine plants point out the need to improve staff's strain capacity when dealing with problems.

4.1.4.6 The analysis of cost performance ratio

Figure 4-12: The analysis of cost performance ratio
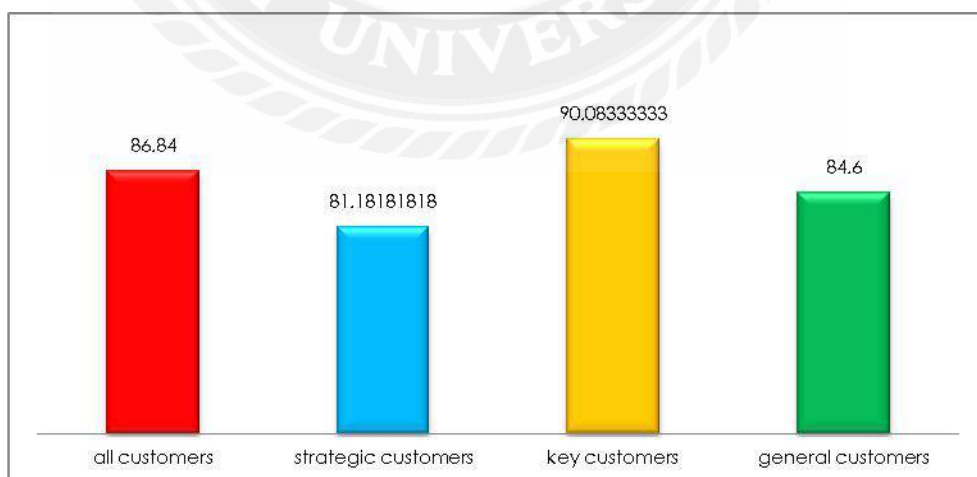
In terms of the cost performance ratio, the evaluation given by strategic customers is the lowest, while the evaluation given by key customers is the highest.

4.1.4.7 The analysis of comprehensive strength

Figure 4-13: The analysis of comprehensive strength

In terms of the comprehensive strength, the evaluation given by strategic customers is the lowest, and the evaluation given by key customers is the highest.

4.1.4.8 The analysis of the loyalty of customers

**Figure 4-14: The analysis of the loyalty of customers**

The loyalty of strategic customers is obviously higher than that of key customers and general customers. There is a clear gap between the loyalty of general customer and that of strategic and key customers. Among 21 strategic customers (main engine plants) of BH company, 11 customers count the company as a strategic partner, and 6 as key partners and 2 as general partner. Among 36 key customers (main engine plants), 14 customers count the company as a strategic partner, and the remaining 22 as key partners.

Figure 4-15: The analysis of the partnerships
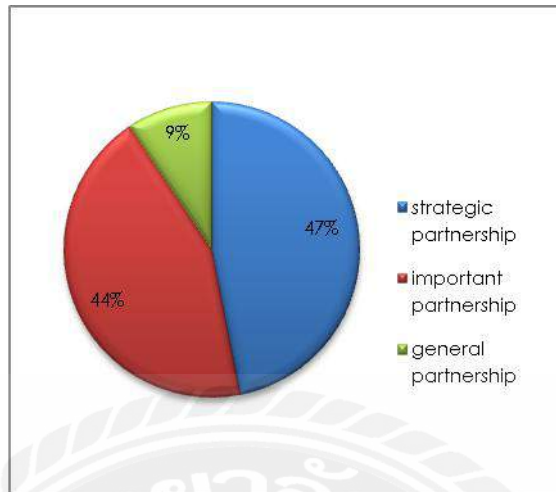
In terms of the partnerships, 47% (30) of the main engine plants consider BH company as strategic partnership, while 44% (28) of the main engine plants consider it as important partnership. And the remaining 9% (6) of the main engine plants consider it as general partnership.

**Figure 4-16: The analysis of the developing direction of partnerships**
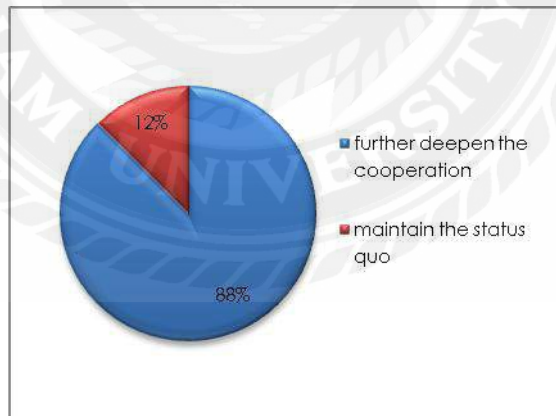
In terms of the developing direction of partnerships, 87% (56) of the main engine plants hope to further deepen the cooperation with BH company, and the remaining 13% (8) of the main engine plants want to maintain the status quo.

## 4.2 The Satisfaction Measurement and Analysis of Dealers as Customers

4.2.1 The Analysis of the Basic Information of the Survey

Figure 4-17: The Analysis of the Investigation Area of Dealers
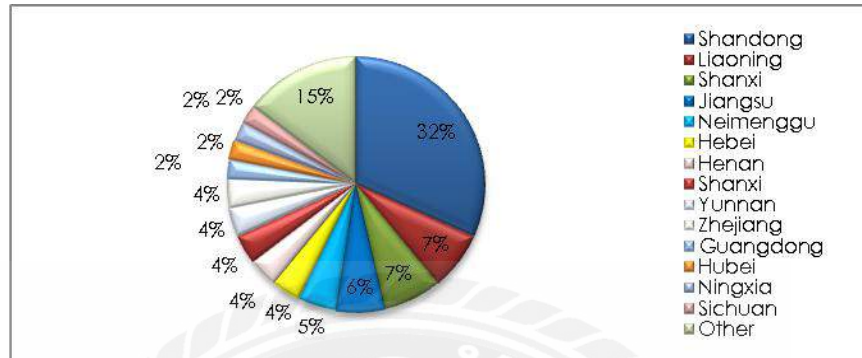
82 dealers were investigated successfully. Of them, 11 strategic customers were all investigated and 8 of them were investigated successfully; in addition, 68 of 156 key customers and 6 of 36 general customers were involved in the sampling survey.

Figure 4-18: The Distribution of Competitors
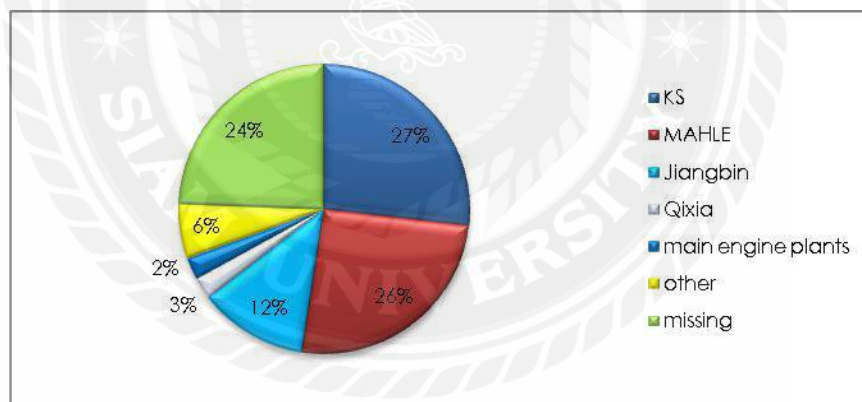
In terms of the competitors, nearly 76% (62) of the customers pointed out the competitors and made the comparative evaluation. 27% of the customers said the competitor is KS; 26% said it is MAHLE; 12% said it is Jiangbin; 11% said it is Qixia, the main engine plants, Anqing Huanxin, Federal-Mogul, Jingang, Weichai or Xichai.

4.2.2 The Analysis of Structure Variables

Figure 4-19: The Analysis of Structure Vriables
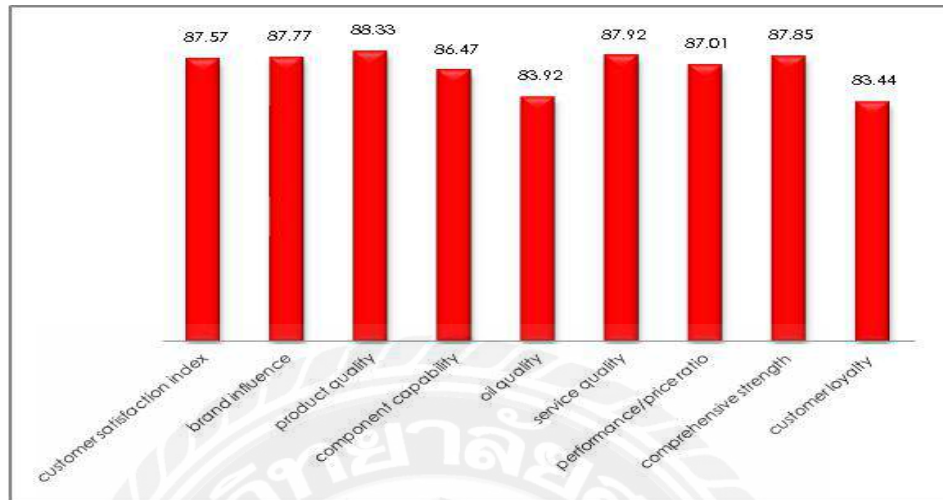
The satisfaction index score of dealers of BH company is 87.57, The score of the brand influence is 87.77, The score of product quality is 88.33, The score of component capability is 86.47, The score of oil product quality is 83.93, The score of service quality is 87.92, The score of performance/price ratio is 87.01, The score of comprehensive strength is 87.85, The score of loyalty is 83.44.

The scores of most of the indexes range from 87 to 88. The score of product quality is higher than 80, showing that product quality is an obvious advantage of BH company. The score of oil product quality is lower than 84, showing that the quality of oil products still needs to be improved. The score of customer loyalty is lower than 84, showing that BH company needs to make more efforts in this respect.

4.2.3 The satisfaction analysis of dealers as different types of customers

Figure 4-20: The satisfaction analysis of different types of customers

	customer satisfaction index	brand influence	product quality	component capability	oil quality	service quality	performance/price ratio	comprehensive strength	customer loyalty
strategic customers	87.54	85.78	89.54	86.17	81.47	86.56	86.95	85.94	82.25
key customers	87.78	88.30	88.38	86.50	84.03	88.33	87.23	88.33	83.48
general customers	85.32	84.60	86.17			85.12	84.60	84.60	84.60
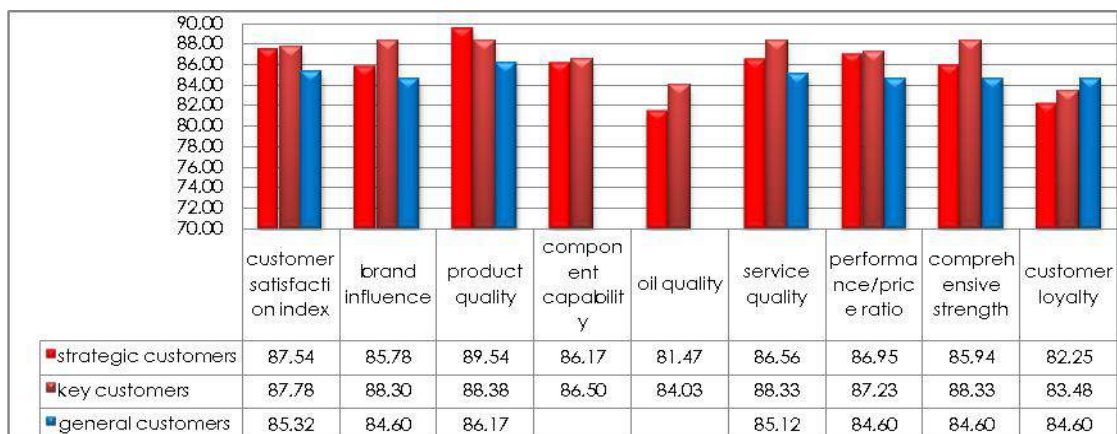
The satisfaction index of strategic customers is close to that of the key customers, which is significantly higher than that of the general customer. The evaluation of key customers on the brand influence, oil quality, service quality and the comprehensive strength is higher than the strategic and general customers. The loyalty of the general customers is the highest. The general customers did not evaluate the component capabilities and product quality.

4.2.4 The Analysis of observational variables

4.2.4.1 The analysis of the reasons for cooperation

Figure 4-21: The analysis of the reasons for cooperation
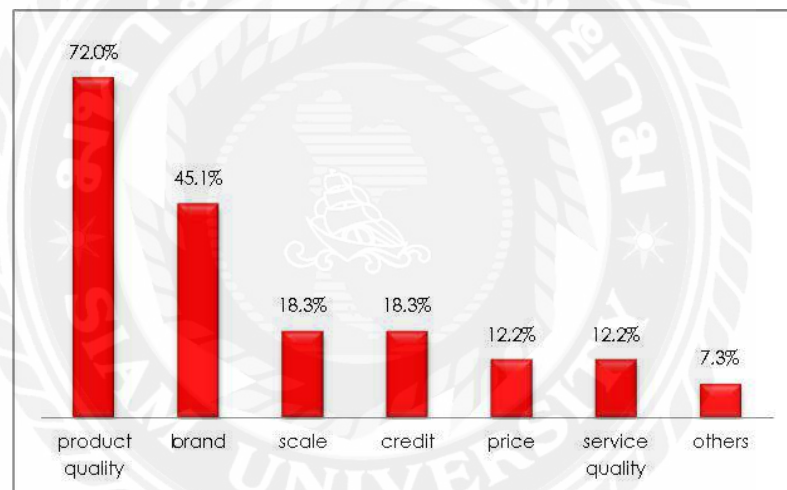
The analysis of reasons for cooperation showed that more than 70% of the dealers think the quality of products is the primary factor to attract cooperation, followed by the brand (45.1%), scale and credibility, and then the price and service quality.

According to the analysis of reasons for cooperation, although the product quality and the brand of BH company have been recognized by the majority of dealers, the quality of service needs to be further improved.

4.2.4.2 The analysis of brand influence

Figure 4-22 : The analysis of brand influence

In terms of the brand influence, the evaluation of key customers rated the highest, followed by strategic customers, and then general customer. Dealers from different regions put forward the following suggestions to expand the brand influence: customers in Shandong hope that the company could expand its market share in the international market, enhance its international reputation, explore new e-commerce, update itself in time to meet new emission requirements, and increase the product diversity in the use of large-scale machines; customers in Shanxi hope that the company to could improve capacity utilization, develop new e-commerce; customers in Jiangsu, Guangdong and Guangxi hope the company to increase publicity efforts; customers in Yunnan hope that the company could increase capacity utilization and expand the international market; customers in Zhejiang hope the company to increase international market influence.

4.2.4.3 The quality analysis of piston product

Figure 4-23: The analysis of the quality of piston product as different types of customers


Figure 4-24: The index analysis of the quality of piston product
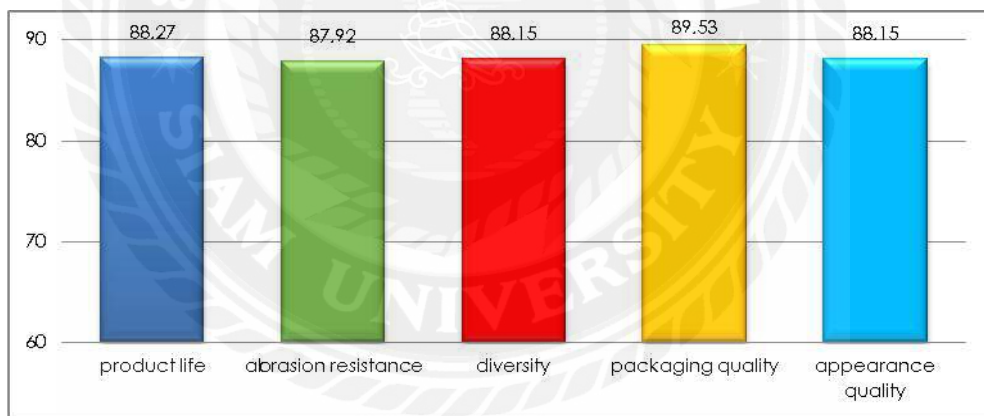
In terms of the quality of piston product, the evaluation of strategic customer on the product quality is the highest, and the evaluation given by the general customer is the lowest.

In terms of service life, 13% of dealers think BH company needs to improve the product reliability. Over 22% of dealers think the company needs to improve the technology of surface treatment, heat treatment and piston head treatment.

In terms of abrasion resistance, 19% of dealers think BH company needs to use new composite materials to improve abrasion resistance. 16% of dealers think the

company needs to improve the technology of surface treatment and the technology of processing piston head.

In terms of appearance quality, 9% of dealers think that BH company needs to improve the technology of casting and processing blanks. 8% of dealers think it is necessary to improve the technology of surface treatment. 8% of dealers think it is necessary to introduce finishing equipments. 6% of dealers think that there is a need to improve the technology of processing the hole of piston pin. In addition, some dealers reflect that there are some glitches and sharps.

In terms of packaging quality, nearly 40% of dealers think BH company's packaging is not solid enough and the products can be easily damaged in transit.

In terms of the product diversity, nearly 50% of dealers think BH company needs to improve its product diversity.

4.2.4.4 The quality analysis of piston pin product

Figure 4-25: The index analysis of the quality of piston pin product
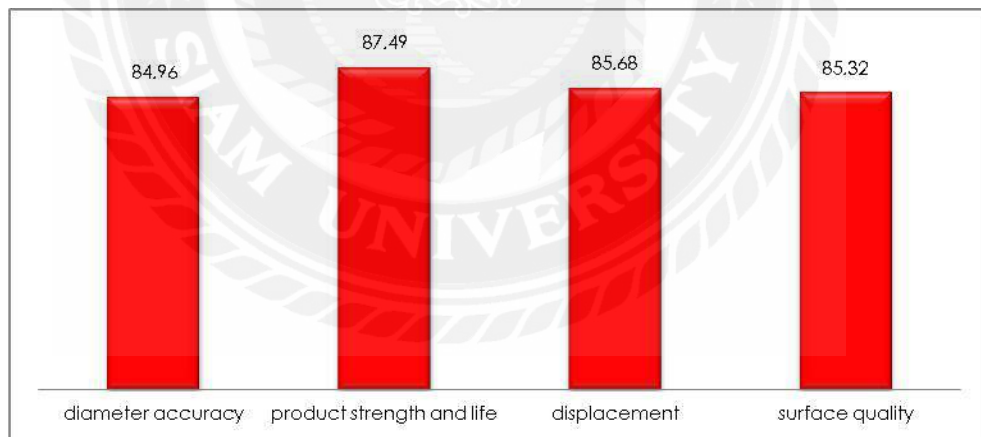
A total of 26 dealers evaluated piston pin products. Dealers have the highest satisfaction with the strength and life of the piston pin, followed by the displacement and surface quality, and then the outside diameter accuracy.

4.2.4.5 The analysis of component capability

Figure 4-26: The analysis of component capability
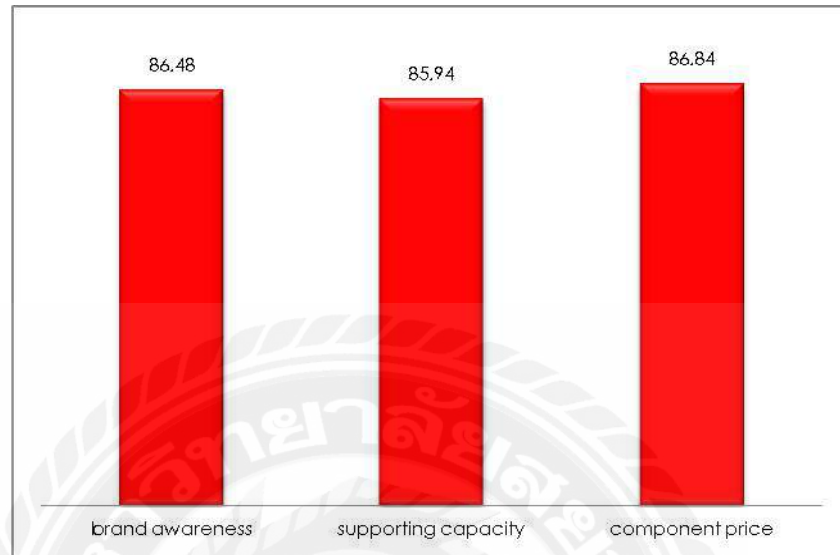
A total of 20 dealers evaluated the components. The evaluations of the dealers on the component price, brand awareness and supporting capacity are very high.

4.2.4.6 The analysis of oil quality

Figure 4-27: Figure of the index analysis of oil quality
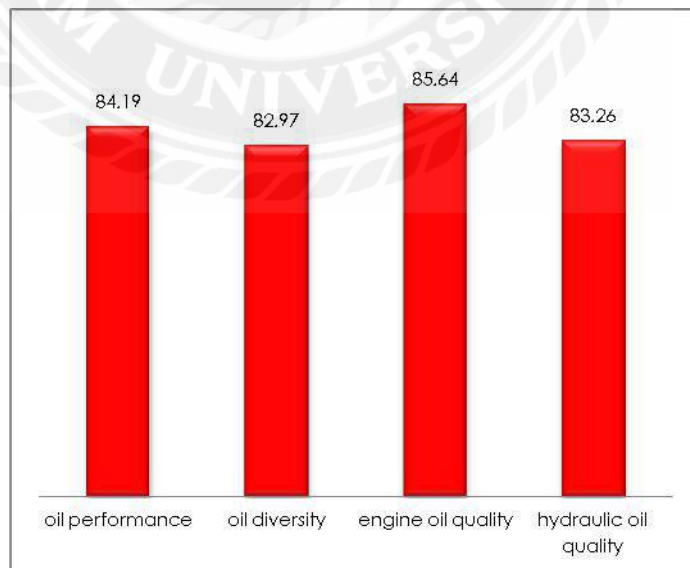
A total of 23 dealers on the quality of oil were evaluated. Among them, 78% of the customers sell company's oil, 30% sell hydraulic oil, 9% sell antifreeze, and

4% sell gear oil. More than half of the dealers regard the Great Wall as the main competitor. Over 20% dealers regard Shell as their competitor and the remaining 20% regard Mobil, Weichai, and Kunlun as their competitors.

For the indexes of oil quality, only four indexes with more evaluations were analyzed: oil performance (84.19 points), oil diversity (82.97 points), engine oil quality (85.64 points), and hydraulic oil quality (83.26 points).

4.2.4.7 The analysis of service quality

Figure 4-28: The analysis of piston service quality as different types of customers
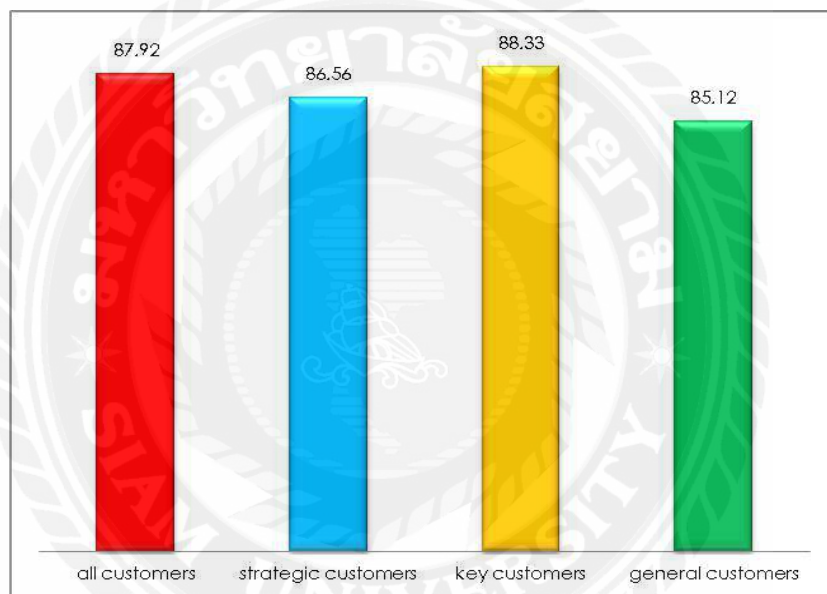
Figure 4-29: Index analysis of piston service quality
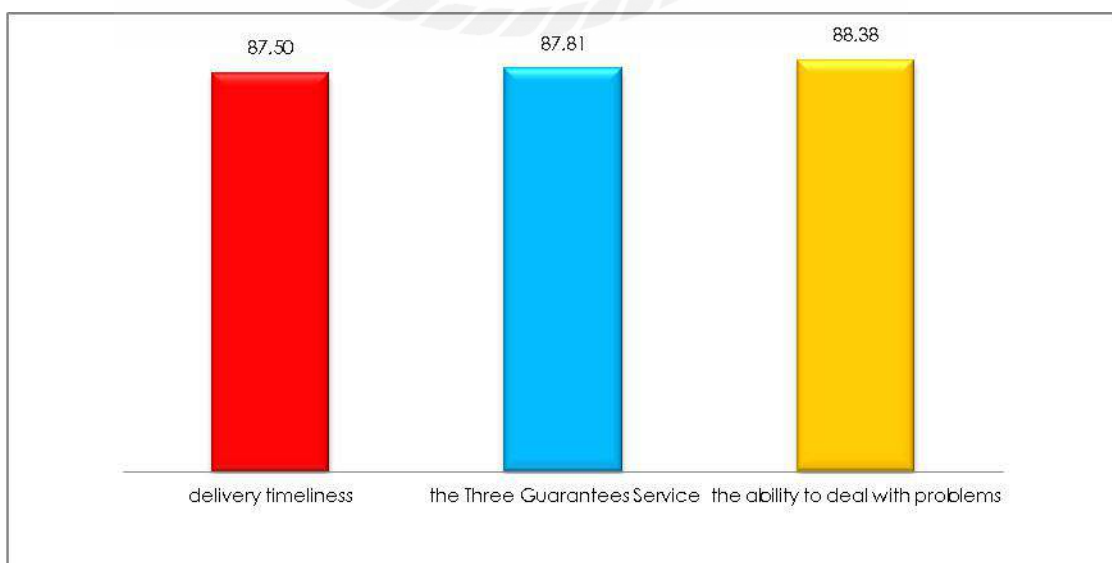
In terms of service quality, the evaluation of the key customers on the service quality rated the highest, and the evaluation of general customer rated the lowest.

In terms of delivery timeliness, BH company needs to improve logistics efficiency, improve the logistics system, and simplify the logistics process. In terms of the ability to deal with problems, nearly half of the dealers put forward suggestions for improvement. Among them, 26% of the dealers think the company needs to improve efficiency and deal with problems more timely. 11% of the dealers think it is necessary to simplify the procedures, and another 11% of the dealers think it is necessary to improve the staff capacity (Quanzhou, Fujian; Changsha, Hunan; Yangzhou, Jiangsu; Shanghai; Kunming, Yunnan) so that to improve their ability to deal with problems. 5% of dealers think that it is necessary to improve the staff attitude (Shijiazhuang, Hebei; Taian, Shandong) and enhance their sense of responsibility (Chengdu, Sichuan). In terms of the Three Guarantees Service, 40% of dealers think BH company needs to improve the quality of Three Guarantees Service. Among them, 31% of the dealers reflect the tedious procedures for return and exchange since it is not timely; 8% of the dealers think the company shirk the responsibility and find excuses on the issue of return and exchange.

4.2.4.8 The analysis of cost performance ratio

Figure 4-30: The analysis of cost performance ratio
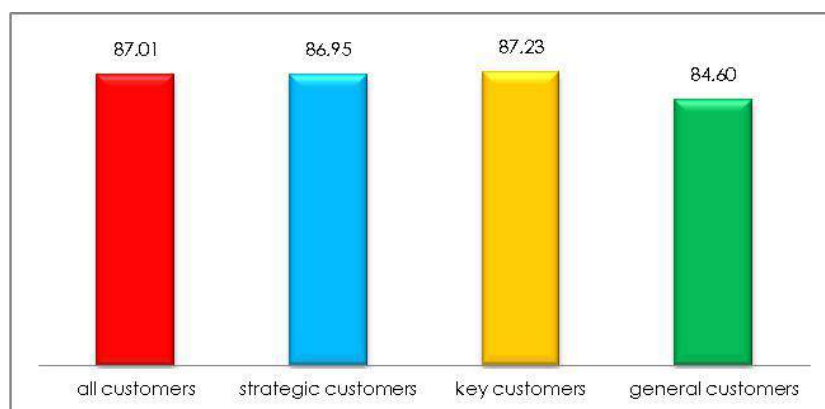
In terms of cost performance ratio, the evaluation of strategic customers and key customers were significantly higher than that of general customers.

4.2.4.9 The analysis of comprehensive strength

Figure 4-31: The analysis of comprehensive strength

In terms of comprehensive strength, key customers have the highest evaluation on the comprehensive strength and the evaluation of general customers is relatively low.

4.2.4.10 The analysis of customer loyalty

Figure 4-32: The analysis of willingness to cooperate
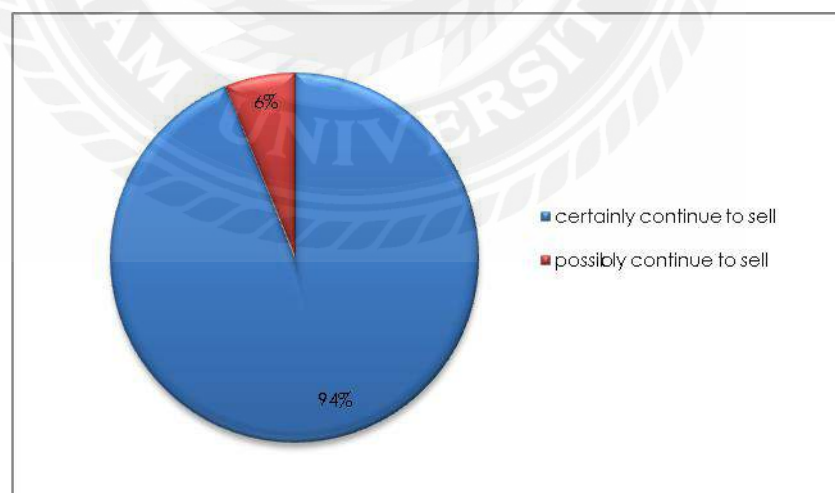
In terms of cooperation, 94% of the dealers said they will definitely continue to sell the products of BH company, while the remaining 6% said they may continue to sell them.

4.3 The Analysis of Customer Opinions

The main engine plants believe that the product quality, brand and service quality of BH company are the most prominent advantages. In addition, the high cost performance ratio, good reputation, large scale, low cost control, timely delivery and high work efficiency are also the advantages reflected by the main engine plants. The dealers believe that the most prominent advantages of BH company are: good product quality, great brand influence; in addition, good service quality, high cost effectiveness, high market share, good corporate reputation, large scale, and comprehensive strength are also the advantages reflected by the dealers.

Some suggestions reflected by the main engine plants are: expanding international influence, developing new materials, new technologies and new products (such as middle and high-end products, high-power products and composite materials, etc.); in addition, developing e-commerce, increasing publicity efforts, further reducing costs, improving the quality and attitude of salesman, and speeding up delivery etc., are also some problems repeatedly reflected by the main engine plants. Suggestions reflected by the dealers are: expanding the influence of the international market, increasing capacity utilization, developing new products (such as the products which can meet the new emission requirements, motorcycles, cars, and large machine piston), and developing e-commerce market; in addition, reducing prices, increasing publicity efforts, reducing damage in transit, speeding delivery, improving service attitude, stabilizing prices, maintaining market order, and strengthening the management of sales channels are also the main problems reflected by the dealers.

CHAPTER 5

SUMMARY

Satisfying customers is a fundamentally sound principle. Unfortunately, measurements of customer satisfaction are not especially informative or diagnostic, principally because of their striking distributional characteristic. Examination of the customer satisfaction literature and empirical investigations reveal that measurements of customer satisfaction exhibit tendencies of confounding and methodological contamination and appear to reflect numerous artifacts (Peterson & Wilson 1992).

5.1 Main Research Findings

With the formation of the oversupplied buyers' market, the further aggravation of global competition, the ever-increasing of consumers' awareness of safeguarding their rights, especially the arrival of the times when customers become increasingly personalized and diversified, and the gradual establishment of a customer-oriented business operation view, the research on customer satisfaction has increasingly become the attention focus of theory circles, business circles and even government departments.

Towards customer satisfaction, many scholars at home and abroad voice their opinions from different perspectives. Based on the previous studies, this paper combines the research of customer satisfaction with the actual conditions of enterprises, and the main research results are as follows:

This paper summarized some points after comprehensively analyzing the status quo of customer satisfaction measurement of Chinese companies. And this paper further emphasizes the importance for companies to conduct customer satisfaction measurement.

Based on the structures of American Customer Satisfaction Index (ACSI) and Chinese Customer Satisfaction Index (CCSI) and combined with the actual condition of Chinese enterprises, this paper designs a questionnaire that includes eight

modules—brand influence, research and development capability, perceived product quality, perceived service quality, perceived value, comprehensive strength, customer loyalty and customer satisfaction.

Taking BH company as an example, and combining customer satisfaction measurement with the actual conditions of this company, this paper shows detailedly the whole survey process. Furthermore, based on the data obtained from the survey, this paper analyzes the survey results and then puts forward some improvement measurements accordingly.

5.2 The Shortcomings of the Research

Nevertheless, due to the author's limited knowledge, there are still many deficiencies in this paper.

Problems with the ACSI model itself. Firstly, ACSI is a descriptive measurement that is developed to reflect the operation quality of macro economy. So its guiding role in improving the quality of micro-enterprises still needs to be tested in practice. Secondly, the influence of each variable isn't considered in the calculation of the survey data and the weight of each variable was not set in the calculation. But in practice, different kinds of enterprises have different requirements for the weights of different variables, so different variables should be weighted differently according to the actual conditions.

In this study, only certain customers, that is the main engine plants and the dealers, are selected as respondents while terminal customers are not involved, so the sample cannot reflect comprehensively BH company's customer satisfaction. At the same time, the sample size of general customers is small because of the random determination of the sample. However, for the sake of theoretical exploration, the data that can be analyzed and calculated by the software PLS-GUI are considered as valid, so the universality of the conclusions of this study remain to be discussed.

In terms of the setting of questions in the questionnaire, this paper only provides a train of thought. The questions in the questionnaire are targeted at

companies only, so the questions may be adjusted when the questionnaire is applied in other industries.

The customer satisfaction measurement in this paper is based on the ACSI model. However, as more attention is paid to the research on customer satisfaction in theory and business circles, the combination of the research on customer satisfaction and the practice of businesses will be further deepened. Therefore, the establishment of targeted customer satisfaction models for different enterprises based on their actual needs will become the future research direction.

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APPENDIX 1

The Survey Questionnaire of BH Company's Customer Satisfaction

Respectable customers:

Hello! I am BH company's interviewer and we are conducting users' research on BH company's piston products. Would you mind spending your precious time on a few questions about the products' quality and service? Our questions are very simple. You are required to mark between 1 to 10 among which 10 points stands for the highest score and 1 point for the lowest score.

Your province(city):   The name of your department:

Your name: Your telephone number:

The category of the users being surveyed:

□ main engine clients   □ service station (□ Cummins, □ FAWDE , □ Weichai Power,

□ China National Heavy Duty Truck Group Company)

The type of automobile: □ passenger cars   □ commercial vehicles

The importance of customers (written by the interviewer):

□ strategic customer   □key customer   □ general customer

The reason of cooperation:

1, What are the main factors which attract you to cooperate with BH company?

A. scale B. credit C. brand D. research and development ability E. price F. products' quality   G. service quality   H. the type of products I. others

Brand influence:

2, What do you think of the influence of BH company's brand in market? (higher score for the higher influence and lower score for the lower influence)

□1   □2   □3   □4   □5   □6   □7   □8   □9   □10

What measures do you think BH company can take to improve the brand influence ?

Research and development ability:

3, What do you think of BH company's research and development ability?(higher

score for the very strong research and development ability and weak for the lower score for the not very strong research and development ability)

□1   □2   □3   □4   □5   □6   □7   □8   □9   □10

Which aspects of research ability do you think BH company should improve?

Piston product quality:

4, Do you think the life of BH company's product can meet your requirements? (higher score for the complete satisfaction and lower score for the dissatisfaction)

□1   □2   □3   □4   □5   □6   □7   □8   □9   □10

What do you think BH company can do to increase the life of piston products?

5, Do you think the heat resistance of BH company's product can meet your requirements? (higher score for the complete satisfaction and lower score for the dissatisfaction)

What do you think BH company can do to improve the heat resistance of the products ?

6, Do you think the abrasion resistance of BH company's products can meet your requirements? (higher score for the complete satisfaction and lower score for the dissatisfaction)

□1   □2   □3   □4   □5   □6   □7   □8   □9   □10

What improvement do you think BH company can make in terms of the abrasion resistance?

7, Do you think the bearing mechanical load capacity of BH company's products can meet your requirements? (higher score for the complete satisfaction and lower score for the dissatisfaction)

What do you think BH company can do to improve the mechanical load capacity?

□1   □2   □3   □4   □5   □6   □7   □8   □9   □10

8, Besides the above quality indexes, which indexes are you also concerned with ?

A indexes (eg. material quality, packaging quality, variety diversity)

Can BH company's products meet your requirements in terms of A index ?

□1　□2　□3　□4　□5　□6　□7　□8　□9　□10

What do you think BH company need to improve in terms of A index?

Service quality:

9, What do you think of the delivery timeliness of BH Company ? (higher score for most timely and lower score for not very timely)

□1　□2　□3　□4　□5　□6　□7　□8　□9　□10

What improvement do you think BH company can make in terms of the delivery timeliness?

10, What do you think of the quality of BH company's salesmen?(higher score for very good and lower score for not very good)

□1　□2　□3　□4　□5　□6　□7　□8　□9　□10

What do you think BH company can do to improve the quality of the salesmen?

11, What do you think of BH company's ability to deal with problems? (high score for very well and lower score for not very well)

□1　□2　□3　□4　□5　□6　□7　□8　□9　□10

What do you think BH company can do to improve the ability to deal with problems?

Cost performance :

12, What do you think of cost performance of BH company's products and services? (higher score for the very high cost performance and lower score for the low cost performance)

□1　□2　□3　□4　□5　□6　□7　□8　□9　□10

Overall strength

13,What do you think of BH company's overall strength?(higher score for very strong and lower score for not very strong)

□1　□2　□3　□4　□5　□6　□7　□8　□9　□10

Willingness to cooperation:

14,What development stage do you think the cooperation between BH company and your company is in ?

□strategy partner relations　□important strategy partner relations

□general strategy partner relations　□occasionally cooperation

15,What direction do you expect to develop your partnership in with BH company in the future?

□further partner relations □maintain the current relations

□reduce the cooperation opportunities □no more cooperation

16,What do you think the biggest advantage of BH Company and the most urgent problems to be improved respectively is ?

Advantages:

Improvement :

Our commitment :

　　As interviewers, we have accepted the special training for interviewers, are familiar with the duties and professional ethics of the interviewers, and bear in mind the extreme importance of keeping company secrets. I know the responsibility and consequences of cheating. I have faithfully conducted interviews and records, and I guarantee that the questionnaire will be kept in safe custody by the client after the interview is over.

　　　　　　　Signature of the interviewer:　　　　　　　　Time:

APPENDIX 2

The Survey Questionnaire of BH Company's Dealers' Satisfaction

Respectable dealers:

Hello! I am BH company's interviewer and we are conducting dealers' research on BH company's piston products. Would you mind spending your precious time on a few questions about the products' quality and service? Our questions are very simple. You are required to mark between 1 to 10 among which 10 points stands for the highest score and 1 point for the lowest score.

Dealer's province(city):　　　　　The name of the dealer's department:

Dealer's name:　　　　　　　　Telephone number :

The importance of customers (written by the interviewer):

□ strategic customer　　□key customer　□ general customer

The cooperation relationship: Your company has cooperated with BH company for___ years and the annual sales of products is about_____.

The biggest competitor of BH company(represented by X in the following text): □Mahle　□Jiangbin piston　□KS　□Federal Mogul

□ARN　□others

The reason of cooperation:

1, What are the main factors which attract you to cooperate with BH company?

A. scale B. credit C. brand D. research and development ability E. price F. products' quality

G. service quality H. the diversity of variety I. market share J. others

Brand influence:

2, What do you think of the influence of BH company's brand in market? (higher score for the great influence and lower score for the less influence)

□1　　□2　　□3　　□4　　□5　　□6　　□7　　□8　　□9　　□10

What measures do you think BH company can take to improve the brand influence ?

3, Do you think the life of BH company's product can meet your requirements? (higher score for the complete satisfaction and lower score for the dissatisfaction)

□1   □2   □3   □4   □5   □6   □7   □8   □9   □10

What do you think BH company can do to increase the life of piston products?

4, Do you think the abrasion resistance of BH company's products can meet your requirements? (higher score for the complete satisfaction and lower score for the dissatisfaction)

□1   □2   □3   □4   □5   □6   □7   □8   □9   □10

What improvement do you think BH company can make in terms of the abrasion resistance?

5, Do you think the product appearance quality can meet your requirement ? (higher score for the complete satisfaction and lower score for the dissatisfaction)

□1   □2   □3   □4   □5   □6   □7   □8   □9   □10

What do you think BH company can do to improve the product appearance quality?

6, Do you think the packaging quality of products can meet your requirement? (higher score for the complete satisfaction and lower score for the dissatisfaction)

□1   □2   □3   □4   □5   □6   □7   □8   □9   □10

What do you think BH company can do to improve the packaging quality of the products?

7, Do you think the diversity of BH company's products(the ability to provide different types of products) can meet your requirements ? (higher score for the complete satisfaction and lower score for the dissatisfaction)

□1   □2   □3   □4   □5   □6   □7   □8   □9   □10

What improvement do you think BH company can make in terms of the diversity of BH company's products?

The product quality of piston pin

8, Do you think the OD accuracy of BH company's piston pin can meet your requirements? (higher score for the complete satisfaction and lower score for the

dissatisfaction)

□1　□2　□3　□4　□5　□6　□7　□8　□9　□10

What improvement do you think BH company can make in terms of the OD accuracy of BH company?

9, Do you think the strength life of BH company's piston pin can meet your requirements? (higher score for the complete satisfaction and lower score for the dissatisfaction)

□1　□2　□3　□4　□5　□6　□7　□8　□9　□10

What improvement do you think BH company can make in terms of the strength life of BH company's piston pin?

10, Do you think the displacement of BH company's piston pin can meet your requirements? (higher score for the complete satisfaction and lower score for the dissatisfaction)

□1　□2　□3　□4　□5　□6　□7　□8　□9　□10

What improvement do you think BH company can make in terms of the displacement BH company's piston pin?

11, Do you think the surface quality of BH company's piston pin (clean without impurities, no cracks, no burn) can meet your requirements? (higher score for the complete satisfaction and lower score for the dissatisfaction)

□1　□2　□3　□4　□5　□6　□7　□8　□9　□10

What improvement do you think BH company can make in terms of the surface quality?

The evaluation on the components :

12, How much do you know about the brand of the BH company's components? (higher score for very much and lower score for not very much)

□1　□2　□3　□4　□5　□6　□7　□8　□9　□10

13, Do you think the components support ability of BH company's products can meet your requirements?

□1　□2　□3　□4　□5　□6　□7　□8　□9　□10

What improvement do you think BH company can make in terms of the components support ability ?

14, What do you think of the cost performance of the BH company's products' components? (higher score for the high cost performance and lower score for the low cost performance)

□1　□2　□3　□4　□5　□6　□7　□8　□9　□10

15, The brands of piston rings and cylinder liners you preferred are respectively : the brand of piston rings_____

　　　　　　the brand of cylinder liners_____

the common brands of the piston ring include: (CYPR, Anqing, Yangzhou Wutingqiao and so on)

the common brands of the cylinder liners include: (Yangzhou Wutingqiao, zhongyuan , Anqing and so on)

Service quality:

16, What do you think of the delivery timeliness of BH Company ? (higher score for most timely and lower score for not very timely)

□1　□2　□3　□4　□5　□6　□7　□8　□9　□10

What improvement do you think BH company can make in terms of the delivery timeliness?

17, What do you think of BH company's ability to deal with problems? (high score for very well and lower score for not very well)

□1　□2　□3　□4　□5　□6　□7　□8　□9　□10

What do you think BH company can do to improve the ability to deal with problems?

18, What do you think of the three guarantees of the BH company?(higher score for very well and lower score for not very well)

□1　□2　□3　□4　□5　□6　□7　□8　□9　□10

What improvement do you think BH company can make in terms of the service of

three guarantees?

Cost performance :

19, What do you think of the cost performance of BH company's products and services? (higher score for the very high cost performance and lower score for the low cost performance)

□1   □2   □3   □4   □5   □6   □7   □8   □9   □10

20, How much are you satisfied with the profit by selling BH company's products ?(higher score for very much satisfied and lower score for not very much satisfied)

□1   □2   □3   □4   □5   □6   □7   □8   □9   □10

Overall strength

21, What do you think of BH company's overall strength?(higher score for very strong and lower score for not very strong)

□1   □2   □3   □4   □5   □6   □7   □8   □9   □10

Willingness to cooperation:

22, The possibility of your company continuing to selling BH company's products is :

□certainly continuing to sell   □possibly continuing to sell

□cutting down the sales   □not selling any more

23, According to your research, what do you think of the willingness of customers to buy BH company's products from the parts factory?

□very high □relatively high □general □relatively low □very low

24,Would you like to recommend your customers buy products for part factory? Your willingness is:

□very high □relatively high □general □ relatively low □very low

Open opinion:

25, What do you think the biggest advantage of BH Company and the most urgent problems to be improved respectively is ?

Advantages:

Improvement :

Our commitment :

As interviewers, we have accepted the special training for interviewers, are familiar with the duties and professional ethics of the interviewers, and bear in mind the extreme importance of keeping company secrets. I know the responsibility and consequences of cheating. I have faithfully conducted interviews and records, and I guarantee that the questionnaire will be kept in safe custody by the client after the interview is over.

Signature of the interviewer: Time:
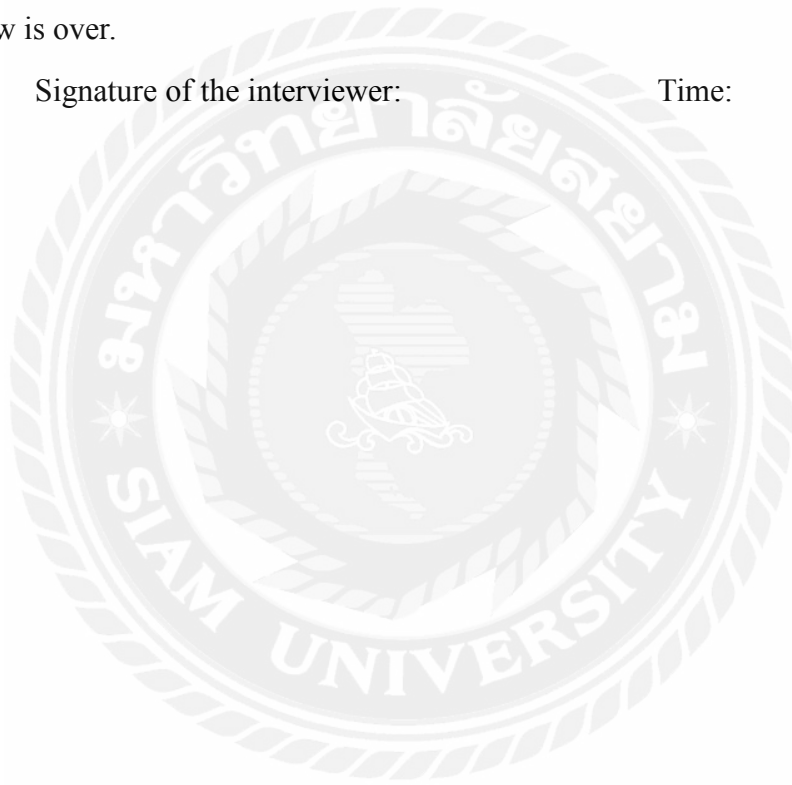
APPENDIX 3

The Survey Questionnaire of BH Company's Oil Product Dealers' Satisfaction

Respectable dealers:

　　　Hello! I am BH company's interviewer and we are conducting dealers' research on BH company's oil products. Would you mind spending your precious time on a few questions about the products' quality and service? Our questions are very simple. You are required to mark between 1 to 10 among which 10 points stands for the highest score and 1 point for the lowest score.

Dealer's province(city):　　　　　The name of the dealer's department:

Dealer's name:　　　　　　　Telephone number :

The importance of customers (written by the interviewer):

□strategic customer　　□key customer　□general customer

The type of the products: □engine oil　□hydraulic fluid

□anti-freeze fluid □gear oil　□brake fluid　□others

The biggest competitor of BH company's oil products (represented by X in the following text): □the Great Wall　□Shell　□Kunlun　□Mobil

□Total □Castrol □BP □Chevron □Monarch □FUCHS □AMSOIL　□others

Brand influence:

1, What do you think of the influence of BH company's oil brand in the market?(higher score for the great influence and lower score for the less influence)

□1　　□2　　□3　　□4　　□5　　□6　　□7　　□8　　□9　　□10

What do you think the BH company can do to improve the influence of BH company's oil brand?

Product quality:

2, Do you think the performance of BH company's products can meet your requirements ? (higher score for the complete satisfaction and lower score for the dissatisfaction)

□1　　□2　　□3　　□4　　□5　　□6　　□7　　□8　　□9　　□10

What do you think the BH company can do to improve the performance of BH company's oil brand?

3, Do you think the diversity of BH company's oil products can meet you requirements? (higher score for the complete satisfaction and lower score for the dissatisfaction)

□1   □2   □3   □4   □5   □6   □7   □8   □9   □10

What improvement do you think BH company can make in terms of the diversity of BH company's oil products?

4, Engine oil: Do you think the quality of BH company's engine oil   (such as: cleaning, lubrication, sealing, cooling, anti-friction) can meet your requirements? (higher score for the complete satisfaction and lower score for the dissatisfaction)

□1   □2   □3   □4   □5   □6   □7   □8   □9   □10

What do you think BH company can do to improve the engine oil quality ?

5, Hydraulic fluid: Do you think the quality of BH company's hydraulic fluid(energy transfer, system lubrication, corrosion protection, rust prevention, cooling) can meet your requirements?(higher score for the complete satisfaction and lower score for the dissatisfaction)

□1   □2   □3   □4   □5   □6   □7   □8   □9   □10

What do you think BH company can do to improve the quality of hydraulic fluid ?

6, Antifreeze fluid: Do you think the quality of BH company's antifreeze fluid(such as: antifreeze, anti-boiling, rust protection, scale prevention, foam prevention, corrosion prevention) can meet your requirements? (higher score for the complete satisfaction and lower score for the dissatisfaction)

□1   □2   □3   □4   □5   □6   □7   □8   □9   □10

What do you think BH company can do to improve the quality of   antifreeze fluid?

7, Gear oil: Do you think the quality of BH company's gear oil (such as: load resistance capacity, abrasion resistance, anti-emulsification, oxidation stability and thermal stability, anti-foam, rust protection and corrosion prevention) can meet your

requirements?(higher score for the complete satisfaction and lower score for the dissatisfaction)?

□1   □2   □3   □4   □5   □6   □7   □8   □9   □10

What do you think BH company can do to improve the quality of gear quality?

8, Brake oil: Do you think the quality of brake oil (such as: low temperature fluidity and high boiling point) can meet your requirements?

(higher score for the complete satisfaction and lower score for the dissatisfaction)?

□1   □2   □3   □4   □5   □6   □7   □8   □9   □10

What do you think BH company can do to improve the quality of brake oil?

Service quality:

9,What do you think of the delivery timeliness of BH Company's oil products?(higher score for most timely and lower score for not very timely)

What improvement do you think BH company can make in terms of the delivery timeliness?

10, What do you think of BH company's ability to deal with the oil problems? (high score for very well and lower score for not very well)

□1   □2   □3   □4   □5   □6   □7   □8   □9   □10

What do you think BH company can do to improve the ability to deal with problems?

11, What do you think of the after-sales service(such as professional knowledge training) of BH company's oil products?(higher score for very good and lower score for not very good)?

□1   □2   □3   □4   □5   □6   □7   □8   □9   □10

What do you think BH company can do to improve the after-sales service?

Cost performance :

13, What do you think of the cost performance of BH company's oil products and services? (higher score for the very high cost performance and lower score for the low cost performance)

□1   □2   □3   □4   □5   □6   □7   □8   □9   □10

14, How much are you satisfied with the profit by selling BH company's oil products ?(higher score for very much satisfied and lower score for not very much satisfied)

□1   □2   □3   □4   □5   □6   □7   □8   □9   □10

Overall strength

15, What do you think of BH company's overall strength?(higher score for very strong and lower score for not very strong)

□1   □2   □3   □4   □5   □6   □7   □8   □9   □10

Willingness to cooperation:

16, The possibility of your company continuing to selling BH company's oil products:

□ certainly continue to sell   □possibly continue to sell

□ cut down the sales   □not sell any more

Open opinion:

17, What do you think the biggest advantage of BH Company and the most urgent problems to be improved respectively is ?

   Advantages:

   Improvement :

Our commitment :

   As interviewers, we have accepted the special training for interviewers, are familiar with the duties and professional ethics of the interviewers, and bear in mind the extreme importance of keeping company secrets. I know the responsibility and consequences of cheating. I have faithfully conducted interviews and records, and I guarantee that the questionnaire will be kept in safe custody by the client after the interview is over.

      Signature of the interviewer: Time: