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PRODUCT RESEARCH ON QUALITY AND SERVICE CASE STUDY ON MECHANICAL AND ELECTRICAL SYSTEM DESIGN AND INSTALLATION

Natcha Krimjai¹, Raden Tanpracha², Toungthong Pacharapruethipakorn³
and Prawit Srakaew⁴

^{1, 2, 3, 4} The Faculty of Business Administration, Bangkok Thonburi University
Bangkok, Thailand

ABSTRACT

This study aims to study and to compare on product research on quality and service case study on mechanical and electrical systems design and installation at CCSB Engineering Co., Ltd. The 175 samples were customers of CCSB Engineering Co., Ltd. The instrument was questionnaires. The statistical procedures employed to examine the data were Frequency, Percentage, Mean, Standard Deviation, t-test, One-Way ANOVA: F-test was used to analyze the hypothesis.

Results of the study were the following

Most samples were male, age 31 - 45 years, Diploma and below Bachelor Degree graduated, positioning in the maintenance department of air conditioners and electrical in the business of shops and restaurants. The expectation level on quality product and service indicated at average level. The perception level on quality product and service indicated at high level. The expectation level on quality product and service indicated at high level, relied upon the best services and quality product.

Keywords: 1) Product 2) Quality 3) Service

1. Introduction

Important factors and essential for business today. In view of the quality of the customer all products and services the business is a manufacturer and service provider. Delivering an impressive product and excellent service to customers. The results from delivering great customer satisfaction (Customer Satisfaction) and contributes to the relationship with the customer (Customer Relationship), as well as to encourage these customers to buy your product or service. continuous (Customer Retention), as well as build customer relationships over the long term. And causing loyalty to a product or service to our (Customer Loyalty).

Quality Management System The system has laid the framework on the basis of focusing on the customer (customer focus) the organization has implemented an effective response to customer demand. And organizations need to be explored Measure and track customer satisfaction and service users. With polls Measure and track keeping in mind the feelings of the customer and the customer (customer perception) to the business. And businesses are able to meet the needs of our customers how much. Including the business processes required to bring the results of measurements to use. Thus, the process of creating customer satisfaction surveys measure and track customer satisfaction with its effectiveness. News and information will guide the implementation of the survey. Measuring Customer Satisfaction Used to enhance performance. As a customer-focused customers.

^{1, 2, 3, 4} Master of Business Administration
E-mail: bkkthon.natcha@gmail.com

As a result of the foregoing, the study was to explore the quality products and services based on a SEVQUAL. Which is widely accepted. And shows the gap between the perception of the service. The expectations of customer Needs to be analyzed And satisfaction of the customer service quality. Which provides protection and reduce customer dissatisfaction. It also encourages executives. And all the staff have to focus on quality and deliver better service to our customers continuously.

2. Research Objective

1. To study the expectation of customers on the quality of products and services.
2. Study on the quality of products and services, customers who use the services of the company, CCS B n. Engineering Co., Ltd.
3. To compare the expectations and perceptions of product quality and customer service.

3. Research Hypothesis

1. General information of the respondents included gender, age, education, position and the type of business, different constraints. There are expectations towards the products and services are different.
2. General information of the respondents included gender, age, education, position and the type of business, different constraints. A version known to high quality products and services are different.

4. Literature Review

Woraphat Poojaroean (2002) are create targeted quality indicators are as follows:

1. Measurable
2. Effectiveness
3. Efficiency
4. communicate, know all over the organization.
5. assign responsibility to achieve the set goal.
6. review the Edit (update) periodically (PDCA) systems.
7. accordance with the Organization's vision, goals, policy, philosophy.

Creating a KPI

The tool helps to measure, evaluate, to know the results favor action. Adverse effects A failure. The success and sustainable value for the measurement and evaluation with KPI, which is in response to events or metrics strategy (Strategic operation), rather than routine activities (Normal predation) or as tools that integrate with mechanisms for strategic planning (Strategic Planning) to bring policy into action (Policy Deployment) so there is a measurement system, and evaluated KPI is important to the success of the WTO. KPI creation steps are as follows (source Thailand Productivity Institute).

1. define objectives or results that the organisation needs (What to measure).
2. define success factors or factors in the crisis (or Critical Success Factor Key Success Factor) that is associated with the objectives or results, organizations such as factor cost, quality, quantity, delivery, Satisfaction, security and productivity
3. define a scorecard that can indicate success effectiveness from implementation of objectives or results that an organization (How to measure), which can be displayed is the information quantitatively, and determine the formula in the calculation, including units of each scorecard.

4. filter the scorecard to find out the main indicators by priority and weight the importance of each scorecard.
5. distribute scorecards, logged on to the relevant agencies.

Testing criteria, the quality of the indicators.

1. the availability of information, the assessment of whether individual scorecards provide enough information or not.
2. accuracy of the information, assess whether existing data for each indicator is up to date and current information is in or not.
3. the cost of procurement or to evaluate whether data storage or data storage for each scorecard cost much and good value or not.
4. the clarity of the scorecard, evaluate whether the individual indicators are clear, and all parties involved understand the match or not.
5. individual scorecards reflecting actual operating result or showed the lion to be measured
6. can bring a scorecard to compare operating results with another organization or agency, or in the past
7. each of the indicators associated with the scorecard to another commercially reasonable or not.

The concept of quality service.

The quality of service excellence requires sensitivity to deliver the impression from service. Customer, service providers should be aware of the delivery, good service to customers regularly by means of quality (Quality). Mean, what caused the customer perceived service quality (Gronroos 1990) (Service Quality) is difficult, because the service check. Have uncertainty production work out standard. The service is mostly a physical thing. Can be stored to the production, as customers to buy services. So while customers buy service and service delivery can lead to errors and to potential consumers. The offensive has Gronroos proposed model recognition of total quality. To explain that the customer satisfaction in quality service?The quality of service awareness. As a result of the assessment process are compared with expected customer services with the service cycle. Ming the model quality in the perception of overall (The Total Perceived Quality) consists of 2 aspects.

1. Technical quality (Technical Quality) is what the customer will receive. From the services that can measure clearly.
2. Quality function (Function Quality) is a method to measure the quality of services to diverse and changing a lot. You. The image in the functions associated with the psychological reaction

The concept of customer complaints

Complaints (Complaints) means that customers do not get from the businesses needs and expectations of customers. And customer dissatisfaction and let the relevant people know (ChaisomponChawpresert, 2006).

Complaints can occur as well. Customer service However, a complaint must contain clear elements. To be able to bring a complaint to the facts. To find ways to eliminate or modify. And organizations that will provide answers to any customer, however.

Complaints (Receipt of Complaint) required information needed to handle complaints. Customer, which should include:

1. Details of complaints
2. What customers want to edit
3. complaints about anything. (Products / or corporate functions)
4. personnel
5. marketing information.

5. Research Methodology

Population

The population used in this research include customer service group of the company during the year 2012-2017 total 296 listing by the administrator responsible or direct customer-related services of the company, as agent for each customer.

Sampling

The sample in this study. The researcher uses the method to calculate the appropriate sample size from the total population of 296 people by using the formula of Yamane (BoontamKitpreeda-borisut, 2007: 92) due to the error of sample allows 0.05 researcher. Sampling from the customer to the company. The simple random sampling and in full amount that determined is 175 people.

Methodology

The instrument used in this study is. Questionnaire surveys, quality products and services of CCS B. ENGINEERING LIMITED 30 items that were created based on the SERVQUAL MODEL and the quality level is divided into three steps: the first is questionnaire. 5 with personal factors such as sex, age, education, position, heading 2, a query about a prospective 15 items, divided into 3 parts eye. Factors affecting expectations and communicate their needs and experience. The question is the scale of values (Rating scale) 5 of the 3rd questionnaire about perceived 10, which is divided into two parts by the factors that affect perception and communication and delivery of services. The questions will be about the scale (Rating scale).

Validity and reliability

The researcher test instruments according to the following steps.

Study details from academic theory and research. About the quality of service expectations and perceptions of service users. Learn how to create a query from a survey research methods, quality products and services. Create questionnaires and questionnaires created advisors. To determine the validity and content validity in the revised questionnaire. Introduced a revised questionnaire was tested on a sample of 30 individuals who are not then find the confidence. (Reliability) using a correlation coefficient using the Cronbach (Cronbach's Alpha Coefficient), which has the confidence of 0.728.

Statistics

1. Percent in value and frequency values (Frequency and percentage) to describe the frequency and percentage of data obtained from the questionnaire. Episode 1 the General information of the respondents

2. The average sample (Sample mean) and standard deviation (Standard deviation) to describe the average and deviation of the data obtained from the questionnaire, episode 2, the expectations of quality products and services, and the episode 3 the perception towards quality products and service.

3. analysis of the data by using the t-test test to compare the General information of the respondents are against expectations for quality products and service, and a test to compare the General information of the respondents who have continued to recognize the quality products and service.

4. Data analysis One-Way ANOVA: F-test test to compare the general information of the respondents have the expected. Wang quality products and services. And test to compare the general information of the respondents who perceived on the quality of products and services. . with 3 group up.

6. Results

The general information of the respondents.

Most of the respondents were male, 147 were minor female, 28

Samples were aged 31-45 years, 123 minor aged 30 years and under 30 men aged 46-60 years were 15. and aged 61 years and above No. 7 respectively

Most of the samples had levels of vocational education. And a lower degree of 73 secondary level education were 70 levels of education, lower secondary and less than 29 people and has a Master's degree or higher of 3 consecutive samples.

It has a duty to take care of the air power of 80, followed by a general duty officers, employees 76 people, has a page rank of 15 engineers and have the appropriate boxes. Responsible for the management of 4 people respectively.

Most of the business of shops, restaurants, a total of 71 people into doing business hotel. Mall, hospital yield of 58 to 33 other types of businesses and business type, number 13, respectively.

The quality expectations on products and services.

The expectations for products and services. Overall is moderate Considering it was found that the real needs of the product quality and design expectations. Is the most anticipated. Was ranked No. 1, followed. Past experiences about the quality of your products and designs used. And that you are aware of any general who did not come from the company.

About the quality expected by the level of expectations for product and service information from the General acknowledges that do not come from the company. About the expected quality Overall at a low level When considered individually, was found to have advanced technology and professional work. Is the most anticipated. Was ranked No. 1, followed. The reliability of the service contract. Care and attention to the customer. Skills and ability to trust. And are ready to provide rapid sequence.

The expectations for products and services is a real need for quality products and design expectations. The overall level When considering an item that has the skills and ability to trust. Is the most anticipated. Was ranked No. 1, followed. Care and attention to the customer. The reliability of the service contract. With advanced technology and professional work.

And are ready to provide rapid sequence level expectations for products and services on historical experience, product quality and design that had been used. The overall level When considering an item that has the skills and ability to trust. Is the most anticipated. Was ranked No. 1, followed. The availability of services quickly. The reliability of the service contract. Care and attention to the customer. The advanced technology and professional working order.

The recognition on the quality of products and services.

The perception of the overall product and service at a high level. Considering the fact it was found that the information about the products and designs you get from the company. There is a perception as possible. Was ranked No. 1, followed. The truth about the delivery of products and designs. Receive from the company.

The level of awareness for products and services related to the real information. The products and designs obtained from the Company. About the expected quality The overall level When considering that they are ready to serve quickly. There is a perception as possible. Was ranked No. 1, followed. Skills and ability to trust. With advanced technology and professional work. The reliability of the service contract. And the care and attention to the customer, respectively.

The perception of our products and services to deliver the truth about the products and designs obtained from the Company. About the expected quality The overall level When considering that the reliability of the service contract. There is a perception as possible. Was ranked No. 1, followed. With advanced technology and professional work. Skills and ability to trust. Care and attention to the customer. And are ready to provide rapid sequence.

Hypothesis testing

1. Overview of the respondents include gender, age, education positions. And type of business There are different expectations for the products and services that meet the different positions. Different types of businesses have an effect on expectations for the products and services are different. The gender and age differences affect expectations for the products and services do not vary.

2. Overview of the respondents include gender, age, education positions. And type of business Different perceptions on quality of products and services varies found that education and business differences affect the perception of products and services differ in terms of gender, age and location of different functions take effect. get to know the products and the service is no different.

7. Conclusions

1. Level of Expectation of products and services. Overall is moderate Which does not comply with research SnojandPetermanec (2001: 314-321) studied the importance and the quality of service actually received. Library of Economics Library Administration Of the University of Maribor, Slovenia The research found that On the service provider side, The respondents also expect the highest service expertise. The ability to communicate with the users' trust and to show to the user. For the composition of information resources And the devices and data This may be due to the customers who use the service do not expect that a product or service would have thought. Service providers should be aware of the delivery of better services to the customers who regularly Gronroos (1990) noted that service quality (Service Quality) is difficult. Due to uncertainty in the Service-producing jobs out to a high standard. Because the service is most tangible difficult. Can not be stored and must be produced as customers to buy the service. So while customers to purchase and service delivery that will cause errors and make the consumer was not satisfied. So if you create a service that would allow customers expect good quality of product as well. We have developed our service and product quality to meet customer expectations. So that customers receive the highest quality and best service. This will help to enhance the image and build credibility for the organization. So if you create a service that would allow customers expect good quality of product as well. We have developed our service and product quality to meet customer expectations. So that customers receive the highest quality and best service. This will help to enhance the image and build credibility for the organization. So if you create a service that would allow customers expect good quality of product as well. We have developed our service and product quality to meet customer expectations. So that customers receive the highest quality and best service. This will help to enhance the image and build credibility for the organization.

2. The perception of the overall product and service at a high level. This may be due to the use of customer and purchase. Get good service and quality products makes customers feel good on services and products. The organization must satisfy the customer because the customer is going to be like this group of people is critical to the operation of the business. You can follow the concept of Cronin and Taylor (Cronin and Taylor, 1992)

with a focus on customer satisfaction or dissatisfaction. And comparing the experiences of the clients receiving services. With the expectation that the recipient at the time of the service. Which is what makes it possible to measure the quality of service. The quality of service in the perspective of the market. Court order Apple Inc. and Russian Tsar Rick Horowitz (Cordupleski, Rust and Zahorik,. 1993) defined it. Quality of Service The service extension the Services and service organizations That could meet or satisfy the expectations of the people. The basic idea of providing a quality framework for the satisfaction of this service. Supported by scholars as one of the bits Weiner (Bitner, 1992), which describes the results of that research has been conducted that. Service quality can be measured through the satisfaction of the clients have (Zeithaml, Parasuraman, and Berry, 1990) offers a view of the quality of service from expectations. (Expectation) of patients Expectations of patients who have been on any of the Services. It is caused by several factors, together or as a set. And such factors that determine the expectations of the clients and offer the quality of service. The difference is the service actually received the service they expect. 1990) offers a view of the quality of service from expectations. (Expectation) of patients Expectations of patients who have been on any of the Services. It is caused by several factors, together or as a set. And such factors that determine the expectations of the clients and offer the quality of service. The difference is the service actually received the service they expect.

3. The results of the expectations of customers who have been out of service and quality of product. It appears that the vast majority of customers do not expect much on products and services of the organization. But the organization to provide service and quality to customers, the perception of customers with quality products and services at a high level. The results of this study were not consistent with the research (Pronwitoo Koakathapron, 2000) have studied the quality of information services, the difference between expectations and reality of obtaining information services. The Library and Information Center, Mahidol University. The research found that Expectations with the reality of obtaining services include all aspects of the student. Is negative, indicating that students have an expectation of quality service in all aspects of higher level services actually received. The expectations on service quality in each aspect. Found that the physical and confidence there is a gap between expectations and actual service as possible. User expectations are higher than the actual level of service they receive. Expectations for reliability. The response and reach the heart. The students at different grade. Expectations are different. For a service that has actually been found that a class of students who are receiving services actually different aspects. The results of the research will see expectations of students are higher than has been true.

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