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Impact of Total Quality Management on Customer Satisfaction for Malaysia's Telecommunication Sector in Selangor

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Abstract: Customer satisfaction is one of the major concern today. Every feature and aspect of the service industry should be investigated with the aim of advancing and developing service quality and resolving problems that occur to the customer, creating customer values, achieving customer satisfaction and establishing sustainability for business. As a result, every company or organisation invested more in quality improvements. These efforts resulted in a new quality management method known as total quality management (TQM). TQM assist telecommunication industry in retaining and acquiring satisfaction of the customer. Therefore, the intention of the study is to identify the relationship between customer satisfaction and TQM in Malaysia's telecommunication sector.

Keywords: Total Quality Management, Customer Satisfaction, Telecommunication Sector

1. Introduction

The crucial and very significant obstacle encountered by the organisation in this market competition is to increase customer awareness on quality (Anil & Satish, 2019). In the market, the customer is known as king where it means that every single organisation's objective is to obtain much profit from the satisfaction of the customer (Rasheed, 2016). Customer focus refers by placing customers' needs at the centre of all business development and decision of management which is one of the essential key elements in enhancing of organisations performance (Ullah *et al.*, 2016). In order to ensure the sustainability of competitive advantage, the most important aim and objective for the organisation are by improve satisfaction of the customer (Anil & Satish, 2019). Every accompaniment, criticism, objection, comment and feedback made by the customer were taken into consideration in which can result in the success of the business. Thus, it is shown that the satisfaction of the customer played a

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major role successfully in any business sector (Kim, 2020). By evaluating and appreciating each of the feedback made by the customer and making improvement from it was a major success in the organisation (Kim, 2020).

In today's competitive market, businesses need to satisfy client expectations. Customer satisfaction is an important phase in the organisation's strategic strategy. Companies worldwide encounter hyper-competition not just from local competitors but also from multinational competitors with extensive experience servicing customers all over the world with items that are affordable, of outstanding quality and delivered to the correct place at the right time (Alaoun, 2018). To compete in today's market, practically every company is using or attempting to implement total quality management (Alaoun, 2018). Quality management and effective management, as well as product and service innovation, are the only ways to assure a company's or organisations long-term viability (Harshitha & Kumar, 2019). Businesses should increase the quality to the level requested by customer because customer-measured quality is a critical quality trait (Chen *et al.*, 2017). As a result, every company or organisation invested more in quality improvements. These efforts resulted in a new quality management method known as Total Quality Management (TQM) (Şimsek Gunduz & Gündüz, 2017). TQM refers to a management concept that targets to continually improve product quality in order to improve customer satisfaction (Anil & Satish, 2019).

The telecommunications sector is becoming increasingly competitive and mobile service providers are having difficulty maintaining customers (Sze Chee & Md Husin, 2020). The telecommunications business in Asia, particularly Malaysia, has undergone enormous expansion during the last few decades (Chang *et al.*, 2011). Since customers have the exemption to switch service providers, hence, it is critical for the organisation to assure satisfaction of customer with the service quality provided (Sze Chee & Md Husin, 2020). According to statistics provided by the Malaysian Communications and Multimedia Commission (MCMC), there is increasing in number of complaints by customer for mobile services provided since the beginning of the year in 2021. The overall customer complaints from January to June was found to be increased from January to June with **14,351** complaints to **44,693** complaints, respectively. Due to the fierce competition in the telecommunications industry, delivering high-quality service, as well as customer satisfaction and loyalty, has a big influence on keeping current customers and attracting new ones. Delivering high-quality services is fundamental of maintaining consistent and unbroken competitive edge (Habibi, 2020). Previous research has established that process quality, interaction quality and environmental quality are part of service quality factor and the outcome are factors to customer satisfaction and loyalty to an organization (Mukhtar & Anwar, 2016).

2. Literature Review

2.1 Telecommunication in Malaysia

The telecommunications sector is regarded as a foundation for any country's entire growth (Khadijeh, 2015). In Malaysia, the pioneer in telecommunication sector is Telekom Malaysia. Established in **1984**, Telekom was the first telecommunications firm in Malaysia to provide fixed-line service. Since then, numerous businesses have developed in Malaysia, such as Maxis, Celcom, Digi, and U Mobile, to meet the growing demand and sophisticated requests from customers on wireless services (Chuah *et al.*, 2015). The success of the telecommunications business is determined by the individual firms' efforts and investments. Telecommunications systems are the fastest expanding business, thus they are up against a lot of competition. The Malaysian Communications and Multimedia Commission (MCMC) is the Malaysia's primary regulator and governor of telecommunication industry and its regulation in Malaysia (Burhanuddin *et al.*, 2018). Regulatory changes and rehabilitation are critical components of increasing competitive effectiveness in the telecommunications sector. According to the MCMC (2018), mobile service providers provided over **64%** of the total income in the telecommunications

sector. The telecoms sector in Malaysia is very competitive. Companies like Digi, Maxis, Celcom, Yes Mobile, U-mobile and Tune Talk are effectively operating in Malaysia, providing a large and diverse consumer base (Khadijeh, 2015).

2.2 Total Quality Management

TQM was first introduced in the 1950s and it has been used in the United States and Europe since the late 1970s. The TQM is designed to assure long-term consistency in quality products and services while also meeting consumer needs. This strategy is used to increase a company's quality and production (Harshitha & Kumar, 2019). TQM originated from reactionary influences against the mechanistic management model, such as a sequence of stages inspection, quality control and quality assurance, to the organismic model, which is a new way of thinking about organisation management and stakeholders (Kim, 2020). TQM is a management style that emphasises the continual improvement of quality and customer satisfaction (Boykanyo, 2019). TQM entails the creation of institutions such as quality improvement teams in order to retain focus and implement organisational improvement activities. TQM still an important problem in manufacturing, as well as in healthcare, service, non-profits and indeed, in every company (Kim, 2020). TQM has also influenced quality improvement, sales, client base growth and profitability (Harshitha & Kumar, 2019).

Numerous research have been conducted to discover the crucial factors that must be present for TQM to be implemented successfully in a business. Process thinking, customer satisfaction, total staff engagement, strategic thinking, integrated system, continuous improvement and efficient communication were all significant aspects in TQM's success in quality, maintenance and management (Harshitha & Kumar, 2019). TQM procedures have resulted in significant improvements in the attitude to current business approaches, quality awareness and changes in TQM variables, according to the results. The expansion was shown in the improvement of brick quality, effective employment management, modern communication adoption, increased sales and customer base and eventually an increase in the organization's goodwill and profit (Harshitha & Kumar, 2019). Similarly, TQM and tools are made up of three major elements which include satisfaction of customer, staff participation and continuous improvement (Kim, 2020).

Leadership (LD), benchmarking (BM), information and analysis system (IAS), service culture (SC), service-scape (SS), technology-based banking service (TBBS), customer focus (CF) and human resource focus (HRF) were all of TQM dimensions studied by Pattanayak & Maddulety (2017). According to the findings, ensuring appropriate TQM implementation would inevitably and clearly enhance customer satisfaction in the business, demonstrating that TQM has a strong good relationship with customers. In addition, customer focus, leadership and senior management commitment, continuous improvement, employee empowerment, process management and knowledge management were other important considerations (Anil & Satish, 2017). The findings revealed that knowledge management is the most important component that has a strong relationship with customer satisfaction. The firm may release new items more regularly with excellent knowledge management techniques, which helps to retain consumers and develop customer loyalty (Anil & Satish, 2017). The researcher then looked at another TQM dimension, and the results obtained were different. Customer focus, supplier quality management, continuous improvement, education and training, employee empowerment, quality information analysis, quality assurance and quality performance were some of the TQM techniques investigated in the study. The findings show that TQM methods have a favourable and substantial relationship with both performance metrics, quality performance and customer satisfaction. The most common TQM procedures that drive customer satisfaction are quality assurance and quality information analysis (Anil & Satish, 2019).

Conversely, the study investigate the effect of TQM approaches on the quality of textile firms with a variety of TQM practises, including the academic status of managers, the number of employees, the

buyer profile, the presence of ISO 9001, the presence of R&D studies and the presence of customer satisfaction feedback (Şimsek Gunduz & Gündüz, 2017). According to the findings, these practises must be properly presented to employees and they must be encouraged and instructed in the use of methodologies and tools that define TQM (Şimsek Gunduz & Gündüz, 2017). Next, top management commitment, employee training, staff participation, employee empowerment, rewarding and recognition, continuous improvement and customer focus were investigated as TQM dimensions (Alaoun, 2018). Only employee empowerment, reward and recognition and a customer-centric approach have a beneficial impact on competitive objectives, according to the study. This shows that managers in Qatar telecommunications organisations understand the significance of implementing comprehensive quality management factors (Alaoun, 2018). According to statistical assessments, TQM elements have a considerable impact on consumer behaviour via continual quality improvement and innovation. In addition, the largest impact was connected to the influence of hard TQM variables on consumer behaviour via innovation, according to the findings.

2.3 Customer Satisfaction

There are different definitions and points of view on customer satisfaction in an organisation or company based on prior research. Customer satisfaction has been shown to have a favourable influence on the productivity and performance of businesses (Habibi, 2020). For efficient administration of a company, performance measurement is essential (Anil & Satish, 2017). The goal of satisfaction of the customer activities is marketing enhancement, create more customer-centric development, increase customer loyalty and find new ways to innovate (Kim, 2020). Customer needs and expectations are very important to the organisation since they are directly tied to the company's profitability because delighted consumers are more likely to buy the same goods or services again, the firm's profitability may rise. It represents the discrepancy between the anticipated service and the customer's experience or perception of the service. Customer satisfaction is a critical metric for assessing healthcare service and determining quality outcomes (Agyapong *et al.*, 2018). "The number of consumers, or proportion of total customers, whose reported experience with a business, its goods, or its services (ratings) surpasses established satisfaction targets" is how customer satisfaction is defined. As a result, it is critical for organisations to manage customer satisfaction successfully (Rasheed, 2016). The organisation based its quality on the needs and expectations of its customers. To achieve customer satisfaction, the organisation invests in innovative service delivery methods (Daqar & Constantinovits, 2020).

According to research, customer satisfaction are more likely to share their insight and customer experience with five to six individuals, but unsatisfied customers are more likely to tell ten to eleven people about their product or service experience. Customer satisfaction is the feeling of consumers who have had their expectations met by a company's performance. Following the results, academics claim that satisfaction of customer contributes to a company's future success. Customers' prior outlooks have a big effect on the service quality that is supplied to them and whether or not it meets or exceeds their expectations (Habibi, 2020). Customer satisfaction is a critical component of every profit-driven organization's success. High-quality products and services may provide a company a competitive advantage. A high-quality reputation attracts pleased and loyal consumers, who reward the company with continuous patronage and positive word-of-mouth advertising, which frequently leads to new customers (Anil & Satish, 2019). Customer satisfaction demonstrates a connection between high-quality services and customer loyalty. Customers with a high level of satisfaction with institutions will continue to do business with them and build a love and respect for them. Satisfied consumers aid in the acquisition of new customers by boosting repurchase frequency and word of mouth (Kim, 2020).

In order to accomplish the objectives, a company's responsibilities must go well beyond just satisfying consumer requirements or addressing complaints. An organisation that maintains constant touch with its customers understands what the consumer wants, how they use the product and predicts

needs that the client may not even be aware (Anil & Satish, 2019). Customers who are satisfied with a business's service are more likely to communicate favourable intents in the form of recommendations and positive word of mouth, choosing the company over competitors, and boosting the company's revenue (Agyapong *et al.*, 2018).

2.4 Hypothesis Development

TQM dimensions such as field operations, after-sales service and staff attitude were evaluated in a research on customer satisfaction in the Indian automotive sector. Majority of consumers assess the service quality, service fee, service time and customer relationship as average or above average. They also rate the buying experience, technology and working day convenience as average or above average. The study's results reveal that as the impact of TQM increases, service quality improves and higher quality leads to higher customer satisfaction. Although respondents were delighted with the TQM services provided by automobile firms, the sector's TQM operations could be improved. According to the report, the majority of organizations provide a broad variety of TQM services, although workers are generally unaware of these activities (Rasheed, 2017). The previous study looked at the influence of TQM on customer satisfaction in the telecom business in Afghanistan, with customer loyalty retention, benchmarking, profile development, strategic TQM planning and minimizing customer complaints among the TQM elements investigated. Customer royalty retention, profit creation and strategic TQM planning all have beneficial impacts on satisfaction of customer, leading to the adoption of different hypotheses of positive effects of TQM dimensions on customer satisfaction in the telecommunications business (Habibi, 2020).

Process quality, interaction quality and environment quality have been studied as TQM factors within organization. The findings prove that TQM has positive affect on customer satisfaction at the **95%** confidence level. This result can assist organization in considering some TQM factors in their strategic plan to enhance satisfaction among the customers, adding value to the organizations and increase the ability to operate in a competitiveness environment (Nguyen & Nagase, 2019). Customer satisfaction, for example, is considered to be impacted by a various aspects including the abilities of staff communication, staff comprehension, tangibles such as location surrounds, interpersonal traits and system efficiency (Agyapong *et al.*, 2018). Since the sustainability of a company is dependent on satisfaction of customer, organisation should utilize the customer satisfaction to evaluate the performance. Hence, in this study, similar to prior studies, the level of customer satisfaction will be used as a performance indicator for accessing the organization's success (Anil & Satish, 2017).

Total quality management is a method used in the service industry, such as telecommunications, to increase customer satisfaction. The quality of a telecommunications organization's service improves the road to increasing customer satisfaction. TQM and service quality have been shown to have beneficial and substantial benefits on customer satisfaction and customers' trust and commitment have a considerable impact on customer royalties in previous studies (Nguyen & Nagase, 2019). Therefore, by considering these findings, the following hypothesis for this study is proposed as

$$H_1 = \text{Total quality management positively influences customer satisfaction}$$

2.5 Research Conceptual Framework

By adapted from the previous study of (Nguyen & Nagase, 2019), the research framework for this study is shown as in Figure 1.

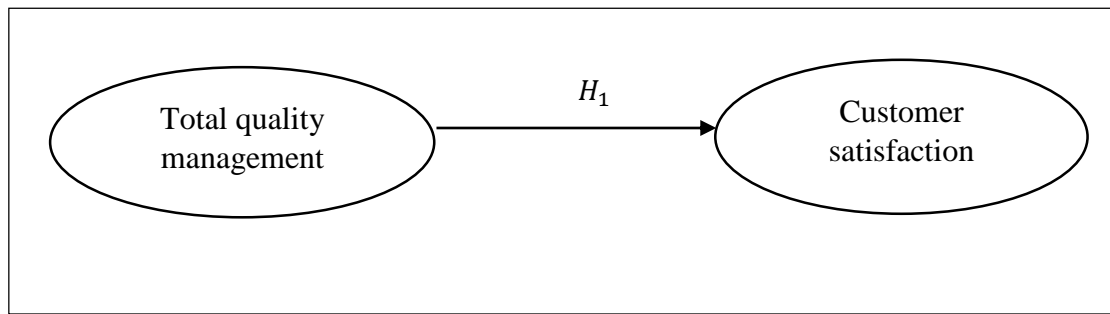


Figure 1: Research Framework

From the Figure 1, total quality management act as an independent variable while customer satisfaction act as dependent variable in this study.

3. Methodology

3.1 Research Design

Quantitative research methods will be used in this study to achieve study research. A quantitative data analysis allows to investigate, present, explain and analyse the relationships and patterns in the quantitative data collected. For quantitative data, assumptions about the relationship between total quality management and customer satisfaction must be tested either the null hypothesis must be rejected or accepted.

3.2 Population and sampling of study

The target population is the entire group that a researcher is interested in examining and analysing. As a result, the subject of the measurement is a population element. The population is a group of individuals or research participants who are similar in one or more aspects and which forms the subject of the study. The population for the mobile service provider customers in Selangor are estimate more than one million. By referring to Krejcie and Morgan table, the sample size for this study is 384 respondents. However, to ensure the sufficient number of the respondents obtained and to prevent the respondent error, the study targeted 400 respondents drawn from the different customers of the mobile service provide in Selangor. Any inaccuracy brought into the survey findings as a consequence of respondents supplying erroneous information is referred to as respondent error.

The research instrument will be distributed to the intended respondents using a simple random sampling technique. Simple random sampling is when every member of a population has the same probability of being included in a sample and all feasible samples of a given size have the same chance of being chosen (West, 2016). The problems that may be experienced with big populations are the focus of this research. Thus, the data for this study will be collected using simple random sampling, providing each sample unit a chance to be questioned.

3.3 Research Instruments

The questionnaire will be selected and tested to fit the needs of the current study and the research idea. Essentially, the initial questionnaire questions were based on previous research. To evaluate the model and hypothesis in this research, a questionnaire survey will be conducted. The Likert 5-point scale will be utilized in every survey. For the using of Likert scale, a score of one (1) indicate strongly

disagree, score of two (2) indicate disagree, score three (3) indicate for moderation, score of four (4) indicate agree and score five (5) indicate for strongly agree.

The survey's research instrument is divided into three components, each of which is aimed to gather information from respondents about the organization's TQM and customer satisfaction. Customers of mobile telecommunication networks such as Celcom user or Maxis user will be requested to fill out an online questionnaire. This study's items for measuring each component were modified from earlier research.

3.4 Data Collection

The key data that will be utilised to fulfil the study will be acquired using primary data where the data will be collected by distribution questionnaire. The questionnaire will be created by using Google Form and distribute it through online medium. This study will be used email, quick responses (QR) codes and link distribution on social networking such as WhatsApp as online survey distribution method.

3.5 Data Analysis

The inferential analysis will be used to analyse the data obtained. Inferential analysis enables to make data predictions or conclusions. Data will be obtained from samples and generalisations about a population will be made using inferential statistics. The data will be analysed using the SPSS (version 25.0) statistical software. SPSS software is an excellent and valuable tool that is currently utilised by the majority of researchers in quantitative studies. SPSS software is an effective and useful tool where nowadays, most researchers used the software in quantitative studies. By using SPSS software, the data can be easily analysed and find the required result for the study (Habibi, 2020).

The ability of the research's instrument to reliably gather data on the construct desired by the study is referred to as instrument reliability. The reliability test is used to determine the consistency of measurement equipment that often employ questionnaires. Cronbach Alpha is a metric for measuring the scale of stretches that is often used in studies. It is essential that the instrument employed in the analysis of the variables be reliable. The reliability coefficients of the items used in the study exceed the minimum threshold level of 0.70 suggested by Nunnally and Bernstein (1994). It denotes that the research variables' reliability values have been accepted (Travakol & Dennick, 2011).

Hypothesis testing is a form of inferential statistics that enables conclusions to be drawn. To determine which hypothesis the data support, a hypothesis test evaluates sample statistics and factors in an estimate of the simple error. The findings are statistically significant when the null hypothesis is rejected. The 95% confidence interval, which is the P-value compared with a 0.05 level of significance, will be used to decide whether to accept or reject the null hypotheses H_0 of the statistical test. To determine the validity of the hypothesis model, the statistical significance (P-value) is considered to be $p < 0.05$ in this study. A statistical hypothesis test's main goal is to determine if a data sample is typical or atypical when compared to a population, assuming that a population hypothesis is correct.

4. Conclusion

This study will provide an understanding on the variables of total quality management (TQM) which consist of process quality, interaction quality and environment quality that effect on customer satisfaction. Customer satisfaction has a very important position in every organisation and business.

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