

CUSTOMER SATISFACTION FOR QUALITY OF STEEL STRUCTURE  
FABRICATOR IN SINGAPORE

KHAIRIL ANWAR BIN BAINAMIN

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## **DEDICATION**

This thesis is dedicated to all individuals that have provided their continuous supports in completing my thesis report. A great appreciation to my wife, Nurul Ain Binti Mohamad that has vigorously committed a morale support and stand still right next to me to boost my motivation and inspire my utmost potential. To my supreme Supervisor, Dr Khairulzan Bin Yahya, I would like to thank for all your tireless efforts, guidance, advice and motivation in leading my way to complete this superlative journey. Thank you for spending your time and dedication to bring me to the end of my Master journey. To my beloved lovely parents, Tuan Bainamin & Puan Junaidah thanks for your continuous prayer, trust and motivation that have made me a better person. To my children, Nur Batrisyia, Nur Alya Hadirah, Nur Alysha Hazirah & Nur Arysha Maisarah, thanks for your great smiles and amusing behaviour that strengthening my composure and sturdiness. Last but not least, I would like to dedicate my gratitude to all my classmates, my Master Course Lecturer, UTM staff especially Puan Jazmawati and all individuals resided surrounding me for your advice, supports, tolerance and empathy.

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## **ABSTRACT**

This paper presents an analysis of customer satisfaction for quality of steel structure fabricator in Singapore. Most of company more concern & focus on average score & percentage without analyzing feedback data and improving base on customer comment. This lacking situation will grow the bottom iceberg; where the weakness had been highlighted but never put a full stop to improve. It will create more issue until the end of the day, it will affect the credibility and reputation of the company. The main objective of the study is to determine and to show the part of dimension that company have to improve base customer satisfaction feedback using SERVQUAL analysis & Importance Performance Analysis (IPA). Start with creating questionnaire on customer satisfaction feedback and distribute questionnaire to the respondent which had a quality knowledge, expertise or work under quality department related with quality field. Analyze questionnaire feedback and classify based on SERVQUAL dimension. The results are projected in the form of SERVQUAL dimension. Result will be projected in SERVQUAL table & IPA model to define which dimension need for improvement and make a comparison with data customer feedback collected from year 2011 until 2017; highest rank (SERVQUAL) and dimension located at quadrant 'Concentrate Here' main focus for improvement. Base on result, it will guide management to decide the area and dimension to improve as to increase percentage of customer satisfaction.

## ABSTRAK

Laporan ini mengemukakan tentang analisis kepuasan pelanggan terhadap kualiti fabrikasi struktur keluli di Singapura. Sebilangan besar syarikat lebih mementingkan & memberi tumpuan pada skor & peratusan purata tanpa menganalisis data maklum balas dan meningkatkan kualiti berasaskan kepada komen pelanggan. Keadaan ini menyebabkan masalah meningkat secara tersembunyi; di mana kelemahan yang telah diketahui tetapi tiada sebarang tindakan diambil oleh pihak syarikat untuk penambahbaikan. Ini akan menimbulkan lebih banyak masalah sehingga akhir, ia akan menjejaskan kredibiliti dan reputasi syarikat. Objektif utama kajian ini adalah untuk menentukan dan menunjukkan kategori yang harus dibuat penambahbaikan oleh syarikat berdasarkan kepada maklum balas kepuasan pelanggan asas menggunakan analisis SERVQUAL & Analisis Prestasi Kepentingan (IPA). Bermula dengan membentuk soalan soal selidik mengenai maklum balas kepuasan pelanggan dan sebarkan soalan soal selidik kepada responden yang mempunyai pengetahuan, kepakaran atau bekerja di bawah jabatan yang berkaitan dengan bidang kualiti. Analisis maklum balas soal selidik dan klasifikasikan berdasarkan SERVQUAL kategori. Hasilnya akan diterjemahkan dalam bentuk model SERVQUAL & model IPA untuk menentukan kategori mana yang perlu diperbaiki dan membuat perbandingan dengan data maklum balas pelanggan yang dikumpulkan dari tahun 2011 hingga 2017; focus utama pada keputusan yang terletak pada peringkat tertinggi (SERVQUAL) dan dimensi yang terletak pada kuadran 'Concentrate Here'. Berdasarkan kepada keputusan, ia akan menunjukkan kepada pihak pengurusan kategori yang perlu ditambahbaik dan perbaiki untuk meningkatkan peratusan kepuasan pelanggan.

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## **LIST OF ABBREVIATIONS**

QMS	-	Quality Management System
SERVQUAL	-	Service Quality
IF	-	Improvement Factor
IPA	-	Improvement Performance Analysis

# CHAPTER 1

## INTRODUCTION

### 1.1 Problem Background

In quality management system mentioned that company or organization shall monitor customer's perception of the degree level, known as customer satisfaction feedback whereas their needs and expectations has to be fulfilled. The company shall determine the method of obtaining the monitoring and reviewing customer satisfaction information. For example, of monitoring customer perceptions can include customer survey, customer feedback on delivery products & services, meetings with customers, market-share analysis, compliments, warranty claims and dealer reports (Bourke & Roper, 2017). Customer satisfaction feedback is part of ISO clause need to be done to complete cycle of quality management system and most of the company analyze level of satisfaction by overall average score compare with objective customer satisfaction target score. Action will be taken when average score below than expectation. Management never analyze result based on feedback criteria and ignore voice of customer.

This study will be analysis customer voices on customer satisfaction feedback using SERVQUAL & IPA model to understand part of dimension need for company to improve to gain customer satisfaction score. Thus, one of the famous steel fabricator in Singapore; TTJ Design Engineering Pte. Ltd has been selected as case study for customer satisfaction feedback.

## 1.2 Problem Statement

Quality management system will consider partial dysfunctional when company didn't convey customer voice message to the realistic issue and ignore any comment raised from customer satisfaction feedback. It is company responsibility to understand customer needs and feedback in order to improve quality of process and produced high quality product with affordable cost.

Customer satisfaction feedback distributed after project completed as part of quality management requirement to complete cycle of quality management system. Customer satisfaction data will be collected and score will calculate based on customer evaluation and convert into percentage by overall score. The result percentage score will be compare with objective target and action for improvement will be taken when percentage score below objective target. This method practically reliable to overview the whole result but lack of defining the weakness and strength from customer feedback. Failure or unsuccessful situation to achieve an objective will be affect the entire team in the company especially on the individual capability & performance, repeated quality issue, potential of increasing on issuance of non-conformance from customer, additional operational cost due to rectification work. There is an option to revise objective target, at least once successful to reach a target, it will motivate the team to improve more than current target. Then, management can revise objective and set a new target to achieve, encourage team to make an improvement and show a correct direction to succeed. Some management prefer in a comfort zone, set a low target to achieve and never have intention to move forward, 'ignorance disease' do not take any intention to the improve, hide all the problem under carpet and wait for the bomb to blow. Set objective is sort of benchmark and valuation of performance for department, team and also individual contribution to achieve the objective.

Content from customer satisfaction feedback shall be elaborate into 5 dimension based on SERVQUAL method; tangibles, reliability, responsiveness assurance and empathy(Sakyi, 2020), analyze the result and projected with combination with IPA model to define which question from customer feedback was in the first(1<sup>st</sup>) rank and located at quadrant 1 (concentrate here).

In this case, the issue that most of the company facing can be elaborate into three (3) factors:

- i. Ignorance to hear a customer voice;
- ii. Less awareness to the customer satisfaction feedback;
- iii. Lack of method to analyze customer feedback to define a real issue and mitigate for solution.

Company management team had wide experience in industry and a lot of exposure in varies issue for quality, planning, contract, manpower, government agency and law until safety issue. The only thing require is understanding to mitigate and sort the issue in the correct way without incurred any additional cost impact to the operation cost.

### **1.3 Aim and Objectives**

Aim of the study is to investigate about customer satisfaction for quality steel structure fabricator. To achieve this aim, the following objectives has been identified:

- i. To identify critical dimension based on service quality method (SERVQUAL) & Important Performance Analysis (IPA);
- ii. To measure the quality service expectation level from the customers as well as from the management;
- iii. To justify the critical quality aspects that need an improvement and the suggestions overcome the issues

### **1.4 Research Scope**

Research study will be focus on customer satisfaction feedback; comparison between external parties and internal feedback whereas TTJ Design & Engineering Pte. Ltd has been selected as case study. Information related with costs, security and legal issue will be excluded from this research. The scope of research is limit as mentioned below:

- i. Information and data taken only covers the Quality Management system, TTJ Design & Engineering Pte. Ltd,
- ii. Area for data collection is confined within external parties (client and 3<sup>rd</sup> Parties) and internal Quality Department which is related with TTJ Design & Engineering Pte. Ltd and
- iii. Strategy management implemented to achieve departmental objective base on finding.

## **1.5 Important of study**

Customer satisfaction is main tools in quality management system that holding a roles as voice of opinion from external party. It is important to study the value of customer satisfaction whereas a few method of analysis such as SERVQUAL analysis and IPA model used to describe point of improvement based on SERVQUAL five (5) dimension. At the end of chapter, it will explain the finding and result of SERVQUAL analysist by showing the SERVQUAL Table and IPA model whereas the company able to know the main issue, then to plan for improvement as to mitigate the issue in order to enhance customer satisfaction and quality of service & product.

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