

**PROFIT THROUGH COST OF QUALITY (COQ) IN ASSEMBLY
LINE OF MALAYSIAN SUBCONTRACTOR BASED
SEMICONDUCTOR COMPANIES IN MALAYSIA.**

A thesis submitted to the Executive Development Centre in partial
fulfillment of the requirements for the degree
Master of Business Administration, Universiti Utara Malaysia

by

Dharmendra a/l A.Ramanathan

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FAKULTI PENGURUSAN PERNIAGAAN
(FACULTY OF BUSINESS MANAGEMENT)
UNIVERSITI UTARA MALAYSIA

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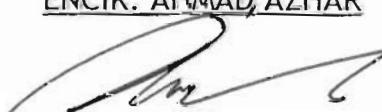
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List of abbreviations

1. COQ – Cost of quality
2. SBSC – Subcontractor based semiconductor companies
3. TQM – Total Quality Management
4. IC – Integrate Circuit
5. QPP – Quality Productivity Program
6. P-A-F – Preventive – Appraisal – Failure
7. PDCA – Plan Do Check Act
8. FOL – Front of Line
9. EOL – End of Line
10. MNC – Multi National Companies
11. ISO – International Standard Organization
12. FEL – Front end loading
13. SPC – Statistical Process Control
14. NPC – National Productivity Council
15. ESS – Employee Suggestion Scheme
16. TPM – Total Productivity Maintenance
17. CIM – Computer Integrate Management
18. DOE – Design of experience
19. APQP – Advanced product quality planning
20. KOK – Kursus Orientasi Kumpulan
21. TOP – Team orientation program

Abstract

Bahasa Malaysia

Thesis ini adalah berkenan ‘Cost of quality’ iaitu bagaimana kualiti kerja yang bermutu dapat menyumbang kepada peningkatan jualan dan seterusnya meningkatkan keuntungan tanpa peningkatan pada kos di syarikat-syarikat semiconductor yang bebasaskan subkontraktor di Malaysia. Untuk meningkatkan quality kerja dan produk, berbagai kaedah telah digunakan, antaranya memahami PAF model iaitu kaedah pencegahan, penilaian dan kaedah pengagalan. Selain itu penggunaan konsep ‘Total Quality Management’ mempercepatkan tujuan utama iaitu keuntungan melalui kualiti. Pada masa yang sama thesis ini juga membincangkan masalah-masalah yang di hadapi oleh sesebuah syarikat dalam memperlaksanakan ‘cost of quality’ dan cara mengatasinya serta langkah-langkah yang perlu diambil oleh sebuah pengurusan syarikat semiconductor untuk memperkembangkan perniagaan, keuntungan serta berada dalam kedudukan persaingan yang lebih kompetatif berbanding dengan syarikat lain.

English

This thesis is discussing about profit through cost of quality in subcontractor based semiconductor companies in Malaysia. The purpose of this thesis is to show how quality works able to increase the sales and profit without increasing the cost. In order to achieve quality works and product, many methods have been discussed. Among the methods are PAF model which is preventive, appraisal and failure and TQM approaches, which help to speed up the process of profit through cost of quality activities. There are also discussion on why many companies not able to implement COQ fully, suggestion on how to overcome the barriers, steps to implement COQ and approaches to be used in making COQ successful in semiconductor industries. This will help a company to be more competitive in market which eventually will help a company to expand their business and increase the profit margin.

1.0 Introduction

This thesis is about how a management specifically in subcontractor based semiconductor companies (SBSC) in Malaysia able to increase their profitability while reducing their operation costs. Through a proper direction and set-up by the higher level management and through team or project activities by the employees of the companies involving cost of quality (COQ) which are preventive costs, appraisal costs, internal and external failure, the SBSC able to provide excellent quality integrated circuit (IC) unit to their customers and expand their business that eventually increase profitability. During the implementation COQ process, commitment from the higher management team is very vital in order to make the profit through COQ successful. This research will mainly involved in assembly line of SBSC.

2.0 Literature review

2.1 Relationship between cost and quality

In recent years, many companies have recognized the important relationship between cost and quality. In the past, companies generally underestimated the costs of quality because they were difficult to quantify. Quality costs are now defined in two major categories: the cost of achieving good quality and the cost of poor quality. Generally when the cost dedicated in achieving good quality product increase, the costs of poor quality will decrease. Concepts about quality cost categorization are major contributions of Joseph M. Juran who introduced "Gold in the Mine", in which he likened costs resulting in defects to a gold mine in which profitability could be enhanced (*J.M. Juran 1951, Quality Control Handbook, 1st ed. New York: McGraw-Hill*). Joseph M. Juran is a pioneer in teaching the Japanese how to improve quality. Juran believes strongly in top management commitment, support and involvement in the quality efforts. He is also believer in teams that continually seek to raise quality standards. Although research into the relationship

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