

**ISO 9001 CERTIFICATION AND PERFORMANCE IN MANUFACTURING
INDUSTRIES**

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ABSTRAK

Pelaksanaan system pengurusan ISO 9000 di syarikat menjadi semakin popular dan bertambah pesat sama ada di Negara barat seperti Amerika Syarikat, British atau di negara asia tenggara. Penyelidikan ini adalah bertujuan untuk mencari keberkesanan pensijilan ISO 9001 ke atas industri pembuatan di Malaysia. Ia akan memberi tumpuan kepada prestasi pasaran, prestasi operasi dan prestasi kakitangan dalam syarikat. Ini juga merangkumi analisa pada pengaruh strategi pemasaran ke atas hubungan pensijilan ISO 9001 dengan prestasi pemasaran. Selain daripada itu, penyelidikan ini juga cuba memahami sebab-sebab syarikat ingin pensijilan itu dan masalah yang dihadapinya. Di samping itu, cara penyelesaian akan diperbincangkan juga. Penyelidikan ini diadakan pada syarikat pembuatan saja di Malaysia Utara, borang soalselidik telah digunakan untuk mengutip data untuk dianalisis. SPSS telah digunakan untuk membuat analisis ke atas data-data yang dikutip dan juga menentukan kebenaran pada hipotesis yang ditetapkan. Keputusannya telah membuktikan kesan positif pensijilan ISO 9001 ke atas prestasi pemasaran tempatan, operasi dan sumber manusia tetapi tiada perbezaan terhadap prestasi pemasaran eksport. Manakala startegi pemasaran (kepimpinan kos keseluruhan) telah dibuktikan sebagai angkubah moderator di dalam perhubungan antara pensijilan ISO 9001 dan prestasi pasaran eksport.

ABSTRACT

The trend of implementing the ISO 9000 quality system has grown quickly throughout the world, including in developed countries like US, UK as well as developing countries in South-East Asia. This research will study the impact of ISO 9001 certification on manufacturing Industries in Malaysia. It focuses on the effectiveness of ISO 9001 certification on market performance, operation performance and personnel performance as well as the market strategy as moderating factor. Besides, it also tries to understand the reasons for certification and problems faced by company when implementing the ISO 9000 system and also recommends the solution to overcome these problems. This research was based on manufacturing companies in Northern Malaysia Questionnaires were used as the main research instrument. The SPSS software was used to analyse the data obtained from the questionnaires and to test the hypothesis put forward. The results of the analysis show that ISO 9001 certification give positive effects on the company's domestic market, operation and personnel performance but no significant difference on export market. Marketing strategy (overall cost leadership) was found to be a moderating variable between the relationship of ISO 9001 certification and export market performance.

Chapter 1

INTRODUCTION

Background

The ISO 9000 series of Quality Management System Standard was established in 1987 by the International Organisation for Standardisation or ISO. The purpose of these Standards established is to provide guidelines of quality system to the organisations and to improve their performances so that they can provide better and more consistent quality products or services to their customers. The ISO 9000 requirements focus on process control, reduced wastage, improved efficiency and productivity, and more cost effectiveness in their business operation.

Malaysia has adopted the ISO 9000 Standard into its National Standards in order to increase the global competitiveness of local industries through higher quality products and services. In Malaysia, the acceptance of this International Standard was very slow during the initial stage. Less than 50 companies were successfully certified to the ISO 9000 series system from 1987 to 1989. After this transition period, the acceptance of the ISO 9000 series certification is increasing. By 2001, there were about 1697 companies registered to the ISO 9000 series Quality Management Systems (SIRIM, 2001).

The number of companies registered, by comparison, is still very small. This only represents about 5.6% of the total 30,000 establishments in Malaysia. Out of these 1697 companies, mostly are large companies or multinational companies. By 2001, there are 20,000 SMIs companies, representing about 91% of the manufacturing

establishment in Malaysia (FMM, 2001). In the other hand, those large companies or multinational companies, to a large extent, already had some control system in existence even before they implemented the ISO 9000.

Many researches have been carried out on ISO 9000 certification and organization performance. These studies show that certified companies benefited from ISO 9000 implementation including internal benefits and external benefits. Internal benefits are defined as internal function of organizations such as processes and structure of organization. External benefits are benefits concerning the organization in relation to its environment including exporting performance. However, many researches also found that the ISO 9001 certification does not give expected results to organization but in reverse showing negative effects to productivity and quality.

ISO 9000 series certification has become important to exporters who wish to enter the international market especially small and medium industries. This happened because their customer mostly large organization which always requires their supplier or subcontractors to be certified. Further more, some countries or economic organization impose the rules of ISO 9000 series certification for entering their market. Besides, competitive pressures occur where firm in an industry uses the ISO 9000 series certification for marketing purpose and this forces others to follow in order not to be at a perceived competitive disadvantages.

For Malaysia, a country which highly dependent on exporting performance is having high percentage of the exporting amount comparing to GDP of the country. Most of the exporting performance is contributed by foreign invested company. However,

SMI which consists mostly local organizations have been playing important role in indirect exporting by being material suppliers and/or subcontractors to MNC. While many SMI also involve in direct exporting by selling finished products, semi-finished products and/or materials to international market. According to data, the SMI either involves in direct or indirect exporting only consists small portion of overall SMI in Malaysia.

Problem Statement

Performance Differences of ISO 9001 Certified Companies

Adoption of the ISO 9000 Quality Management System in the manufacturing industries has started to grow. According to previous studies, performance different happened to organizations that certified ISO 9001, some organization gained improvement but some organization productivity are negatively affected. In order to strengthen the manufacturing industries capability, it is important to determine the effects of ISO 9000 series quality management system certification in enhancing the company operation performance, personnel performance and market performance in order to gain competitive advantages.

Marketing Strategy as Moderating Variable

There are relatively few studies that trying to link marketing performance to ISO 9001 certification, most of the studies explained that the market performance improved by ISO 9001 certification is due to organization able to achieve higher customer satisfaction and greater competitive advantage. However, it is possible whether ISO 9001 certification itself that leads to these improvements. The researcher think that

business strategy is involved as moderating variable in the relationship between ISO 9001 certification and market performance.

Additional Analysis

Among different group of company such as ownership, size of company, operation period and certified/non-certified company, the reasons for certification and barriers encountered during implementation may be different. Therefore, the study investigates the different trends for groups of companies in order to have clearer understanding of ISO 9000 responses and acceptance in manufacturing industries.

Research Objectives

The primary objective of this research is to determine the performance of ISO 9001 certification on the company operation performance, personnel performance and market performance in Malaysia. Secondly, this study also try to determine the company marketing strategies moderate the relationship between ISO 9001 certification and marketing performance. Besides, this research also analyse the differences of reasons for certification among 3 types of ownership, company size, company operation period. Differences also evaluated for perceived barriers during ISO 9001 implementation between ISO 9001 certified and non-certified company.

Research Questions

There will be four major research questions.

- i) What are the reasons for certification?
- ii) What are the perceived barriers encountered during ISO 9001?

- iii) What is/are the marketing strategy adopted by company?
- iv) What is the company performance on domestic market, export market, operation and personnel performance?

Scope / Area of the Study

The scope/area of the study is confined to manufacturing Industries in northern Malaysia, which include companies certified and not certified to ISO 9001 certification.

Significance of the Study

This study investigates the effects of ISO 9001 certification on organizations as well as its relationship with market strategy. The findings this study can recommend whether companies should go for ISO 9001 certification. In addition, the study gives an indication to manufacturing industries as to the potential problem areas in adopting ISO 9000 quality management system and suggests solutions.

Organization of Remaining Chapters

This research is organized into five major chapters. The first chapter provides an introduction and background to ISO 9001 certification in Malaysia, defines the problem statement of the study, sets the objective of the study, outlines the research questions, define the scope and highlights the significance of the study. The second chapter reviews literatures of previous studies on the quality field, effects of ISO 9001 certification, barriers of ISO 9001 implementation and requirements of successful ISO 9001 implementation. A proposed theoretical framework is constructed at the end of

the second chapter. The third chapter discusses the research methodology applied on this study covering research design, variables, sampling process, measurements and data analysis methods. Chapter four presents profile respondents, descriptive data analysis, results of reliability test, results of t-test, two way ANOVA, one way ANOVA analysis and hypotheses testing. Finally, chapter five concludes with the recapitulation of the study, discussions, implications, limitations, future research and conclusion.

Chapter 2

LITERATURE REVIEW

Quality

The meaning of quality can be defined as understanding of customer's requirements, expectations and buying behaviors. Although many researches have been carried out on quality and its significant level, quality still remains a term that is not easy to be understood and, as a result, many definitions of "quality" have been established. For the purpose of this research study, the following definitions of "quality" will be used:

i) Aspect of Product

Aspect of product can be defined as a precise and measurable variable. In product-based definitions, differences in quality reflect the differences in the quantity of some ingredients or attributes possessed by a product. (Abbott, 1955)

ii) Aspect of User/ customer

Aspect of use/customer definitions start from the premise that quality lies in the eyes of the beholder. Individual consumers are assumed to have different wants or needs, and the goods that best satisfy their preferences are the ones they regard as having the highest quality. From the aspect of user, the quality can be viewed as 'Quality is fitness for use' (Juran, 1974). This aspect of user concept faces challenge that is how to identify individual preferences so that the product produced meets all consumer satisfaction.

iii) Aspect of Manufacturing

Aspect of Manufacturing is primarily concerned with engineering and manufacturing practices i.e. conformance to requirements. Supporter of manufacturing aspect concept defined quality as 'Quality means conforming to requirements' (Crosby, 1979). In this concept, any differences from specification cause defects in quality. Therefore, it is important to focus on reducing the number of deviations to improve the quality of its products. This can lead to lower costs, because preventing defects is viewed as less expensive than repairing or reworking them.

If refer to ISO 9000 Quality Management System –Fundamentals and Vocabulary ISO (2000), it has defined quality as a degree to which a set of inherent characteristics fulfills requirements. This definition has gathered the above three definitions of quality. The definition scope is not only covering product but also management system.

Cost of Quality

Johnson (1993) said that quality in general has an effect on the costs. These costs can be categorised into two types :

i) Operating Quality Costs

These are the costs incurred to obtain necessary quality levels. These include costs of preventing quality problems and to achieve products, services and systems for quality problems. This includes costs of failures, which are really the costs of quality problems themselves, such as waste, scrap, warranty cost, rejection, rework, service cost and loss of customer goodwill.

ii) External Quality Costs

These are costs in providing the function of company's quality system to others e.g. Customers, regulatory groups, certifying body, and etc. Some people emphasized on the potential cost to the company if quality is not attained. Juran (1987) established a concept based on Cost of Quality (COQ), which analyzed the aggregates of all the costs to the company of doing things wrong by not conforming to specifications. The costs a company incurs to secure better quality can be grouped into four categories :

i) Prevention Cost

The costs associated with actions taken to plan the process to ensure that defects do not occur. For example, designing a defect-free manufacturing process, employee training and development, quality circles, preventive maintenance and the cost increase the quality of raw inputs received.

ii) Appraised Costs

The costs of measuring the level of quality attained by the system or ensuring that customer requirements are met. For example, receiving inspections and testing, In-process inspections and testing, and finished outputs inspection.

iii) Failure Costs

The costs incurred to rectify defective output, for example, scrap, rework, repair, re-inspection of rework and downtime due to defects. This costs also associated with delivering defective output to the customer. e.g., warranty adjustments, investigation of defects, returns, recalls, liability suits and loss of customer goodwill.

Juran (1988) criticized some traditional organizations, which were only concerned about the initial cost that a company need to invest in a quality improvement process and neglected the COQ. However, the company which neglected the COQ might need to pay a higher price at the end. Several researchers also supported the above arguments. Crosby (1979) mentions that poor quality in the average firm costs about 20 percent of revenues, most of which could be avoided by adopting good quality practices. Karatsu (1988) strongly supported that quality does not means higher costs. He cites the Japanese industries that are competitive in quality around the world are also competitive in terms of cost. What must be understood is that if quality improvement is introduced successfully and reduced defects, cost will not increase but decrease and by a very substantial amount.

Quality Trend

Wilson (1996) emphasized that quality has to keep along with global demands. The quality of product and service has long been a concern of Malaysian manufacturers, as it is essential for the successful marketing of products and services at home as well as overseas. The quality they have set for themselves is comparable to that required by their customers, local and international.

The recent and strong trend in the movement towards better quality is the growing number of requests for manufacturers to demonstrate quality of their management systems. Persico (1992) and Wilson (1996) both emphasized that more and more customers not only want to see acceptable product “samples” but to have assurance that manufacturers can indeed manage themselves so as to continuously produce products which meet the requirements defined by the “samples”. Therefore it is

important that there is a common understanding of what is considered as satisfactory standard for any given product, process or service. Standardization is a process of formulating and applying rules for an orderly approach to an activity.

The trend of standardization in Quality Management System has increased in recent years with growing consumer sophistications, environmental concerns, fast-changing technology, corporate thinking which is now focused on standards as a competitive tool (Hutchins, 1994). Japan and Europe have been spearheading the trend towards standardization and companies must keep tab on these developments if they want to compete effectively in the international markets.

The international standard that has become the world standard and accepted by over hundred countries as their national standard, is the ISO 9000 series of quality standards published by the International Organization for Standardization (ISO), an inter-governmental organization based in Geneva. The ISO 9000 series of quality standards provide the company with a set of principles for establishing the company system. ISO 9001 certificates are awarded to companies that meet the quality management requirements. However, the obtaining of ISO 9000 series certification should not be the ultimate goal in quality management effort. Quality Management is a continuous process. Quality is to be viewed as an investment, not an expense. Products made to high quality standards gain market acceptance and bring profits.

Basic Principles of the ISO 9000 System

The ISO 9000 system consists of five documents for version 1994 and three documents for version 2000 whose focus is on quality assurance system. The brief descriptions of these models are shown below :

i) Quality Management System-Version 1994

ISO 8402—Vocabulary

ISO 9000---Guideline for selection and use of the standards

ISO 9001---Model for Design and Development, Production, Installation and Services

ISO 9002---Model for Production, Installation and Services

ISO 9003---Model for Final Inspection and Testing

ISO 9004---Quality Management and Quality System Guidelines

ii) Quality Management System-Version 2000

ISO 9000--- Quality Management System –Fundamentals and Vocabulary

ISO 9001---Quality Management System-Requirements

ISO 9004---Quality Management System-Guidelines for Performance Improvements

In order to obtain the ISO 9000 series certifications, all the elements listed in these models must be fulfilled. All business processes related to any of these elements, must be documented and governed by procedures and work instructions. Employees must show evidence (forms, data, records, etc.) that the way they carry out their daily work complies with the standard requirements.

The four basic principles of ISO 9000 System requirement outlined by Hutchins (1994) is as follows:

Principle One : ISO 9000 is a standard for a quality system. It is not a product or services standard. This principle of the ISO 9000 required a systematic way of managing business, which can lead to higher consistency in product quality.

Principle Two : ISO 9000 is based on documentation and premised on the following :

- i) Document what you do;
- ii) Do what you document; and
- iii) Prove it

This principle satisfied the growing trend in quality requirement on quality management system cited previously by Persico (1992) and Wilson (1996).

Principle Three : ISO 9000 emphasizes on prevention. The objective is to prevent defects in quality and not attending to them after they occurred. This principle is inline with Juran's (1987) preventive costs and is aimed at addressing the failure cost, which Juran points out, might otherwise be incurred.

Principle Four : ISO 9000 is a universal standard. It is able to achieve this universality because it only spells out broad requirements and leaves the manner of fulfilling the requirements to the organization. In other words, the focus of ISO 9000 is on what needs to be done and not on how it is to be carried out. Due to this broad requirement, companies in all fields and industries can practically implement the ISO 9000.

While the ISO 9000 system was originally designed for the manufacturing sector and had the greatest impact in this sector, the standards can also be applied to service organizations, with minor reinterpretation. The ISO 9004 outlines the reinterpretation of ISO 9000 requirement for service industries.

Trends of the ISO 9000 Implementation

There is a growing trend for various industries over the world adopting the ISO 9000 system. Implementing the ISO 9000 system provides the company a form of strategic advantages to remain competitive in the global markets. More and more companies worldwide are also implementing the ISO 9000 system to standardize their organization quality system to achieve competitive advantage internationally.

The above finding was further supported in a recent study by ISO TC 176 (Wilson, 1996) which found that over 80% of the businesses in the world are small or medium-sized businesses. The definition of small and medium-sized business is based on employment levels. The size definition, however, vary by country. In some countries, the definition of small may be those businesses with fewer than 10 employees while in another country, it may be fewer than 100 employees.

The more business development in the country, the greater the employee numbers. In Malaysia, the small or medium-sized business (called small and medium-sized industries or SMIs) is defined as those companies with shareholders' fund not more than RM2.5 million and fulltime employee not exceeding 150 persons. (FMM, 2001).

According to Wilson (1996), the ISO 9000 requirements are not written for large business. The standards are generic, however, are designed to be appropriately applied by all businesses, regardless of its size. As a result, SMIs encounter all the same implementation problems as large business, but usually have fewer resources to apply to the process. In addition, SMIs tend to have less experience, particularly when it comes to quality system concepts, tools, and terminology than large business. Hence, most of the SMIs do not proactively attempt to implement ISO 9000 until a major customer directs that implementation or certification become a requirement for further business. SMIs often look at the ISO 9000 as a burden and not benefit. They usually do not have confidence that ISO 9000 compliance will bring additional market share or even the possibility of increased efficiency within its organizations.

Effects of the ISO 9000 Implementation on Organization

The study by Hutchins (1994) found that the companies implementing the ISO 9000 systems are indirectly involved themselves in a quality improvement process. The benefits that a company can enjoyed with the ISO 9000 implementation includes:

- i) Reduce managers in constant intervention in the operation of the business. This is achieved, as the staff will be given the means to control their own operations;
- ii) Provide the right tasks to be specified in a way that will yield the right results. The standard requires advance planning of the work and putting in place procedures, standards and guidelines;
- iii) Provides a documentation of the organisation's experience in a structured manner that formed a basis for education and training of staff, and the systematic improvement of performance.

- iv) Provides a means for identifying and resolving problems and preventing their recurrence. The standard requests for detecting deviations from practices and specifications, the cause of deviations and implementing corrective actions;
- v) Provides the means for ensuring people to perform task right the first time by provision of work instructions, training, and conducive working environment;
- vi) Provides objective evidences that can be used to demonstrate the quality of the organization's products and services and to demonstrate to any external evaluators that the various operations are under control. The standard enables this by identifying, producing and maintaining records of key operations; and
- vii) Provides data that can be used to determine the performance of operating processes, products and services and for improving organizational performance and customer satisfaction.

Another researcher, Taormina (1996) also found that many companies have obtained improvement over the ISO 9000 implementation and certification process. These include increase productivity, raise product or service quality, lower overhead, stimulate creativity, reduced waste and redundancy, stimulate teamwork, become a valuable marketing tool, attract new markets, showcase and increase company image, reduce product liability and reduce employee turn over.

There are many other researchers who argue that implementation of the ISO 9000 system in a company can cause many effects, some positive and some negative. For

the benefit of this research study, the various effects of ISO 9000 implementation are summarised as follow :

i) Profitability

According to researcher's experience as quality system auditor, many small and medium size companies in Malaysia found that the cost of ISO 9000 implementation is too high. Typically, a small company with about 50 employees is required to pay a minimum of RM7,500 to RM10,000 for pre-award audit fee. Many small firms in Malaysia are concerned that certification under ISO 9000 will raise cost without improving quality, productivity and profitability.

George and Weimerskirch (1994) mentioned that quality should not be considered as cost to a company but rather profitability. Systematic process of quality system will reduce waste and increasing productivity improvement. Less waste and greater productivity lead to lower unit cost, which improve both margins and used of assets. Continuous quality improvements will increase the customer satisfaction on the company's products or services quality. By increasing the number of customers, it is likely that the sales will be increased and that improves margins and grows revenues. Similar benefits have been discovered by Gump (1994). He argues that the continuous quality improvement is one of the most important assets built into its quality system that make Japan a success story in the world.

ii) Productivity

Deming (1982) believes the positive relationship in quality and productivity, which is based on the reduced productivity that is caused by quality defects, rework and scrap.

He further concluded that an improvement in quality means transfers waste of man-hours and machine time into the manufacture of good products and better service.

Karatsu (1988) who is a strong supporter of the positive theory express his disappointment because there are still many people believe that raising productivity requires workers to work longer hours. He believed that this view comes from not understanding what productivity means. When the number of work hours increases and thus produces more goods, that's mean increasing production, not productivity. Productivity is the result of efficiency. If an item that takes ten hours to produce can be produced in five hours under an improved system, productivity has doubled. Increasing production does not make more profit but productivity will.

iii) Communication

Lawler et al. (1992) is focusing the importance of communication in business operations. Without proper communication of information, it is difficult for individuals to understand how the business is being carried out and to make meaningful contributions towards the goals and direction of the company. Overall, in the absence of information, individuals are limited to simply performing prescribed task and filling roles in a relatively automatic way, and they are prevented from participating in the overall business direction and results.

Quality improvement required the changes in the way people think and behave (Oakland, 1994). All this can be achieve through improved communication, trust and the free exchange of idea, knowledge, data and information. He further stressed that communication is essential for information flow and process improvement. An

organization should introduces and stresses “open” method of communication, by documenting its processes and activities, maintaining open offices, being accessible for improved effectiveness between staffs, employees, departments and even branches.

Communicating the problems to the concerned departments or personnel is important, it can warns or highlights to employees to prevent it from happen but often it is not done. According to Stebbing (1993), this may be due, to large extend, the fact that there is no proper documentation system to highlight these areas and record of such problems in organization, which, the quality system can then be revised to take corrective action and eliminate future recurrence.

iv) Market Share

Companies with ISO 9000 series certifications are usually listed as preferred suppliers in the customer’s supplier lists. Companies gaining the ISO 9000 system certification, display the certification mark on the brochures or in the advertising media might help the products more widely accepted. The registration helps to improve confidence between the supplier and its customers, thus helping to safeguard existing business and assisting in developing new markets.

A study carried out by Bain and Company (Rust et al., 1994) on the value of customer retention, revealed that an increase in customer retention rates of five-percentage point can increase profits from 25 percent to 85 percent. This can be achieved because :

- i) It’s more expensive to win new customers than to retain existing one;

- ii) Longer-term customer tend to purchase more; and
- iii) Servicing a familiar customer becomes generally more efficient and therefore, cheaper.

The referral by a satisfied customer almost ensure wining a new customer. Word of mouth by a satisfied customer is always cheaper and more effective then the company effort to attract a new customer. One of the great examples was the tremendous penetration into US market by the Japanese automakers as a result of favourable comment by analysts and customers to the high quality of their cars compared to American models.

Another study by Juran (1988) found that an increase of 20 percent in sales can creates an increase of 50 percent in profit, since no increase in “constant” costs is involved. The main factor is the customer satisfaction on its products or services quality. But to attract new customers by creating a new product line involves much investment in market research, technology, facilities, and personnel. In addition, the venture is for more risky.

v) Cooperation/Team work

Researcher, Oakland (1994) emphasized that quality improvement program can promote teamwork and he further suggests that the only efficient way to tackle process improvements or problems is through the used of teamwork. According to him, the use of the team approach to problem solving has many advantages over allowing individuals to work separately. These include a greater variety of complex problems may be tackled - those beyond the capability of any one individual or even

one department - by pooling of expertise and resources. Problems are exposed to a greater diversity of knowledge, skills, experiences, and are solved more efficiently. The approach is more satisfying to team members, and boosts morale and ownership through participation in problem solving and decision-making.

The benefits of ISO 9000 certification has been extensively discussed by many researchers, however in term of issues on exporting performance or expansion to international market is not much been examined. A survey in the UK by Lloyds Register Quality Assurance (1994) reported a highly favorable reaction to ISO 9000 certification with benefits including it being a valuable public relations and marketing tool, increase ability to bid for contracts and it had helped enter international market. Similar research results also shown by Clare (2002) where positive feedback received from companies on the benefit factors such as greater opportunity for export and expansion to international market. Buttle (1996) report on mail surveys of 1220 certified organization in UK. Finding indicates that 58% of ISO 9000 certified organizations experience the benefit of reducing barriers to international market. However, Brown's (1998) investigation of 160 respondents in Australia which are small and medium enterprises noted that they had not found improvement in the international marketplace.

Some literatures found that there were some negative effects of the ISO 9000 system implementation in the organisation operations. The ISO 9000 system was claimed that it creates bureaucratic and rigid procedures. This inhibits initiative and results in delay in responding to the new needs. Similar findings made by Omachonu and Ross (1994). Study done by Singels et al. (2000) shows that there is no positive

relationship between ISO 9001 certification and production, customer satisfaction, personnel motivation.

Here, we try to explore the effects of ISO 9000 certification by dividing the effects into external benefits and internal benefits. According to Salleh (2000), external benefits were considered into seven dimensions which are improve customer satisfaction, increased market share, higher perceived quality, glory for the company, competitive edge, quicker time to market and reduced quality audits. Besides, Buttle (1996) states that companies certified ISO 9000 quality management system because of marketing motivation and benefits. The factors include keeping existing customers, gaining new customers, improving customer service and increasing customer satisfaction. Singels et al. (2000) classify the ISO 9000 certification performance into five indicators: improvement production process, improvement company result, customer satisfaction, investment on means and personnel motivation.

The internal benefits were constructed into eight items. The items consist of reduced scrap, enhance inter-company communication, improve departmental cooperation, better documentation, improve measurement system, positive cultural change, greater quality awareness and preventive action. In addition, Buttle (1996) also mentioned this as profitability and process improvement. This benefits contain of productivity gains, cost reduction, reducing waste, improving staff motivation, consistency and others.

Beside performance indicators, Singels et al. (2000) has developed internal and external motivation factors for investigating the relationship between ISO 9000 certification and internal/external motivation factors.

Since exporting performance is considered to be part of marketing management, it is important to consider the proper marketing strategy imposed to any organization involved in exporting. According to Kotler (2000), the marketing strategies include two elements: overall cost leadership and product differentiation. Company practices overall cost leadership is working hard to achieve the lowest production and/or distribution cost so that price can be set lower than competitors and win more market share. Market strategy: Product differentiation is defined as company concentrates on achieving the superior performance in an important benefit area which is valued by customer such as quality, service, technology, reliable etc. This research is trying to find out the influences of the two marketing strategies between ISO 9000 certification and export or domestic market performance.

Barriers to Successful ISO 9000 System Implementation

Stebbing (1993) indicates that fear of the bureaucratic documentation requirement of the quality standard is the barrier for companies pursuing the implementation programme. According to him, to implement a quality system and to assess and report shortcomings within the system, it must have some basis to work with. These bases are the written procedures which should indicate “what” is required or is to be controlled; “who” is responsible for ensuring that the requirement is met or that the control is carried out; and “how”, “when”, “Where” and “why” it is controlled. These

requirements are viewed as red-type and regarded as a tool for the top management to monitor and control their employees' activity.

Oakland (1994) found that many companies have experienced different types of difficulty in implementing the quality improvement in their organisations. The major ones are management is not fully committed and reverts to meeting short-term gains. Scepticism due to lack of integration and organisational focuses on quality. Loss of credibility to quality system, which becomes last month's or last year's flavour. Teams become bogged down in trivia issues instead of tackling the important problems.

Wilson (1996) however concluded five categories of most likely barriers to successful ISO 9000 implementation, they are :

- i) Insufficient management involvement in the process.
- ii) Inadequate resources provided to perform the task.
- iii) Inappropriate assignment of low-level personnel.
- iv) Working to an unknown or unreasonable implementation plan.
- v) Inadequate acceptance of the need for ISO 9000 by the workforce.

Requirement for Successful ISO 9000 System Implementation

Both the management and lower level employees must play their respective parts in order to ensure successful implementation of the ISO 9000 system in an organisation.

Wilson (1996) highlights the success factors for management level as follow :

- i) Senior management commits to ISO 900 standard.
- ii) Visibly involving management leadership in the implementation process.