Quality Management Practices and Organisational Performance

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Title of Thesis

Quality Management Practices and Organisational Performance:

"Is There A Relationship Between Quality Management Practices And Organisational Performance In A Financial Services Firm"?
Statement of original authorship

This thesis has been prepared in accordance with the rules set out for the Degree of Doctor of Business administration at the University of Surrey. The work presented in this thesis is, to the best of my knowledge and belief, original, except as acknowledged in the text. The material has not been submitted, either in whole or in part, for a degree at this or any other university.

William Onuwa
2008
Dedication

This research work is dedicated first to the memory of my Dad, Mathias, who passed away on my first day of class, may you continue to rest in peace. You inspired my thirst for knowledge. Secondly, I dedicate this work to my daughter Casia for being my touchstone to reality and what is really important in life.
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Thanks also to my family for all the encouragement and support especially during the difficult times.

Finally I give all the glory to our God for his goodness and provision during this life changing experience.
Abstract

The purpose of this research study is to examine the relationship between Quality management (QM) practices deployed as part of a broader management approach and organisational performance in a financial services industry. Quality management as an organisational performance improvement tool or approach has been in practice since the late 1980’s following the decline in the American manufacturing industry and competitive position compared to the Japanese. Quality management practices have increasingly become an approach used by firms for gaining competitive advantage in an environment where there is a process of constant change in the national and international competitive environment, due in part to globalisation and increased interdependence of world economy. These changes and interdependence have brought an increased demand on organisational competitiveness and performance with the customer gaining a central place in organisational focus.

The benefits resulting from quality management deployment has however been somewhat mixed as seen from the literature reviewed for this study. The study reported here has, therefore, sought to develop a more finely grained analysis of the relationship between QM and performance by examining the detailed link between specific QM practices and performance.

This research study found that certain specific QM practices had a significant relationship to financial performance measures such as net income before taxes, and operating leverage, but did not seem to have the same level of relationship with sales revenue, or the non financial performance measures. As a result, depending of the performance measure requiring improvement, there may need for a different emphasis to be placed on different elements of QM and a consideration of other organisational factors such as brand in attempting to bring about superior performance. The study also concluded that there are other unique organisational factors such as a Transformational
Management Office (TMO) that can moderate the relationship between QM practices and performance improvements.

**Keywords:** Quality management practices; organizational performance; quality dimensions; performance indicators; quality performance models; dependent and independent variables;
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Chapter 1: **INTRODUCTION**

1.1 Quality Management (QM)

The contemporary world economy creates a great deal of uncertainty for businesses due to the rate of changes in the business environment such as product and market deregulations, increasing global competition and rapid changes in technologies. To cope with these changes and make business competitive many firms pursue different techniques among which is quality management (QM) practices (Sharma & Gadenne, 2002). QM according to the Mische (2001) has become a top competitive prerequisite for success in the global market place. A review of various literatures shows that a number of organisations continue to invest resources in adopting quality management practices while refining their methodologies in the deployment process and in particular to identify those quality activities which most directly affect performance. The success or otherwise of the resulting improvements in business performance has been a key area of research mainly within the manufacturing segment as seen from the studies reviewed for this research, and while there have been some reported successes in blue chip companies such as GE and Motorola, there have also been some reported setbacks such as the Florida Power and Electricity company example. The focus on the manufacturing industry is not surprising given the history of the development of QM practices.

**Emergence of QM Practices**

The emergence of QM practices in organisational management appears to have begun around 1980 in response to global competition (Easton and Jarrell, 1998) especially in the US manufacturing sector, where the focus was on improving existing processes or the design of new processes and products to fend off the competition from Japan. The objective of QM therefore in the original approach according to Kujala and Lillrank (2004) was to manage the production process so that it achieved and maintained a consistent, desired level of quality. QM has however since, evolved and changed during the years and is now more appropriate according to Kekale
(2003) to define QM as a management approach that includes the utilization of all possible techniques and tools for the widest possible perception of excellence from the various stakeholders in the firm such as shareholders, employees, customers and the society at large.

Defining Quality

The word quality has been defined as the essential and distinguishing attribute of something or "the totality of features and characteristics of a product or service" that impacts its ability to satisfy a given need or implied need (ISO 8402-1986). The 2002-2003 report of the U.K. department of Parliamentary reporting opined that quality relates to the characteristics by which customers or stakeholders judge an organisation, product or service. Management according to the American society of quality relates to the organisational processes that include concepts, techniques and managing resources that enable goals to be achieved efficiently and effectively. Stuhlman (2006) described practices as the techniques, methodologies, procedures and processes that are used by organisations to get things done. Given the above definitions quality management (QM) practices can be viewed as those techniques or processes used by an organisation to foster improvements in its services or products to satisfy a known or perceived needs of customers. According to quality assurance project report, sponsored by United States agency for international development (2004) quality management is an ongoing effort to provide services that meet or exceed customer expectations through a structured, systematic process for creating organisational participation in planning and implementing improvements.

As observed from the literature reviews, most of the studies on QM practices and organisational performance have focussed largely on internal process improvements within manufacturing firms, and these practices were deployed as the principal strategy for performance improvement. This research will however seek to understand how QM practices when deployed as part of a broader management practices within a corporate initiative, impact performance in a large Canadian financial services company. The
study will be conducted within a predetermined time frame using both a quantitative and qualitative methodologies to conduct the empirical research.

1.2. EVOLUTION

Quality management practices has evolved from being a reactive process for survival to a globalize management approach (See Figure 1.2.1 below). Hackman and Wageman (1995) concluded that the discipline evolved based on the practice-oriented works of J.M. Juran (1989), W. Edwards Deming (1986), and Kaoru Ishikawa (1985), who all shared a common set of assumptions and prescriptions, beginning in the early 1900’s when Henry Ford developed many of the QM fundamentals and recorded them in his book, “My Life and Work”, which later became the “industrial bible” for the Japanese (Saad and Siha, 2000).

Three pioneers have been identified in various literatures as the “fathers” of QM – Edwards Deming, Joseph Juran and Philip Crosby. Each of these pioneers viewed QM from their own unique prism. Edwards Deming had three core views of what QM is – Quality requires a corporate cultural change, Variations is the cause of poor quality and most sources of variation can only be affected by management.

Joseph Juran opined that management was instrumental to improving organisational quality, advocated the use of data to identify areas of improvement and championed the use of techniques such as Pareto analysis. Philip Crosby however viewed QM as requiring changes in attitudes and behaviours of employees and concluded that quality problems are due to lack of standards and attention to details among employees.

QM practices gained momentum in the latter part of the ’80’s due in part to the creation of national awards such as the Malcolm Baldrige National Quality Award (MBNQA) in the USA, European Foundation for Quality Management Award (EFQM), Swedish Institute for Quality Award, and the participation in the award process by leading companies such as Motorola, Xerox, etc. (Easton and Jarrell 1998). Additionally, the success of the initiative in major companies like GE, Honeywell and Sony promoted its
adoption in the industry, coupled with the globalisation of today’s economy as well as “disruptive technology”, which requires greater efficiency and flexibility from firms. Finally, increasing customer awareness and changes in the way customers conduct business, coupled with the concept of “disruptive technology” to existing production and distribution processes, mean that companies need to constantly improve not just the process of product and service delivery but also have a good understanding of the customer requirements. This understanding requires the use of sensitive radar such as QM, which serves as a guide for strategic business direction (Amit, 2003). QM has therefore become an all-pervasive influential factor in business management generally, including the financial services, and continually emerges as a top competitive priority within firms especially over the last two decades (American Foundation and Ernst Young 1992). From a management perspective therefore the critical question then is under what circumstances will quality management practices impact organisational performance.

The transition of the concept from its original focus on process and product quality conformance or control to an indicator of performance or incremental competency pose a very interesting inquiry especially within a financial services organisation, a departure from the focus on the manufacturing sector.
In the model Saad and Siha (2000) described the first phase as reactive - a reaction to massive product recall for deficiency. The focus was on quality control. During this period product specifications were defined and the products inspected before leaving the factory. This was the "gatekeeper" era. The second phase was quality assurance - a desire for stability. It involved identification of the products' quality characteristics, as well as the procedures for quantitatively evaluating and controlling these factors.

The third phase was one of incremental improvement where quality was considered to be a total organisation-wide effort. This was a bottom-to-top concept. Motorola adopted this concept and from it came their Six Sigma. The fourth phase is what the authors summed up as revolutionary. Here quality was considered as a way of life, affecting the attitude & behaviour of everyone, and impacting the organisational culture. In this phase, the customer should be at the heart of planning, with organisational wide involvement. This is when QM became popularly known as Six Sigma, a name coined from the Motorola QM programme. The current phase is globalization where quality is viewed as a means of business competitiveness worldwide. This phase is one where quality can be used to achieve both economies of scales and economies of scope simultaneously. It is worth noting that the various stages of development did not assume a linear progression from one stage to another but rather a way of understanding the focus of QM over time and the transition of core elements from one stage to another, e.g. TQM to globalization.
1.3. Categorization of QM Practices

QM practices have been described differently by various business organisations in their quest for competitive leadership or effectiveness. For example, it is “A Way of Life” at Prudential Insurance UK, “Six sigma” for Motorola, and “Lean Six Sigma” for General Electric in the USA. This can be explained in part by the fact that the definitions of QM did not develop as a result of academic analysis of existing management and organisational theory (Grandzol and Gershon 1997), but through practice-oriented work. It has been categorised by practitioners as both a performance indicator since it aims to describe the capability of a product, service, process and/or input that consistently meets current and future defined expectations, and a business philosophy due to its focus on continuous improvement using customer need data, analyzing business processes, and establishing measurement methods.

Universality of QM practices

The differences in categorization and practices by businesses raise the question of the universality of QM practices. Hackman and Wageman (1995) argued that QM practices, however described, exhibit convergent validity, since there is substantial agreement among the movement’s founders about the key principles and practices of QM. Although a complete definition of QM practices is beyond the scope of this thesis some of the key practices identified in the literatures reviewed included the following:

1. Process focus – emphasis on the concept of process as a fundamental building block of the organisation.
2. Systematic improvement – widespread systematic focus by the organisation on quality improvement.
3. Company-wide emphasis – concept applied throughout the company
4. Customer focus – emphasis on customer satisfaction, service and integration of customer information into management and improvement process.
5. Fact based management – emphasis on deployment of a systematic analysis and fact based decision making.
6. Employee involvement – employee involvement through team work and the development of employees through training.

7. Cross functional management – Emphasis on cross functional involvement in key process improvements and other processes such as new product development.

1.4. Definitions and Emphasis of QM Practices

In this research QM practices will be defined as those techniques or approaches, used by an organisation to foster improvements in its performance. Researchers and practitioners from various disciplines have offered different descriptions and definitions of QM. However, they all emphasise that QM practices are a management philosophy consisting of values, tools and techniques aimed at improving the levels of customer satisfaction (see figure 1.4.1). Values include customer focus, while tools include process maps, and techniques, which involve policy deployment or quality council. The core values of an organisation should determine the most suitable techniques for QM practices in a firm and ultimately, the most suitable tools to support the adopted techniques (Hellsten, & Klefsjo, 2000).

According to Dean and Bowen (1994) QM practices is a philosophy or an approach to management made up of a set of mutually reinforcing principles, each of which is supported by a set of practices and techniques. This entails an organisation-wide commitment to continuous improvement, with focus on teamwork, increasing customer satisfaction and lowering costs. Flynn, Schroeder, and Sakakibara (1994) defined QM practices as an integrated approach to achieving and sustaining high quality output.

Oakland (1993, p.54) states that QM is more than “...shifting the detection of problems from the customer to the producer”. The author articulated the necessity for a comprehensive approach in the deployment of QM practices and the necessity for the adoption by an organisation if it is to improve on its competitiveness, effectiveness and flexibility.

Emerging from the literature reviewed is an understanding that QM practice is a multidimensional construct which is composed of multiple quality practices (Flynn, Schroeder, and Sakakibara, 1995; Kaynak, 2003).
These quality practices have different functions and roles regarding continuous improvement. For example process management is concerned with using statistical and scientific techniques to reduce process variations, which represents the methodological and technical side of QM. Most of the literature reviewed focused on “what” to do in adopting QM practices as well as the tools for project deployment with very little attention if any on the “Value” aspect of QM. It is this sort of prescriptive dominant focus on the “what” that resulted in the frustration experienced by some managers who adopted the QM practices with the expectation of some quick improvements in their organisational performance (Hendricks and Singhal 2000). The review also showed that the QM practices which actually have an influence on performance can be categorised into different groups. What constitutes a comprehensive set of quality practices has however been the subject of much debate (Everett et al, 1997). Deming (1989) emphasised the role of management in QM practices, and concluded that QM is management’s responsibility. Management must develop the proper tools to manage quality and such tools must go beyond the machines or hand tools that help to gauge the quality of a produced item. He asserted that statistical methods were the backbone of management’s basket of tools for managing quality.

Juran focussed on what he termed a Quality Trilogy. He defined the trilogy as quality planning, control and improvement. This is what constitutes QM management practices in his view while Ishikawa saw QM as a process requiring involvement of the total company. Ishikawa is credited with the development of the fishbone diagram, and the concept of the quality circles and their use.

The most prominent QM practices are those outlined by the MBNQA and the EFQM. The Baldrige criteria identified eleven categories, the EFQM identified seven categories and the Swedish Quality Award (SQA) identified thirteen. Each of these principles is implemented through a set of practices, which are simply activities such as collecting customer information or analyzing processes. The practices are in turn supported by a wide array of
techniques (Everett et al, 1997). Some of these practices were observed to explain significant variance in organisational performance. The QM practices categorised by the EFQM and MBNQA as leadership, people management, customer focus and information usage and analysis were the strongest predictors of performance.

The evolutionary patterns, descriptions, and categorisations above show that QM has become a framework for enhancing business performance. According to Breyfogle, Forrest, and Meadows (2001) the practices of QM produces a variety of benefits when properly implemented and supporting infrastructures for selecting, supporting and executing projects are effectively maintained. Benefits includes greater understanding of the customer's needs, improved customer satisfaction, improved internal communication, better problem solving, greater employee commitment, and reduction in waste. The key question here is whether all the improvement projects actually results in improved organisational performance or even whether such improvements in performance can be totally attributed to QM practices. According to Sousa & Voss (2002) the impact of QM practices on business performance via the mediating effect of quality and operational performance, although significant, still leaves a reasonable amount of business performance variance unexplained.

1.5. ORGANISATIONAL PERFORMANCE

The raison d’etre of any commercial firm is continuity and profit generation. In assessing the performance of an organisational however, profitability measurement alone is insufficient as there are multiple stakeholders within any organisation such as shareholders, employees, customers and the community within which the firm exist. This implies that if performance is to be acceptable within the organisation and credible to outside stakeholders other non-financial measures such as market share, customer satisfaction and employee satisfaction and good governance needs to be considered. Organisational performance according to Peterson, Gijsbers, and Wilks (2003) may therefore be defined as the ability of an organisation to use its resources efficiently and to produce outputs that are
consistent with its objectives and relevant for its users. Efficiency relates to how well resources are used to achieve a goal while effectiveness focuses on the appropriateness of the goals chosen. Since performance is a reflection of an organisation’s goals and strategic objectives, performance measures have to be tailored to the conditions and needs of the firm.
Conceptually therefore, organisational performance has been viewed as the comparison of the value created by a firm, measured through the three general elements (efficiency, effectiveness & relevance) of organisational performance, with the value the owners expect to receive from the firm (Barney, 1995, Lusthaus et al 2002).
In another study, Haworth inc. (2005) contends that organisational performance provides the social context within which individual and groups must perform. It argued that organisational performance is the result of factors such as work processes; team/group communication and interaction; corporate culture; policies; leadership; climate for innovation and creativity; and loyalty. Organisational performance can be approached either from a cultural (internal) perspective - shared patterns of perception, representation and response surrounding internal and external operations, or brand (external) perspective - perception of the organisation in the minds of consumers and the outside world resulting from their relationship with products, services, or the company itself.
Measuring Performance
The increasing demands on firms for accountability and performance have resulted in considerable effort being put into defining performance and how it should be measured, thereby ensuring that the concept of performance is expanded beyond a short-term assessment of the financial bottom line. Performance now includes focus on long-term value creation activities such as customer service, quality of internal processes and organisational learning (Kaplan & Norton, 1996).
To measure the performance of the firm, metrics such as net income, revenue growth, productivity, customer satisfaction, and employee retention have evolved, representing the outcome of performance but not the causes
of them. The EFQM and Malcolm Baldrige Awards models have also developed measurements of performance in their assessment of award winners.

For example, the EFQM excellence model comprises nine elements grouped under five “enablers” (leadership, policy & strategy, people, partnerships and resources, and processes) and four “results” criteria (customer results, people results, key performance results and society results). The “enablers” represent how the organisation operates, and the “results” concentrate on the achievements of the goals of the organisational stakeholders and how they are measured and targeted (Bou-Llusar et al, 2005). It is worth noting that the ability not only to define, but also measure and evaluate performance is an essential condition for its improvement. The nexus between organisational performance and QM practices therefore hinges on the efficient and effective use of resources to achieve the goals of the firm. An understanding of what the determinants of organisational performance will therefore be critical in determining if there is a relationship between the deployment of QM practices in a firm and the resulting organisational performance.

1.6. DETERMINANTS OF ORGANISATIONAL PERFORMANCE (OP)

Mitchell (2002) argues in his study “The strategic importance of human resources: driving organisational performance”, that there are three major determinants of OP:

A. Organisational Motivation – This involves employees’ understanding & integration of the company’s mission, the link between company history and current strategy, and the compensation to motivate them to implement its strategy.

B. Organisational capacity – this refers to the capacity of the individual functions within the organisation to deliver on their objectives.

Layered on that is the leadership to direct the strategic success and the skills in creating the infrastructure the company needs to balance inter-organisational relations.
C. Organisational external environment – this is the degree to which the organisation interacts with the external environment, as the level of understanding of the environment will influence performance and how it uses this knowledge in the company’s favour. Performance therefore is to be measured through organisational effectiveness, efficiency, relevance and financial viability.

This view of the determinants of OP is supported by Tvorik and McGivern (1997). In their study the authors viewed OP as the process of creating economic value for the firm. This process they contend is determined by two major factors that must work in harmony with each other if result is to be realized. The creation of economic value for the firm therefore becomes the ultimate measure of performance and determined by the following:

A. Organisational factor - This factor examined through the use of the resource-based view of the firm, suggests that the firm’s internal characteristics, especially the cultural patterns of learning and human capital asset accumulation, have significant impact on its ability to compete within disparate markets. Thus, a firm’s competitive advantage is derived from its unique knowledge or capabilities (Spencer, 1993). Central to this view is the notion of distinctive competencies or firm specific competencies and the ability of the firms’ resources to raise barriers to imitation (Hatch and Dyer 2004).

B. Economic factor - This emphasises the importance of external market factors such as the firm’s competitive position. The critical issue here is having an understanding of the environment in which the firm exists and its ability to match its resources to the demands of the environment to ensure value creation.

The interaction between organisational capabilities and the environment in which the firm operates is therefore critical if improved OP is to be realized (Terzioski & Samson, 2000; Hendricks & Singhal 2001b).

For this research therefore OP will be defined as the ability of the unit of study to use its resources efficiently and effectively to deliver on its
performance goals as measured by both financial (Sales revenue, Net income before tax, & operating leverage) and non financial metrics (employee satisfaction & likelihood to recommend).

**Figure 1.4.1 Quality management core values, techniques and tools**

- **Values**
  - Top mgt commitment
  - Process focus
  - Customer focus
  - Fact based decision
  - Continuous improvement

- **Tools**
  - Affinity diagram
  - Process map
  - Control charts
  - Design matrix
  - MBNAQ criteria
  - Tree diagram

- **Techniques**
  - Quality cycle
  - Policy deployment
  - Process management
  - Benchmarking
  - Quality function deployment
  - Design of experiment

1.7 Conclusion
The chapter provides an overview of how Quality management practices have evolved over the years and the importance of the practices in organisational performance. The evolution of QM shows that it had its origins in the manufacturing industry where it was used as a competitive tool for product conformance and reducing production errors. The definition of what quality is has therefore largely been borne out of the experience of practitioners and pioneers such as Juran, J. Deming, W. and Ishikawa, K. rather than academic theory. It has evolved from a reactive survival control philosophy to a global proactive management measure of incremental competency. The practice of QM has also now become aligned with some major management theories such as the Frederick Taylor’s scientific management theory, with various definitions now emerging not just from the practitioners but also from academic researchers. QM practices are now commonly understood among the practitioners and researchers to be made of common values such customer satisfaction that is supported by various techniques and tools. The practice has also now been shown through research studies to be comprised of various dimensions, with the ones identified by organisations like MBNQA, and EFQM recognised as globally acceptable dimensions that can impact business performance when properly deployed in an organisation (Hellsten and Klefsjo, 2000). The challenges of the current global economy with its constantly changing competitive parameters and consumer behaviour, has made QM practices one of the critical techniques for managing these changes and for continuous business performance improvement (Sharma & Gadenne, 2002).

The chapter also shows that there is a challenge in establishing a common meaning and determinants of business performance and also how much of such performance improvement can be attributed to QM practices, even though there is evidence that QM practices when properly deployed impact performance. The approach adopted for this research study therefore is one that views improved performance as the efficient and effective use of a firm’s resources in creating economic value that is relevant to its
performance goals within a given period and in this case it will be the period 2004 - 2007. The improved economic value for the unit of study will be determined using statistical analysis of the data gathered from company archives and from the survey questionnaire, as well as determining what percentage of the variance in the performance metrics is attributable to the QM practices.

This purpose of this research study will be to contribute to QM knowledge and the enhancement of Quality management practices deployed as part of a broader management philosophy for improving business performance within a Canadian financial services organisation, where the question of QM practices and organisational performance has not before been under investigation.

The rest of this thesis is organised as follows: Chapter 2 deals with the research questions that the thesis aim to address in its study and the empirical research environment to ensure that there is a context for the study. Chapter 3 reviews previous studies on the relationship between QM practices and organisational performance to understand the dimensions of QM practices that actually impact performance as well as understand the determinants of organisational performance. Chapter 4 deals with the research methodology and the development of the research instrument. The chapter finishes with the analysis of the data from the questionnaire. Chapter 5 provides a detail discussion of the analysis results within the context of the company and chapter 6 summarizes the research results and findings as well as the contributions of the present study and its overall implications in the areas of management practices and deployment alongside other management philosophies in performance improvements.

Further areas of studies on the relationship between QM practices and organisational performance are proposed especially the interactions between the QM dimensions.
Chapter 2: RESEARCH OBJECTIVES

2.1. Research Questions

The primary objective of this research is to investigate how QM practices deployed as part of a broader management philosophy influence organisational performance. Specifically this research will investigate the following questions:

1. Is there a correlation between QM practices and a firm’s performance?
2. What elements of QM practices were most critical in the relationship?
3. What contextual factor(s) most influence the strength of the relationship?

These questions will be explored within the context of a financial services industry using a large Canadian financial services company as the unit of study and focussing on a four year period (2003 – 2007). Choosing a time period for examining performance is critical in linking QM to performance (Hendricks and Singhal 2000). This research, in examining this relationship will define QM practices within the company as management practices or initiatives that seek to bolster organisational performance. These management practices will be determined after a thorough review of the literature and the construct models. The critical point here is an understanding that QM practices are deployed as part of a broader management approach in improving organisational performance rather than QM practice being the main performance improvement strategy as exemplified by the firms who compete for the MBNQA. These firms like Xerox or Motorola deployed QM practices as the key strategy for performance improvement.

Most of the literature reviewed for this study based their conclusions regarding the relationship between QM practices and organisational performance on data from manufacturing firms. There were very few studies conducted within the financial services (FS) industry. This was not unexpected considering that the QM concept had been geared primarily to product and process improvement within the manufacturing sector. According to Hasan and Kerr (2003), until recently not much attention has
been paid to quality improvement in service organisations. Most of the researches on QM practices have been geared towards the manufacturing organisations and the application of QM principles and techniques to FS industry has remained a challenging task. There has however been an increased interest in the role of QM in FS industries, due to the critical role they play in many developed economies today. In addition, the growing studies on the theoretical validation of the core QM practices have lead to the increased application of these QM dimensions to other industries outside of manufacturing. This study will therefore seek to contribute to this growing body of knowledge on the relationship between QM practices and organisational performance within a Canadian financial services company, as well as the enhancement of management practices in the deployment of QM practices with regard to the dimensions of QM practices that impact performance.

2.2. THE EMPIRICAL RESEARCH ENVIRONMENT

The Canadian financial services industry is regulated by the Office of the Superintendent of Financial Institutions (OSFI). The federal and provincial government share jurisdiction over the sector. The legislation governing the industry is reviewed every five years and a review was done in 2007. The financial services industry as defined in this study includes all firms primarily engaged in providing products and services to facilitate the flow of money, trade, growth and preservation of wealth such as credit card issuing companies, banks, insurance companies, or financial leasing companies. The services offered by these firms are what determine their measure of success coupled with the extent to which their products meet the needs of the buying public. These services can be broadly divided into four major groups:

1. Introductory service
2. Product service
3. Delivery service
4. Post purchase service
The Canadian financial services industry is made up of banks, trust and loan companies, credit unions, insurance companies, securities dealers and exchanges as well as independent financial advisors. The industry is highly competitive and dominated by six large banks. In addition the industry is significantly integrated as different players offer similar services and “financial groups” offer variety of financial products and services that cut across what was known as the four “pillars” (Banks, trust, insurance & securities). In 2003, there was a slight departure from this trend as many sectors increased their share of income generated from the traditional financial product line. The financial services industry contributes more than 6% of the Canadian GDP, and employs over 600,000 people. The sector has a payroll of over $35 Billion and contributes another $13 Billion of taxes to all levels of government. The sector is therefore essential to the economic growth of the country by providing the vehicle for channelling savings into investment opportunities for the country, and thus driving economic growth. The banking sector holds a significant portion of these assets used in creating the economic growth opportunity as the top five banks holds more than 75% of all the assets within the financial services sector. The returns on equity for the industry between 2005 and 2006 were as follows – banks 14.6%, credit Union 12%, and insurance 11.6%. (CFI report 2007).

According to APEC (2003), in a rapidly integrating global economy, technological change and shifting consumer preferences are together increasing the competitive pressure on firms. To survive or grow in such an environment, the report argues that firms must adopt either one of the following or combination thereof:

1. Productivity and efficiency strategies such as outsourcing
2. Quality related strategies including improving product/service quality and improving coordination with customers/suppliers.
3. Innovative human resources management practices including new compensation procedure to attract and retain top talents.

The Canadian financial services industry is not immune to this competitive pressure expressed by APEC. Over the last five years, most of the large...
service firms have had to adopt one if not all of the approaches outlined above by APEC.

In today's rapidly evolving global market, FS companies everywhere continue to face a lot of industry consolidation as seen within the banking and insurance sectors in North America and Europe. This has in turn created newly diversified global financial services corporations, facilitating global access. These consolidations has increased the pressure to articulate performance measures, such as business growth, revenue, and a requirement to shorten the time to bring new products to the marketplace. The trend in most of the other OECD countries is towards consolidation within the banking sector to enable them reposition themselves in the larger and more competitive marketplace through the efficient and effective use of resources or economies of scale in operations. This has enabled them to become stronger players in the global financial services industry. The Canadian financial services especially the banking sector has yet to see such changes as consolidation within the banking sector is not allowed as part of the current Canadian regulatory regime. In addition there is a limited foreign ownership of banks by the government. This limited foreign ownership has reduced innovation in the financial system and productivity improvement according to an IMF report in 2007. Koeppl and MacGee (2007) have argued that there is new evidence that economies of scale within the banking industry are currently much larger than previous studies have shown. This implies therefore that for banks to take advantage of this there will need to be some mergers or inefficiencies will continue to exist.

In addition, globalisation of the world economy has increased the need to ensure survival, requiring not only flexibility in business approach but also the ability to adapt to emerging changes in consumer demands and methods of service delivery. A good example is the outsourcing of some business processes such as customer services to areas where labour is not only cheaper, but where there is a possibility to offer 24-hour services to consumers who now demand such services.
This has not been without its opposition especially from the trade unions and the debate continues regarding the wisdom of this approach. However competition has made it difficult for firms to do otherwise.

Another consequence of globalization is the creation of stronger regulatory bodies across many countries especially in the OECD countries to ensure that the interests of the customer are well protected in an age of easy access and transfer of data. The Canadian financial consumer agency act is meant to enforce consumer related issues such as data protection and a good example of consumer protection. The impact of data security on a firm’s performance cannot therefore be overlooked, as customers now view data security as part of the performance measure of a company. This therefore means that firms must ensure that data management and security processes are continuously improved to ensure that they comply with both the regulatory and consumer expectations.

Another characteristic of the Canadian financial services is the increased competition in the core market segments within the sector, fuelled in part by new entrants who are able to compete for deposits with higher rates of returns. This competitive landscape is manifested in the low interest rate spread in Canada. According to the World Economic Forum 2005, Canada has one of the lowest rates in OECD. For example Canadian rate is 4% lower than Germany or United Kingdom.

It is against this backdrop of lack of economies of scale, competitive mature market, high regulatory environment, pressure from globalization and changing consumer needs that Canadian market experts opined that the development of a new management philosophy and competitive approach is urgently needed. They argued that market share increase will come from quality management practices adoption such as client/customer focus, and the continuous enhancement of business process (Koeppl & MacGee 2007). The external environment described above, and the consequent internal organisational challenges precipitated the strategic adoption of a company wide Corporate Initiative by the unit of study in this research. The construct of the initiative as seen below (figure 2.2.1) involved the adoption of QM
practices as part of a broader management philosophy in ensuring improvements in business performance. The organisation examined its future business outlook in detail in 2003 based on current performance and conditions, and concluded that the status quo was no longer acceptable if it was to continue to be a leader in the market and produce acceptable total shareholder returns. The corporate initiative (CI) was therefore adopted in part due to the external environment as well as challenges within its own internal organisational structure such as expense growth, flat to low revenue growth, and lack of transparency around operational goals. The deployment of the Corporate Initiative served as a catalyst in energising the organisation to reposition itself for growth and efficient deployment of its resources. It aimed through this corporate initiative and an enabler, in the form of a transformation management office (TMO) to improve, not only its financial position in terms of the operating leverage by Cdn$1.5B within three years but also to change the internal performance culture to one that values team work and is more enterprise focused, data driven, and transparent in execution. The key roles of the enabler were as follows:
1. Ensure ownership of initiatives underpinning the 3 years growth (’04-’07)
2. Align performance metrics with business cases
3. Define critical milestones
4. Create and manage escalation process to address issues
5. Monitor and report progress on corporate performance

The initiative focused on the client or customer loyalty as a key value for improving business performance rather than emphasising internal process improvement as the main strategy.

Customer Loyalty

According to Nilsson et al (2001) customer loyalty arising from customer satisfaction is more profitable for service companies, a conclusion also supported by Edvardsson, Johnson et al (2000). The authors provided evidence linking satisfaction to loyalty and financial performance, as loyalty once earned leads to repeat purchase. The focus of the initiative on customer loyalty as the strategic path for performance improvement is a
critical distinction from the studies in the literature review where the emphasis was placed on internal process improvement as the gateway to improving business performance. This distinction in strategic approach is important as they influence the QM practice deployment strategy as well as the tools and techniques used in the deployment process. Whatever key strategic value is adopted, invariably determines the strategic execution approach.

Therefore although the firm did not classify its Corporate Initiative as QM, the practices adopted in the deployment of the initiative as seen in the construct below falls under the same categorisations as the QM dimensions identified in the literature reviewed for this study.

The company's model of the Corporate Initiative can be depicted as follows:

**Figure 2.2.1 Model of the Company's Initiative and QM Practices**

The model depicts the way in which the Company saw the relationship between the Corporate Initiative, QM practices and organisational performance as being constrained by the internal and external environment and enabled by the transformation management office. This model is based on the researcher's inside knowledge of the various QM practices that had
been adopted and subsequently reviewed for their perceived impact on performance. The researcher is a certified six sigma practitioner who has conducted a number of QM projects in companies that had faced similar challenges, both internal and external. The model is, therefore, an inductive blend of information available to the researcher about the Company Initiative, the key QM practices identified by leading practitioners and the researcher's prior experience. The model, therefore, formed the initial conceptual framework for the study and guided the research data gathering, development of the survey questionnaire and the resulting quantitative analysis.
Chapter 3: LITERATURE REVIEW

3.1. Introduction

Several studies have examined and continue to examine the impact of QM practices on OP, and although most of the studies show that many companies like Xerox and Motorola reported significant benefits as a result of QM deployment, not all companies can claim to have had the same positive benefits. Most of the studies compare the results of these firms that have adopted QM practices such as IBM and FEDEX versus control groups to determine if QM significantly influences organisational performance (Kaynak, 2003; McAdams and Evans, 2004). In all the studies QM was seen as an important lever for improving a firm’s overall performance. According to Kerlinger (1986) relations are the essence of knowledge and what is important to science is not the knowledge of particulars, but knowledge of the relations among phenomena. The inquiry on the relations between QM practices and organisational performance is an attempt to understand the differences among phenomena and the impact of such variations. Much of the early literature in QM according to Jack (2001) focused on understanding the impact of quality on competitiveness. For example, early empirical studies provided general comparisons of QM practices between the U.S. and Japan organisation. Empirical research has also focused on the relationship between the various QM elements and performance with many of these been in the manufacturing industry (Schroeder et al, 1992).

In examining the various literatures, there appears to be a convergence of views of what elements constitute QM practices but with a diverging view in terms of whether all the resulting improvements can be attributed to the deployment of QM practices or which QM elements actually impact performance. This is due in part to what Grandzol and Gershon (1997) articulated in their study as “what has always been good business practice holds true in a QM environment as much as it did before QM”. QM has emerged recently as a major influencing factor in organisational performance. The measures used for such performance improvements have
varied from financial metrics to non financial metrics such as customer or employee satisfaction. The key elements of the practice has however been the reliant in most of the researches on the seven critical elements of the Malcolm Baldrige National Quality Award, which evolved from being a means of recognizing and promoting exemplary quality management practices in 1988 to a comprehensive framework for world class performance. These seven QM dimensions are widely used today as a model for organisational improvement (Flynn & Saladin 2001).

The prevailing business environment of today which requires the continuous creation of shareholder value, has contributed to the greater need for an objective basis of measuring organisational performance.

The literature review will examine the relevant elements of QM practices that seem to influence organisational performance and thereby determine which ones will be most appropriate for this research. In so doing careful attention will be paid to consensus in the conclusions of the various researchers on the importance of these elements. In addition the reviews will also focus on how performance is defined and measured to ensure that the metrics selected for this research are valid.

The section begins with a review of the theoretical foundation of QM. This is because although QM practices were introduced by a number of quality gurus in the early 1980’s, they did not evolve in academia and were not programs tested and refined prior to “export” to business. Theoretical foundations were therefore not established and have only recently become a locus of interest among academicians in terms of established management theory (Jack, 2001; Grandzol & Gershon, 1997).

The section is then followed by a review of the empirical researches on the impact of QM practices on organisational performance as well as the findings from comparative studies. Various models developed and employed in explaining the nature of the relationship between QM practices and organisational performance were also reviewed to understand the interdependence of the QM elements if any. These model constructs attempts to show if any particular path exist for realizing performance
Improvements as well as any underlining factors or contextual factors that influence performance.

The significance of the conclusions of these studies and the dimensions of QM practices emphasised will be carefully examined along with any limitations in methodologies or assumptions used in arriving at these conclusions. Such limitations will provide opportunities for a further investigation and understanding of the relationship between QM practices and organisational performance within the FS industry.

3.2. Theoretical Foundation
The importance of theoretical frameworks in building and testing models in an empirical study has been stated (Yukl, 1989; Flynn et al. 1990) and reiterated by many researchers (Wacker, 1998; parry, 1998; Hair et al, 1994; Mueller, 1996). Grant et al (1994) stated that QM could bridge the gap between the “rationalist” school (based on the principle of scientific management and the theory of bureaucracy) and the “human relations” school (based on the role of organisation as a social system emphasizing psychological and social needs). In addition practitioners are merging pure QM with other practices prescribed by management theory such as performance-related compensation, benchmarking (Hackman and Wageman, 1995). The foundation for any theory of QM is a set of initial premises which form the basis for the logical development of propositions concerning the structure, behaviour, performance and the very existence of QM. The premium on theory development for QM is very high due to its abilities to transcend the boundaries of existing theories as a result of its interdisciplinary nature (Dean & Bowen, 1994). The authors argue that QM appears to cover a great deal of the same ground as management theory although they may use different terms as managers adopting QM practices are concerned with strategy, information analysis, leadership, customer satisfaction and many other topics that are within the domain of QM. The research focus on the development of theoretical foundation for QM began in the late 80’s and early 90’s such as the work of Dean and Bowen (1994) who
focused on improving QM research and practice through theory development while Saraph, Benson and Schroeder (1989) lead the early efforts to develop instruments for measuring the critical factors of QM.

In order to understand the theoretical foundation of QM, it is important to define what QM is. It has been described by many practitioners such as McAdam & Evans (2004) as an approach to management that has evolved from the narrow focus on the use of statistical process to encompass a variety of technical and behaviour methods for improving organisational performance. Management theory on the other hand relates to those principles which provide the means for classifying significant and pertinent management knowledge necessary for enabling an organisation to deliver on its goals (Koontz, O’Donnell, Weihrich, 1984, & Olum, 2004).

In most of the literature reviewed, the examination of the theoretical foundation of QM draws on the QM elements identified by the Malcolm Baldrige National quality award as the basis of examination. The Baldrige categories are Leadership, Customer focus, information and analysis, strategic planning, human resource development, and process management. The conclusion from the literature shows that the domains of leadership, human resource management, strategic planning, and information analysis are well covered both in management theory and QM. The prescriptions according to Dean and Bowen (1994) offered by the two areas on these items were very similar. For example in the area of human resources management, employee involvement, training and career management had the same prescriptions as in QM practices where total organisation involvement with adequate and relevant training are prescribed for the successful deployment of QM practices.

The QM concepts of the early founding “Fathers” of QM such as Juran and Deming when examined along side the classical approach to management, shows some striking similarities especially in their prescriptions. For example Deming (1994) proposed a 14 point method for quality management which is similar to Fredrick Taylor’s principles of scientific management in a lot of ways (Anderson et al, 1994). First both placed
emphasis on a scientific approach to work and organisational improvement. Training is so also very important to both theories. The use of data for improvement and elimination of organisational processes is seen as similar to the scientific design of work and maximising capacity in Taylor’s theory. All three classical theories of management (Scientific by Taylor, operational by Fayol, bureaucracy by Weber) are attempts to enhance management’s ability to predict and control the behaviour of their employees in enhancing organisational performance just like QM practices.

QM practices are also regarded as being part of the internal competitive factors possessed by a firm within its environment. This is due to the fact that a QM practice is a form of learning within the organisation thereby creating new organisational specific knowledge of how to enhance the organisational performance. Most quality improvement activities require the creation of new knowledge for the organisation (Linderman et al 2004). The authors argue that if QM practices lead to knowledge creation then the link between QM and firm performance can be explained. The knowledge based view (KBV) of the firm therefore provides another theoretical perspective in understanding how QM practices leads to improved performance. This theory of organisational knowledge was popularised by Nonaka (1994).

In conclusion the conceptualization of QM practices plays an important role in understanding research findings in a number of areas such as why some companies can achieve great success in QM deployment and others fail. The reasons for the mixed results from QM practices may now be better able to be understood and explained. In addition this conceptualization will enhance the review of the findings from the literature in the next sections. The theoretical foundation therefore shows that QM practice has now evolved from being a management approach derived from practice only to an approach that can be supported by management theories including classical management theory and organisational learning theory.
3.3. Empirical Research on QM & Company performance

Fortuny-Santos et al (2007) concluded from their research in Spain that prior to quantifying the impact of QM practices on the economic performance in a specific firm, it is necessary to assess the goodness of QM in the company. This view is supported by the research study and the resultant model developed by Montes et al (2001) which encompassed three dimensions for understanding the factors that influence the relationship between QM and organisational performance. One of those dimensions is the QM content which focused on the need to ensure that QM content fit with the business orientation and environment uncertainty. In order words QM contents must fit with the norms and shared values of the business and be relevant within the environment in which the business exist. Fortuny-Santos et al concluded that it is always difficult to quantify the impact of QM practices on the financial performance of the organisation due to the many characteristics of the organisation some of which the managers cannot control but can moderate the benefits of QM practices. As articulated by Fuentes and Hurtado (2002) QM indirectly affects bottom-line through intermediate factors like client satisfaction which is in turn affected by other factors.

This study by Fortuny-Santos et al focused on the cost of poor quality, an echo of the traditional quality-is-free argument advanced by Crosby (1979) where any expenditure on quality are to be offset by the increase in productivity. The study used the nine European Quality Award criteria (enablers & results) similar to the Malcolm Baldrige Award, and adopted a theoretical approach in validating the relationship between QM practices and performance as it deemed that empirical effects of QM on the bottom-line was difficult to measure. A brief case study conducted by the authors showed how a company, when it realizes that the cost of poor quality must be reduced used a microeconomics model to develop an improvement plan on the basis of QM practices derived from EFQM criteria. The study further identified participation by all and customer focus as the two other critical elements that impacts performance. The main limitation of
the study is the general applicability of the microeconomic model approach and the assumption that any expenditure on quality is offset by increase in productivity. The focus on poor quality reduction would seem to be a very narrow focus on one or a few competences at the exclusion of other activities of the organisation (Miller, 1993). Miller pointed out that “most outstanding organisations lapse into decline precisely because they have developed too sharp an edge. They amplify and extend a single strength while neglecting most others” in the process of poor quality reduction. In addition the single focus on poor quality and thus quality control could be a limiting factor in organisational learning and incentive for innovation (Sitkin et al 1994, Prieto, Revilla, 2006).

The need for quality content to fit with the business orientation was also a focus of Montes et al (2001). In their study the authors attempted to develop an understanding the underlining factors affecting the relationship between QM practices and organisational performance. Using a framework from an industrial psychology perspective, they argued that the relationship is influenced or moderated by two critical internal factors. The internal factors from the study distinguish between quality contents and elements. Quality content refers to the fit between the business orientation and the deployment content of the practices within the organisation. This fit must also be relevant within the environment in which the business operates and consequently, the alignment between the organisation’s general orientation and the demands of the environment must be right. While business performance can be measured objectively, the outputs are only meaningful within a given environment. Therefore the adaptation of quality content to the objectives of an organisation is considered critical if there is to be any impact on business performance. Another internal factor identified by the authors was the approach to deployment. This relates to the way in which the quality content is deployed within the firm whether as a learning focussed approach or a control focussed approach. The two approaches above are not necessarily mutually exclusive. To the contrary as organisational survival in the highly competitive global economy of today
depend on both the reliability of performance and adaptability (Sitkin et al 1994) – otherwise known as “organisational ambidexterity” (Gibson and Birkinshaw, 2004). Organisational effectiveness hinges on the ability to balance the conflicting goals of stability and reliability (control focussed) with those of exploration and innovation (learning focussed). Where an organisation wishes to provide its employees with the necessary tools to solve problems, quality will be defined differently from a firm that wishes to have its employees prevent losses as a result of out-of-control production processes. In the former quality will be seen as an open system (learning focussed), which enables the development of a learning organisation while in the latter, it will be regarded as prescriptive and closed (control focussed), a situation which in part led to the frustration and failure of some QM practices (Hendricks and Singhal, 2000). This is because it will tend to adopt quality in a mechanistic manner without consideration for the business orientation (customer focus, or process driven or market focus). The consideration of business orientation by firms when adopting quality has become well accepted in quality circles (Reed et al, 1996) if there is to be any meaningful gains from adopting QM practices. The study concluded that the desire to exploit organisational capabilities as well as explore new ones is essentially the primary motives why companies adopt QM practices.

Quality element was another aspect of the internal factors identified by the research study as being an underlining influence on the relationship between QM practices and OP. The study restricted itself to five elements considered to be critical in the relationship. According to the authors, these elements were to serve as guidelines for appraising the effectiveness of the quality programme after implementation. These elements impact the behavioural processes within the business, level of individual learning, and how knowledge is applied to tasks. Quality improvement activities are seen as both a learning and knowledge creation process with the ability to influence organisation learning process. This focus on the learning principle and potential impact on organisational performance
is supported by the resource based view (RBV) theory of the firm and the knowledge based view (KBV).

The RBV theory seeks to show that investment in human capital in a firm in the form of training generates a competitive advantage over its rivals, thereby resulting in superior financial performance. This is because such firm specific internal resources are assumed to be inimitable based on its intangible, firm specific and socially complex nature (Barney, 1991). Investment in these types of resources affect how learning occurs and knowledge is applied to work, resulting in superior organisational performance. The underlining assumption here is that the implementation of quality elements will affect performance due to the improvement in the individual learning processes and that such individual learning is translated into organisational learning which will improve performance. Many authors have recognised the importance of learning capability as beneficial to overall business performance (Soo et al, 2004) and recent empirical studies have also demonstrated the impact of learning and different forms of knowledge on performance (Bontis et al, 2002; Prieto, 2003). The KBV theory on the other hand assumes that knowledge is created through the deployment of quality improvement activities which in turn improves performance. Such knowledge is imparted to the individual and through various process of interaction in the firm the individual knowledge is shared and diffused throughout the firm (Linderman et al, 2004, Prieto and Elena, 2006).

Montes et al concluded their study by considering the impact of organisational culture as a moderating influence on both the behavioural and learning elements of the organisation. The culture is the shared belief of all the people within the firm and the extent to which the cultural change brought about by QM practices is accepted will contribute to the success level.

The key limitation of this study is the strong emphasis on individual learning and the assumption that improving individual performance through learning will lead to improvement at the organisational level and that the unit of analysis is the individual (Cater, 2001). The study did not provide any
empirical evidence to show how individual learning is translated into organisational learning sufficient to impact performance. This link needs to be established, as performance improvement that comes with each person trained does not simply add up to greater productivity and competitiveness. In addition to this, the model raises the question of whether all firm-specific learning is strategic. Another limitation was the failure to show the link between internal focus and the business environment in determining the success of QM practices as seen from the next study below.

The role of internal factors in influencing the relationship between QM practices and OP was the key focus of a study by Lakhal, Pasin, and Limam, (2006). The authors identified seven critical QM practices and classified them into three major groups – Management practices, relating to those issued from top management e.g. commitment & support; Infrastructure, are the practices intended to support core practices such as employee training & participation, customer focus; and Core practices, the tools and techniques specifically related to quality including information and analysis. The aim of the study was to explore the relationship between QM practices and their impact on performance. The QM practices used to verify the relationship were identified after an analysis of various literatures and bore a strong resemblance to those identified by Deming in his study (1989) and the Malcolm Baldrige Awards criterion (1997). The data for the study were collected from a list of 92 companies predominantly in the manufacturing sector. The findings from their research showed that management practices have a positive impact on organisational performance which is in line with some other studies such as Douglas and Judge (2001). Their findings also showed that infrastructure practices have a significant direct effect on operational performance with a strong interplay between infrastructure, core practices and organisational performance.

The study was however not without some limitations in its findings. The first relates to the use of managers perceptions. This constrains the reliability of the responses as a valid indicator of an organisational – level construct. In addition the sample size was relatively too small to permit
broad generalisation of the findings. Furthermore the actual changes in the performance measures were not fully discussed so as to show the extent to which these were impacted.

Nilsson et al. (2001) in their study using Swedish companies examined the impact of three key internal QM practices - employee management, process and customer orientations - and their impact on performance. They concluded that the impact of these QM practices on performance differs between a product organisation and a service organisation. This is especially so for customers and business results. In a product or manufacturing organisation, both employee management and process orientation impacts customer satisfaction through a company’s customer orientation while in a service organisation customer satisfaction is driven by process orientation and customer orientation. This they contend is due to the role of the customer as a co-producer and the fact that a service is produced and consumed at the same time. According to the authors, research using customer impressions provides evidence which show that customer satisfaction is a leading indicator of financial performance. The notional customer satisfaction indices in both the US (Ittner and Larcker, 1996) and Sweden (Anderson et al 1994) are significantly positively related to the firms’ financial performance. Satisfaction is profitable because of its ability to maintain or increase revenues as well as margins.

This study shows that the performance impact of QM practices can be different depending on organisational type. The general applicability of the findings from this study to large organisations with more than 500 employees may be difficult as the research was focused on small companies with employees less than 500. Another limitation of the study is the use of subjective measures for business performance. Although these are widely accepted in organisational research (international quality study, 1992; Powell, 1995) it makes it difficult to apply the results in a general way as perception may differ from one setting to another especially cross cultural borders. In addition, as reported by Dearborn and Simon (1958), managers respond to questionnaires from their own local environment which may or
may not reflect what is going on in the organisation as a whole. Thus it may be dangerous to equate an individual response as the barometer for an organisational level construct.

It was also this focus on internal factors that was the area of interest for Prabhu et al (2000) in their empirical study “The impact of ISO 9000 and TQM on best practice/performance” contends that companies, which systematically adopt best practice starting with ISO 9000 and continuing with QM, are achieving higher performance levels. The study draws from the benchmarking database of a study of manufacturing companies in the north east of England in reviewing any possible relationship between QM and performance. The methodology employed by Prabhu et al was to adopt the six categories of world-class status of the original benchmarking studies and then classified the companies into three groups –ISO 9000 accredited ISO 9000 plus QM companies, & Non ISO 9000. The EFQM business excellence model was then used as a framework of analysis and discussion.

In analysing their findings they grouped the independent factors as “enablers” (leadership, people management, & business processes) and the dependent factors as “results” (people satisfaction, customer satisfaction and operational performance).

The EFQM established the fundamental premise that excellence in the “enablers” will lead to superior outcome in the “results”, which was also the underlying assumption between practice and performance in the original study model used here as the basis of their study.

The degree of correlation was examined using the Pearson coefficient. The resulting correlation showed that QM companies were significantly in the lead in terms of performance. The study confirmed that QM companies are more closely aligned to their customers, ensuring good training for their employees on business processes and therefore better business performance. One of the limitations of the study is the assumption that the training provided on business process is sufficiently significant in its content to ensure performance improvement and that individual learning would translates to effective application of how work is done. Although
organisations learn through their individual members, which develop such knowledge through their own personal experiences, this individual knowledge must be shared and adopted by the other individuals in the group before that knowledge becomes the basis for taking action (Sanchez, 2001). As a result individuals and groups play a crucial role in the integration of knowledge within an organisation in such a way that the knowledge is embedded within the system and sufficient to impact performance, bearing in mind that some individual knowledge are simply for performing specific task only (Nonaka and Takeuchi, 1995; Sanchez, 2001). It would have therefore been useful if Prabhu et al had discussed the linkage between the individual and group learning to show their impact on performance.

Moreover, some other findings from this study seem to question some of its conclusions. For example a few of the indicators showed almost no correlation between quality processes and employee morale. However one of the key enablers of QM practice impact on performance is people management, which among other things implies the empowerment of the employees in solving business problems through quality processes and with quality tools. Involvement of employees has been shown to be a key factor in organisational performance and consequently the employee morale (Peterson et al 2003).

While internal factors as seen in the previous review were critical in the relationship between QM practices and OP, the role of service quality in determining the successful impact of QM practice on OP was the focus of the study by Hasan and Kerr, (2003). The purpose of the study was to determine how the nine dimensions of quality management practice per MBNQA relate to financial and operational performance of companies in the service industry. In their study, a quality management framework based on the attribute theory of service quality was used to show how various quality dimensions affect the organisational performance. The work offered three aspects of service quality models – attribute model that assumes that service quality reflects the service delivery system; customer satisfaction model that defines quality as the difference between expectation and reality.
as perceived by the customer; and the interaction theory which sees service quality as shared experience of gain by the participants in the service system. The methodology employed by the authors in carrying out their studies included a random sampling of 409 companies with at least 50 employees selected from Dun and Bradstreet business directory and questionnaires were sent to them. A total of nine dimensions of quality management practice in service organisations and four organisational performance measures were conceptualized. They concluded that the dimensions “role of top management” and “customer satisfaction” are among the most important in terms of their effect on organisational performance and also exert a greater effect on organisational performance in firms that practise quality management.

The limitations of this study relate to a few areas. The first has to do with the characteristics of the firms selected. There was no discussion on the characteristics of the firms as regards the internal culture or their business environment, which would have explained some of the drivers of their service system approach. Also, there was no discussion on the number of firms selected who actually had implemented quality management and the duration of the practice. This would have shown how successful or otherwise the implementation of quality within the firms and hence the impact on business performance. Finally, while it may initially appear to readers that the work would be focussed on service organisations, it in fact was concentrated more on the service systems of firms, such that the sample of companies used for the study included some construction firms.

Saad G. and Siha S. (2000) on the other hand emphasised product quality in their study as being critical in determining performance although they contended that the drivers of quality and its implications on business performance are yet to be fully understood. Their work focussed on the basic issues and critical relationships in quality and their implications for management policy. According to these authors, quality is affected by various factors including market segment, business performance and cost. These drivers can be both a cause and effect simultaneously. For example
quality is a function of the price charged but on the other hand, both the price charged and the producer’s cost are functions of the quality produced. In other words, for quality to impact business performance, the authors opined that the design and implementation of the quality programme must be very effective. The economic and technical environment affects the design phase while implementation is affected by internal factors like management ability to influence the employees’ behaviour, perceptions, and attitude, without which the implementation will fail. “Organisational culture” (i.e. prevailing norms, values, behaviours, and attitudes) is therefore influenced by the quality policy adopted.

In examining the relationship between quality and business performance over time, the evidence shows that a quality focus may result in improved competitiveness in the short run and reduced profitability in the long run, while in other instances the opposite may be the case. Thus time period is a critical driver of outcome, as not only can quality requirements and expectations differ over time but also the impact of a particular QM practice may differ in the short run from that in the long run (Saad, 1995). The actual impact of quality on business performance depends on many factors including the elasticity of demand for product, existence of substitute or complimentary products, and the real cost associated with improving quality. According to Saad (1995) the conditions for each pattern of quality impact over time relate to the specific product characteristics and its elasticity of demand. For products with low elasticity of demand, a marginal quality improvement would justify a higher increase in price since the quantity demanded is relatively not sensitive to change in price. Therefore, the business environment is critical for understanding the relationship between quality and business performance.

Saad and Siha assert that empirical results show that higher quality may not lead to higher profits and better competitive position in the market place. This raises the issue of highest quality versus optimal quality as being important in understanding the relationship between quality and business performance. This is because a change in quality, however high it may be,
must fulfil a market need and conform to the stakeholders’ collective requirements for it to be relevant. The criticisms of the authors relate to the fact that the main focus in arriving at their conclusions was based on “external quality” (Flynn et al, 1995). In addition, there was no detailed discussion of the role of internal factors in influencing the effective implementation of quality and consequently their impact on business performance which Montes et al (2001) has shown to be a critical determinant of the relationship between QM practices and business performance.

In a study by Hendricks and Singhal, (2000) the authors not only addressed what they considered to be the unfair criticisms of QM in terms of its ability to positively impact financial performance of a firm but also argued that the length of time for which QM practices have been deployed within a firm makes a difference in the financial success experienced by the firm. They began by examining the sources or rationales for the criticisms which they traced to the evidence from the surveys conducted by some leading researchers like Arthur, Little, Kearney and McKinsey & Co. The evidence from these survey results suggested that QM had failed in the organisations surveyed. The authors argued that the practices failed because of the approach adopted by these firms reflecting a mindset of short term financial performance expectations. They concluded that these firms adopted QM practices with inflated expectations and a quick fix mentality, expecting QM practices to solve all the problems in the organisation. They concluded from their research that there were five drivers of financial success for any organisation adopting QM practices. These are:

1. Effective deployment – this means that the key principles of QM are well accepted, practised, and deployed within the organisation. They used quality awards by independent bodies such as the MBNQA or EFQM as a proxy of effective deployment and so any organisation that has won an award was deemed to have effectively deployed these principles.
2. Capital Intensity – They concluded that firms with less capital-intensive environment will have more opportunities for gains from QM activities.

3. Smaller asset value – The result from their study concluded that smaller firms are more likely to be successful in the deployment of QM practices.

4. Diversification – The more diversified an organisation the less success there will be when compared with a focused firm. This they argued is due to the ease of transferring the lessons learned from one operating unit to another at low cost to these other units.

5. Independent award – They concluded that independent award winners significantly outperformed customer award winners. They therefore suggested that in the long run a firm should benchmark their QM implementations against the criteria and evaluation process used by independent award winners.

The list of the critical success factors above would seem to be ignoring the impact of internal factors such as the internal culture and leadership of the firm which other researchers such as Deming, (1994) and Prajogo and Brown (2004) have found to be critical to success. The validity of the factors was not established in the research and this is critical if the research findings are to be broadly applied beyond the research context. The methodology employed by Hendricks and Singhal, (2000) in validating the positive relationship between QM and financial performance was as follow:

1. Defined and chose a performance measure (Stock price).
2. Gathered a sample of 600 firms publicly listed, who have effectively implemented QM.

They analysed the stock performance of the firms over the last five years and compared them against the S&P 500 returns, assuming a hypothetical investment of $100.00. The result from the exercise showed that the
selected sample returns outperformed the S&P 500 benchmark portfolio. The authors acknowledged that the performance may have been due to industry or economic conditions and have nothing to do with whether effective QM practice was in existence in the company. They also cited examples of companies that have won independent quality awards but were now facing financial difficulties such as Florida Power & light, pointing out that while some of the QM achievements were definitely impressive, the evidence is anecdotal due to the other potentially influencing factors above. In addition the manufacturing sector constituted 75% of the total sample of companies selected, thereby making the generalisation of the result across different industries difficult.

Another limitation was the measure of performance used in the research as well as its conclusion due to the following:

1. It was very simplistic in its view and assumed that improvement activity such as QM is the only key driver of stock price appreciation. It ignored the role of external influences such as the “9/11” impact in the US and global markets that may negatively impact stock prices during a particular period. New technological breakthroughs such IPod by Apple, resulting in new customer demand may significantly improve the stock price as has been the case of Apple in recent months since the introduction of these new technological gadgets. Another consideration not discussed is the effect of currency movement which may result in export or import opportunities and consequently impact the sector and returns.

2. The internal characteristics of the firms selected were never discussed beyond the fact that they were from the manufacturing sector. It would have been important to know the structure of the firm, product, unique culture, industry outlook, and changes that occurred during the period of study. This is even more important as the authors themselves have admitted that there may have been factors other than QM practices that enabled the performance of the firms.
The QM definition adopted by the researchers needed further clarification. They defined it as a “management paradigm based on the principles of total customer satisfaction, employee involvement and long term partnership with suppliers and customers”. How was total customer satisfaction measured and in their studies who was the customer and was there total satisfaction? According to Bisgaard and Freiesleben (2004), the economic effects of QM need to be evaluated relative to a company’s overall cost structure and revenue, implying that there is an economic point beyond which it is financially imprudent to satisfy a customer’s need. Thus total customer satisfaction may become unprofitable or uneconomical to achieve. In the study there was no discussion of the cost structures or revenue details of the companies sampled. In conclusion while the study demonstrated, using stock price as a measure of performance, that QM has a positive effect on the financial returns of a company, it failed to show that QM was the sole factor that brought about the financial result. The narrow industry sector scope of the study makes generalisation of the results difficult if not improbable.

Easton and Jarrell, (1998) also focused on the length of time in terms of QM practices deployment as being critical to success in their study. Their showed that long term performance measured by both accounting variables and stock returns is improved for firms adopting QM practices and even consistently stronger for firms who have more advanced QM practices. This was concluded from examining the impact of QM on 108 firms studied between 1981 and 1991, in which QM was defined by the ability to address the criteria of Malcolm Baldrige’s award of excellence in business performance. The critical elements of QM that impacts performance were adjudged to be the ones used by Malcolm Baldrige award in deciding potential winners. Their study however concluded that these factors will only be successful in impacting performance based on the length of time that these elements of QM practices have adopted by the organisation. There was a strong focus on the adoption timeline in the study, regarding when the firms initiated QM practices in order to examine performance changes.
associated with actual implementation period, thereby reducing the potential impact of confounding factors. Thus duration was a critical factor for determining if performance was impacted. Other variables were tested for their contextual influence or impact such as downsizing, which showed that there was a positive association between implementation of QM and performance of firms that do not downsize. The research was based on a cross-sectional survey that examined the association between managers’ perceptions of the impact of QM and model constructs based on questionnaire items that were intended to capture various aspects of the deployment of QM. An event study methodology was employed with potential firms selected through public information, followed by interviews to select the sample firms, which were then further separated into advanced and less advanced firms. The result of the study was deduced from the excess unexpected performance of the accounting variables and on excess cumulative stock returns. Net income, operational income, and sales per employee indicated improvement when compared with the controlled benchmarks. The criterion used for distinguishing between advanced and less advanced was based solely on the length of QM practice only.

Duration alone cannot be the sole measure here as there are firms who have had a long history of deployment but no substantial result and in fact, the authors accepted that it is usually difficult to pinpoint the exact time when QM practices became part of the operational process of a firm. This focus will also seem to ignore the role of the deployment approach employed by firms and the impact of these approaches on the success or otherwise of the QM adoption. Another limitation is the failure to acknowledge the role of the internal characteristics of the firms in the success or otherwise of the QM adoption. It is always difficult to quantify the impact of QM practices on the bottom-line because many organisational characteristics that managers cannot always control moderate the benefits of QM. This will seem to ignore one of the principal underlining management theory regarding the internal resources of the firm. Among such internal resources are the characteristics of the firms selected for the study which were not discussed in a great
length to enable an understanding of other factors that may have influenced performance such as the learning culture or the economic environment of the firms. The study in fact recognised that there are enabling factors that would make QM effective in some companies and less effective in others, so that time of practice may not be sufficient in classifying firms into advanced and less advanced. The research sample was skewed towards manufacturing firms making the generalisation of its results to other industries limited.

Adam et al’s (1997), study sought to identify quality improvement factors that can predict quality and financial performance within and across different geographical environments and they concluded that although quality improvement approach successfully influences performance quality, the impact on financial performance is somewhat weak. The authors affirmed that their study was an extension of the system-structural view of QM in that it was focusing on the firm’s response to reducing the differences between the actual and ideal QM, and the quality practices adopted are evaluated to see which ones most positively impact performance. Relationships, as observed from their study, were statistically significant but did not explain as much variance as when quality was the dependent variable. In other words, QM alone may not be sufficient to broadly impact organisational performance, but requires combination with other factors like proper cash flow management, matching of resources, etc. They further argued that the nine factors identified as capturing QM were reasonably predictive in terms of quality and to some extent financial performance as they were adapted from the Malcolm Baldrige principles. Data for the study was collected from 977 business firms located in Asia/South Pacific, Europe and North America. However inconsistency in the sample selection for this study across the various regions is an area of weakness in the study as it could lead to a biased result, e.g. the sample from the UK was done on the basis that companies were known to the investigators; for others, such as in Hong Kong, the sample was made up of professional managers in part-time MBA programmes, while the Spanish group surveyed was selected based on feelings of accessibility.
Another limitation was the total sample studied. The sample was overwhelmingly focussed on the manufacturing sector, such that if these generic QM practices were to be generalised across industries and geographical boundaries, it may be difficult. In addition there was no discussion of the cultural elements which as outlined by Montes et al (2001) has a moderating influence on organisational behaviour.

The study relied heavily on Deming philosophy of the elements of QM that impact business performance such as the principle that when waste is eliminated, costs are reduced and financial performance is improved. The reliance on this ontological principle in establishing a relationship between cost reduction and improved financial position can be tenuous as waste may be eliminated at a higher cost or at best, the benefit is realized not immediately but at a much later period and only through a disciplined management process or intervention over a period of time. The benefit is not immediate, as may have been implied by the above premise and it is this expectation of instant benefit that has been the source of frustration for some managers with quality management. Many organisations adopted QM with a quick-fix mentality, seeking instant and swift gratification and when the short-term improvements in performance did not materialize, many firms got disillusioned (Hendricks & Singhal 2000). In addition this reliance on the Deming philosophy with the implication of instant result negates the findings of most literature that QM must be deployed for at least three to five years before the benefits are realized. Although the study used statistical tools to test the QM practices and their relationship to performance, it never discussed the details of deployment and the organisational environment which will influence the type of approach and hence impact on financial performance.

Mann and Kehoe, (1994), in their study, examined the effects of QM and other quality activities on business performance. The emphasis in their study as with that of Grandzol and Gershon, (1997) was on “quality activity or elements” that most directly impact business performance. The study was carried out on a sample of 650 manufacturing companies randomly selected,
with 120 companies out of the total sample been those who had implemented quality programs over a period of time. The methodology included the development of a business performance classification system and the determination of the most commonly used quality activities. This was followed by a formulation of questions on the impact of these activities on business performance, executed through survey and structured interviews. One of the criticisms of their methodology is the resulting business performance system, which categorised performance into Strategic and Operational business performance.

The authors concluded that strategic performance is typically dealt with by corporate staff concerned only with major corporate goals, while operational performance is the major daily focus of management and employees. This separation may be regarded as being more artificial than real since there are everyday issues that has the potential to impact the overall business performance. An example is the loss of a major client due to poor product or quality of service. This will impact not just management performance but also total company results. There are indeed issues of a corporate nature, such as good governance or relationship with regulatory authorities, but these can be affected by the daily activities of firms such as Enron corporate scenario of 2004 or even the most recent trading issues at Societe Generale bank 2008 has shown.

Another criticism relates to the selection of the most frequently used quality activities. The study did not show how the validity of these measures where determined nor did it discuss the deployment approach for the activities which will impact their success within a firm and hence business performance. In addition, the selected quality activities were consisted of overlapping, abstract and generic concepts of practices.

Grandzol and Gershon, (1997) identified seven QM practices (Leadership, Continuous improvement, Internal/external cooperation, customer focus, learning, employee fulfilment, and process management) that most impact business performance and testing this within their sample of 582 companies most representing the aerospace, tooling and engineering
industries concluded that there was a strong relationship between QM practices and business performance. One of the limitations of the study according to the authors was the limited data collected for the study.

The difference in the strength of the impact of QM practices on OP between different industries was the focus of the study by Terziovski and Samson (1999). Their study concluded that QM has a significant positive effect on operational and business performance but asserted that the strength of the relationship differs across industry sectors and company sizes, a view supported by the conclusions from the studies carried out by Hendricks and Singhal, (2000) and Nilsson et al. (2001). Terziovski and Samson were however quick to point out that there are companies who achieve good returns without having any QM practices, but that manufacturing companies are more likely to achieve better performance in customer satisfaction, employee relations and business performance with QM than without QM.

In a similar inter-industry study in Australia by Sharma and Gadenne (2002), the authors concluded that the impact of QM practices on performance tend to differ between industries. Their findings revealed that QM practices appear to be positively associated with both objective and subjective measures of performance for the service industry, subjective but not objective measures of performance for the manufacturing industry, and neither for the construction industry.

The findings from these two studies lend credence to the fact that although there is consensus among various researchers that QM practices impact performance, the extent of such impact must be examined within each specific industry as industry specific factors can impact organisational performance. According to Saad and Siha (2000) the impact of QM on business performance depends on many factors including the elasticity of demand for the product in a particular industry or the existence of substitutes. This can be seen in the film industry where the new world of digital camera has made Kodak films obsolete or the world of vinyl records and CD's or even the most recent IPOD which has made portable CD players...
less of an option in the music industry and the real cost associated with improving quality in those industries where the product are facing demand decline.

The limitations of all of these studies include the fact that the firms chosen for review may not be representative of all the firms in the particular industries and as such limit the generalisation of the results to a wider population of business. In addition to this, the approach to deployment and the internal characteristics of the firms such as values, attitudes, and perceptions were not discussed in detail, as these factors influence successful adoption of QM practices and consequently organisational performance. Tvorik and McGivern (1997) in their study of determinants of organisational performance concluded that the impact of internal organisational factors on a firm’s performance is roughly twice as much as economic factors. QM content must therefore be consistent with business orientation and environmental uncertainty in order to be effective (Montes et al 2001). Therefore, to ensure that the relationship between QM practices and business performance is realised, the organisation has to ensure that not only is there consistency between the QM practices adopted and the business orientation but that they are relevant for their particular business environment (Saad and Siha, 2000).

The study by Anderson and Sohal, (1999) like that of Sharma and Gadenne above examined the relationship of QM practices and OP across industries except in this case it was focused on small size businesses. The study conducted in Australia used data collected from 62 small businesses predominantly with employees of less than 100 and mainly privately owned. The study used the Australian Quality Awards framework (AQC, 1995) to determine the link between quality management practices and business performance. The study had a dependent variable in the form of organisational performance and six independent variables, which were the different components of QM practices. The impact of these six variables on the dependent variable was measured using five outputs - Cost of production, Quality of goods or services, Delivery flexibility, Timeliness of
delivery and Productivity improvements. The business outcomes were measured using sales, exports, cash flow, employment levels, overall competitiveness and market share which represented more than just financial metrics. The conclusion by the authors showed largely that Leadership, Customer focus & Quality of process, product and service are the variables that have the highest impact on business performance. While the study did not find people management as a key influence, it is not surprising given the level of staffing of these privately owned companies involved in the study. Another finding of the study is that strategic planning and information management did not contribute to any one of the five organisational performance measures. This may be an indication that the size of a firm has an influence on what dimension of QM practices impact business performance as other studies have shown. An area of limitation is the small sample size and the low response rate from the survey. This limits how far the findings from the research can be applied to firms with employee number greater than 100. In addition there was very little discussion about the nature of the businesses involved and the internal culture or the length of time for which QM practices had been implemented within the businesses.

The diffusion of core competency throughout the firm was seen as an important factor in ensuring that QM practices impact OP. Forker (1996) in his study focussed on the role of strategic business units using the furniture industry to examine the relationship between QM practices and business performance. The study relied on the eight quality dimensions, as identified by Garvin, (1984) in developing the survey questions, which were used in gathering the data for analysis. It concluded that the quality variables that were related to organisational performance (marketing and financial) were design quality/innovation and product improvement. These two variables were also the functions that were most diffused within the organisations studied. The diffusion of these functions is part of the rationale for the study in the sense that the study showed that each quality dimension has its own operational requirements that necessitates different core competencies within a firm. This means that different functional areas have primary
responsibility for assuring different dimensions of quality. Thus internal competence is required if there is to be a relationship between QM practices and business performance, and such competency must be devolved throughout the company. In addition, Forker showed that company's reputation is the main predictor of market share and return on sales growth rather than QM practices. The author's conclusions also bring into focus the assertion by Garvin (1984) that firms do not need to excel in all dimensions of quality in order to be successful: pursuing a quality niche can lead to a better firm performance, especially if the dimension singled out is one that other firms have not targeted.

The criticisms of the study include the low response rate to the survey - of a total of 65 firms sampled, the response rate was 20 percent, i.e. 13 companies. The low response rate could have lead to the exclusion of key market leaders or even skewing the results towards a particular group of manufacturers. Another area of limitation relates to the fact that not much was said about the internal culture of these firms to enable an understanding of how quality was implemented and therefore how it impacted the learning culture, which is critical for innovation or improvement of products.
3.4. Conclusions from Literature review

In the various studies reviewed above, different research methodologies were deployed to examine whether QM practices have a positive relationship with organisational performance. Different researchers adopted different indicators of performance as well as placed different emphasis on the various dimensions of QM practices identified. There were two main purposes of the review; firstly, to gain an insight into the management theories supporting QM practices; and secondly, to provide a valid basis for selecting the pertinent dimensions of QM practices and performance variables for the present study. The review confirmed that a relationship between QM practices and business performance has been found in firms where quality measures have been properly deployed. However, this relationship was shown to be moderated by various factors such as the environment (Powell, 1995), or company characteristics and size (Terziovski & Samson, 2000), duration of quality deployment (Easton and Jarrell, 1998), and industry type whether it a product and service company (Nilsson et al 2001). Organisational internal factors such as the organisational knowledge or culture underpin any relationship between QM and OP. The performance measures were mainly focused on financial metrics with very little effort made to measure performance from a non financial perspective.

In addition there were many unanswered questions posed by these studies especially those relating to the moderating influence of contextual factors such as the environment or organisational culture on organisational performance, and therefore, by inference, the extent to which all the improvements in organisations that adopt QM, can be attributed to the QM practices. The general conclusion from the review was that companies with QM practices seem to have a better organisational performance than those without in spite of the differential measures of organisational performance or the moderating factors. QM practices do enhance a company’s overall competitive advantage, and financial metrics such as Return on equity (ROE), were adjudged to be the best way of measuring this relationship. The
literature, however, does not shed much light on the organisational variables that tend to be different from one company to another (Douglas & Judge, 2001). One of the main limitations of the studies reviewed was the emphasis on manufacturing industries even where the research was conducted across geographical boundaries. This makes generalisation of the findings from the studies to other industries a potential challenge.

The underlying philosophy emerging from the review seems to be one that combines both the positivist and non-positivist perspective on a phenomenon. One school of thought such as Hendricks and Singhal, (2000), believes that effective deployment of QM within the organisation, determined by the quality awards won, results in performance improvements consequently leading to a mechanistic adoption approach by assuming that effective deployment of QM within an organisation, will equate to improved performance regardless of any intervening factor.

Another school such as Adam et al (1997) and Montes et al (2001) while not discounting the impact of QM practices on organisational performance, believed that organisational performance is a social construct influenced by various factors such as culture and organizational learning and therefore sought to understand the moderating influence of these factors. The studies however did not provide any detailed examination of these moderating factors in their empirical or theoretical verification of the relationship (Douglas & Judge, 2001).

The major area of consensus between the studies is around Quality management dimensions. The conclusion across the studies was that QM practices are made up of various dimensions, such as leadership, customer focus and organisational factors (internal and external), regarded as important dimensions that can influence organisational performance. There is general reliance on the QM dimensions used by the MBNQA and EFQM in determining what dimensions were to be; however, how these dimensions or factors relate to each other in contributing to organisational performance was however not examined in any great detail.
The implementation process or deployment was another area of convergence of views. Most of the studies accepted the fact that the implementation or deployment approach adopted by a firm was important if QM is to impact performance, and used winning the quality award such as EFQM or MBNQA as a proxy or measure of effective deployment. This assumption however ignores the findings from another study (Laquito, 1999) that showed how some of the companies that have won quality awards such as Florida Power and Light went into financial difficulties shortly after or in fact went bankrupt.

The common limitation across the studies was that the measure of performance focussed in large part on only share holders value to the exclusion of other stakeholders in an organisation such as the employees, or the community in which the organisation exist or the customers. Very little attempt was made to understand or measure business performance from a non-financial perspective such as employee or customer retention, brand awareness or good governance. Further research, such as that reported here must attempt to address this limitation through the inclusion of additional non financial metrics such as likelihood to recommend by the customer and employee satisfaction in determining the performance of the business.

These limitations and convergences of views on QM dimensions, provides a basis for examining the contributions of QM to business performance within a financial services industry such as a bank or insurance or credit card businesses, for which there are very few empirical studies, as well as identify any contextual factors that may influence the relationship.

This research, in contributing to the growing body of knowledge on the relationship between QM and OP in financial services industry, will build on the conclusions from the literature review, the resulting models subsequently developed and the QM dimensions identified in the review in making contribution to the growing body of knowledge. The research will also seek to enhance management practice in the deployment of QM.
3.5. Research models on QM practices & organisational performance

The literature review conducted for this study showed various authors proposing or developing constructs to help in explaining how QM impacts OP. The common conclusion across the models is the fact that QM practices are comprised of various dimensions and that the impact of these dimensions varies depending on the performance variable and industry type whether it is manufacturing or service. This varying level of impact on business performance was observed through the review to be moderated by other factors such as organisation culture, knowledge or the external environment or elasticity of demand for the product. The models however were not without some limitations. The major limitation of the outputs from these models revolves around the sufficiency of the data or how representative the data and unit of study were. This limitation therefore makes the models more of a guide that a prescriptive tool in understanding how QM practices impact OP (Montes et al 2001).

In developing these models, most of authors described some the statistical methods such as path analysis used in validating the outcomes, which is important in management research, as it lends validity to the model outputs that are developed.

The composite construct (See figure 3.51. below) from the literature review on the relationship between QM and business performance shows that there is interdependence between the business performance, quality dimensions and internal factors. It shows that business performance is not only impacted by the QM dimensions but that the QM dimensions themselves are impacted by both external and internal factors. The output from the interaction between the QM dimensions, internal factors and external factors is the business output in the form of production cost impact or delivery times for example which eventually translates into a better business performance measure. This business performance then in turn influences not just the internal factors but also the QM dimensions deployed within the organisation. The importance of this interaction within the firm and the expected benefits was further emphasised by the willingness of firms to
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abandon QM practices if no measurable value is realised as shown by Hendricks and Singhal, (2000). They concluded in their study that firms would abandon QM practices if they could not see the benefits of the process on their bottom line within a certain period (3-5 years) such as what 3M did in the US. This illustrate further the importance of ensuring that the business output resulting from the interaction between the QM dimensions, internal and external factors contribute positively to the performance of the firm. Other studies done in the early 1990's such as the survey report of McKinsey and Co. also found that on average firms that did not see measurable value added to their business within a defined period tended to abandon the continued deployment of QM practices.

The two major deployment approaches were illustrated by two key models from the literature review. The two approaches can be described as “Control Focus” and “Learning focus” methods of deployment. The control focus approach is concerned with stability and reliability while the learning focus is concerned with creating an environment where innovation and exploration can flourish leading to a learning organisation. It does not however imply that these two methods are mutually exclusive but rather a
blending of the two approaches considering the organisational factors to ensure success (Sitkin et al. 1994).

One of the earliest model with control focus was that developed by Garvin, (1984) called the quality performance model. The model focused on two major paths to improving business performance using QM dimensions. These were Market and Manufacturing routes. These two routes could also be regarded as internal and external factors. As seen below (figure 3.5.2), the manufacturing route focus on the internal processes such as process variability to ensure conformance and then impact both the operational performance or business output through reduced cost, as well as the market route through ensuring that there is reliability in the product or service. The improved process variability therefore impacts product quality regarded in the model as market route either by ensuring conformance or reliability and thus results in increased sales and larger market shares, or alternatively less elastic demand and higher prices.

The idea of optimum levels of conformance quality need to be considered here, as above a certain level of conformance, it ceases to be advantageous for firms to invest in improving internal processes or product quality. Highest quality does not necessarily mean optimal quality as any change in quality has to meet a need in the market as well as shareholders expectations (Bisgaard and Freiesleben, 2004, Saad and Siha, 2000). The market route has a focus not only on ensuring product conformance to customer requirements but also its reliability. The focus of this model is therefore on ensuring that there is reliability and stability or control in the process. This focus is both a strength and limitation.

The strength lies in confirming the impact on business performance of the interaction between the manufacturing route and the market route. While each of the routes has the potential to individually impact business performance, there however needs to be interaction between both routes if they are to have any meaningful and lasting impact on the business. For example where the product is lacking in terms of customer requirements or has come to the end of its life cycle, it may be difficult to contribute to
optimum business performance regardless of any internal efficiency. Similarly where the product is of the best quality but with poor internal and operational efficiency, this may limit its ability to impact business performance.

**Figure 3:5:2 The Quality Performance Model**

Manufacturing Route

Quality Management practice

Internal process Quality (Process variability before final inspection) → Operational Performance (e.g. cost, delivery)

Market Route

Product Quality Performance (After final Inspection)
- Conformance
- Aesthetics
- Performance
- Perceived Quality
- Reliability
- Serviceability
- Durability

Business Performance (Financial)


The major limitation of this model is the absence of any detailed consideration of the internal organisational factors beyond the internal processes or deployment approach. As identified earlier in the literature review, not only is the deployment approach important in influencing the realisation of QM benefits, but equally important in realising a lasting business performance is the organisational culture, a critical part of the internal factor, which will invariably be impacted also by the deployment as shown by Montes et al (2001). Finally, the model is silent on the QM dimensions that have the most significant impact on the business performance.

The limitations of the model by Garvin (1984) was addressed in the model developed by Montes et al (2001, see figure 3.5.3). This has been one
of the most comprehensive models in the literature, as it focused on both the internal factors within the organisation as well as the external factors that moderate the impact of QM practices on performance. The model enabled a holistic focus on the internal and external characteristics of the firm, providing a strong platform for understanding and analysing the underlining factors that influence the relationship between QM dimensions and organisational performance.

The model, based on industrial psychology studies, encompasses three major dimensions - Quality contents, Quality elements, and Cultural change - in developing an approach for understanding the factors that influence the relationship between QM and organisational performance. These three elements enabled the identification and examination of the various contextual factors that influence the impact of QM on business performance. The QM contents addressed the need to ensure that the contents fit with the business orientation and environmental uncertainty. This, according to the authors is needed for ensuring that there is a strategic purpose and alignment in the development of the QM contents if the firm is to be efficient. Thus consistency with the norms and shared values of the business must exist in order for the firm to experience a successful deployment of QM practices. This view is supported by the work of Saad, and Siha, (2000) when they argued that QM change process is like an iceberg; it has a very small visible part (the strategic and structural) and a large hidden part (the values, behaviours, perception and implicit paradigm). The success of the process is progressively linked to the discovery of these hidden elements.

The QM elements as illustrated in the Montes et al. model, impact both the behavioural and individuals' learning process. According to the authors the influence on both the learning levels within the organisation and the behavioural factors will influence the way work is done and knowledge applied to tasks. The assumption inherent here is similar to the knowledge based view (KBV) that individual learning can be translated to organisation learning for competitive advantage, thereby resulting in improved performance for the business (Hitt et al., 2001, Linderman et al., 2004).
Most quality improvement activities require the creation of new knowledge for the organisation, and the knowledge created by the quality improvement activities is what improves the organisational performance and becomes part of the “Knowledge stock” of the firm. The interaction between knowledge stock (all that is already known or needs to be known) and learning flows (relationship and interconnection) is what impact organisational performance (Prieto and Elena 2006). Nonaka’s theory considered to being a robust development of the relationship between knowledge and organisational performance (Linderman et al, 2004), theorised how this occurs starting with the individual (See figure 3.5.4 below). Knowledge creation the opined for example occurs through socialization during the process of team building in the deployment of QM practices and data analysis promotes both team building and knowledge creation in its process.

The cultural dimension in Montes et al model, serves as a mediating effect on the relationship through its impact on learning behavioural process. This is because in the long run an organisational culture will be influenced by the QM policy used. However the opposite can be true in the short run (Saad & Siha, 2000). Montes et al argued that because the culture of an organisation is created and contributed to by all the employees in the firms therefore any new process such as QM practices must be generally perceived by all as mutually reinforcing their shared values if it is to have any impact. The culture of the firm is therefore a significant moderating factor in the success of any QM practice within a business. It is this combination of focus on knowledge creation and internal underlining factors that posit the model as one that can be classified as an “open” approach to QM deployment which enables the creation of a learning organisation.
Although there is convergence of views with other researchers in terms of the existence of QM elements and its impact, the number and specifics remains a subject of great debate among many practitioners and researchers. The QM elements considered in this model included the following; Leadership, HR management, customer and supplier relationship, internal organisational culture, and process management. The model showed that these elements not only impact the behaviour and learning process but also the personal/system interaction, which in turn influences performance. In other words QM has an impact on the way organisational members apply their knowledge in the organisation which in turn impact OP. While the study accepts that models will always be guidelines, successful Implementation is what determines the level of performance improvement within the organisation (Powell, 1995).
Ahire et al (1996) however argued that a formal QM programme is not necessary for implementing QM elements in an organisation. The fact of doing so with a QM programme however makes them more successful.

These two models shows that no single one approach whether control focused or learning focused can create a sustainable improvement in business performance but rather a combination of approaches. In addition the environment in which the business operates will have a moderating influence on the extent to which the QM practices deployed will influence performance. This study will therefore ensure that the deployment approach within the unit of study is well understood within its business environment as described in chapter two, in view of its influence on the relationship between QM practices and organisational performance.
Figure 3.5.5 below, represents a summary model of the key variables and relationships identified in the literature. It represents, therefore, a further elaboration of the model of the Corporate Initiative, as seen in Figure 2.2.1. In particular, it identifies more precisely the internal and external constraints, such as culture and the external business environment, and the key dimensions of QM, such as leadership, customer focus and people management, which previous research has shown to be important. This elaborated model therefore forms the starting point and framework for the empirical research.

**Figure 3.5.5. Summary model**
Chapter 4: Research Methodology & Design

4.1. The Methodological Considerations

The specified objective of this research is to investigate the impact of QM practices on organisational performance within a Canadian financial services organisation when deployed alongside with other management practices. The goal was to determine whether there exist any form of relationship between the various QM dimensions and organisational performance measures. This objective presupposes first, the existence of a real world that exists independent of cognition or thought and that reality is organisational performance, but secondly that the impact of QM practices within an organisation is created through the inter-subjective sets of meanings between the respondents and researchers. Organisational reality according to Mendy (2007) rests not on following rules but in what the system of interactions mean to respondents that presents itself to the researcher as following a pattern. These presuppositions informed the methodological framework for this research study.

A research methodology refers to more than a simple set of methods; rather it relates to the rationale and philosophical assumptions underpinning the research study which in turn might explain what the researchers' ontological or epistemological views are. Ontological assumptions are concerned with the nature of reality without any concern for how that nature might be known while epistemological assumptions are those that focus on how reality may be studied and the nature of “knowledge” (King and Kimble 2004). Hirschheim et al (1995) suggested that how the researcher views the world or organisation and subsequently what is seen as being valid and acceptable knowledge has a profound influence on the perceived relative importance of how they in turn address the phenomenon being studied such as organisational performance. Any research study is therefore always based on fundamental philosophical assumptions (Lee 2004; Myers 1997). These philosophical assumptions according to Guba and Lincoln (1994) are a fundamental starting point to guide research inquiry, as well as to qualify the
use of specific techniques in both the underlying assumptions guiding the research and in the theoretical framework (Garcia and Quek 1997). Research methodology is therefore the operational framework or protocol within which the facts as known are placed so that their meaning may be seen more clearly (Leedy, 1989). The choice of a research approach is not only dependent on the researcher’s philosophical position, but also on the type of research questions to be addressed (Holme & Solvang, 1991; Merriam, 1998).

These philosophical assumptions have led to some lively debates concerning competing philosophical paradigms for organisational performance research. For example, research methods have variously been classified as objective versus subjective on an imaginary continuum (Burrell and Morgan 1979), with objective research as practiced in the social sciences separating the researcher from the respondent, with the objective researcher/subject focusing on the respondent/object in order to understand objective reality while subjective research puts the researcher/subject into the context of a situation to understand it and the subjective researcher seeks to know the situation through the eyes of the respondent (Olson 2005). Recent research contributions however argue that these should be regarded as epistemological and ontological paradigms (Weber 2004), as the relationship between subject and object is an indicator of the ontological and epistemological assumptions on which a given study is based.

The philosophical assumption for this research therefore will blend both an objectivist and subjectivist (ontology and epistemology) view of organisations. The objectivist assumption is that whenever QM practices are effectively deployed within an organisation, there is a resulting improvement in the performance of the organisation. This follows on the ontological view of “reality” (organisational performance) that, conclusion follows from the premise which are supposed to derive from sources other than observation of the world e.g. from reason alone.

The subjectivist view of the phenomenon relates to those events, beliefs and attitudes that shape the relationship between QM and organisational
performance. It views the relationship as a social construct, dependent on the environment in which it occurs. In other words the world of organisational performance is a construct influenced by various factors, as organisations evolve through the interaction of participants, an evolution that is dependent on shared convictions and values of participants (Dumay, M. 2007).

Figure 4.1.1 below shows the process of how a researcher’s philosophical assumptions influences the research methods adopted:

![Figure 4.1.1 Philosophical Assumptions & research methods](image)

In conclusion research methodology is crucial to the success of any research study given that the essence of any research is either to contribute to a body of knowledge or develop a body of knowledge within a specific area of study or studies. This goal therefore requires that the methodological framework used by the researcher be relevant and convincing, or at least credible with verifiable evidence, when examined by peers or other researchers in the field of study (Remenyi et al., 1998).
4.2. Research Methods

The research’s specified objective to investigate the organisational performance of a Canadian financial institution as result of the deployment of QM practices alongside other management practices contains a research question that is analytic in nature. In order to address the analytic aspect of the research, a quantitative approach was adopted. The quantitative aspect of this study involved the use of a survey instrument as the principal means of data gathering on the performance measures of the organisation and QM dimensions, along with data from the company’s archive on the goals, objectives and deployment strategies for the Corporate Initiative. The performance indicators chosen for the study were the generally accepted measures especially the financial indicators based on the key findings and theories from the literature review. The theories and conclusions from the literature review on the relationship between QM practices and organisational performance served as the basis for the developing the survey questionnaire itself.

The other objective of the research to generate knowledge by studying, analysing, and describing all the variables that impacts the organisational performance measures contains research question of a descriptive nature and the use of semi-structured interviews enabled the explanation of the causal network shaping the phenomenon in question. This approach is considered suitable when description and explanation are looked for (Merriam 1998). Also according to Denzin and Lincoln (2000) qualitative research turns the world into a series of representations including field notes and interviews and involves an interpretative naturalistic approach to the world. This means that the qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret phenomena in terms of the meanings people bring to them.

Thus the method chosen for this research is a combination of quantitative and qualitative methods.

Meredith et al (1989) proposed a generic research method which was a framework with two key dimensions, appropriate for different methodologies.
or approaches. The two dimensions were - from existential to rational and from natural to artificial. At the natural end of the continuum is empiricism, which derives its explanation from concrete and objective data, while at the artificial end is subjectivism, which derives its explanation from interpretation and artificial reconstruction of reality. Moving from one extreme of existential to rational represents the use of different logical approaches in the construction of theories - from individual experience or basic knowledge to a formal structure and pure logic. Meredith et al found that research in industrial and operational management were more artificial in nature. They suggested that academic research in the area should begin to move towards more existential paradigms, changing from rational to more natural which apply direct observations through case or field studies. They pointed out that QM represents a rich area for the application of these techniques, so that surveys, structured interviews and field studies have provided a progressive empirical path for studying QM. Melnyk and Hendfield (1998) concluded in their study that any empirically conducted research need to be “theory-driven”, as theory provides the foundation for all scientific research. In contrast to the theory driven empirical research, the use of grounded theory is another research method from which theory emerges and is entirely grounded in the data.

The increasing number of empirical research studies on QM practices and its relationship with business performance has also consolidated some theoretical foundations of quality management (Dean and Bowen 1994, Weymes 2004). Significant progress in understanding the relationship between QM practices and business performance has been aided as well, as seen in the literature review, by the use of surveys where data can be collected, quantified, analysed, and combined with unstructured interviews. In many of these studies, the researchers to some extent have attempted to use both qualitative and quantitative methods, because it provides a better perspective on the phenomena being studied (Easterby-Smith, 1991). This combination of approach according to Rossman and Wilson (1984, 1991)
enables corroboration of the essential research facts as well as develop a richer analysis of data.

In achieving the objective of this research therefore, it was necessary to use both a quantitative and qualitative methods in conducting the research study. While the survey questionnaire was the main research instrument used for gathering data on both the quality initiatives and the organisational performance, the semi-structured interview was used to gather additional information as well about the context of the organisational performance and the deployment of QM practices. The findings from the interview process helped to provide further understanding for some of the variations in the impact of the QM practices on business performance and this ensured that facts as gathered from the questionnaire were better understood within the required context. In addition these responses were very critical in understanding the role of the contextual factor in the study. Care was taken to ensure that researcher bias in the process was minimised by summarising the responses and submitting to the participants for validation that the summaries accurately reflected the discussion. Thus the use of the survey questionnaire and the semi-structured interview addressed both the exploratory and the explanatory questions raised by the research objectives.
4.3 The Research Design

Research design is a key aspect of any research process and usually includes (a) the formulation of a strategy to resolve a particular research question; (b) the collection and recording of the evidence; and (3) the processing and analysis of these data and their interpretation. According to Grunow (1995), it is a crucial element of any empirical research project. The research design (See Figure 4.3.1 below) is what informs the main investigative processes, i.e. what, how, and where data is to be collected, the analytical methods used for the data collected, and the observational field (Royer & Zarlowski, 2001).

![Research design diagram]

**Figure 4:3:1. Research design position in the research process**

The design may however have subsequent reflexive influence on the research objectives and methods as the research enters the fieldwork stage, consequently making research construction an ongoing process (Royer and Zarowski, 2001). This is especially so in the data gathering process where the analysis process may result in redesigning the collection methods. The design will also have an influence on the development of the analytical instrument and model construction, culminating eventually in the validation or development of a theory.

This research will be an empirical case study. Flynn et al, (1990) among other researchers, argued that empirical research methods are more appropriate for quality management research. The term “empirical” here means that facts or knowledge are based on real world observations within the company. It will be based on the use of data gathered from the natural setting of the organisation, for which this researcher had no control over the events in the organisation being studied although there is control over the data gathering process. According to Merriam (1998) a case study is considered to be an intensive and holistic description and analysis of a restricted phenomenon. The particularistic characteristic of the case study means that it focuses on a particular situation, occurrence or phenomenon. She argues further that with a case study being descriptive, this means that the result of the phenomenon studied is comprehensive and substantial through the combination of quantitative analysis and qualitative approach, while the heuristic characteristic implies that it can increase comprehension of the phenomena. Remenyi et al (1998) also argued that the holistic emphasis of the case study makes it most appropriate when dealing with the complexity of business and management research.
4.4 Sources and methods of data collection

This section presents the research design of data requirements, collection, and analytical methods. The analytical methods for the data set will be discussed in a subsequent section.

The research data requirement design determines the research variables to be collected in order to carry out the pre-determined analytical methods for the data so as to achieve the research objectives. Research data about QM dimensions and company performance measures were the primary information to be acquired.

Survey questionnaire was used as the primary instrument to collect data about the QM dimensions and performance measures with quantitative methods employed in analysing the data set. Detailed discussion on the development of the research instrument will follow in the section below.

Another source of data was the company's archive which provided information on the deployment strategy and goals of QM practices within the organisation, past financial performance details, future business performance targets and the organisation's culture including structure.

In addition, some industry performance data was also obtained from the company's archives especially data about customer satisfaction and likelihood to recommend. This was to understand if there are similarities in the pattern or level of performance improvement between the company and the industry in general, as well as any underlining global performance improvement factors for the industry to isolate the effect of QM practices from other change drivers or initiatives.

Sample

In both quantitative and qualitative research the characteristics of the sample studied and the population targeted must be defined before determining the generalisation parameter of the results. To do this, quantitative research draws on the process of statistical generalisation and qualitative research draws on a process of analytical generalisation (Yin, 1989). In this research study, careful attention was given to the sample
selected in terms tenure and organisational position within the business as these criteria were important in ensuring that the responses were credible based on organisational knowledge of the unit of study. The executives had at least a minimum of five years tenure with the firm and therefore were assumed to be competent in providing accurate and relevant information about the company and the Corporate Initiative.

The profile of the participating executives is presented in the table below. A total of 70% came from the business and functional units with the remaining 30% coming from corporate or operational support units. The tenure criterion was a good representation of all the company’s executives where the average tenure ranges between five to ten years. Also the functional or business support units which are mainly cost or expense centres represents about 30% of the total staff compliment of the organisation.

**Characteristics of the Sample of Executives**

**Table 4.4.1**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>%</th>
<th>Base (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business Unit</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Functional</td>
<td>35</td>
<td>14</td>
</tr>
<tr>
<td>Corporate</td>
<td>12.5</td>
<td>5</td>
</tr>
<tr>
<td>Business</td>
<td>35</td>
<td>14</td>
</tr>
<tr>
<td>Operations</td>
<td>17.5</td>
<td>7</td>
</tr>
<tr>
<td><strong>Tenure</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-5</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>6-10</td>
<td>37.5</td>
<td>15</td>
</tr>
<tr>
<td>&gt;10</td>
<td>57.5</td>
<td>23</td>
</tr>
<tr>
<td><strong>Leadership Role</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior Executive</td>
<td>37.5</td>
<td>15</td>
</tr>
<tr>
<td>Executive</td>
<td>62.5</td>
<td>25</td>
</tr>
</tbody>
</table>

**Base: All sample employees**

|                | 100 | 40 |

81
4.5. Development of research instrument- Questionnaire

Chadwick et al (1984) defined a research instrument as an instrument specifically designed and empirically validated for gathering data or addressing key research questions such as a survey questionnaire. The validity and reliability test for a research instrument is therefore important in assessing the accuracy and effectiveness of a survey instrument. See figure 4.5.2 below for a summary process for the development of a research instrument.

The principal research instrument used for this study was a survey questionnaire (See appendix A), and as Madu (1998) and Bavagnoli and Perona (2000) concluded in their study, the questionnaire is a popular data collection method in QM studies. The content of the survey questionnaire for this research study reflects the current convergence of views on QM practice dimensions and organisational performance measures as seen from the literature reviews. The dimensions of QM practices were selected based on the conclusions from the literature review especially the dimensions identified as critical by MBNQA and EFQM for selecting award winners. In identifying the organisational performance indicators (appendix D) for this research, performance was first defined as the value created by an organisation for all its stakeholders such as shareholders, employees and customers. This value relates to the effectiveness and efficiency with which its resources are utilized and the relevance of the output to its users. Therefore the measure of organisational performance for this research was defined not only in terms of financial metrics such as sales revenue, net income before tax or operating leverage but also in terms of the employee satisfaction, and the likelihood of the customer to recommend the company, a proxy for customer satisfaction.

The measures of performance selected, though based on the literature review, were further validated with the senior executives to ensure that they were relevant and appropriate in measuring the performance improvement in the business for the period under review. These were all objective factors for which data was obtained - sales revenue to show customer growth,
operating leverage (difference between revenue growth rate and non interest expense growth rate) to measure the organisational alignment and processes, and net income before tax as the best indicator of the effective use of resources across the organisation by leadership. The non financial performance measures were employee satisfaction which provided an insight into the internal culture of the organisation and likelihood to recommend which enabled an understanding of the company’s internal processes for client service delivery as well as a proxy for customer satisfaction and loyalty. The questionnaire had 40 items grouped into three parts (A, B, & C). Each item was scored on a 5-point Likert scale ranging from “strongly agree” to “strongly disagree”. For the purpose of this study, 30 QM dimension items were used to operationalize the independent variables (QM Practice) and 10 items were used for the performance constructs (Dependent variables). Scale reliability was affirmed (See table 4.5.1 below) by computing the reliability coefficient, Cronbach’s alpha, for each set of scale items. Cronbach’s alpha is an indication of the stability and consistency with which an instrument measures a concept and helps to assess the goodness of a measure (Sekaran, 2003). The minimum accepted value for Cronbach’s alpha is .70 (Sekaran, 2003).

Table 4.5.1 Reliability Coefficient Statistics

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>CRONBACH’S ALPHA</th>
<th>N OF ITEMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership &amp; Commitment</td>
<td>.84</td>
<td>6</td>
</tr>
<tr>
<td>Client Focus</td>
<td>.70</td>
<td>6</td>
</tr>
<tr>
<td>Human resources</td>
<td>.73</td>
<td>6</td>
</tr>
<tr>
<td>Int. culture &amp; org. alignment</td>
<td>.71</td>
<td>6</td>
</tr>
<tr>
<td>Process management</td>
<td>.70</td>
<td>6</td>
</tr>
<tr>
<td>Financial performance</td>
<td>.61</td>
<td>4</td>
</tr>
<tr>
<td>Non-financial performance</td>
<td>.63</td>
<td>6</td>
</tr>
</tbody>
</table>

The 5 QM dimensions had an acceptable alpha value in excess of or equal to .70, therefore indicating the reliability of the group of items in each QM dimensions as a measure of that dimension.
The performance (financial and non-financial) indicators showed alpha values that were below the acceptable level of .70, suggesting that items may not all be accurate indicators of performance. Therefore, it was necessary to use five measures of performance selected from established models from the MBNQA and EFQM and from interviews with the executives of the firm used for the research.

Part A of the questionnaire had five sections which were focused on QM practices and operationalised with 30 QM dimensions, Part B was focused on the organisational performance changes during the last three years and had two sections each addressing the financial and non-financial performance measures and was operationalised with 10 items, and Part C sought to obtain some generic information about the respondents. The survey was pre-tested with a few executives in the human resources and quality management divisions before it was fully administered to detect any possible shortcomings in the design and administration (Emory and Cooper, 1991). This was done also to ascertain if the questions were easy to understand, or whether other questions needed to be added or if some of the existing questions should be modified, and verify that the list of participants were the right persons for the study. The feedback was very helpful in clarifying and modifying some of the questions.

The length of the questionnaire was taken into consideration in the design phase and was an area of focus during the pre-test phase as well. All the reviewers were satisfied with the length of the questionnaire and during the pre-test phase, the time to complete the questionnaire was validated and in turn provided further evidence that the length was adequate. The questionnaire took approximately 20 minutes to complete.

Personal contacts were made in this research study before the questionnaires were sent out explaining the purpose or objectives of the study and to assure them of the anonymity of the responses. This direct communication with the respondents also helped to minimize the potential problem of missing data. All the questions were discussed with each respondent to ensure proper understanding before they received the
questionnaire and also during the interview phase for those few executives where the interview and the filling out of the survey questionnaire were combined. The completed questionnaires were returned to a designated address and it took an average of about eight days for each questionnaire to be completed and returned. Ninety percent of all the questionnaires sent were returned within two weeks with the remaining ten percent returned within three weeks.

In this process, the respondents were asked to answer the questions using a three year (2004 - 2007) overview. The choice of a time period for ascertaining the impact of QM practices on performance is crucial as concluded from the studies done by Laquinto, A. (1999) and Hendricks, K. & Singhal (2000). The authors affirmed that in order to link QM practices to performance, choosing the period to begin measuring the performance and over what period is crucial. This is because QM takes at least three to five years before any benefit is realized or to be fully absorbed and integrated in the normal operating mode at the firms, hence the need to examine the relationship over a period. The timeline for this research study was decided based on the fact that the organisation used as the unit of study launched the Corporate Initiative in 2004 with a three year timeline for all its performance measure targets.

The twin drawbacks in using a survey questionnaire of low rate of response, and untimely return of the questionnaires were carefully managed through a follow-up reminder via emails and personal contact. These coupled with the fact that the researcher is employed in the same organisation was significant in ensuring a timely and 100% response rate.

Figure 4.5.2 Summary of the Development of a research instrument

![Diagram](image)

Theoretical Foundation – this starts with the literature review followed by the identification of the key concepts in QM practices and organisational
performance. This is then followed by the selection of the indicators that represent QM practices dimensions and organisational performance measures, all based on the literature reviewed.

The pre-test is the pilot phase where these questions are tested to ensure that they will be relevant to the dimensions of QM practices and performance indicators. During this phase changes or revisions may be needed to fine tune the questions.

The empirical analysis and verifications of the instrument is done through data collection on the real practices within the company, which are then analysed against the indicators selected. The result of the analysis may lead to the refinement of the construct selected, followed by reliability and validity testing. Once all the above has been done satisfactorily, an empirically verified instrument is then considered to have been developed.

4.6. Semi-structured interviews

This is a technique used to collect qualitative data through a process that allows a respondent time and scope to talk about their opinions on particular subject within a framework of themes to be explored. The objective is to understand the respondent’s view rather than generalisations about behaviour. Flynn et al (1990) opined that semi-structured interviews can be used to validate response categories in questionnaires so that a researcher can have a better understanding of the implications of any specific answers in the questionnaire.

The semi-structured interviews for this research study were carried out either on a face-to-face basis or by telephone conversation between the interviewer and the interviewee, who in this study were also the same persons who received the questionnaires. Some of the questions in this interview process were predetermined from some of the findings in the literature reviews, and the archival data. The questions (See appendix B) were presented in a standard format to ensure that the answers could be recorded in a standardised form (Remenyi et al, 2003). The Interviews were interactive, flexible, and allowed for in-depth discussion and focused probing. This permitted the contextual understanding of the information
obtained earlier, either in the questionnaire or from the archival sources, as well as helped to confirm whether other organisational initiatives such as mergers and acquisitions or tax changes had introduced some biased effects on the firm’s performance. The major challenge in this phase was the availability of the selected individuals as calendar conflicts or business pressure meant that some interviews were shortened or cancelled. Once the interviews were finished, the responses were collated and documented for the interviewees to confirm or validate. This was to ensure that there was agreement in terms of the meaning associated with responses and the context within which they were made.

In the interest of time, some of the interviews for the study were conducted at the same time as when the questionnaires were handed out and the questionnaires were filled in after the interview. This was due to the fact that a few of the individuals selected to participate in the study had very busy schedules given the average time it took to secure an appointment. The issue of bias may be raised here due to combining the interview process with filling out of the questionnaire. The bias potential was however minimised in part by the fact that only 3 (7.5%) executives had such a situation and also by the fact the interview questions were open ended. The interview process occurred in the participant’s office face to face or via the telephone, where they could have access to any data needed to support their views. The objectives were to elicit from the executive with minimal prompting, the major milestones in the development and execution of the Corporate Initiative, the factors that enabled its success and impact on organisational culture and secondly to probe in greater detail the contribution of any contextual factor such as the transformational management office (TMO).

The level of response details provided depended on the area of responsibility of the executive as the executives were not all equally impacted particularly with regard to impact on customer processes.

Three critical assumptions were made with regards to the participants:

1. Executives fully understood the rational for the Initiative.
2. They are able to articulate the benefits or otherwise of the Initiative.

3. They were very conversant with the TMO and its role.

In general the interview lasted for about 45 minutes and the questions asked were focused on gathering information to provide an understanding of the following areas about the Corporate Initiative - developmental context, deployment approach, external factors, organisational culture and any contextual influence on the initiative. The responses provided additional insights beyond what the primary data analysis could provide and were therefore used to support, validate and explain some of the quantitative data. Flynn et al. (1990) pointed out that when used in conjunction with survey, it enables a better understanding of any specific answers in the questionnaire.

4.7. Validity and Reliability

The concepts of validity and reliability are important in any research study to ensure that the conclusions from the study are relevant, accurate and of practical use to other researchers. The concept of validity and reliability are related in social science but in an asymmetric manner. A test cannot be valid unless it is reliable, but it can be reliable without being valid (Potter 1996), hence the need to ensure that this research study is both reliable and valid in terms of the methods, research instrument and the variables used in research. The present research study has attempted to ensure that it is both valid and reliable by ensuring that the methods adopted and the research instrument used are supported and validated by previous studies in the QM fields as seen from the literature review.

4.7.1 Validity

To assess the overall validity of this research it is necessary to examine the three types of validity relevant to the study - Construct, internal and external. Construct validity consist in demonstrating that the selected measures to be used in the research actually address the ideas, concepts, relationships and issues being studied (Remenyi, 1998). In this research study the QM practices selected were done after a thorough review of the
literature as well as a review of the variables used by MBNQA and EFQM in deciding quality award winners in the USA and Europe, a process generally accepted by practitioners and academicians as robust and all encompassing of key drivers of organizational efficiency and performance (Samson and Terziovski 1999 and Prabhu et al 2000). The selected measures of performance for this research study were validated with the business executives even though they were determined from the various conclusions from the literature review. Furthermore the business uses the financial performance measures selected for this research study as part of its annual report on business performance to shareholders and investor community (Appendix C). With regards to the non financial measures used in the research study, these were some of the metrics regularly used by the business as part of its annual compensation planning or employee management strategy such as communication. Additionally, the quantitative approach and statistical tool used in this research reflects the approach used from other studies as seen in the literature review in determining the relationship between QM practices and OP. This lends further credence to the construct validity of the research. In terms of the qualitative method, the interview participants reviewed the write up from the Interview sessions in order to correct any misinterpretations or errors in the meaning assigned thus lending validity to the output.

Internal validity is a concern for causality research but the concept can be extended to all research that uses inference to establish results (Yin, 1989). Rosenthal and Rosnow (1991) argued that it is the degree of validity of statements made about whether X causes Y. Internal validity is therefore ensuring the pertinence and internal coherence of the results produced by a study. The findings from the analysis is supported by the conclusions from some other studies as seen from the literature review such as those of Terziovski and Samson (2000) and Hendricks and Singhal (2000).

External validity deals with the problem of knowing whether the findings of a research can be generalized beyond the immediate research environment or case study. Thus external validity is the extent to which the
results from the research can be applied in other situations than the one surveyed (Merriam, 1998). This research study is focused on a unit of study within the Canadian financial industry so that for any general application of its findings, there will need to be a consideration of the nuances of the entity for which the conclusions are to be applied as internal organisational factors can influence successful deployment of QM practices (Montes et al., 2001).

4.7.2. Reliability

In evaluating the reliability of any research study, which is the reliability of the results, the various processes involved has to be repeatable, with the same results obtained by other researchers and/or at different periods (Drucker-Godard et al, 2001). The goal of reliability is to minimize the errors and biases in a study. According to Yin (1994) the case study protocol is especially an effective way of dealing with the overall problem by increasing the reliability of case studies. The survey questionnaire (appendix A) and the semi-structured interview framework document (appendix B) would make it possible for another researcher to follow the process during the data collection phase. The description of the data analysis process also ensures the reliability of the study, and also the financial performance figures were collected from documents in public domain and validated by the finance area of the unit of study.

The argumentation above describes the efforts made to ensure that the research study is as accurate as possible and hence this research study can be considered to be valid and reliable.

4.8. Methods of data analysis

Data analysis is a body of methods that involves the process of looking at and summarizing data with the intent to extract useful information about a research question and develop conclusions (Macintosh, 1997). The data analysis in this study has sought to show the impact of QM dimensions on performance measures within a Canadian financial services organisation. The methods used for analysing the data set in this study included statistical and thematic techniques.
4.8.1. Quantitative Data Analysis

The purpose of the analysis was to determine not only if there was any relationship between QM practices and Organisational performance (OP), but also to verify the percentage of the variance in OP that can be explained by the QM dimensions. QM dimensions were treated as the independent variables and the organisational performance using five measures, were treated as the dependent variable.

The broad QM dimensions such as leadership and client focus formed the starting point for this research. However, they were refined into more specific QM practices in the survey questionnaire in the light of the findings form the literature review and the emerging evidence from the firm under investigation. The emphasis in the data analysis, therefore, was on a more granular analysis of the relationship between particular QM practices and organisational performance. Cronbach’s Alpha values were used as a guide in determining whether specific QM practices should be grouped together under the broad QM dimensions or selected for separate examination of their association with organisational performance.

A correlation coefficient analysis of the data obtained from the questionnaire was carried out to determine whether any relationship actually existed between the independent QM variables and the dependent organisational performance variables selected for this study. Caution was taken in interpreting the correlation coefficients results to ensure that the probability of other influencing factors was not ignored. This is because of what Field (2000) described as the third party variable problem. According to him, in any bivariate correlation analysis between two variables, it cannot be assumed that there is a causality relationship as there may be other measured or unmeasured variables affecting the results.

A coefficient of determination was calculated for the variables to determine how much of the variance in the dependent variables can be attributed to the independent variables. Although no conclusions could be drawn about causality of the variables examined in the research study, it was, however, recognised that, using the coefficient of determination, some
of the variance seen in the dependent variables could be attributed to the
independent variables.

The method used for analysing the relationship between the variables was
the non-parametric method as the data-set obtained from the survey
questionnaire did not meet the normality requirement for a parametric test.
The test for normality was done (see appendix F) on the data so as to
ensure that the appropriate analytical approach was used for analysing the
data. This test showed that the data distribution was far from normal and
therefore the most appropriate analytical approach was a non-parametric
approach. The specific non-parametric method used was Kendall’s Tau.
According to Field (2000) this methodology should be used in place of
Spearman’s coefficient when the data is small with a large number of tied
ranks. He goes further to argue that Kendall’s statistic is a better estimate of
the correlation in the population thereby enabling a more accurate
generalisation from the findings. The data used for this research study may
be regarded as small (40) and there were a large number of tied ranking. An
initial analysis of the data was done to determine if there were any errors or
missing data using a case processing summary. In addition, from the
analysis of the data set, it was found to be error free.

4.8.2. Interview Data

The method used to analyse the interview results was an abridged
version of the thematic analytical method due to the purpose of the
interview in the research study as stated above. Thematic analysis seeks to
identify common themes and patterns in an interview text or field notes
(Forest D. et al 2002, Aronson, J., 1994). These themes are based on
certain criteria such as those adapted from Owen’s list (1984). These are:
Recurrence – at least two parts of the interview reflect the same thread of
meaning, even though different words are used.
Repetition - key words, phrases, sentences are repeated in at least two parts
of the interview.
Forcefulness – significant changes in volume or inflection or positioning during the interview.

The notes taken during the interview were analysed for potential answers to the research questions. The first time a theme such as client experience or transparency, or performance is noted, it was highlighted with a brief description of the theme. Major themes were then identified by the frequency of occurrence in all the various interviews.

In this research the themes overlap to some extent but taken as a whole, it provided a comprehensive overview of the interpretations of the participants' perception of the Corporate Initiative in terms of the areas of focus for the interview. This research analysis does not seek to make grand claims concerning this type of qualitative analysis as the process was merely seeking to identify and understand the underlining factors that had influenced the relationship between QM practices and organisational performance within the firm. The major themes were – organisational alignment, performance measurement, transparency, organisational culture, and benchmarking.
Chapter 5: Discussion of Results

5.1 Data Analysis Results and Discussions

This chapter discusses the results from the statistical analysis of the survey data, starting with an overview of the overall summary of the correlation analysis. This is then followed by a detailed discussion of the impact of QM dimensions on the five organisational performance measures selected for this research study.

It has been argued earlier that the relationships between broad QM dimensions, such as 'leadership', and performance disguise more than they reveal and that it is important to uncover the specific elements of QM dimensions which are linked to performance. Therefore, a correlation analysis was conducted at a level below the major groupings of the QM dimensions in order to identify these more finely grained relationships between specific QM elements and selected business performance indicators. These correlations are presented below.
<table>
<thead>
<tr>
<th>Sales Revenue</th>
<th>Net Income Before Tax</th>
<th>Operating Leverage</th>
<th>Employee Satisfaction</th>
<th>Likelihood to Recommend</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Client feedback</strong>&lt;br&gt;(R=.332) **</td>
<td><strong>Client Feedback</strong>&lt;br&gt;(R=.376) **</td>
<td><strong>Quality improvement approach</strong>&lt;br&gt;(R=.275)</td>
<td><strong>Leadership objective</strong>&lt;br&gt;(R=.386) **</td>
<td><strong>Leadership promotion</strong>&lt;br&gt;(R=.275)</td>
</tr>
<tr>
<td><strong>Total solution approach</strong>&lt;br&gt;(R=.285) **</td>
<td><strong>Documented deficiency</strong>&lt;br&gt;(R=.290) **</td>
<td><strong>Training needs &amp; contribution</strong>&lt;br&gt;(R=.448) **</td>
<td><strong>Leadership promotion of quality</strong>&lt;br&gt;(R=.284)</td>
<td></td>
</tr>
<tr>
<td><strong>Employee support</strong>&lt;br&gt;(R=.278)</td>
<td><strong>Learning tool and client planning</strong>&lt;br&gt;(R=.339) **</td>
<td><strong>Cross functional teams</strong>&lt;br&gt;(R=.336) **</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Client Satisfaction measure</strong>&lt;br&gt;(R=.278)</td>
<td><strong>Cross functional teams</strong>&lt;br&gt;(R=.314) **</td>
<td><strong>Employee support</strong>&lt;br&gt;(R=.269)&lt;br&gt;(P&lt;.050)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Employee support</strong>&lt;br&gt;(R=.362) **</td>
<td><strong>Client experience</strong>&lt;br&gt;(R=-.303) **</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Improvement suggestion</strong>&lt;br&gt;(R=.286) **</td>
<td><strong>Performance information acquired</strong>&lt;br&gt;(R=.309) **</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ongoing education</strong>&lt;br&gt;(R=.280)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** Statistically significant @ \(p<.05\) level
The table above is a summary of the correlation analysis, showing all the main positive and negative correlations between the core QM elements and the objective performance measures selected for this research study, where \( p < .05 \) level or close to that level (Sig. 2-tailed). The performance measures are the objective business performance indicators relating to the company.

In the table (see appendix E for details), the columns show those QM elements that are related to a particular measure of performance. Those with double asterisks denote where the relationship is statistically significant at \( p < .05 \) and are therefore considered as critical contributors to the relationship, that is making a unique contribution to this relationship between QM practices and organisational performance.

In the resulting summary above, column one shows that sales revenue, an organisational performance measure was positively correlated with four QM elements. This implies that variance in the sales revenue performance can be attributed in part to the QM elements. The significant values however, (Sig. 2-tailed \( p < .05 \)) of the correlation coefficient, shows the extent to which correlations reflect a substantive impact of the QM dimensions on performance. In the above result only two QM dimensions had positive coefficient correlations with sales revenue that could be considered statistically significant. It can therefore be concluded that sales revenue, a performance measure, is influenced by only two QM dimensions – Client feedback and Total solution approach- in this research study.

The second column in the table shows that there is a positive correlation between net income before tax (NIBT) and seven QM dimensions. This suggests that the more these QM elements are practiced in the firm the better the performance measure of NIBT will be. Six of the seven QM dimensions had a correlation coefficient that was statistically significant \( (p < .05) \) and therefore to improve NIBT only the six QM dimensions will be considered to be of importance.

The third column shows a positive correlation between operating leverage and five QM elements. Of the five, three had a positive correlation coefficient that was statistically significant and one QM dimension had a negative
correlation coefficient with the performance measure that was also statistically significant (p<.05). The implication from this is that where there is a need for improvement in the operating leverage performance of the business these four QM elements will be the key drivers of such improvement result especially the QM elements - training needs and contribution - , where both the correlation coefficient and the value of the correlation is very strong. The negative correlation value implies that the less of this QM dimension the better the operating leverage performance. The last two columns show the correlation coefficients between the QM dimensions and the non financial performance measures - employee satisfaction and likelihood to recommend. The result shows that of the two QM elements used in this study, only leadership objective had a positive correlation that was statistically significant. Although the other performance measure, 'likelihood to recommend', had a positive correlation with a QM dimension, leadership promotion, it was not statistically significant (p<.05). The implication here is that the non financial performance measures were less likely to be influenced by the QM elements used in this research as only one QM element had any impact on the relationship implying that there may be other factors not considered in this research that droves any improvements in the period considered for this study.

The summary table above therefore shows that the impact of specific QM elements on performance was mixed, even though overall there was a positive relationship between QM and organisational performance. Pallant (2001) has cautioned that the size of the sample has a great deal of influence on the significance of r. She continued further to state that where N=30 for example, there may be a moderate correlation that does not reach a statistical significance at the traditional p<.05 level, compared to when N=100, where a small correlation may be statistically significant. In the results above where the N=40, there were some small to moderate correlations that did not reach a statistical significance level at p<.05. Pallant recommended the inclusion of the coefficient of determination of
such correlations in determining which variables to be considered as critical. This is the reason for showing some of the small correlations in the table above even though they were not statistically significant as factors to be considered for future research where the population sample is greater than 40.

In addition to the consideration given to the QM elements that were statistically significant as denoted with an asterisk in the summary table above, the strength or value of the correlation coefficients were also examined under the guidelines recommended by Cohen (1988) to ensure that the conclusions arrived at from the analysis were valid. His recommended guidelines were as follow:

1. Where r = .10 - .29 the correlation will be regarded as small.
2. Where r = .30 - .49 it will be regarded as medium.
3. Where r = .5 - 1 will be regarded as large.

Thus in addition to the significant value of the QM elements both the strength of the correlation coefficient and the coefficient of determination were also taken into consideration in the deciding the factors that impact the relationship between QM practices and organisational performance. The mixed result in terms of the impact of QM practices on the performance measures supports Foster’s (2007) findings in his research study. According to him, QM practices has a positive impact only on some key organisational performance measures such as earnings before Income tax but not on others such as sales growth.

The independent variables (QM practices) in this research study were found to be positively correlated with the performance variables (Dependent variables), though not at the same level i.e. small, medium or strong, of impact for all of them. The coefficient of determination also found that although these QM elements were statistically significant, they could only explain a proportion of the variances observed in the performance of dependent variables. Some of the performance variances explained was significant e.g. over 60% as in the case of NIBT, while only about 10% of the variance were explained in others such as employee satisfaction.
consideration of the size of the value of the correlation (r), the significant value and the coefficient of determination were therefore influential in the decision process of concluding which QM elements were to be considered as important influence on organisational performance for this research study. The analysis however did not focus on the interaction between the independent variables, which could be the subject of future studies but rather on the interaction between the independent and dependent variables and how that interaction impacted the organisational performance.

In conclusion the summary table of the correlation coefficients between the QM elements and the performance measures above shows that financial performance measures within the company were influenced by three main QM practices:

a. Client Focus
b. HR Capabilities and Learning
c. Internal culture and organisational alignment

Non-financial measures were shown to be associated with one major QM practice:

a. Leadership and commitment

Leadership and commitment is considered essential for any successful execution of a corporate initiative such as the deployment of QM practices. The essential role of leadership in ensuring the success of corporate initiatives is only possible where leadership demonstrate the ability to manage conflicting outcomes which any major organisational initiative tend to create (Fredberg et al, 2008).
SALES REVENUE

Table 5.1.2 Correlation coefficient analysis result between Sales revenue and QM dimensions

<table>
<thead>
<tr>
<th>QM Dimensions</th>
<th>Correlation(r) Coefficients</th>
<th>Significance level P&lt;.05</th>
<th>Coefficient of Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client Feedback</td>
<td>.332</td>
<td>**</td>
<td>11%</td>
</tr>
<tr>
<td>Client satisfaction</td>
<td>.278</td>
<td></td>
<td>7.7%</td>
</tr>
<tr>
<td>measure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employee support</td>
<td>.278</td>
<td></td>
<td>7.7%</td>
</tr>
<tr>
<td>Total solution</td>
<td>.285</td>
<td>**</td>
<td>8.1%</td>
</tr>
<tr>
<td>approach</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** Statistically significant @ p<.05 level

Sales revenue is the total amount of money earned by the firm from the sale of all its financial products and services during the time frame of this research study. The growth in sales revenue was used as a proxy for increased customer base or greater acceptance of its products and services by customers within its market. In either case there was a lot of emphasis by the unit of study on growing its revenue base not only to enhance its operational leverage measure but also as a proxy for growth in customer base and its attendant market share improvement. This measure of performance is also one of the key performance indicators reported in its quarterly and annual company reports to the investors. In adopting the Corporate Initiative, the unit of study set some specific revenue growth target. The attainment of this target was one of the measures of success for the organisation and the initiative. The target was a revenue growth of $1.5B or more over a three year period and as at the end of the 2007 financial year this target had been achieved (See Appendix C).

From the analysis result table above (table 5.1.2), there were four QM variables that had a small to modest positive correlation with the sales revenue growth. Only two QM dimensions (Client Feedback & Total solution approach) were statistically significant (p<.05) however.
In total the four QM dimensions explained 35% of the variance in the revenue performance variable. The two statistically significant variables – client feedback and total solution approach – explained about 19% of the variance in sales revenue performance measure.

The client feedback, which has a positive medium correlation coefficient with sales revenue, implies that the more the client feedback is considered and included in the organisational process, the more the growth in the sales revenue. The recognition by the organisation of the importance of client feedback on business performance is demonstrated by the inclusion of the measure in the individual performance measure of the organisation as well as the establishment of a client experience council across the various business units within the business and adds credence to the findings of the correlation analysis result. These client experience councils across the various business units were created to ensure that client feedback were regularly discussed and any remedial action implemented as part of a total solution such as the improvement project that was initiated for new account opening. This particular project was initiated after a review of the client experience and feedback in terms of the processes and waiting time for opening a new account. The findings of the review led to the implementation of a quality project which resulted in a significant improvement in the process by about 40%. The client feedback results are also closely linked to compensation which has had an impact on the performance culture. Currently, there is a process whereby the client feedback scores on various management practices are closely monitored and compared to industry standards with a percentage of staff compensation linked to the scores obtained.

The conclusion from the table above therefore, is that sales revenue performance variable was influenced by two QM dimensions that were statistically significant and explained 19% of the variance in the performance measure. When the other QM dimensions not statistically significant are included, the four dimensions still only explained a limited percentage (35%) of the variance in the performance measure.
This limited variance in the performance explained by QM dimensions implies that there were other factors not analysed in this research study that may have had an impact on the revenue growth. The interview process provided an avenue to explore what these other factors could possibly have been. The other factors raised during the interview process included such factors as improved branch network and location, centralisation of accountability for sales and distribution strategy, improved service delivery and incentive based programs such as compensation. It was understood during the interview process that these factors were strong contributors to the growth in revenue during the period under study. An example of how such factors contributed to the growth was the implementation of a tailored branch customer strategy. This gave the branch employees autonomy to make decisions resulting in a closer relationship with the customers. This according to the interviewees resulted in a quicker resolution of customer concerns and issues leading to an improvement in customer satisfaction, a critical requirement for improved sales revenue.

The interview process therefore provided additional insight into the other possible factors which contributed to the improvement in the sales revenue. The existence of such additional factors is supported by Foster (2007). According to Foster there are many exogenous macroeconomic factors that can influence revenue growth and in the words of one of the interviewees for this research, “factors such as investment in branch growth, better use of our assets, and enhanced suite of products played a significant role in our revenue growth over the last three years”.
**NET INCOME**

Table 5.1.3 Correlation coefficient analysis result between NIBT and QM dimensions

<table>
<thead>
<tr>
<th>QM Dimensions</th>
<th>Correlation(r) Coefficients</th>
<th>Significance level@ p&lt;.05</th>
<th>Coefficient of Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client Feedback</td>
<td>.376 **</td>
<td>**</td>
<td>14%</td>
</tr>
<tr>
<td>Learning tool and planning</td>
<td>.339 **</td>
<td>**</td>
<td>11.5%</td>
</tr>
<tr>
<td>Employee support</td>
<td>.362 **</td>
<td>**</td>
<td>9.9%</td>
</tr>
<tr>
<td>Cross functional teams</td>
<td>.314 **</td>
<td>**</td>
<td>7.8%</td>
</tr>
<tr>
<td>Ongoing education</td>
<td>.280</td>
<td></td>
<td>8.2%</td>
</tr>
<tr>
<td>Improvement suggestions</td>
<td>.286 **</td>
<td>**</td>
<td>13.1%</td>
</tr>
<tr>
<td>Deficiency documented</td>
<td>.290 **</td>
<td>**</td>
<td>8.4%</td>
</tr>
</tbody>
</table>

** Statistically significant @ p<.05 level

Net income before tax (NIBT), an important measure of company’s profitability, represent the total earnings of a company and is calculated by taking the total revenues and adjusting for the cost of sales, and other expenses incurred in the period before tax is deducted (Brealey, R., Myers, S. 1991). The unit of study for this research wanted to improve its profitability such that it can be ranked among the top-quartile players within the financial institution industry in North America, as this is its benchmark for this financial performance measure. As with revenue growth, NIBT growth targets were set for the organisation for the period and over the last three years NIBT has grown by over 35%.

The NIBT goal that was set for this measure by the unit of study was an improvement of $2.8 Billion over the period of review, and the results at the end of the 2007 financial year, again shows that the target was achieved (Appendix C).
The correlation analysis result table above shows that seven QM dimensions had a small to medium positive correlation with net income. Six of the independent variables (excluding the ongoing education variable), had a statistically significant correlation with the dependent variable. A coefficient of determination was calculated to determine how much of the variance in net income increase can be explained by these six QM elements. They accounted for 65% in total, which is quite a substantial amount of variance explained. This suggests that these QM dimensions are very critical to net income performance measure. Three of these QM dimensions – Client feedback, learning tool and planning (using company performance results as a tool for employee learning and client planning), and improvement suggestions (improvement suggestions arising from client experience) - were particularly important in their level of impact on the performance measure as they explained 39% of the variance in the dependent variable. Some of the improvement focus of the organisation lends credence to the findings of the analysis above. An example of such improvement projects was the contact centre transformational projects for servicing clients and the mortgage application processing project confirmed the analysis results.

The other QM dimension from the analysis that has influenced income growth is the employee support. This is the support received by the employees throughout the period of organisational changes especially in the form of an open and honest communication. The emphasis placed on open and honest communication including the various tools and processes instituted provides confirmation to the findings from the analysis. Communication is a critical tool during periods of change within the organisation. A number of communication tools and processes were put in place to ensure that employees were well informed of the business strategy such as the resource rationalization that needed to be done following the decision to realign and restructure the entire organisation to enhance the focus on the client. Employee surveys were conducted at regular intervals, a CEO employee round table implemented where the CEO shares his thoughts on the organisational direction with employees, and town-hall meetings held
at all levels. These processes ensured that not only were the employees fully informed but provided them with the opportunity to ask questions about the issues of interest, as well as gave the organisation the opportunities to obtain feedback from the employees on the initiative. The feedbacks from these meetings were incorporated into the execution process of the Corporate Initiative. The contribution of this type of communication strategy to employee’s motivation is supported by the study conducted by Mitchell (2002). He identified organisational motivation as one of three factors affecting organisational performance. This he said comes from the employee’s ability to understand and integrate the company’s mission, alignment between the company’s culture and its strategy among other things. This understanding is what creates employee engagement (Coffman, 2004). According to the author, an employee is considered engaged when they work with a passion and feel a profound sense of connection to their organisation through a good understanding of the organisation. He concluded that this affects their satisfaction and consequently their performance within an organisation. This type of connection comes in part from the communication structure within the organisation especially during times of organisational changes. The communication structure provides the employee with an avenue through which he/she can better understand the organisational change issues or challenges and how they can effectively contribute, or how their employment or career may be impacted. Coffman concluded therefore that as employees feel engaged, their contribution to the organisation will be greatly improved and hence better organisational performance.

In conclusion, the QM dimensions identified in the table above (table 5.1.3.) as impacting NIBT growth is supported by the company’s business improvement approaches discussed above. There were other factors however, that were not considered in this research study but explored through the interview process, such as tax changes that have also contributed to the income growth. This can be regarded as part of the 35% variance that was unexplained by the six statistically significant QM
dimensions above. One of the interviewee noted that "the change in the tax regulation provided us some significant income opportunity but we still had to do other things to ensure we were in the top quartile of the industry".

OPERATING LEVERAGE

Table 5.1.4 Correlation coefficient analysis result between operating leverage and QM dimensions

<table>
<thead>
<tr>
<th>QM Dimensions</th>
<th>Correlation(r)</th>
<th>Significance level</th>
<th>Coefficient of Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality improvement approach</td>
<td>0.275</td>
<td></td>
<td>7.6%</td>
</tr>
<tr>
<td>Training needs and contribution</td>
<td>0.448</td>
<td>**</td>
<td>20.1%</td>
</tr>
<tr>
<td>Cross functional teams</td>
<td>0.336</td>
<td>**</td>
<td>11.3%</td>
</tr>
<tr>
<td>Client experience scores in assessment</td>
<td>-0.303</td>
<td>**</td>
<td>9.5%</td>
</tr>
<tr>
<td>Performance information acquired</td>
<td>0.309</td>
<td>**</td>
<td>9.2%</td>
</tr>
</tbody>
</table>

** Statistically significant @ p<.05 level

This is the third measure of financial performance used in this research study, and it is defined for the purposes of this study as the difference between revenue and expense growth rate. Prior to deploying the Corporate Initiative in 2004, the operating leverage was negative (-2%), which meant that the expense base of the firm was growing faster than the revenue base, a situation that was not sustainable if the business was to remain profitable. This led to the company setting a target of 3% or more as a goal after benchmarking against the performance of peers in the top quartile within the industry globally. From the data set analysis (table 5.1.4) five QM dimensions were found to have a positive correlation coefficient of which only four of these were statistically significant, meaning that the association was not accidental and thus an increase in these variables will results in an increase in the performance measure. The strength of the correlation ranged
from medium to large. Of these four QM dimensions that were statistically significant one was negatively correlated to the performance measure implying an inverse relationship. The four statically significant variables in total explained 50.1% of the variance in the operating leverage performance measure.

One QM dimension (employee training needs & the consideration of their contribution in the development of the initiative) had a very strong positive correlation coefficient with the dependent variable and accounted for 20% of the variance in the dependent variable. This QM practice relates not only to the various types of training provided but also to the inclusion of the employees contribution capabilities in developing and executing the initiative. This consideration for the contribution capability of the employees is what Montes et al (2001) described in his quality model as the fit between the quality content and the organisation. In other words a successful deployment of quality practice must take into account the capabilities of the employees to ensure that the quality content can be relevant to the organisation.

The quality and quantity of the training provided had a defined approach especially the process of determining the training requirements. The methodical approach adopted by the firm especially towards training needs bolstered the employee performance which in turn resulted in a better organisational performance as measured by the operating leverage. The resultant improvement in business performance from investment in training is also supported by the resource based view (RBV) and Knowledge based view (KBV) of the firm (Foss, 1997; Linderman et al, 2004). The underlining assumption of both theories is that improvement in individual learning process or knowledge base has a positive correlation with organisational performance, thus suggesting that as individual learning or knowledge improves, it impacts the general learning within the firm and consequently results in superior organisational performance due to the way knowledge is then applied to work. The organisation instituted a leadership skills assessment process to determine its leadership capabilities, gaps and the
training needs required for ensuring a successful execution of the Corporate Initiative. This process of assessment also became part of the process for resource allocation or placement in the organisation. An example of such a training process was that developed for the customer contact centres.

The contact centres are regarded as the “front door” to the company’s distribution channels as it provides the opportunity to speak to a large number of clients on a daily basis. This daily volume of client contact provides a significant opportunity for the firm to impact client experience and differentiate itself from the competition. The transformation training began with a benchmarking study to identify the gaps within the operation. One such gap was identified as being the area of resource recruitment and training. The result of the project led to significant improvements in performance measures such as the call abandon rate dropping from 9% to 2.4%, percentage of calls answered in 20 seconds increasing from 43% to 81%, and average speed of answer reduced from 180 to 19. All these improvements have led to more than a 25% improvement in efficiency and a significant reduction of staff turn-over rate (2007 Strategy Update report).

It is however very interesting to note that the QM dimension of client experience scores and improvement suggestions’ variable was negatively correlated with operating leverage measure of performance, implying an inverse relationship. The implication of this type of relationship is that as one increase or decreases, the other decreases or increases so that as more of the client experience improvement suggestions are implemented, operating leverage performance will decrease. This was due in part, as understood from the various interviews, to the fact that most of the improvement arising from client experience suggestions needed some financial investments or expenditure which resulted in higher expenses. One example of such client experience improvement was the need for localised service delivery. One approach adopted by the unit of study for meeting this improvement was a significant financial investment in branch network expansion and improvement (over $40 million in three years). One senior executive in the interview process summed up the strategy saying “it was all about our
retailing strategy which is to ensure that we establish new locations as competition shifts to local market if we are to continue to be a leader in the market". While this improved client service experience, it did not improve the operating leverage since it increased the expense base in the current period. As seen from appendix C although the operating leverage has improved since the deployment of the initiative, it is still below the target of 3% set as a goal, but infrastructural capital investments may have contributed to this lower number as discussed in the interviews.

**EMPLOYEE SATISFACTION**

**Table 5.1.5** Correlation coefficient analysis result between employee satisfaction and QM dimensions

<table>
<thead>
<tr>
<th>QM Dimensions</th>
<th>Correlation(r)</th>
<th>Significance level</th>
<th>Coefficient of Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership objective</td>
<td>.386</td>
<td>**</td>
<td>15%</td>
</tr>
<tr>
<td>Leadership promotion</td>
<td>.284</td>
<td></td>
<td>8%</td>
</tr>
</tbody>
</table>

**Statistically Significant @ p<.05 level**

The table above shows that the employee satisfaction performance variable in this study was influenced by two QM dimensions - Leadership objective i.e. inclusion of quality objectives in the objectives of the Corporate Initiative when management are setting goals and evaluating success; and Leadership promotion i.e. visible promotion by the leadership of quality tools. Only one of them - leadership objective - however had a positive correlation coefficient with employee satisfaction which was statistically significant. This QM dimension explained 15% of the variance in the dependent variable. This means that there were other factors which although not considered in this research study influenced employee satisfaction performance measure.

Employee satisfaction is an attitudinal variable, regarded as a global feeling about the job or as a related constellation of attitudes about various aspects or facets of the job (Zhang 2000). It is not a static state but is subject to influence and modification from forces within and outside an individual, which may be his or her own personal characteristics and the
immediate working environment such his or her relationship with the supervisor or peers (Baran, 1986; Lam, 1995). Employee satisfaction therefore according to Bulgarella (2005) is the result of a holistic approach that involves strategic steps such as viewing employees as the primary source of competitive advantage, identifying the root causes of dissatisfaction among employees or developing meaningful employee involvement and effective communication channels. Studies on organisational performance have also validated that when employees are satisfied, it has an influence on the financial performance of the firm as they are more committed and engaged with the organisation and consequently better performance (Barber et al, 2006). The European Model for Total Quality management (1994), the Deming Prize (1996), and the American Baldrige Quality Award (1999) have all considered employee satisfaction as an important factor in their selection of award winners. Ted (1996) stated that employee satisfaction is as important as customer satisfaction, and Ishikawa (1985) stated that a firm whose members are not happy and cannot be happy does not deserve to exist. Further empirical evidence of this relationship between employee satisfaction and customer satisfaction, was also be found in the studies by Harter, Schmidt & Hayes (2002).

The findings from the correlation analysis of the data set for this study (table 5.1.5) is supported by various studies on the role of leadership in employee satisfaction including Hee, Y and Beatty (2001), Leimbach, M. (2006), Kaye, B., Jordan-Adams, S. (2002) who all concluded that when leadership has the skills to foster employee satisfaction, they create a higher level of fulfilment in their employees which directly impact the bottom line. In this research study, the unit of study for example, empowered their employees to deal with customer issues as the local environment dictated. This autonomy or empowerment in developing customer solutions contributed to a significant reduction of client dissatisfaction as well as a high employee satisfaction measured by the employee opinion survey of 2007 which improved by about 10 percentage points over the previous year. It is also worth noting that employee satisfaction is a measure that is
regularly monitored through the employee opinion survey carried out annually. Not only is the level of satisfaction measured through a combination of responses from certain group of questions but any potential negatively impacting factors are also carefully analysed.

The visible promotion of the use of quality tools to solve client issues and business challenges was another QM dimension which although was not statistically significant had a small positive correlation with the non financial performance measure of employee satisfaction.

An example of this was a project to improve first call resolution in the contact centres. The challenge for the business was that clients were calling more than once about the same issue costing the business an estimated amount of over $4 million annually. This repeat calls placed a severe burden on the process. Since the completion of the project there has been a 13% improvement in overall client satisfaction and a 14% increase in appreciation for business as well as employee satisfaction. In conclusion, how employees feel about their job has an impact not only on their work experience but also on tangible business outcomes such as profit, customer satisfaction and sales (Nilsson et al, 2001). The conclusion from this correlation analysis shows that employee satisfaction as a performance measure, while influenced by the two QM dimensions identified in the table above, is also open to influence from other sources or factors not considered in this research study such as what Easterlin (2003) described as the economist view. This is one where the individual's satisfaction is influenced by material conditions especially growth of income. Satisfaction on the job is also influenced by external factors such as off the job experience. The frustrations and difficulties people face in their personal lives such as separation or divorce have been shown to contribute to a general decline in employee job satisfaction. This is what Easterlin also described as the setpoint model, where each individual is thought to have a setpoint of happiness given by genetics and personality.
Another concept is employee "engagement". According to Coffman (2004) when an employee is engaged they work with a passion and feel a sense of connection to their organization and this affects their satisfaction. In conclusion while the organisation in this research study did not set a specific target for employee satisfaction it is nonetheless a key measure that is regularly focused on by the business through its annual employee opinion survey, the results of which are presented to the board of directors. The results from the 2007 survey shows the enterprise score for engagement at 87% total favourable representing a 9 percentage points above its benchmark of major competitors in the industry.

The interview process also provided some understanding of what other factors may have impacted employee satisfaction. This included the compensation and other employment benefits such as bonus composition and level. According to one interviewee "Our compensation structure and package is one of the best in the country and so employees generally are satisfied which is why our average tenure is at least 15 years.” This view is akin to what Easterlin (2003) described as the economist view.

**LIKELIHOOD TO RECOMMEND**

**Table 5.1.6** Correlation coefficient analysis result between Likelihood to recommend and QM dimensions

<table>
<thead>
<tr>
<th>QM Dimensions</th>
<th>Correlation(r)</th>
<th>Significance level</th>
<th>Coefficient of Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership Promotion</td>
<td>.275</td>
<td>P&lt;.05</td>
<td>14.9%</td>
</tr>
</tbody>
</table>

This non financial performance measure is defined for this study, as the willingness of customers to recommend the company, its product or services to another potential customer. The willingness to recommend is assumed to be based on the level of satisfaction experienced by the customer. Likelihood to recommend is therefore used as a proxy for customer satisfaction index by the unit of study in terms of its suite of products and service delivery. Anderson et al (1994) defined customer satisfaction as the degree to which
the firm’s customers continually perceive that their needs are being met by the firm’s products and services which could be transaction specific or cumulative.

From a transaction-specific perspective, customer satisfaction is viewed as a post-choice evaluative judgment of a specific purchase occasion. By comparison, cumulative customer satisfaction is an overall evaluation based on the total purchase and consumption experience with a product or service over time. Consequently, customer satisfaction is a more fundamental indicator of the firm’s past, current, and future performance. It is the customer’s feelings of pleasure or disappointment resulting from comparing a product’s perceived performance (or outcome) in relation to his or her expectations. Customer satisfaction is therefore a function of perceived performance and expectations. If the performance falls short of the expectations, the customer is dissatisfied. If the performance matches the expectations, the customer is satisfied. If the performance exceeds the expectations, the customer is highly satisfied or delighted (Naumann and Giel, 1995). The attainment and maintenance of satisfactory levels of customer satisfaction is today a fundamental determinant for business health, growth, and economic viability (Feigenbaum, 1991). The Malcolm Baldrige National Quality Award (1999), for example, considers customer-focused results the most important in its criteria for selecting award winners. For the European Foundation for Quality Award (1994), customer satisfaction is the most important in terms of points assigned in determining the award winners as well. According to Fornell et al. (1996), customer satisfaction is a new type of market-based performance measure for firms. It provides an important measure of the firm’s past and current performance, as well as future financial health.

Customer satisfaction represents a new means of evaluating performance for the modern firm and the modern economy. Marketing scholars and practitioners have long recognized that customer satisfaction is an important and central concept, as well as an important goal of all business activities (Zhang, 2000).
In the correlation analysis result for this research study (table 5.1.6) only one QM practice – Leadership promotion - was found to have a positive correlation with the dependent variable, explaining 16% variance in the performance of the dependent variable even though it was statistically not significant, meaning that the association may have been accidental. The strength of the association in terms of the percentage of the variance in the performance measure explained as measured by the coefficient of determination is very minimal (16%). This lends further credence to the suggestion that there were other significant factors that were more influential on the performance of the measure. This view was in part supported by the responses obtained during the interview. The interviewees revealed that the key approach used by the firm to improve its likelihood to recommend performance measure was through differentiated client service experience. In a survey conducted for the firm in 2006, customer service was identified as a critical driver of both customer profitability and satisfaction. For the firm, the contact centres provided the most opportunity for a differentiated client experience as 75% of customers in a survey said that would give more business to a company based on a great contact centre experience. In an industry report for this performance measure in 2007, the firm was placed in the top quartile, a significant improvement from previous years when it was in the mid range half in terms of performance position in the industry. In the industry study between 2004 and 2006 the likelihood to recommend for the firm improved by 4%.

In the words of one of the interviews “improvements in our product suite and services no doubt contributed to our rating improvement among our peers”. The image of the company especially the focus on the position of a trusted advisor as well as investment in the frontline were the other factors identified during the interviews as having had an impact on the improvement of the performance measure.

The conclusion under this performance measure is that QM dimensions had very little effect on its improvement as other factors such as company image, frontline investment, and product suite were observed from the
5.2. CONCLUSION

The overall conclusions from the correlation coefficient analysis results are that first, QM dimensions have a significant and strong effect on organisational performance. The results also highlight however that even though there is a positive correlation between the QM dimensions and business performance measures, some of the QM dimensions were found to be statistically insignificant, implying that the relationships in some instances could have been accidental. Secondly, the analysis results showed that the impact of the QM dimensions tends to vary depending on the performance measure. For example employee support has a high impact on NIBT performance measure compared to operating leverage or sales revenue measures. Thirdly, the coefficient of determination of these correlations showed that QM dimensions can only explain a proportion of the total variance in the performance measures, with the highest being 65% for the NIBT and 15% for employee satisfaction. The inability of the QM dimensions to explain the total variance in performance meant that there were other factors that could have impacted the performance measures.

The interview process was able to provide some understanding as to what these other factors were such as localised service delivery, local customer service strategy, incentive based compensation structure, and tax changes and how they influenced the organisational performance during the period under study. The relationships that emerged from this data-set analysis are supported by previous studies on QM practices and organisational performance. This includes the studies done by Eason and Jarrell (1998), who reviewed the financial results of 108 firms that started QM programs between 1981 and 1991. They found that these firm’s stocks outperformed those of a controlled group. Another study is that by York and Miree (2004) who studied the links between QM and financial performance. They too found that firms with QM practices outperformed other firms who never won the Baldrige quality award. It is therefore an expectation that QM
practices should result in improved financial performance as it emphasises reductions in cost and increases in measures such as rolled-throughput, leading to improved cash flows, earnings and operating leverage (Foster, T, 2007). In addition to financial performance measures, other researchers such as Montes et al (2001) have focused on non-financial performance measures such as employee satisfaction, organisational learning, customer satisfaction and process efficiency. Improvements efforts through QM practices according to Montes et al should help a company to grow as profitability improves. Often this could result in a more productive use of resources such as human resources, through the creation of a learning organisation hence employee satisfaction and a customer base willing to recommend the firm to others. Figure 5.2.1 below shows a summary of the key QM practices in this research study that were associated with business performance during the period 2004 – 2007.

**Figure 5.2.1 Summary of Data Analysis result**
Chapter 6 Research Conclusions

6.1 General research conclusions

This research study has attempted to contribute to the understanding of organisational performance improvement within a financial services organisation when QM practices are deployed alongside other management practices. The study followed the framework used by other scholars in the QM field as seen in the literature reviewed, such as Hendricks & Singhal (2001b) and Adam et al (1997), who demonstrated through the use of survey questionnaire that there is a positive correlation between successfully deployed QM practices and organisational performance.

A review of these literature showed that most of the evidence on which this conclusion regarding the existence of a relationship was based, was derived within the manufacturing industry context where quality management was the main strategic goal. Motivated therefore by the need to investigate how the deployment of QM practices affect organisational performance in a financial services industry, where QM was not the main strategic goal, an empirical research study was carried out within a Canadian financial services group operating in a diversified and competitive market, relying among other things on customer service quality, comprehensive product suite and operating leverage. Three specific research questions were formulated to address the goal of understanding such a relationship within the Canadian financial services group. These were:

- Is there a relationship between QM practices and a firm’s performance?
- What elements of QM practices were most crucial in the relationship?
- What contextual factor(s) influence the strength of the relationship?

Forty (40) senior executives in one of the largest Canadian financial services group were successfully invited to participate in the study with a detailed self administered survey questionnaire and followed by a semi-structured interview, adopting some of the methods observed in the literature reviewed. The resulting construct and the data analysis output are supported by other models and findings from other empirical studies reviewed in the literature for this research study.
In the Canadian group studied, the deployment of QM practices was as a result of the launch of a Corporate Initiative, and was viewed as an additional method for improving performance. Although the emphasis of the Initiative was on customer focus and the resulting management practices were not labelled as QM, some of the execution practices adopted by the organisation for the Initiative however, such as data and fact based decision making, were found to be the same as the core QM practices deployed in most of the firms that have been shown to have embraced and deployed QM practices within their organisation e.g. Motorola or Xerox. The deployment of QM practices within the context of the firm in this research study was therefore seen as an additional tool in attaining its Corporate Initiative goal, and not as its main strategic performance improvement tool.

The research method used for the study was a combination of quantitative and qualitative approaches. The quantitative approach involved the use of statistical tools to analyse the data obtained through the survey questionnaire, and the output of the analysis addressed two of the three questions which this research proposed to examine as part of its primary objective. The qualitative approach for the research study involved the use of semi-structured interview process. This process provided an additional understanding of the factors not analysed in the study but that has played a role in improving business performance in the company such as Transformational Management Office (TMO).

The first question deals with the correlation between QM practices and the firm’s performance.

The evidence derived from this research shows that there is a positive correlation between QM dimensions and improvements in organisational performance, especially financial performance measures, during the period under study (2004-2007) measured by the improvements in NIBT, sales revenue, and operating leverage. The evidence also show that this correlation is particularly strong for the improvement in operating leverage and net income before tax as the QM dimensions explained over 50% of the variance in these business performance measures.
QM dimensions however, only had a moderate positive correlation with sales revenue and explained less than 50% of the variance in the dependent variable. This suggests that there may be other factors such as macro economic factors that had an impact on the measure but were not considered in this research study. These findings are supported by the results of other researches such as those of Hendricks and Singhal (2001b) Wrolstad and Krueger (2001) whose results also showed a correlation between QM practices and improvement in financial performance.

The correlation between QM dimensions and the improvements in the non-financial performance measures was at best mixed. The positive correlation was moderate although statistically significant for employee satisfaction while the likelihood to recommend measure although had a positive correlation with the QM dimensions, was not statistically significant. This implies that there were other major factors that led to the improvement of the non financial measure of performance outside those that were reviewed for this research study. This in a way also shows that deploying QM practices alongside other management approaches is critical in ensuring improvement in business performance as QM practices do not impact all the business performance variables in the same way or to the same extent.

The second research question relates to the core dimensions of QM practices that impacted the organisational performance (QM dimensions with asterisks in table 5.1.1. ), the findings from this study were found to support those from other research studies such as that carried out by Saad and Siha (2000), Aghazadeh (2002), Hansson (2003) and Prieto & Revilla (2006). They all concluded that there are key elements of QM practices such as committed leadership and employee engagement were critical to Improvement in organisational performance whenever QM practices were deployed in an organisation. This research study found eleven key QM dimensions to be critical in the relationship between QM practices and organisational performance improvements. The study by Montes et al (2002) supported the specific QM dimensions identified in this research as being key variables that had an impact on business performance. In addition when
reviewing the QM dimensions from this study in the context of previous researches on QM and performance, a confirmation of the selected dimensions and support for the findings is evident from the literature review.

The third research question addresses the issue of contextual factor and how it influences the strength of the relationship. Within the firm studied for this research, the key contextual factor adjudged through the interview process to have influenced the strength of the relationship especially between the QM practices and the improvement in business performance especially the financial measures, was the Transformational monitoring office (TMO). The role of this group was to enable an enterprise wide transparency and excellence in executing the transformational goals, as well as monitoring and reporting to the group executives all the major initiatives for performance improvement. The group’s main focus within the process was on the major enterprise wide business initiatives and drivers (at least $5Million) supporting growth as well as addressing the improvement of the enterprise cost base.

The interview process articulated the influential role of TMO and consequently its impact on the relationship between the QM practices and the financial measures of performance. According to Montes et al (2002) QM practices and content should fit with the business orientation and the environment in which the firm operate if there was to be any positive result. In this sense a right alignment between the business orientation, business environment and QM practices will produce the performance improvement desired by the firm. Contextual factors such as TMO represented an important fit between the QM content and the business orientation. As a result of this, it had a great influence on the organisational performance behaviour through the impact on individual characteristics such as performance attitudes and accountabilities even though it has been difficult to analyse in the data. Such contextual factor according to Hansson (2003) may be considered to be unique to each organisation due to, for example, historical event, type of business environment and the rational for deployment or business orientation. In the words of one of the interviewees
“TMO provided the enterprise view of performance accountability through common processes and metrics, ensuring performance transparency, while providing the necessary input for future changes in performance targets.”

In conclusion, the goals of this research study were addressed by both the quantitative and qualitative evidence provided to answer the three research questions. The evidence appears to confirm that QM practices contribute to the performance improvements of the unit of study during the period under review, especially financial performance measures. The company will need to continue to pay close attention to those QM dimensions—client feedback, cross functional teams, employee support, training needs and contribution by employees—found to have impacted the financial performance measures the most, if it is to continue to improve its performance on that measure. Leadership objective as a core QM dimension will also need to be a focus for the organisation, as the research analysis shows that it had an impact on the non financial variable especially employee satisfaction, which is a key contributor to performance as seen from various other studies.

The level of attention or focus on these QM practices will vary depending on the particular business performance measure requiring improvement. This variation of impact by performance measure arises from the statistical analysis of the questionnaire data which has shown that the contributions of these elements to performance improvement vary between the performance measures. For example Client feedback though significant for both revenue and NIBT, had a stronger impact on the Net income performance measure than revenue. Employee support is another QM practice which had an Impact on both NIBT and sales revenue but not at the same level of significance as it did for operating leverage. Finally is the cross functional teams’ QM dimension which was shown to be significant in terms of improving operating leverage but less significant in terms of NIBT improvement. These differences in the level of significance of the QM practices and the Impact on business performance measures are supported by other studies such as (Foster, T, 2007; Nilsson et al, 2001).
Thus while QM practices have been shown to impact business performance, their impact will vary between the business performance variables under review and so a firm need not expend equal resources on deploying all the QM practices but rather choose the QM dimensions that will provide the most impact, based on the business performance measure to be improved.

The research therefore, emphasised that it is at the level of specific QM practices that the association between QM and performance operates. For example, it is ‘Client feedback’ in particular, rather than ‘Client focus’ in general which is linked to performance. The relationship between QM dimensions and organisational performance must therefore, be understood at this more finely grained level.

6.2 RESEARCH CONTRIBUTIONS & IMPLICATIONS

The findings from this research study make five basic contributions to the management practices of QM deployment within a financial service organisation in Canada. The contributions can be summarised as follows:

1. QM practices can be deployed within an organisation as part of a broader management practices as QM dimensions were shown to be unable to explain all the variance in performance measures.

2. QM elements that impact organisational performance can differ between performance variables in terms of the strength of the relationship. This therefore means that firms need not have a uniform emphasis on all the QM elements across the organisation but should rather focus on those QM dimensions which are shown to be associated specifically with performance. The firm therefore need not excel in all the QM dimensions of quality to be successful in its deployment.

3. The impact of contextual factor must be carefully considered when deploying QM practices to ensure that the quality content has a good fit with the business orientation and environment. The study found that a contextual factor such as TMO made a positive contribution to the relationship between QM practices and performance improvement
because it fitted well with the business orientation and culture of the firm.

4. The research showed that consideration of employee training needs and contributions had the strongest correlation value and statistical significance and therefore impact on financial performance improvements over the last three years while leadership objectives had an impact only on employee satisfaction.

5. Operating leverage improvement and Client experience were shown to be negatively correlated. This has some implication for how an organisation will develop its client experience improvement strategy for the future. Where the findings from client experience require new investment for improvements in client impacting processes, this may lead to a negative impact on operating leverage. New ways of incorporating this new investment in the calculation of operating leverage needs to be considered.

6.3 Limitations and Future Potential Research

LIMITATIONS
The limitations of this study can be examined from the perspective of study scope, timeline for examining the improvements and the interview methodology.

In terms of the scope, the study was limited to one large financial services organisation in Canada with personal banking as the dominant business segment. This means that the findings may not be easily generalised to all other financial services organisation in Canada especially where personal banking is not a major business segment.

While most studies in QM practices such as the EFQM award and the MBNQA award have recommended five years as the time line for determining whether QM practices have had any sustainable impact on the business performance, this research has used a three year timeline in carrying out the study.
Another limitation relates to methodology in the use of the semi-structured interview and the analytical process of the interview notes. Due to the time constraint and availability of the interviewees, the use of the interview as a tool for verifying the data collected from the questionnaire was limited as the interviews were conducted in some cases at the same time as when the surveys were completed. In addition the thematic analysis was an abridged version as the interviews were not recorded before analysis rather the analyses was based on notes taken at each interview which could have limited the completeness of the analysis as not every single word would have been written down.

FURTHER RESEARCH
For enhancements of this work, further research might test the QM dimensions identified in two separate financial services organisations to validate their influence on performance, as the present study only focused on a single firm.

This study has provided a starting point for research on the effects of employee satisfaction on the likelihood to recommend and this will be a good area to explore in another study as the research study shows that there is a strong positive relationship between the two variables. The interrelationship between the QM factors themselves and how this interrelationship impact performance improvement should be an area of future interest. The current study has shown some interrelationship between the factors especially employee support and cross functional teams or client feedback and total solution approach.

Finally the positive relationship between leadership objective and employee satisfaction in influencing organizational performance will be an area that may need further exploration for the future especially a study of the level of employee satisfaction before and after the deployment of QM practices and what percentage of the variance in performance can be attributed to this change.
APPENDIX A


School Of Management
University Of Surrey, Guildford, United Kingdom.
2007
PART A. Survey on Client First Strategy and Quality Practices

Please answer the following questions below based on the Client First Strategy and practices in your company over the last three years, using the scales shown. You should circle the appropriate number as you determine applicable.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Don't Know</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Section 1. Leadership & Commitment

1. Management is actively involved in the development of client first strategy and client process improvement projects. 1. 2. 3. 4. 5.
2. Management treat quality as an important tool for executing client first strategy. 1. 2. 3. 4. 5.
3. The company's vision for client first strategy includes the use quality tools and practices. 1. 2. 3. 4. 5.
4. Quality objectives are tied into client first objectives when management sets goals and evaluates success. 1. 2. 3. 4. 5.
5. There is a visible promotion of the use of quality tools in solving client issues and business challenges. 1. 2. 3. 4. 5.
6. Client process improvement projects are part of the senior leadership team business discussions. 1. 2. 3. 4. 5.

Section 2. Client Focus

1. Client experience feedback is a critical input for internal process design and service standards in the business. 1. 2. 3. 4. 5.
2. The company regularly measure client satisfaction and develops a coherent executable plans to address areas of concerns. 1. 2. 3. 4. 5.
3. Client requirements are communicated throughout the business regularly and all employees understand them. 1. 2. 3. 4. 5.
4. New product introduction process includes a review gate on client feedback and input before launching. 1. 2. 3. 4. 5.
5. Client satisfaction results and actions are formally communicated to all employees on time. 1. 2. 3. 4. 5.
6. The measure of success for all projects includes impact on client process and overall quality of service.  

**Section 3. Human Resources (Capabilities & learning)**

1. Employees are encouraged to develop quality improvement approach in solving client issues.

2. Employee training needs and contributions are considered in the overall development of client first objectives.

3. Employees are fully aware of the business performance against client expectations and where to find the supporting data.

4. Company performance results are used as a learning tool and for client process improvement planning.

5. Employees are encouraged to work in cross-functional teams on client first improvement projects to improve team learning.

6. Ongoing client education (formal & informal) and in-house training for all employees is encouraged.

**Section 4. Internal Culture & Organizational alignment**

1. Decision making process within the business is based on data collected, carefully analysed and evaluated.

2. Client experience improvement suggestions are carefully considered and implemented if feasible regardless of who makes them.

3. Employees are well supported through times of change with an open and honest communication culture.

4. Organizational structures are developed to provide the best client experience and ensure clear accountability.

5. Client first project teams are always made up of different departmental personnel to ensure total solutions.
6. Annual assessment of senior leadership team performance has a client experience score included.  

Section 5. Process management (Client impacting processes)

1. There is a well defined framework for process improvement especially those processes impacting clients.  
2. All time based client processes are regularly reviewed and evaluated to ensure that they meet client needs.  
3. There are formal systems for acquiring process performance information in the company.  
4. Any deficiency identified in client process is documented and follow up actions developed and executed.  
5. All employees have easy access to all client process improvement tools within the company.  
6. All time based client processes are well articulated within the company and communicated to all employees.

Part B. Business Performance Indicators

1.1. Financial Performance Indicators

Deployment of Client First initiative has improved/increased the following:

a. Sales Revenue or Total sales increased by a minimum of at least 10% over the last three years.  
b. Net income before tax increased by a minimum of 10% over the last three years.  
c. Operational expenses improved by a minimum of 10% over the last three years.  
d. Operating leverage improved by a minimum of 10% during the last three years.
1.2. NON – Financial Performance Indicators

a. Employee training budget increased year over year by an average of at least 10% during the last three years.  
   1. 2. 3. 4. 5.

b. Employee turnover rate minus retirees and unavoidable losses such as maternity improved over the last three yrs by 10%.  
   1. 2. 3. 4. 5.

c. Retention of profitable customers during the three years period improved by over 20%.  
   1. 2. 3. 4. 5.

d. Timeliness of client service such as time to answer calls or credit decision improved by over 20% during the last three years.  
   1. 2. 3. 4. 5.

e. Employee satisfaction improved during the last three years by at least 20%.  
   1. 2. 3. 4. 5.

f. Likelihood to recommend scores improved by at least 20% during the last three years.  
   1. 2. 3. 4. 5.

Part C. RESPONDENT DETAILS

Please circle the appropriate answer

- Executive/Leadership role: Yes; No;
- Period with Company: <5years; >5 yrs <10yrs; >10 yrs;
- Business unit: CB;GTO;GF - Specify;CM;WM; Others;
Appendix B: Interview Topics

General Category

Corporate Initiative:
- Why/Driver
- Execution approach
- Impact on organisation
- TMO impact and development

Employee Involvement and Morale:
- Suggestion systems
- Employee recognition
- Employee opinion survey

Organisational culture
- Key drivers
- Performance drivers
- Vision and leadership

Organisational Structure:
- Senior management initiative team
- Customer centred alignment
- Impact of initiative
- Empowerment

Training:
- Leadership training
- Methods of training
- Planning & selection of training types
- Selection process of leaders for training
Customers:
- Customer Project-oriented teams
- Customer satisfaction measures reported
- Customer experience reports
- Customer listening posts

Performance Culture:
- Transparency and accountability
- Cross-functional teams
- Performance measures

Organisational QM Values:
- Written quality values & Internal quality consultants
- Formal benchmarking
- Quality project tracking reports

Organisational QM Processes and Tools:
- Problem-solving process
- Process maps
- Root-cause analysis
APPENDIX C: Financial Highlights of Unit of Study.

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136
<p>| Kendall's tau-b | sales revenue increase | Correlation Coefficient | Sign (2-tailed) p | N | net income increase | Correlation Coefficient | Sign (2-tailed) p | N | operating leverage improvement | Correlation Coefficient | Sign (2-tailed) p | N | employee satisfaction | Correlation Coefficient | Sign (2-tailed) p | N | likelihood to recommend | Correlation Coefficient | Sign (2-tailed) p | N | framework for process improvement | Correlation Coefficient | Sign (2-tailed) p | N | client processes regularly reviewed | Correlation Coefficient | Sign (2-tailed) p | N | performance information acquired | Correlation Coefficient | Sign (2-tailed) p | N | deficiency documented | Correlation Coefficient | Sign (2-tailed) p | N | easy access to improvement tools | Correlation Coefficient | Sign (2-tailed) p | N | time based processes known | Correlation Coefficient | Sign (2-tailed) p | N |
|----------------|------------------------|-------------------------|------------------|---|--------------------|-------------------------|------------------|---|--------------------------------|-------------------------|------------------|---|-----------------------------|-------------------------|------------------|---|--------------------------------|-------------------------|------------------|---|--------------------------------|-------------------------|------------------|---|--------------------------------|-------------------------|------------------|---|--------------------------------|-------------------------|------------------|---|--------------------------------|-------------------------|------------------|---|--------------------------------|-------------------------|------------------|---|--------------------------------|-------------------------|------------------|---|--------------------------------|-------------------------|------------------|---|
| Kendall's tau-b                      |                        |                        |                  |   |                    |                        |                  |   |                                |                        |                  |   |                             |                        |                  |   |                                |                        |                  |   |                                |                        |                  |   |                             |                        |                  |   |                                |                        |                  |   |                             |                        |                  |   |                                |                        |                  |   |                             |                        |                  |   |
| sales revenue increase               |                        |                        |                  |   | 1.000              | 0.674**                  | 0.145             |   | -0.13                        | -0.006                  | 0.166            |   | 0.208                        | 0.220                  | 0.254            |   | -0.101                      | -0.068                  | 0.048            |   | 0.140                        | 0.290**                  | 0.082            |   | 0.106                      |                        |                  |   |                             |                        |                  |   |                             |                        |                  |   |                             |                        |                  |   |
| net income increase                  |                        |                        |                  |   | 0.674**            | 0.191                  | -0.027             |   | -0.102                       | 0.448**                  | -0.024           |   | -0.068                      | -0.183                  | -0.174           |   | 0.031                      | 0.210                  | 0.129           |   | 0.207                      | 0.078                  | 0.153           |   | 0.092                      |                        |                  |   |                             |                        |                  |   |                             |                        |                  |   |
| operating leverage improvement      |                        |                        |                  |   | 0.145              | 0.191                  | 1.000             |   | -0.039                       | 0.104                  | 0.152            |   | 0.277**                     | 0.305**                  | 0.129            |   | 0.082                      | 0.106                  | 0.439           |   | 0.129                      | 0.210                  | 0.171           |   | 0.082                      |                        |                  |   |                             |                        |                  |   |                             |                        |                  |   |
| employee satisfaction               |                        |                        |                  |   | 0.292              | -0.169                 | 0.775             |   | -0.775                       | 0.456                  | 0.271            |   | 0.044                      | 0.027                  | 0.355            |   | 0.549                      | 0.439                  | 0.439           |   | 0.129                      | 0.210                  | 0.129           |   | 0.092                      |                        |                  |   |                             |                        |                  |   |                             |                        |                  |   |
| likelihood to recommend             |                        |                        |                  |   | -0.103             | -0.102                 | -0.039            |   | 1.000                        | -0.448**                  | 0.024            |   | -0.068                      | -0.183                  | -0.174           |   | 0.031                      | 0.210                  | 0.129           |   | 0.207                      | 0.078                  | 0.153           |   | 0.092                      |                        |                  |   |                             |                        |                  |   |                             |                        |                  |   |
| framework for process improvement   |                        |                        |                  |   | 0.196              | 0.194                  | 0.152             |   | -0.024                       | 0.853                  | 0.585**         |   | 0.400**                     | 0.241                  | 0.049            |   | 0.092                      | 0.210                  | 0.129           |   | 0.207                      | 0.078                  | 0.153           |   | 0.092                      |                        |                  |   |                             |                        |                  |   |                             |                        |                  |   |
| client processes regularly reviewed |                        |                        |                  |   | 0.208              | 0.196                  | 0.277**           |   | -0.068                       | 0.079                  | 0.585**         |   | 1.000                       | -0.455**                  | 0.081            |   | 0.066                      | 0.158                  | 0.262           |   | 0.262                      | 0.071                  | 0.305           |   | 0.054                      |                        |                  |   |                             |                        |                  |   |                             |                        |                  |   |
| performance information acquired    |                        |                        |                  |   | 0.137              | 0.163                  | 0.044             |   | 0.624                        | 0.577                  | 0.000            |   | 0.001                      | 0.571                  | 0.968            |   | 0.262                      | 0.071                  | 0.305           |   | 0.054                      |                        |                  |   |                             |                        |                  |   |                             |                        |                  |   |
| deficiency documented               |                        |                        |                  |   | 0.199              | 0.227                  | 0.027             |   | 0.193                        | 0.294                  | 0.005            |   | 0.006                      | 0.455**                  | 0.096            |   | 0.054                      | 0.210                  | 0.129           |   | 0.092                      |                        |                  |   |                             |                        |                  |   |                             |                        |                  |   |
| easy access to improvement tools    |                        |                        |                  |   | 0.199              | 0.227                  | 0.027             |   | 0.193                        | 0.294                  | 0.005            |   | 0.006                      | 0.455**                  | 0.096            |   | 0.054                      | 0.210                  | 0.129           |   | 0.092                      |                        |                  |   |                             |                        |                  |   |                             |                        |                  |   |
| time based processes known          |                        |                        |                  |   | 0.199              | 0.227                  | 0.027             |   | 0.193                        | 0.294                  | 0.005            |   | 0.006                      | 0.455**                  | 0.096            |   | 0.054                      | 0.210                  | 0.129           |   | 0.092                      |                        |                  |   |                             |                        |                  |   |                             |                        |                  |   |   ** Correlation is significant at the 0.01 level (2-tailed). |
| time based processes known          |                        |                        |                  |   | 0.199              | 0.227                  | 0.027             |   | 0.193                        | 0.294                  | 0.005            |   | 0.006                      | 0.455**                  | 0.096            |   | 0.054                      | 0.210                  | 0.129           |   | 0.092                      |                        |                  |   |                             |                        |                  |   |                             |                        |                  |   |   * Correlation is significant at the 0.05 level (2-tailed). |</p>
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* Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).
Appendix F: ERROR TESTING

### Likelihood to recommend

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<th>Cumulative Percent</th>
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### Operating leverage improvement

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### Net income increase

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