

## **Management Accounting Practices: A Case of Total Quality Management (TQM) Strategies and Performance**

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### **Abstract**

This study aims to identify the emergence of Total Quality Management (TQM) and its implications on Management Accounting in a leading company in Sri Lanka. The reasons for implementing the TQM, benefits, its continuation, and management accounting implications were explored. For this purpose, employed a case study approach, and semi-structured interviews were conducted with employees of different hierarchical levels. The findings show that institutional factors and technical efficiencies influence the implementation of TQM. From the institutional perspective, the selected organization can enhance the performance via TQM implementation by identifying the reasons behind the TQM movement and gaining benefits due to the continuation of TQM as a well-developed and effective problem-solving tool. From the technical perspective, this study contributes to the existing literature on TQM and guides practicing managers to enhance their performance via effective implementation. Additionally, this contributes to the development of Management Accounting systems.

**Keywords-:** Case Study Approach, Management Accounting, Total Quality Management

## 1. INTRODUCTION

Total Quality Management (TQM) is the art of coordinating the entire to reach its excellence. It is the embellishment to the habitual way of managing business and it helps for the endurance in the worldwide opposition. This is not only a philosophy, yet additionally, a bunch of rules or guidelines for continuous upgrades for the services and products offered to customers.

Total quality management (TQM) was originated in Japan in the 1950s as a philosophy of quality management. TQM efforts typically draw heavily on the previously developed tools and techniques of quality control. Most organizations provide more attention to the TQM during the late 1980s and early 1990s with the emergence of ISO 9000, lean manufacturing, and Six Sigma. In the late 1980s, TQM was initiated as a management concept that included the quality of all issues in an organization. TQM now has become the responsibility of management and requires the involvement of all employees. Further, TQM has since primarily been recognized for emphasizing customer needs and contribution to organizations, efficiency, and effectiveness through process orientations and continuous improvement (Steiber & Alange, 2013).

In recent years many organizations have moved towards a TQM path in their quest for quality (Hoque & Alam, 1999; Yeng, 2018). TQM has been recognized as an essential

platform supporting continuous improvement and measuring business performance (Pipan, Gomiscek, & Kljajic, 2014). TQM is an important management practice, and companies cannot choose to ignore quality if they want to survive. Through the implantation of TQM practices, an organization can ensure the effectiveness of efforts to improve cost reduction, productivity, quality, and effective delivery, where ultimately TQM leads to organizations' competitiveness (Ooi, 2015; Khan, 2003; Sharma, Lawrence, & Lowe, 2010; Sharma & Hoque, 2002; Hoque & Alam, 1999; Modell, 2009; Terziovski & Samson, 1999; Week, Helms, & Etkin, 1995; Boaden, 1997)

However, there is a growing recognition in the Management Accounting literature that, when an organization adopts a new management philosophy such as TQM, it may lead to changes in the firm's internal accounting and control mechanism (Hoque & Alam, 1999; Sharma et al., 2010; Model, 2009). In there, the popular conceptualization of TQM practices emphasizes the need for mechanisms supporting lateral control such as empowerment of managers with cross-functional process responsibilities, team-based rewards, and use of non-financial goals and performance measures (Modell, 2009; Sharma et al., 2010; Hoque, 2003; Boaden, 1997).

Further, Hoque and Alam (1999) note that implementation of TQM subsequently changes the

Management Accounting System (MAS) of an organization. The TQM-focused MAS assists management in the evolution and improvement of TQM practices and satisfies managers' information needs.

Based on all the facts mentioned, it is unarguable to state that TQM is a widely researched area in most of the other countries (Shahzadi et al., 2018, Sharma & Hoque, 2002; Terziovski & Samson, 1999; Lee & Lee, 2014; Kanji, 1996; Sharma, Kumar, & Kumar, 2007; Mensah, Copuroglu, & Fening, 2012; Boaden, 1997; Kanji, Malek, & Tambi, 1999). However, there is a dearth of studies on TQM implementation in Sri Lanka (Kaluarachchi, 2010; Yapa, 2012), especially using a qualitative approach such as a case study approach. Thus, it is motivated us to fill these gaps by addressing the following research questions.

- Why is TQM implemented?
- What are the benefits and reasons for the continuation of TQM?
- How have Management Accounting practices changed to facilitate the TQM movement?

The broader perspective proves that this case study helps practice managers who intend to adopt TQM in their organizations. The study became original by exploring the TQM implementation of a selected entity in Sri Lanka. Therefore, the findings of this study

will contribute to expanding the existing literature on TQM and add further explanations on TQM implementation. Thus, it contributes to both knowledge and practice.

In an attempt to accomplish the above, this paper is divided into the following sections. Firstly, the literature on TQM is reviewed, followed by an explanation of the methodology employed. Then the reasons for TQM implementation, benefits, and reasons for the continuation of TQM, Management Accounting practices that need to change to facilitate the TQM movement are critically analyzed. Discussions of findings are discussed before the conclusions, and the implications are presented.

## 2. METHODS

The research method can be categorized into four groups, namely qualitative/case study, quantitative/survey, archival and descriptive (Gooneratne & Hoque, 2013). This study utilizes three methods for data collection: semi-structured interviews with eleven employees at different hierarchical levels, review of documentary materials on the company's TQM & management accounting practices, and observation of the manufacturing process of one plant.

The case study method was one approach used in this study as this study is a "contemporary, pre paradigmatic and ongoing phenomenon", (Lindgreen, 2001, p. 78) of TQM. The study is based on a Beta company that practices TQM efficiently. The company has been

practicing a Quality control system since 1995. With the introduction of the new ISO standard, the managing director of the company became interested in adopting TQM in line with that standard. Then Beta Company has utilized TQM as one of the management systems of the company.

The unit of analysis for this research was the individual level. (Yin, 1994). The interviewees were selected from the different hierarchical levels of the head office and a plant. These include chief financial officer/executive director, financial controller, central quality manager, business unit controller, a management accountant, a plant controller, a human resource manager, a production manager, a quality executive, a quality controller, and a group leader who are directly engaged in TQM practices and accounting practices. Eleven in-depth interviews were conducted using a well-organized and planned semi-structured questionnaire developed, aligned with the research questions. Interviews were tape-recorded and transcribed. Thematic analysis was used in analyzing the data manually, and the techniques such as cross-case synthesis, rival explanation, and pattern matching were adopted. Furthermore, data were collected through observation of the manufacturing and quality process of plant one. Andon system, some of the quality gates, daily improvement cards, daily problem cards, “five-why analysis” process, and Quality Inspection Board and

problem-solving management system were observed through the plant visit and those details were also used when analyzing data. In addition to the above mentioned, data were also collected through the corporate website of the relevant company.

The reliability of this study was established through the case study protocol. The pattern matching strategy was adopted to reduce the concern over internal validity. Making a priority to the ethics which are crucial to follow in qualitative research, informed consent was taken from all the parties before obtaining the data and was ethical enough to safeguard the confidentiality and privacy, and anonymity of the interviewer.

### **3. RESULTS**

This section displays the direct quotations from the transcripts of the interviews with each respondent. Quotations of respondents are presented in italics and each respondent was abbreviated as RP.

The findings are presented under each research question of the study.

#### **3.1 Research Question 01: What are the reasons for TQM implementation?**

The findings (themes coming under research question 01) are shown in figure 1 (Appendices).

Two main themes were identified under this research question. They are external and internal themes of TQM implementation. Further,

some sub-themes emerged under each of the themes (e.g., operational improvement). Each of these themes and sub-themes is discussed below with relevant quotations.

### **3.1.1 Internal reasons operational improvement**

Generally, manufacturing organizations experience issues such as inefficiencies of operation, including increases in defects rate, scrap and rework. The adoption of TQM led to operational improvements due to proper quality management. The operational improvement as a theme is demonstrated in the following quotations. Quality controller of the plant one explained,

*“Before the adoption of TQM we have experienced lots of system failures such as machine breakdowns. With the emergence of the TQM, we reduce those failures and enhance our operational activities”.*

The production manager further added,

*“We assigned real persons to the real place the minimize defects of the operation.”*

*“TQM is not like a one-day transformation. It is like a transformation that happens over time. We had a quality control approach before the implementation of TQM, and with the implementation of TQM, it turns to quality assurance. And TQM resulted for the improvement of operations within the company through effective utilization of resources.” (RP01: CQM)*

And,

*“We as a manufacturing company engage needs to pay our fullest attention towards the quality of our operations. It was able to achieve at its highest after the TQM implementation within the company”.* (RP 02: BUC)

Further,

*“We changed the total production system with the implementation of TQM. As a production manager, before the implementation of TQM, I did not have a specific production agenda. But, with the implementation of the TQM, I have to continue the production process based on specific agenda.” (RP 05: PM)*

### **3.1.2 Internal Reasons – To minimize the cost of production**

Most manufacturing organizations experience high costs in their manufacturing processes. Beta also faces a similar situation due to the inefficiencies of the operations. Therefore, management of the Beta has implemented a formal quality system, TQM to eliminate unnecessary costs of production such as non-quality costs.

The following quotation supports this theme.

*“Our manufacturing system involves a high-cost manufacturing process. We believe that high wastage and non-quality cost of the product will be eliminated through the TQM” (RP 02: BUC)*

### **3.1.3 Internal reasons - Customer orientation**

This company does not want to lose its customer confidence by delivering low-quality products. Essentially, they want to continue

the ISO certificates and other quality-related awards. In addition, the company uses the TQM system as a base for different management systems such as safety, environmental management and as a tool for high customer satisfaction.

This theme was substantiated by the following quotations.

*“Since we are serving the international market, we always need to be in touch with our customers’ demand. TQM helps us to survive in the market with higher customer satisfaction, as they always request for quality products.” (RP01: CQM)*

And,

*“TQM has been enabled us to be more customer-oriented as most of our customers’ request for quality products and it is one of the key success factors of our company.” (RP 02: BUC)*

Further,

*“We mainly focus on the quality more than the production units. Always respect the customer's voice. We want to provide a guarantee in relation to the quality by implementing a formal quality system such as TQM. Without having a proper and systematic quality system, we do not provide the guarantee.” (RP 05: PM)*

### **3.1.4 External reasons - To continue ISO 9001 – 2008 Certification**

At Beta, TQM practices were introduced by the Managing Director of the company. The company practiced the quality control system from 1995 and with

the introduction of the new ISO standard, the company became interested in adopting TQM in line with that standard. Then, the company has utilized TQM as one of the management systems of the company.

The following quotations substantiated this theme.

*“We were trying to transform quality management system towards TQM concepts in line with the introduction of new ISO 9001 in 2000. That was a starting point of transforming our quality system towards TQM philosophy.” (RP 02: BUC)*

And,

*“Without having that ISO certificate, we cannot export our tires. Therefore, we are more concerned on it and we give much effort to keep the quality level of the products. TQM supports us in continuing the quality of the products, process, and all”. (RP 03: PC)*

These quotes state that, with the ISO certification, they require a formal quality system to ensure the quality of the products. Implementation of TQM is not an immediate change and the company gradually changed the processes, procedures, and employees’ perception towards TQM over a long time. There will be a non-acceptance from the end of employees towards TQM implementation if it was an immediate and a huge change.

### **3.1.5 External reasons - Market pressure**

Interviews with quality staff of the company revealed that are huge

market pressures to implement a formal quality system within the organization. TQM is an essential factor that aligns with the market requirements of countries such as; Europe and North America who are major customers of the company. These countries do not import solid tires if suppliers do not have a formal quality system. Therefore, market pressures of the international market have influenced Beta to implement a formal quality system like TQM for catering to those markets. As explained by the quality executive of plant one,

*"We would not be able to cater our products for our customers without having ISO certificate and TQM practices. Implementation of TQM has been matched with the market pressure while assuring about the quality of the products." (RP 03: PC)*

### **3.1.6 External reasons - Tough Competition**

Competition in the market is increased with the emergence of local and international (such as Indian) solid tire manufacturers in the marketplace. Implementation of TQM can be identified as a tool that gains a competitive advantage to face competition in the market effectively.

*"Since we are catering our final products to the international market, we believe that the product's final quality is not enough to increase our competitiveness. Hence we require a formal quality system to ensure the overall quality of the production." (RP 02: BUC)*

And, *"Since we are serving for the international market, we always touch with matured and world market leaders in the global market such as Toyota, Nissan, Mitsubishi, etc. Most of the global market leaders have implemented TQM as their formal quality management system and they have achieved a lot of benefits by utilizing TQM. Therefore, we decided to implement TQM as our formal quality system by looking at the successful companies in the global market to gain advantages of the TQM."* (RP04: QE)

### **3.2 Research Question 02: What are the reasons for the continuation of TQM?**

The findings (themes coming under research question 02) are shown in figure 2 (Appendices).

Under this research question, seven themes and several sub-themes emerged. These themes are discussed below with the relevant quotations.

#### **3.2.1 Continuous Training Programmes**

Since TQM adoption was a long-term transformation, the company's management was able to obtain consent from employees and address their concerns by providing adequate awareness by organizing seminars, training programs, and workshops. Therefore, no resistance was observed from Beta's employees, and this is one of the key factors for the continuation of TQM.

One of the Quality executives of the Beta added:

*“We followed a lot of awareness sessions, workshops to provide understanding about the quality system. Thus, employees could know the quality and the importance of quality by participating in training programs. Although they did not have a complete understanding of TQM, they had a proper view of the consequences of not following quality systems. Therefore, all levels of employees accepted the TQM adoption.”*

And,

*“We trained employees through on-the-job training, workshops, and outwards bound training. There, ultimately employees got involved with TQM adoption proactively and positively because they had to do something as a team.” (RP 06: HRM)*

### **3.2.2 Pre-preparation with change management**

Beta trained their employees before the implementation of TQM and prepared the employees for this change. Further, Beta adjusted the principles of TQM without damaging the core of the project, in line with employees' concerns. They also provided knowledge about what they expect from launching the project. Thus, employees contributed to the successful TQM adoptions without resistance and agreed to continue the TQM practices in the future. One of the human resource managers in Beta further illustrated:

*“We allowed employees to come up with their concerns before the adoption of TQM and we provide clear solutions for those concerns. Because we know if we correctly provide a solution with a proper mechanism to solve employee concern, then people will automatically embrace that system.”*

### **3.2.3 Effective communication of TQM purposes and goals**

Effective communication of goals to achieve through TQM and advantages of implementation of TQM for the employees at the initial stage have resulted in an effective continuation of the process. Thus, employees have a better understanding of what is expected from them towards the TQM goal achievement. The following quotation from the Human Resource manager of Beta is evidence for it.

*“By and large, every employee of the organization seems to have an idea about what is TQM in general and what are the advantages of the TQM through well-developed training programs of the organization. Therefore, all level of employees knows the negative effect if they do not follow TQM practices. Thus, in the initial stage when TQM was introduced in Beta, employees accepted that change without any reluctance.”*

### **3.2.4 Value Stream Mapping with TQM**

As a manufacturing company, Beta involves with a lot of manufacturing processes and activities to obtain the final

product. Some of these activities or processes do not generate value for the final product and are additional costs. Therefore, the company introduced value stream mapping which eliminates the non-value-added activities and continuously improves their operations. This is supported by the following quotation.

*“After implementing TQM, we introduced six value streams mapping linked with lean manufacturing. Through the value stream, we identify what are the elements which are not giving any value to the final products and eradicate those non-value adding activities systematically.”*

### **3.2.5 Continuous Quality Audits**

To continue the ISO 9001 certificate, the company should perform quality audits. This is a compulsory requirement for ISO-certified companies. Implementation of TQM facilitates the continuation of the ISO certificate. Plant controller of plant one stated that,

*“We are an ISO certified company, so we have a standardized quality management system. Therefore, we perform quality audits on a semiannual basis. In the quality audit, we check each system of the plant.”*

### **3.2.6 Well-developed problem-solving mechanisms**

The company adopts well-developed problem-solving mechanisms, which helps to continue TQM practices.

### **3.2.6.1 PDCA cycle**

TQM processes can be divided into four sequential phases: plan, do check, and act (PDCA cycle). This cycle facilitates the continuous improvement of the company; the central quality manager elaborated, *“We utilize the PDCA cycle to perform our TQM practices effectively. In the planning phase, we identify the problems and collect data related to the problems. Then we try to determine the root cause of the problem. In the doing phase, we develop a proper solution and implement that solution to the problem area. In the checking phase, we measure and check the results of the solution whether that solution eliminates that problem or not. In the acting phase, we document those results, share the knowledge.”*

Further, he stated that,

*“This PDCA cycle is linked with the next PDCA cycle. Hence our operation will continuously improve through this process.”*

### **3.2.6.2 Quality related internal culture**

Beta has a quality-related culture; it has a lot of systems, processes, and procedures used to maintain sustainable quality systems within the company and provide an effective mechanism to resolve quality-related issues. It also has a very quality committed management team. Plant controller of plant one remarked,

*“We have a different meeting to discuss quality-related issues like management review meetings, quality meetings, and performance review meetings. Also, we have a*

*problem-solving culture. We believe in a formal structure to solve the quality-related issues.”*

And,

*“We have several mechanisms to solve issues at the production level, including daily based monitoring systems, weekly reviews, and monthly review meetings. On the other hand, top management always involves solving production and quality-related issues.” (RP 05: PM)*

Further,

*“We have three values to enhance the internal customer satisfaction. According to those values, we never produce defective products; we never accept defective products from previous processes, and we never send defective products to next processes.” (RP04: QE)*

### **3.2.6.3 Problem-solving cards and improvement cards**

Problem-solving cards and improvement cards are also used in the company as a tool of problem-solving mechanisms. Problem-solving cards generate issues of the production, and improvement cards generate employees' ideas and suggestions for improvements of the existing quality and production process. The team leader of plant one remarked,

*“We use problem-solving cards and improvement cards in our company. We have three values to enhance internal customer satisfaction. According to those values, we never produce defective products; we never accept defective products from previous processes,*

*and we never send defective products to next processes.”*

### **3.3 Research Question 03: How has the Management accounting practices changed to facilitate the TQM movement?**

The findings (themes coming under research question 03) are shown in figure 3 (Appendices).

#### **3.3.1 Structural Changes in the Business**

After adopting TQM, all the plants of Beta were divided into two business units, namely, business unit – construction and business unit – material handling. Business units' controllers of these two units were attached to the finance department. The Business Unit controller of the construction elaborated this as,

*“After the business unit separation, all plant accountants are reporting to the business units' controllers, and they are responsible for reporting to the top management of the company. Those two business unit controllers take care of the management accounting part of their business unit.*

*Supporting functions of the business units like health and safety, central engineering, security are reported to the central finance department.”*

Further, the Plant controller of the plant once remarked that,

*“After the adoption of the TQM, some structural changes occurred in the company. The centralized organizational structure moved to a decentralized one. Two business unit controllers got responsible for their profitability and*

*manufacturing cost of the business unit."*

### **3.3.2 Changes in Management Accounting System**

Since TQM is one of the advanced manufacturing techniques, the quality of the data will be increased directly or indirectly. The quality of management accounting has also improved after the adoption of TQM. All the data are recorded in the SAP system of the company. Further, a few of the following quotations support the above theme.

*"With the adoption of TQM, Beta was looking for new advanced management techniques to facilitate TQM movement. Traditional MAS used a weight-based allocation system to absorb production costs into the products. But finally, Beta decided to move to the BETA system from the traditional costing method. That was a significant change in MAS of Beta after the adoption of TQM."* (RP01: CQM)

And,

*"In addition, the normal budgetary process of Beta identifies cost saving projects with each year's budget after implementation of the TQM."* (RP 02: BUC)

### **3.3.3 Increased Effectiveness of the Workload**

As per the interviewee's views, the TQM adaptation workload of most management personnel and other employees has become effective and efficient.

Chief Financial Officer (CFO) of Beta explained that,

*"My workload was reduced with the implementation of the TQM since I can obtain more accurate and reliable information. As well as I spend less effort and time to interpret management accounting information."*

A similar idea was generated by the business unit controller – the construction of the company.

*"Effectiveness of the workload has been increased after the adoption of the TQM. Because I have some knowledge on what kind of information I need and where it should get it, therefore, I can easily coordinate and prepare my reports in an effective manner."*

### **3.3.4 Effective Decision Making related to Management Accounting**

With the implementation of TQM, the decision-making process of the company has become effective and efficient. There, higher efficiency and continuous improvement can be obtained through the identification of cost-saving projects. They should enhance their profitability through the TQM adoption. With the identification of cost-saving projects related to the production, Beta can realize the actual production cost and minimize raw material and conversion cost. Therefore, the management of the company always looks at the cost behavior of the products. This is supported by the following quotations.

*"Management accounting system of Beta facilitates the calculation of efficiency and expenditure variance is related to labor cost after the*

*implementation of TQM.*" (RP 05: PM)

And,

*"We incurred additional cost for the process due to the quality faults of the production process before the adoption of the TQM. With the implementation of TQM, we have introduced some sophisticated tools to capture the cost involved with those issues and we can measure not only quality cost but also the non-quality cost of the production through new tools."* (RP 01: CQM)

Before the implementation of TQM, organizations only used financial-related KPIs such as cost per kg. But with the adoption of TQM, Beta measures non-financial KPIs such as operational excellence, people's engagement, and best reputation in addition to financial KPIs to measure the performances of the organization. Chief Quality Manager (CQM) of Beta explained that,

*"Quality and no-quality related costs did not consider before the implementation of TQM. With the adoption of TQM, the organization prepares reports on quality and no quality. Thus, the true picture of the organizational performance was able to identify through the TQM adoption."*

### **3.3.5 Well Organized Monitoring and Reporting System**

In Beta, before the implementation of TQM, there were no continuous meetings and preparation of reports to review and evaluate the company's performances. With the implementation of TQM, Beta has developed well-organized

monitoring and reporting system. Now Beta has held a management meeting once a month. At the month-end, the business units' directors will call management meetings to discuss the monthly performance where the plant accountants will do the presentations on variance analysis. Business unit controller construction stated that,

*"After the adoption of TQM, in every management meeting of respective departments, the heads have to report the performance of the departments. That is done through the presentation. And also, at the month-end plant accountants should prepare a plant performance report and it should be presented."*

Plant controller of plant one further added:

*"Before TQM, we reported our management reports plant-wise. But with the implementation of the TQM, the company develops common report format and capture information from several locations within the company."*

## **4. DISCUSSION**

This section compares the findings of the extant literature. In there, the findings regarding the reasons caused for the implementation of TQM were compared with existing literature. Most of the themes that emerged were in line with extant literature. (Hoque, 2002; Hoque and Alam, 1999; Modell, 2009; Sharma et al., 2010). However, tough competition and Market pressure were identified as new findings.

Most of the findings come under the reasons caused for continuous TQM practices of Beta Company were discussed in previous studies (Sharma et al., 2010; Sharma & Hoque, 2002; Hoque & Alam, 1999; Modell, 2009; Bagherzadeh, 2002; Knaji, 1996; Huang & Lin, 2002; Temtime, 2003; Khan, 2003). However, two of the themes were identified as new findings; Well-developed problem-solving mechanisms such as; PDCA Cycle, Quality related internal culture, and Problem-solving cards, and improvement cards.

Except for the themes, structural changes in the business, changes in the management accounting system, and increased effectiveness of the workload which have been discussed in the previous studies (Kanni et al., 1999; and Chaudhary et al., 2015; Hoque and Alam, 1999), literature is silent on other themes under changes in management accounting practices with the adoption of TQM. Thus, effective decision-making related to management accounting and well-organized monitoring and reporting system is identified as new findings.

## **5. CONCLUSION**

This study aims to understand the emergence of TQM and the changes in management accounting practices after adopting TQM in a Sri Lankan manufacturing company that has been effectively following TQM practices for over fifteen years. A single case study has been utilized to collect empirical evidence and to answer the research questions and achieve

the research objectives of the study where the first objective of the case study was to explore internal and external reasons for TQM implementation, the second was to identify reasons for the continuation of TQM and finally the third was to explore the management accounting implications of TQM.

According to the study's findings, the first objective was achieved, and it revealed that, at Beta, different external and internal reasons led to the implementation of TQM. It introduced the TQM philosophy for their organization with the introduction of a new ISO standard. In addition, institutional factors such as market pressures and tough competition influenced the implementation of TQM. Not only institutional reasons but also internal reasons (operational improvement, customer satisfaction, and reduction of the cost of the quality and production) affected the implementation of TQM in the Beta.

The second objective was to identify reasons for the continuation of TQM and Beta has been effectively following TQM practices for over fifteen years due to its effective implementation and problem-solving mechanisms and benefits of the TQM. Management of the Beta had conducted well-developed training programs for their employees. Therefore, all levels of employees had an idea about TQM adoption, and they willingly engaged with the TQM practices in Beta. Further, Beta had a lot of systems, processes, and procedures to solve the issues

related to quality and production with the already won ISO and other quality certifications.

And when analyzing the third objective of this research, to explore the management accounting implications of TQM, the quality and reliability of the management accounting information have increased due to TQM practices. Management of Beta introduced financial and non-financial performance measures to cater to the TQM adoption. Beta has moved to the BETA system from the traditional costing system to facilitate the TQM practices. Further, after TQM implementation, the firm has laid more concern on the variance analysis to reduce the cost of the quality and production.

The findings of this study enhance the existing literature on TQM. Even though many studies are available on TQM (Boaden, 1997; Kanji et al., 1999; Sharma & Hoque, 2002, Ooi, 2015; Khan, 2003), it was evident that there is limited research on TQM and MAS. Moreover, the findings of this study are also useful to practicing managers currently

using TQM practices and intending to adopt the TQM philosophy in their organization.

This study indicates how an organization could effectively implement and derive benefits from a TQM system, as Beta's has been practicing it for over fifteen years, giving many benefits. The company intends to continue it to the future. This study also provides insights to practicing managers on how management accounting practices could be changed to facilitate to TQM movement of an organization.

However, this study has few limitations, even though it provided useful contributions to literature and to practicing managers. This study was done as a single case study and the time factor was also affected negatively for the number of interviews conducted. Nevertheless, the study provides important implications for future research. We suggest future researchers adapt multiple case study methods, use different companies in different sectors, and explore different perspectives of TQM implementation.

## APPENDIX

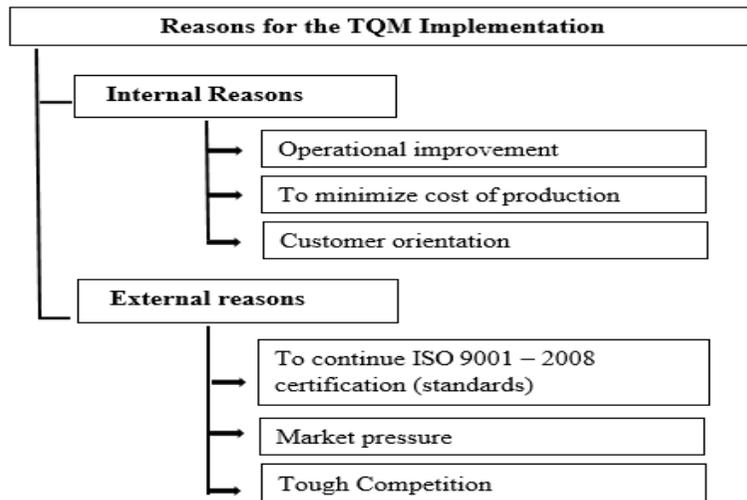
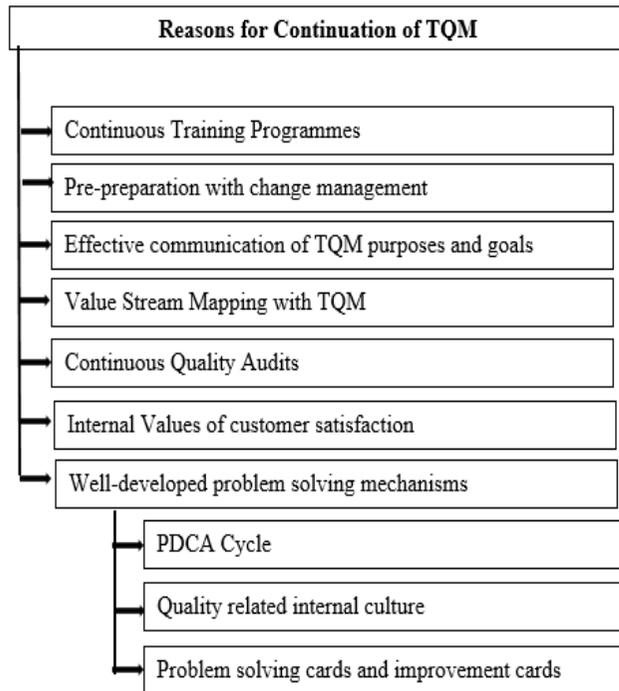
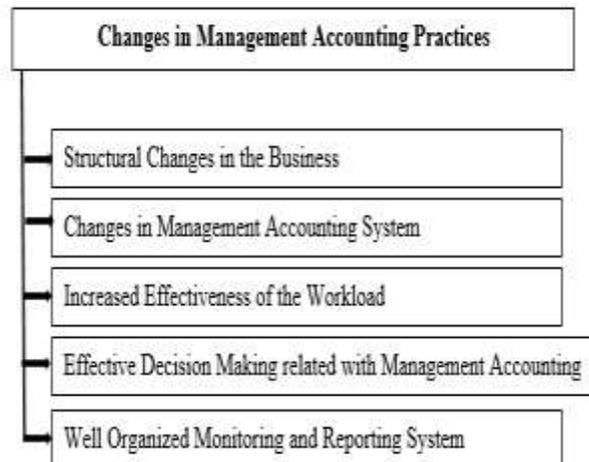


Figure 01: Reasons for the TQM Implementation



**Figure 02: Reasons for Continuation of TQM**



**Figure 03: Changes in Management Accounting Practices**

## REFERENCES

- Aghazadeh, S. M. (2002). Implementation of total quality management in the managed care industry. *The TQM Magazine*, 14(2), 79 – 91.
- Boaden, R.J. (1997). What is total quality management... and does it matter? *Total Quality Management*, 153-171.
- Central Bank of Sri Lanka (2014). Annual report, Colombo, Sri Lanka
- Chartered Institute of Management Accountant (2005). CIMA official terminology.
- Chartered Quality Institute (2015), from <http://www.thecqui.org>
- Chaudary, S., zafar, S., & Salman, M. (2015). Does total quality management still shine? Re-examine the total quality management effect on financial performance. *Total Quality Management & Business Excellence*, 26, 811-824.
- Gooneratne, T.N., & Hoque, X. (2013). Management control research in the banking sector: A critical review and directions for future research. *Qualitative Research in Accounting & Management*. 10(2), 144-171
- Hansson, J., & Klesfsjok B. (2003). A core value model for implementing total quality management in small organizations. *The TQM Magazine*, 15(2), 71-81.
- Hiromoto, T. (1988). Another hidden edge-Japanese management accounting. *Harvard Business Review*.
- Hoque, Z. (2014). Drivers of Management Control Systems Change: Additional Evidence from Australia. *Advances in Management Accounting*, 65-92
- Hoque, Z., & Alam, M. (1999). TQM adoption, institutionalism, and changes in the management accounting system. *Accounting and Business Research*, 29(3), 199-210.
- Jones, M.J., Munday, M., & Brinn, T. (1998). Speculation on barriers to the transference of Japanese management accounting. *Accounting, Auditing & Accountability Journal*, 11, 204- 215.
- Kaluarachchi, K.A (2010). Organizational culture and total quality management practices: a Sri Lankan case. *The TQM Journal*, 22(1), 41-55.
- Kanji, G.K (1996). Implementation and pitfalls of total quality management. *Total Quality Management*, 7(3), 331-343.
- Kanji, G.K., Malek, A., & Tambi. B.A (1999). Total quality management in UK higher education institutions. *Total Quality*

- Management*, 10(1), 129-153.
- Khan, J.H. (2003). Impact of total quality management on productivity. *The TQM Magazine*, 15(6), 374-380.
- Lee, H.H., & Lee, C.Y. (2014). The effects of total quality management and organizational learning on business performance: evidence from Taiwanese insurance industries. *Total Quality Management & Business Excellence.*, 1072-1082.
- Longenecker, C.O., & Scazzero, J.A. (1996). The ongoing challenge of total quality management. *The TQM Magazine*, 8(2), 55-60.
- Lorente, A.R., Dewhurst, F., & Dale, B.G. (1998). Total quality management: origins and evolution of the term. *The TQM Magazine*, 10(5), 378-386.
- Mensah, J. O., Copuroglu, G., & Fening, F. A. (2012). The status of total quality management (TQM) in Ghana: A comparison with selected quality awards winners from Turkey. *International Journal of Quality & Reliability Management*, 29(8), 851-871.
- Modell, S. (2009). Bundling management control innovation: a field study of organizational experimenting with total quality management and the balanced scorecard. *Accounting, Auditing & Accountability Journal*, 22, 59-90.
- Modell, S., & Humphrey, C. (2008). Balancing acts in qualitative accounting research. *Qualitative research in Accounting & Management*, 5(2), 92-100.
- Ooi, K. (2015). Total quality management and knowledge management: A multi-group analysis of nonstructural variance between manufacturing and service sector. *Total Quality Management & Business Excellence*, 26, 1131-1145.
- Pipan, K.K., Gomiscek, B., & Kljajic, M. (2014). Slovenian national excellence award and total quality management in Slovenian companies. *Total Quality Management & Business Excellence*, 25750-762.
- Plenert, G. (1995). Management cybernetics: total quality management. *Kybernetes*, 24(1), 55-59.
- Shahzadi, S, Khan R., Mary, Toor & Haq A. (2018). Impact of external and internal factors on management accounting practices: a study of Pakistan, *Asian Journal of Accounting Research*, 3(2), 211-223
- Sharma, M., & Kodali, R. (2008). TQM implementation elements for manufacturing excellence. *The TQM Journal*, 20(6), 599-621.

- Sharma, R.K., Kumar, D., & Kumar, P. (2007). Quality costing in process industries through QCAS: a practical case. *International Journal of Production Research*, 45(15), 3381-3403.
- Sharma, U., & Hoque, Z. (2002). TQM implementation in a public sector entity in Fiji: Public sector reform, commercialization, and institutionalism. *The International Journal of Public Sector Management*, 15(5), 340-360.
- Sharma, U., Lawrence, S., & Lowe, A. (2010). Institutional contradiction and management control innovation: A field study of total quality management practices in a privatized telecommunication company. *Management Accounting Research*, 21, 251-264.
- Steiber, A., & Ala Lange, S. (2013). Do TQM principles need to change? Learning from a comparison to Google Inc. *Total Quality Management & Business Excellence*, 24, 48-61.
- Terziovski, M., & Samson, D. (1999). The link between total quality management practice and organizational performance. *International Journal of Quality & Reliability Management*, 16(3), 226-237.
- Weeks, B., Helms, M.M., & Etkin, L.P. (1995). Is your organization ready for TQM? An assessment methodology. *The TQM Magazine*, 7(5), 43-49.
- Yapa, S. (2012). Total quality management in Sri Lankan service organizations. *The TQM Journal*, 24(6), 505-517.
- Yeng, Sin Kit. (2018). The Impact Of Total Quality Management (Tqm) On Competitive Advantage: A Conceptual Mixed-Method Study In The Malaysia Luxury Hotel Industries. *Academy of Strategic Management Journal*, 17(2)