ISO 9000 CERTIFICATION: SOME LESSONS FROM A LARGE FIRM IN TANZANIA

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ABSTRACT

We present some findings on the implementations and achievements of ISO 9000 standard certification at the Tanzania Cigarette Company (TCC). Among other things we examine the motivation behind adoption of the standard and attempt to measure the implemented changes in terms of quality management.

Though positive social impact, improved business results and increased customer satisfaction were recorded in the period following ISO 9000 implementation, these results were not viewed as resulting from ISO 9000 quality standard but rather from privatisation and what transpired during the process of seeking ISO 9000 certification. The findings suggest that ISO 9000 certification does not improve performance and that firms already on a steady growth path should seek the standard so as to maintain good performance. With the initial need being to raise 'standards', a policy intervention and/or creating a local intermediate standard may be necessary for SMEs seeking ISO 9000 certification.

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JEL Classification: L15, L16

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INTRODUCTION

The quest for quality is an endeavour that organisations in every industry worldwide embark on in a continuous effort to succeed. The main objective is for organisations to reach world-class excellence through high-quality products and/or services, customer satisfaction, and cost reduction with profit optimization (Arauz & Suzuki, 2004). Quality has evolved from the manufacturing sector to the service sector and includes

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not only statistics, control chart, or sampling plan, but also training, personnel quality and customer satisfaction. The quality climate has been changing due to a much greater emphasis on quality by businesses and by governments (Dedhia, 2001). According to Wilson, Walsh and Needy (2003), internationally, there are nearly 60 programs and awards that reward companies for improving quality. Most notable are the Malcolm Baldrige National Quality Award, the Deming Prize, Six Sigma and the ISO 9000 programme.

ISO 9000 is a family of standards published by the ISO that gives requirements for an organisation's Quality Management System (QMS). The standard applies to all types of organizations, whatever the size or business (International Standards Organisation (ISO), n.d). Currently, ISO 9000 is supported by national standards bodies from more than 148 countries. This makes it the logical choice for any organisation that does business internationally or that serves customers who demand an international standard of quality. In addition, ISO allows a company to institutionalize the right attitude by supporting it with the right policies, procedures, records, technologies, resources, and structures (ISO, n.d). ISO 9000 is rapidly becoming the most important quality standard with the number of certifications worldwide increasing by over 700% between 1998 and 2003 (ISO, 2003).

Companies adopt ISO 9000 standards so as to control or improve the quality of products and services, to reduce the costs associated with poor quality, or to become more competitive. They may also choose this path simply because customers expect it or because a governmental body has made it mandatory (ISO, n.d). In a study in Hong Kong involving 58 ISO 9000 certified companies, Lee et al (1999) found that the main reasons for seeking certification were foreign trade and business. Other reasons include marketing and the need for continuous improvement**.** In Indonesia, Societe Generale Surveillance (SGS) (2001) found that certification was done with the belief that it will bring both external benefits such as increased customer satisfaction and increased market share, and internal benefits such as greater productivity and operational efficiency, greater management control and greater employee awareness. In one of the largest surveys in the United Kingdom (UK) involving over 1200 companies, it was found that firms sought ISO 9000 certification in order to enjoy both operational and marketing benefits which impact costs, revenues and by inference profits. The top three benefits sought are profit improvement, process improvements and marketing benefits (Buttle, 1997).

Most developing countries are lagging behind in terms of ISO certification. Tanzania is also lagging behind the rest of East Africa in terms of the number of certifications. A 2003 survey of certified companies worldwide revealed that by the end of 2003 Uganda was leading with 252, followed by Kenya with 199 and finally Tanzania with only 11

ISO 9000 certifications (ISO, 2003). The list of certified firms is also dominated by large firms, most of which are also subsidiaries of multinationals[1] and trade internationally. This trend is likely to change in the future, considering that, among institutions seeking certification, there are government institutions such as the College of Business Education, Contractors Registration Board, and National Building and Research Agency. Part of this momentum has been fuelled by the European Union through the Centre for the Development of Enterprises, which assists developing countries such as Tanzania in improving the standards of their institutions (C. Ekelege, Personal Communication, 15th July, 2005). Small firms, particularly those offering goods and services in the international market or to multinationals operating in the country are also likely to join the bandwagon as the pressure for ISO 9000 certification comes from their trade partners.

The ISO 9000 standard adoption requires substantial costs in terms of time and money. Costs usually take the form of increased labour efforts during the preparation and training of employees and during preparation of the required documentation. Once certified, firms reveal the fact in an elaborate media exercise that implies that the company has achieved a form of distinction. It is important that firms seeking certification are not only clear about the impact that the certification will have on its operations and performance but also about how to get the process right. With the quality programme being in its infancy in Tanzania, coupled with few ISO9000 certified firms, a comprehensive study is needed to determine the implementation level as well as the achievement levels of ISO 9000 certification. This paper presents some findings on the implementation and achievements of ISO 9000 certification at the Tanzania Cigarette Company (TCC). Among other things the study examined the motivation behind adoption of the standard and attempts were also made to measure the implemented changes in terms of quality management.

TCC was ISO 9000 certified in 2001 following the company's successful privatisation. The company is involved in cigarette manufacturing and is majority-owned by Japan Tobacco International (JTI), one of the largest cigarette companies in the world[2]. Since privatization, TCC has been going from strength to strength. In 2002, TCC was voted one of East Africa's most respected companies. The company's shares are traded on the Dar es Salaam stock exchange and the share price has appreciated by over 340% since the initial public offering in 2000. The company was selected for this study because it has been ISO 9000 certified for the last 5 years. This is ample time for the impact of certification to be assessed. The fact that the firm's stocks are listed on the Dar es Salaam Stock Exchange made obtaining some of the required information relatively easy.

The study is among the first of its kind in Tanzania and provides an opening for other researchers to explore the subject. The research enlightens firms that are certified and those seeking certification on the impact they are likely to experience on their performance, and also gives valuable inputs to ISO training consultants and auditors for their future work. Examining the implementation and results of the ISO certification serves as an eye-opener for TCC it can determine areas of weakness and strength.

The paper progresses as follows: The second part covers the conceptual and theoretical development by providing a review of the literature pertinent to the study and presents a probable hypothesis. The third part deals with the overall research methodology employed. Part four presents the techniques used in data analysis and then proceeds to outline the research findings. The last part draws up some implications and concludes.

Literature Review

The International Organisation for Standardization (ISO) is the world's largest developer of standards and between 1947 to date has published more than 13,700 International Standards. ISO's purpose is to facilitate international trade by providing a single set of standards that people everywhere would recognise and respect (ISO, n.d). In a world where competition has become global, quality lowers costs and becomes a powerful product differentiation for customers. Djerdjour and Patel (2000) define quality as "an excellence standard, the fitness for use or conformance to requirements". Through customer-focused programme, quality lowers costs and is a powerful product/service differentiation tool. In the context of the ISO 9000 standard, quality is defined as "the totality of characteristics of an entity that bear on its ability to satisfy stated and implied standards" (ISO, n.d). Kotler (2002) defines Total Quality Management (TQM) as an organisation-wide approach to continuously improving the quality of all the organisation's processes, products and services. TQM emphasises the understanding of variation, the importance of measurement, the role of the customer and the involvement of employees at all levels of the organisation.

The drive for quality has resulted in some countries recognising and awarding prizes to companies that exemplify the best quality practices. These include the Malcolm Baldridge National Quality Award, European Quality Award and the ISO 9000. The ISO 9000 has become a set of generally accepted principles for documenting quality (Kotler 2002). One of the benefits attributed to the ISO management standard is that it constitutes a good first step towards a TQM system, raising awareness of quality amongst workers and creating a good climate to implement it (Martínez-Costa, 2004). Baidoun (2003) defines the ISO 9000 series certification as the starting point for entering the competition; the ongoing journey towards TQM. A study of 220 ISO

certified companies carried out in Indonesia by SGS (2001) reveals that 79% consider ISO as a first step towards TQM.

ISO 9000 has been implemented in numerous organisations around the world and various studies have been carried out to assess the effects of the standard on performance. The studies have been different in terms of benchmarks used to gauge performance, the nature of firms studied and the time interval between certification and the respective studies. The researches have also been conducted by independent parties as well as by firms that are involved in ISO 9000 certification. As a result, adopting the standard has resulted in diverse effects in different organizations, with studies citing both benefits and disadvantages.

Among the benefits asserted by ISO 9000 certification consultant, SGS, are international recognition of the firm's quality management system, continuous improvement of the firm's quality management system and processes, overall increase in the firm's performance return and an increase in employees' commitment and motivation (Societe Generale Surveillance (SGS), n.d). Inaki, Gavin and Marti (2002) conducted a study over a 5-year period with 800 companies in Spain and found that ISO 9000-registered companies out-performed non-registered companies, though the former had had the same performance prior to and after registration. The study analysed the profitability and sales performance of the firms and concluded that the superior performance of certified firms was not as a result of the quality standard, but due to firms with better performance having a greater propensity to pursue ISO 9000 registration. When studying Greek firms certified within a period of 5-6 years, Tsekouras, Dimara and Skuras (2002) also found that adoption of ISO 9000 had no effect on a firm's financial performance. The study argued that the effects of adopting an ISO 9000 scheme are long term (over six years) and of a strategic nature. The study noted that firms adopting the standard are larger, produce intermediate goods with lower profitability and have higher leverage than those not adopting ISO 9000 quality assurance scheme.

From the results obtained in a study by Martinez-Costa and Martineze-Lorente (2003) of 713 ISO 9000 Spanish companies certified within a period of 3 years, it was found that the quality standard only resulted in benefits relating to process management. It could also not be affirmed that the acquisition of ISO 9000 by a company implies that the value of the firm in the market rises. In another study in Fiji by Djerjour and Patel (2000), ISO 9000-certified surveyed companies reported no tangible benefits of TQM but listed an improvement in employee management communication, an increase in customer confidence, a better understanding of job roles, better feedback on employee morale to management and improved organisational creativity as intangible benefits achieved. The study collected data from 3 of the leading firms in Fiji within a period of

three years from certification. SGS (2001) found that the main benefits reported in 220 ISO 9000-certified Indonesian companies are improved documentation, enhanced employee awareness, and continuous improvement. The study noted that ISO 9000 was not an end in itself but a means to implement continuous improvement.

In a piece of research by Terziovski, Samson and Douglas (1996) in Australia and New Zealand, it was found that the main benefit of ISO 9000 certification was the ability of the certificate to open doors that were previously closed or which would close if the standard was not adopted. The study used 13 variables to determine performance, ranging from percentage growth in sales to employee morale, and concluded that ISO 9000 certification does not have a significantly positive effect on organisational performance by itself. In the United States Corbett, Montes, and Kirsch (2002) did a study on 473 firms on the effects of adopting ISO 9000 on financial performance over a 10-year period. It was found that firms that adopted the standard maintained their return on investment while those that did not experienced gradually worsening performance. The decision to seek the standard may therefore be positively associated with other good management practices which lead to sustained good performance. However, the study concluded that a firm cannot gain sustainable competitive advantage from ISO 9000 certification only.

From the literature, one may conclude that the firms that seek adoption of ISO 9000 are those that are well established, with competent management, and with good business performance. Firms of such standing are keen to stay competitive and can easily avail themselves of the substantial resources required for ISO 9000 registration. Adoption of the standard allows the firm to maintain its performance and results in internal benefits, such as more streamlined operations and improvement in the quality of products and processes. The main external benefit is the usefulness of the standard as a marketing tool. However, the ISO 9000 programme does not improve either the financial performance or the market value of a firm in the short term, i.e. less than 6 years from certification. This means that ISO certification is a means of laying the groundwork for an organisation to be able to improve its performance in the future.

The implementation of an ISO system is a change process that requires considerable time and effort. Management commitment and involvement has been ranked high on the list of important factors for successful implementation of the standard (Poksinka, Dahlgaard, & Antoni, 2002). Top management involvement ensures that the programme gains credibility in the eyes of the employees and there is less resistance to change. A study based on data from 180 manufacturing companies by Hongyi, Ip, Tam, and Frick (2000) investigated the empirical relationship between employee involvement and quality management and concluded that employee involvement is positively related to enabling TQM and improving in business performance. Involving

employees is therefore a prerequisite for TQM and other quality management programmes. Despite the important role played by employees in the successful implementation of the ISO 9000 programme, most of the studies done on ISO 9000 collect views from management staff only (Arauz & Suzuki, 2004; Djerjour & Patel, 2000; Claver, Tari and Molina, 2003; Lee et al, 1999; Rao, Solis and Raghunathan, 1999).

Interestingly the few studies that take employees' views into consideration reveal significant differences in opinion between employees and managers. A study done by Carlsson and Carlsson (1996) in Sweden established that employees responsible for quality regarded the influence of certification on all functions to have been greater than did the representatives of these functions themselves. The study concluded that the attitudes of the employees reflected a weaker interest in the ISO system than is required for the quality programme to exert a strong influence on the organisation. Davis and Fisher (2002) in a study conducted in 21 Australian firms found that quality specialists had more positive views of their company's quality programmes than staff from other job groups. The disparity in opinions may be a result of differences in commitment and involvement levels between managers and employees. The views of employees are therefore valuable in determining the extent of their involvement and hence assessing the impact of any quality programme.

Any system implementation can only be termed as successful if there is a form of measure to establish the degree of success. Performance measurement is a tool that holds companies accountable and hence measurement of the same should address an aspect of performance that the organisation can significantly influence (Mjema, 2004). According to Mjema and Kaizigile (2004), performance measurement helps in detecting and correcting problems and in understanding processes, enhances decision-making, shows where improvements need to be made, assists in determining effective resource used, strengthens accountability, and advances strategic planning and goal setting. Various studies have been conducted to evaluate quality practices and include contributions from quality leaders, formal evaluation models and empirical research. Quality leaders such as Edwards Deming introduced the concept of variation to the Japanese, as well as a systematic approach to problem solving, which later became known as the Deming or Plan, Do, Check, Action (PDCA) cycle. Joseph M Juran focused on Quality Control as an integral part of management control and stated that Quality Planning is part of the trilogy of planning, control and improvement. Another quality leader is Armand V Feigenbaum, who is the originator of Total Quality Control (Quality Gurus, 2003).

The main formal evaluation models are the Malcolm Baldridge National quality award model in the USA, the European Foundation for Quality Management (EFQM) model

in Europe and the Deming application prize model in Japan (Claver et al 2003). According to Claver et al (2003) the USA model groups the main concepts and values in quality management into 7 categories, the EFQM model consists of 8 principles in regard to people, customers, society and key results, while the Deming model is divided into 10 chapters. Several other scholars have developed highly reliable and valid instruments of quality measurement through empirical research. Parasuraman et al (1985, 1988), (cited in Claver et al, 2003) developed a methodology for measuring service quality called Servqual. The model consists of a set of five dimensions which have been consistently ranked by customers to be the most important for service quality, regardless of the service industry. These are tangibles, reliability, responsiveness, assurance and empathy. This model is narrow in that it is based on customer perceptions of quality and is limited to the service industry. Another model that has been advanced by Saraph et al (1989), (cited in Badri, Davis & Davis 1995), proposes measures of overall organisational quality management for both manufacturing and service firms. It provides a synthesis of the quality literature by identifying eight critical factors of quality management in a business unit. The sampling frame for this model consisted primarily of large companies with over 1000 employees and the model has no results constructs (Claver et al, 2003). This model is appropriate for very large companies and its strengths include being applicable to both service and manufacturing companies. The model is weak in that it does not have any results factors, making it difficult to assess the outcome of implementing a quality programme.

Claver et al (2003) developed a model that identified a set of 8 critical factors and 3 results of total quality management. The instrument was developed from a review of literature and then empirically tested in Spain in a study involving 106 ISO 9000-certified organisations.. The key implementation factors of the quality management system measured were training, continuous improvement, quality planning, leadership, supplier management, specialised training, and process management. The results were determined by the effect of the programme on the level of customer satisfaction, the social impact and business results of the firm. The study provides an integrated framework for TQM, identifying its critical factors and results factors and was tested for reliability and validity within the same study.

This measurement instrument by Claver et al (2003) was selected for this study because it is recent and it supplements existing measures in the literature. The model includes results factors that may be used to evaluate the outcome of the quality programme in wide-ranging terms, i.e. business results, social impact and customer satisfaction. In addition the Claver et al (2003) instrument is based on a large number of ISO 9000-certified companies from a cross-section of varying-sized companies from different industries.

As with other quality programmes implemented in organisations, managers play the leadership role in the implementation of ISO 9000. As seen in the literature reviewed, employee involvement in such a programme is critical for its success (Hongyi et al 2000). This is because people closest to a problem or opportunity are in the best position to make decisions for improvement if they have control of the improvement process. Consequently, if the employees at TCC were fully committed and involved in the implementation of the ISO 9000 programme, their opinions on the process should not significantly differ from those of their managers. Their opinions should be similar, since they are part of the same process and team. This leads to the first hypothesis:

> **H1- There is no significant difference between the views of management staff and employees of TCC on the implementation levels of the ISO 9000 programme.**

Empirical studies reveal that, over a period of six years and less, the quality standard has not been found to result in improvement in the financial performance of a firm (Tsekouras et al, 2002; Inaki et al, 2002; Corbett et al, 2002). However, adoption of the standard streamlines a firm's operations, resulting in improvement in internal factors relating to process (Martinez-Costa & Martineze-Lorente, 2003; Djerjour & Patel, 2002).This paper uses the Claver et al, (2003) instrument to determine the impact of ISO, 9000 adoption on performance at TCC. Performance is defined in terms of three result factors, i.e. 'customer satisfaction', 'social impact' and 'business results'. The strength of the relationship between the critical and the results factors outlined in the said instrument is determined and used to establish the impact of the programme on the firm. This leads to the second hypothesis;

> **H2- There is a significant improvement in the performance of TCC after ISO 9000 implementation. Hence there exists a positive correlation between the critical factors and the results factors when applied in TCC.**

Research and Sampling Design

The data used in this paper was collected from TCC management and employees. The information sought was on the implementation levels of quality management factors, the results obtained after ISO 9000 and motivation for seeking the standard – with the questions being formulated along the Claver et al (2003) approach. The four aspects presented for motivation were: to facilitate foreign trade; to improve process and product quality; to gain marketing benefits; and the need for continuous improvement A preliminary questionnaire was subjected to a pilot survey followed by a pre-test. involving subject experts. The instrument was then tested empirically by collecting the questionnaire.

Company directors and section heads were identified as the respondents on the part of the top management of TCC. This group was targeted because it plays a key role in guiding the company towards quality standards. The second group comprised non-management employees of TCC. These were the people directly involved and affected by the implementation of the quality process. TCC has a total of 670 employees, of whom 26 are part of the top management team. It is structured around 7 distinct departments of different sizes: Corporate affairs, Legal, Finance, Company service, Human Resource, Marketing and Manufacturing. All the departments were represented proportionally in the study. All the members of the management staff were included in the study while a sample of 50 was taken out of 644 non-management employees. Sampling was stratified at random so as to be able to get feedback from each department. The number of samples taken from each department was in proportion to the number of potential respondents in each department.

Data from the top management group was collected using a drop-and-pick structured questionnaire considering their level of knowledge and exposure[3]. A structured questionnaire was also used to collect data from non-management employees, but the involvement of the researcher made it more like a structured interview. This method took cognizance of the fact that employees comprise a cross-section of individuals with different backgrounds and their understanding may not be uniform. This also ensured control over the response rate and the interpretation of the questions. For the two target groups, questionnaires were adapted to reflect the information available to each. The instrument for the management staff therefore collected data on 8 critical factors and 3 results while the instrument for non-management staff only collected data on 7 of the 8 critical factors[4].

Research Findings and Discussion

16 of the 26 questionnaires distributed to top management were returned (a response rate of 62%) while 47 of the non-management employees responded giving a response rate of 94%.The collected data was analysed in three groupings, namely, implementation levels of the quality management critical factors, level of results factors obtained and motivation for seeking ISO 9000 certification. Analysis was done using descriptive statistics such as frequency, mean and standard deviation, while the hypotheses were tested by comparing means and use of correlations.

Data was collected from managers and employees on the implementation levels of the 8 quality management critical factors. Managers' views (Table 1) indicate that the critical factors were well implemented. Only one response of 'a little' was given and none of the managers gave a response of 'not at all' on the extent of execution of the critical factors. The average response among this group was that the programme was

implemented to 'some extent'. Results indicate that 'process management' and 'leadership' were best executed and least well executed respectively, with the views on the former being more consistent than those of the latter. At the same time the responses were least consistent when it came to implementation of quality planning. The most stable results obtained were for implementation of supplier management factor.

Table 1: Implementation Levels of Quality Management Critical Factors- Managers' Views

Quality Management Critical Factors	**No of respondents**	**Number of responses**					**Mean**	**Std Dev**
		not at all	a little	some what	to some extent	to a great extent		
Training	16	0	0	1	10	5	4.25	0.58
Continuous Improvement	16	0	0	1	10	5	4.25	0.58
Quality Planning	16	0	0	4	6	6	4.13	0.81
Leadership	16	0	0	9	5	2	3.56	0.73
Specialised training	16	0	0	7	8	1	3.63	0.62
Learning	16	0	1	5	9	1	3.63	0.72
Process management	16	0	0	0	9	7	4.44	0.51
Supplier Management	16	0	0	1	11	4	4.19	0.54
All Factors Combined		**0**	**1**	**28**	**68**	**31**	**4.01**	**0.64**

Source: Field study and Own Computations

The views from employees (Table 2) seem similar to those of the managers on the individual factors. Again 'process management' was found to be best implemented with the most agreement, while 'leadership' was least well executed and with less agreement in views. The 'grand mean' for employees is higher than that of managers, indicating that the former were more positive that the latter about the execution of the programme. On the implementation levels of the critical factors, the response 'to a great extent' received the largest number of responses from employees.

Table 3 presents the results obtained from the managers and employees collectively on the execution of the quality programme. Once again the critical factor chosen to have been best implemented was 'process management', while the one voted as least well implemented was 'leadership'. The responses collected for the three least well implemented factors (i.e. leadership, learning, and specialised training) also revealed the greatest variability. The responses were least variable for process management, followed by continuous improvement. Specialised training and leadership revealed the highest variability, indicating that the respondents were less in agreement. The average response was that the quality management factors were implemented 'to some extent'.

Table 2: Implementation Levels of Quality Management Critical Factors- Employees' Views[5]

Quality Management Critical Factors*	**No of respondents**	**Number of responses**					**Mean**	**Std Dev**
		not at all	a little	Some what	to some extent	to a great extent		
Training	47	0	2	3	14	28	4.45	0.8
Continuous Improvement	47	0	0	3	13	31	4.6	0.61
Quality Planning	47	0	10	4	15	28	4.51	0.66
Leadership	47	0	2	9	14	22	4.19	0.9
Specialised training	47	1	1	5	12	28	4.38	0.92
Learning	47	0	0	11	8	28	4.36	0.85
Process management	47	0	0	2	10	35	4.7	0.55
All Factors Combined		**1**	**15**	**37**	**86**	**200**	**4.46**	**0.76**

Source: Field study and Own Computations

Table 3: Implementation Levels of Quality Management Critical Factors- Managers' and Employees' Views

Quality Management Critical Factors	**No of respon-dents**	**Number of responses**					**Mean**	**Std Dev**
		not at all	a little	Some what	to some extent	to a great extent		
Training	63	0	2	4	24	33	4.4	0.75
Continuous Improvement	63	0	0	4	23	36	4.51	0.62
Quality Planning	63	0	0	8	21	34	4.41	0.71
Leadership	63	0	2	18	19	24	4.03	0.9
Specialised training	63	1	1	12	20	29	4.19	0.91
Learning	63	0	1	16	17	29	4.17	0.87
Process management	63	0	0	2	19	42	4.63	0.55
Supplier Management	16	0	0	1	11	4	4.19	0.54
All Factors Combined		**1**	**6**	**65**	**154**	**231**	**4.32**	**0.73**

Source: Field study and Own Computations

Table 4 presents the managers' view on the extent of improvement of three results factors – 'customer satisfaction', 'social impact' and 'business results' – since the implementation of the ISO 9000 programme. From the 16 results obtained, the leading response was 'to some extent' while no-one responded with 'not at all' or 'a little'

Table 4: Achievement Levels of Quality Management Results Factors- Managers' views

Quality Management Result Factors	**No of respondents**	**Number of responses**					**Mean**	**Std Dev**
		not at all	a little	some what	to some extent	to a great extent		
Customer Satisfaction	16	0	0	6	7	3	3.81	0.75
Social Impact	16	0	0	0	12	4	4.25	0.45
Business Results	16	0	0	1	7	8	4.44	0.63
Total		**0**	**0**	**7**	**26**	**15**	**4.17**	**0.61**

Staff questioned responded that 'business results' had improved the most, as indicated by an increase in yield, revenues and improvement in the company's competitive position. 'Social impact' received the second highest ratings with managers responding that TCC is more involved in the community and has developed policies to reduce health and safety risks and to protect the environment. According to the study, 'customer satisfaction' showed the least improvement, though managers responded that TCC collected information to measure customer satisfaction. The results also indicate that managers are more in agreement about the improvement in 'social impact' and less in agreement about the change in 'customer satisfaction'. The average opinion was that the results factors improved 'to some extent'.

The responses obtained from the managers of TCC on motives for seeking ISO 9000 were analysed using mean and standard deviation. The results are shown in table 5. The four motivation alternatives provided in the study were considered to have contributed 'to some extent' to the decision by TCC to obtain ISO 9000 certification. The results indicate that over four fifths of TCC managers felt that the main motivation for seeking

the quality programme was in order improve the product and process quality at TCC. The reason that was cited second was for the company to gain marketing benefits from the certification. The need for continuous improvement and facilitating foreign trade came third and fourth respectively in terms of popularity. Of all the factors, managers' views on facilitating foreign trade were the most disparate.

Table 5: Motivation factors for seeking ISO 9000 – Managers' views

Motivation Factors	**No of respondents**	**Number of responses**					**Mean**	**Std Dev**
		not at all	a little	some what	to some extent	to a great extent		
To facilitate foreign trade and business	16	0	1	4	13	2	3.75	0.78
To improve product and process quality	16	0	0	0	7	9	4.56	0.51
To gain marketing benefits	16	0	0	2	5	9	4.44	0.73
The need for continuous improvement	16	0	0	2	10	4	4.13	0.62
All Factors Combined		**0**	**0**	**8**	**35**	**24**	**4.38**	**0.62**

Source: Field study and Own Computations

T-test of the mean difference (Table 6) was used to test the hypothesis that there is no significant difference between the views of management staff and employees on the implementation levels of the ISO 9000 programme. With 61 degrees of freedom the t-value was calculated as 3.07, the test revealing that views of the managers were significantly different from those of the employees. Employees were more positive than their managers about the implementation levels of the quality programme. However, the employees were more in agreement on the same than the managers. Thus, the hypothesis on uniformity of views can be rejected at 99% confidence level.

Table 6 Results from comparing means of views obtained from managers and employees using independent sample t- test.

Quality Management Critical Factors	Managers N1=16		Employees N2=47	
	Mean	**Std**	**Mean**	**Std**
Training	4.25	0.58	4.45	0.8
Continuous Improvement	4.25	0.58	4.6	0.61
Quality Planning	4.13	0.81	4.51	0.66
Leadership	3.56	0.73	4.19	0.9
Specialised training	3.63	0.62	4.38	0.92
Learning	3.63	0.72	4.36	0.85
Process management	4.44	0.51	4.7	0.55
All Factors Combined	**3.98**	**0.65**	**4.46**	**0.76**

Source: Field study and Own Computations

To determine whether the ISO 9000 programme resulted in improvement in performance at TCC, this study examined the relationship between data on implementation levels and on results obtained after the programme's implementation. The strength of this association then assisted in determining whether the improvement in performance was as a result of the ISO 9000 programme. To test the hypothesis, correlations between the responses on the implementation of the quality management factors and the results factors were calculated. Pearson's correlation coefficients obtained are indicated in table 7. Only 5 of the 24 relationships were positively correlated at a significance level of 5%. These relationships were; leadership and customer satisfaction; training and social impact; quality planning and social impact; leadership and social impact; specialised training and social impact. The results show that there was greater social impact as a result of ISO 9000 certification that customer satisfaction. There was however no significant impact on business results. Of all the

quality management critical factors, leadership produced the greatest results, i.e. the strongest correlations, while supplier management produced the least.

Table 7: Pearson's Correlation Coefficients for Quality Management Critical Factors and Results at TCC

	Customer Satisfaction	Social Impact	Business results
Training	**0.42(0.10)**	**0.52(0.04)****	**0.23(0.39)**
Continuous improvement	**-0.04(0.89)**	**0.26(0.33)**	**0.41(0.11)**
Quality planning	**0.26(0.33)**	**0.65(0.01)***	**0.28(0.29)**
Leadership	**0.57(0.02)****	**0.56(0.02)****	**0.3(0.26)**
Specialised training	**0.27(0.31)**	**0.60(0.01)***	**0.11(0.69)**
Learning	**0.23(0.39)**	**0.31(0.24)**	**-0.06(0.84)**
Process management	**0.40(0.12)**	**0.36(0.17)**	**0.19(0.47)**
Supplier management	**0.09(0.73)**	**-0.21(0.45)**	**0.33(0.21)**

Figures in brackets indicate the level of significance (2 tailed) * significant at 1%

** Significant at 5%

Source: Field study and Own Computations

From the results, over three-quarters of the relationships between the quality management critical factors and the results factors are not significantly positively correlated. This indicates that the implementation of the quality programme had no association with the results obtained. Thus, though there was good performance at TCC following the implementation of the ISO 9000 programme, this performance cannot be attributed to the quality certification. Hence the hypothesis does not hold true and can be rejected at a 5% significance level.

Implications and Conclusion

The ISO 9000 quality programme was fully implemented at TCC and these findings were supported by all the staff interviewed. However, the employees were found to be more positive than their managers. Surveyed literature supports the difference in views between managers and employees, though the former tend to be more positive about quality systems than the latter and not vice versa (Carlsson & Carlsson, 1996; Davis &

Fisher 2002). The main reasons for adopting a quality system at TCC were found to be improvement of process and product quality and achievement of marketing benefits. These grounds are similar to cases reviewed in the literature (Buttle, 1997). The company has also had positive results since certification. However this improvement in performance was not as a result of ISO certification. These findings are supported by the literature reviewed which indicated that ISO, 9000 certification does not lead to improvement the performance of a company (Dalgleish, 2005; Tsekouras, et al, 2002). This results of this study fit in with existing theories on a firm's motivation for seeking ISO 9000 certification and the impact that the programme has on an organisation. This therefore implies that this study, along with other similar studies, may be used as a reference point for firms interested or involved in ISO 9000 certification in Tanzania. However the results on the comparison of views of managers and employees do not fit in with previous studies.

Adoption of ISO 9000 is a process that involves an entire organisation. For the programme to be effectively implemented it is wise for an organisation to properly the groundwork. This involves an assessment and correction of any internal weaknesses that may hamper the execution of the programme. At the same time a firm should ensure that the relationships between staff, and especially between mangers and employees, are healthy. The managers should also be sufficiently equipped so as to be able to provide the required leadership. This study can conclude that a firm should not seek the standard as a way to improve performance but in a bid to maintain performance. The quality programme should not be viewed as an end in itself but as a means to an end. The standard streamlines operations and creates an environment where a firm is able to maintain its prior good performance. Hence the main benefit of ISO 9000 is allowing a firm to maintain its performance.

The finding that ISO 9000 certification does not improve performance presents a challenge to SMEs. ISO 9000 certification entails a great deal of time, money, and other resources. to ensure that the process is well executed. SMEs may not have these resources though improving 'standards' with, ultimately, the goal of achieving ISO 9000 certification improves performance in the process. With the initial need being to raise standards, a policy intervention and/or creating a local intermediate standard may be necessary to support SMEs in Tanzania that are seeking ISO 9000 certification.

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END NOTE

[1] Bonite Bottlers – which holds the Coca Cola franchise – was the first company to be ISO 9000 certified in the year 2000

[2] Following listing of its shares at the Dar es Salaam Stock Exchange, JTI increased its shareholding to 75% with the remaining being held by the general public (19.5%) and the Government (5.5%)

[3] Both e-mail and printed form were used to reach the respondents

[4] The Questionnaire is not appended but the factors are contained in the tables in the findings section

[5] Supplier management is not included as it does not apply to employees.