

Challenges Facing Industrial Companies in Zimbabwe in Maintaining: A Case Study of a Textile Engineering Firm

Rupa Khanna Malhotra¹, Narendra Singh Bohra², Rajesh Upadhyay³

¹Department of Commerce, Graphic Era Deemed to be University, Dehradun, Uttarakhand India, 248002

²Department of Management Studies, Graphic Era Deemed to be University, Dehradun, Uttarakhand India, 248002

³School of Management, Graphic Era Hill University, Dehradun, Uttarakhand India, 248002

ABSTRACT

As a result of the success of the ISO 9001:2008 Quality Management System (QMS), many organisations are eager to adopt it and get certification. Certification to ISO9001 standards has become obligatory as a result of the globalisation phenomenon. In an effort to provide higher-quality products and services, a significant number of Zimbabwean manufacturers have attained certification. The Standards Association of Zimbabwe is Zimbabwe's primary accreditation authority (SAZ). According on the findings of a case study conducted for KT Textiles, this article evaluates the difficulties encountered by one certified manufacturer in its pursuit of maintaining ISO 9001: 2008QMS compliance. The primary tools for gathering information for this study were questionnaires and in-person interviews. There was also mention of the group's historical documents and minutes from pivotal meetings. Managers and staff members from across departments were polled using a stratified random sample method. In addition to the data gathered from the surveys, we also interviewed several of our employees to fill in some of the blanks. Statistical graphs and charts were used in order to examine the data. This study uncovered the company's adherence to the 8 QMS principles outlined in ISO 9001:2008. According to the study's findings, the most significant obstacles the company faces in upholding its QMS are a lack of top-level involvement and support, a lack of employee creativity and innovation, a lack of focused internal audits, a lack of a preventive maintenance schedule, and a lack of priority placed on data analysis.

Keywords: .

INTRODUCTION

World Class Manufacturing (WCM) organisations are distinguished by their unwavering dedication to providing excellent results in terms of both output and customer satisfaction. As a consequence, the company will be more competitive on a worldwide scale because to its excellent customer service and all-around operations. A strong quality management system may help a company consistently offer high-quality goods. This means that the corporation will aim to produce items at an appropriate cost and will implement a set of criteria, procedures, and tests to monitor the

effectiveness of the manufacturing process [1].

This report is based on research that used KT Textiles as a case study to evaluate the difficulties encountered by manufacturing enterprises in Zimbabwe in maintaining conformity to the ISO 9001:2008 Quality Management System (QMS). Spinning, weaving, knitting, dyeing and finishing, as well as making non-woven fabric and interlinings from 100 percent cotton cultivated locally, are the main operations in textile manufacturing. Fabrics of all kinds are manufactured by KT Textiles for usage in the manufacturing sector.

The purpose of this study was to evaluate the positive effects of adopting ISO 9001: 2008 and achieving certification. It is important to pinpoint the most difficult aspects of maintaining ISO9001 QMS conformity in the manufacturing industry.

Many businesses that adopt ISO9001 fail to completely reap the advantages for which it was designed. The fact that they are able to achieve the minimum standards of the ISO 9001 standard and keep their certification in the first place is also noteworthy. Globalization has increased competition, thus maintaining ISO 9001 standards for quality delivery is essential.

CONNECTED WORKS

Through the years, people have come to understand that "Excellent Quality Management does not simply happen [2]." Managers at all levels of an organisation must be actively involved. Therefore, ISO 9001 is a Quality Management System (QMS) standard that necessitates the coordination of a business's activities via the documenting of operational processes and management actions taken to satisfy client needs [3]. International Organization for Standardization (ISO) 9000 is a family of standards intended to standardise quality management globally [4]. Its goals are to reduce variation in practise from country to country, clarify language, and heighten public knowledge of quality issues.

ISO 9001:2008 accreditation aims, among other things [5], to reduce the organization's reliance on its people in favour of its systems. Focusing on customers is at the heart of the Quality Management System (QMS), which is why its primary objectives include raising product quality while decreasing costs and increasing productivity [6]. ISO 9001:2008 QMS identifies leadership as a critical factor for driving the organization's vision and shifting the emphasis of employees to achieve business goals [7]. It was also shown that there is a relationship between continual development and engagement of senior management .Only 25% of Indian ISO 9001-certified enterprises have senior management that is really devoted to quality concerns; in the other 75%, the QMS is given the least priority during resource allocation. The ISO 9001:2008 standard stresses the notion that workers at all levels of the company are essential assets and their full engagement helps the business via individual creativity and innovation (ISO, 2008). (ISO, 2008). Another research found that employee engagement had a positive impact on corporate culture by breaking down silos and encouraging collaboration across departments [7].

A company's targeted goals may be attained more effectively via the management of activities and associated resources as a process, which is the fourth principle of ISO 9001:2008 [8]. Companies completely following this idea obtain cheaper costs and shorter cycle times via effective use of

resources; enhanced, consistent, and predictable outputs [9]. Minimizing, if not eliminating, waste is one way to do this . The system approach idea to management enables long term growth of the company. The company's Quality Management System shall be documented in detail, with the policy, quality manual, procedures, document control, record creation, and scheduled maintenance system serving as the guiding documents for all operations. Understanding this concept helps companies to completely integrate and align their processes to accomplish desired outcomes, ability to concentrate effort on critical processes, and delivering trust to stakeholders on the firm's capabilities in order to obtain competitive advantage on the market.

A research conducted to assess the efficiency of Contracting companies certified to the ISO 9001 standard in the United Arab Emirates found that the permanent aim of the company should be centred on improving its performance over time . This is accomplished by drawing on past experiences, utilising the "Plan-Do-Check/Study-Act" cycle popularised by Shewhart and Deming as a starting point, and always looking for methods to improve the QMS's performance. Identifying and fixing the sources of quality problems throughout production, shipping, and storage. When combined with expertise and intuition, the analysis of data underpins the notion of factual approach to decision making, which aids management in making good judgments.

ISO 9001 Quality Management Systems have been the subject of much investigation because of their potential to benefit businesses in a wide variety of industries and economies throughout the world. Yet, \sto ascribe the success of these organisations to ISO 9001 in fulfilling their aims is under controversial . For example evaluated the impact of ISO 9000 quality standard adoption on 288 Spanish enterprises, and the findings indicated that 65% of firms had favourable internal and external benefits following its implementation. Evaluated the expenses, advantages and the satisfaction level of 140 ISO 9000 certified enterprises in Saudi Arabia. The QMS contributed to the continued existence and prosperity of the company, demonstrating once again that the advantages of ISO 9001 much surpass the expenses of achieving the standard. Furthermore, surveyed the implementation of ISO 9001 and 14001 in the Far Eastern countries of Japan, Taiwan, Hong Kong, and South Korea, and found that ISO 9001 certification is associated with a better corporate image, higher quality products, greater customer satisfaction, and more streamlined internal processes. However, looked at how Australian businesses fared after adopting ISO 9000 QMS. A lack of statistical significance between customer focus and stable processes was found, suggesting that putting a premium on consumers may not pay dividends when it comes to developing reliable procedures. It was noticed that ISO 9001 certification in Zimbabwean Manufacturing enterprises had a favourable influence on competitiveness, capacity utilisation, staff engagement, employee retention, and organisational communication. These advantages are just two of many, including reduced accident rates and increased earnings. Despite the advantages received by ISO 9001 certified manufacturing organisations, there are frequent obstacles experienced by these companies. These \schallenges may generally roughly characterised as follows:

- 1) Problems originating in the chain of command (the majority of businesses have problems with Top Management's dedication, employee motivation and recognition, organisational learning, and strategic focus).
- 2) Problems with the organization's strategy (most companies' stated goals, guiding principles,

and core values don't really lead to any tangible results). An organization's key performance indicators (KPIs) and activities are not being driven by strategic planning and mapping.

- 3) 3) Quality system related difficulties (most firms demonstrate a poor Plan-Do-Check/Study-Act (PDC/SA) cycle, absence of in-depth internal audit system, non value adding meetings or trainings and unnecessary paperwork).
- 4) 4) Discrepancies in corporate social responsibility and long-term viability as they relate to society.

Most of the research and studies done so far have shown positive results for organisations who use ISO9001 Quality Management Systems. There is, however, evidence that businesses that have used such systems have encountered difficulties. Management's failure to adequately fulfil its Leadership responsibilities has been singled out as a root cause of the most pressing problems.

METHODOLOGY

KT Textiles served as the case in this research, which took the form of a case study. Both quantitative and qualitative techniques were included in the study process. Qualitative research has a phenomenological stance toward the research process, whereas quantitative research takes a scientific approach, strives for objectivity, and gathers and utilises numerical data . Questionnaires, interviews, observations, documentation, and archival materials were used to gather data for the study.

Gathering Information, or A.,

An anonymous subset of the workforce was surveyed for this study. Quality Assurance (QA), Operations, Marketing, Finance, Human Resources (HR), and Engineering are the six divisions into which the participants fell. Seventy people made up the research sample; this included 20 upper-level managers (2 from QA, 6 from Production, 3 from Marketing, 3 from Finance, 3 from HR, and 3 from Engineering) who filled out questionnaires, and 50 workers (3 from QA, 3 from Production, 3 from Marketing, 3 from Finance, 3 from HR, and 3 from Engineering) who were randomly asked questions in groups of 5 while the researchers recorded data. Consequently, the sample size was a compromise between the growing cost of data collecting and the declining cost of sampling error.

The Tools for Conducting Research

In this study, researchers employed both questionnaires and in-person interviews. The researchers mined information from interviews, surveys, and archive materials. Researchers gave assurances to participants that their responses would remain private. In order to gain a feel for the company's QMS as a whole, the researchers also conducted randomised interviews with employees.

DISCUSSION OF RESULTS

Data evaluated here was acquired from the Case study firm with a classified response rate Participant response rate and demographics Overall, men make up 79.1% of the questionnaire and interview respondents in this research. Participants were requested to submit information about their age and this was utilised to assess degree of maturity of participants for quality strategy implementation.

The reject rate shows a general decrease to attain the least rate in 2007. There was however a sudden rise in 2008. This sharp rise is explained by the impact of the economic hardships that were being faced by employees. The economy had basically come to a stand-still in that year and hence it was difficult for the organization together with its employees to perform.

After ISO 9001:2008 certification in 2009 there was a marked decline in reject rate for the firm. The respondents cited the marked reduction in reject rate from 2002 to 2012 as the driving force for the firm's products on the Zimbabwean and International market. It was revealed that the adoption of ISO 9001:2000 in 2003 and ISO 9001:2008 in 2009 instilled a sense of quality awareness to employees in terms of were analysed to check the production levels of the organization against customer orders. Two scenarios were considered and these are before the ISO 9001:2000 certification (2002) and after the ISO 9001:2000 certification (2003 to 2011).

Customer visits and survey data

The research team sought the minutes of meetings held by company representatives with different customers as a KPI relating to customer perception. The study found out that the organization had in place, a system for analyzing sales data, visit reports and customer complaints. This would be the basis for identifying the root causes of customer complaints or any underperformance in this KPI so as to take the necessary corrective and preventive actions. This is supported by questionnaire responses that highlight the fact that the company does meetings with customers. There are individual visits by the Quality Assurance and Marketing teams to customers so as to understand their needs, complaints and suggestions for further improvement.

However, the interview responses revealed that customer complaints are not well communicated to all levels of employees to raise awareness of the problem as well as involving them to find a solution to the problem at hand. They gave an example of recent customer complaints which were not communicated to them but only to management. There is thus no structure for effective resolution of customer complaints. This has a negative impact on service delivery. The tricky part is that the customer complaint system is in place but the sustainability of the QMS is compromised by the effectiveness of the system.

Leadership

Leadership plays a very critical role in the sustenance of a QMS.

Vision, Mission, core values and quality policy.

The formulation of the company's vision, mission, values and quality policy shows the initial application of the leadership principle. However, the questionnaire and interview responses highlighted the fact that top management's involvement in the QMS need to be more visible. There is lack of top management commitment to some elements of ISO 9001:2008 QMS. The responses to the interviews highlight lack of shared vision in resource allocation towards quality issues.

There is need to provide resources to the QMS so as to implement a fully planned and integrated strategy, derived from the mission of the organization. This was supported by a realization that only 10% of the quality budget was sponsored by management in the year 2011. The other 90 percent was diverted to other projects like water reticulation, coal storage facilities, warehouse expansion

and energy management system among others.

Quality Policy

The research checked how the policy is used to achieve continual improvement by addressing top management's vision and strategy for the firm's future. The policy has not been in sync with the situation on the ground. Policy implementation on development of the human resources to ensure direct involvement and responsibility for quality was lagging behind. Employees raised the issue that their QMS improvement suggestions are not being implemented and no resources are allocated to these suggestions. While the organisation has a quality policy in place as required by ISO 9001, its implementation is not being effective. As such the anticipated results will not be obtained.

Quality objectives

Quality objectives are supposed to be reviewed periodically to come up with new or improved ones. Most departments in the organization have not been paying attention to the objectives. They have been failing to meet the quality objectives for the past 3 years, and there are no improved objectives. Management highlighted that they are yet to achieve them and no proper implementation plans have been put in place. This is detrimental to the principle of continual improvement highlighting the failure to make it an objective for every individual in the company.

Employee recognition and awards

The questionnaire and interview responses revealed that employee recognition and reward systems are not properly motivating employees. There is an indication that top management withdrew some monthly reward and recognition incentives for employees. The organization used to appraise individuals and teams once every month on quality improvement issues and reward them accordingly. This is now being done once a year and employees feel shortchanged. It thus has an effect on quality improvement and generally the delivery of the QMS is compromised.

Recognition of achievements through appraisal must be the key determinant of employees' remuneration to motivate, creating a changing culture, aligning employees to the organization's vision, communicating strategy and inspiring them to meet quality objectives.

Implementation of management review minutes and resource allocation to the QMS

Respondents revealed that the top management's allocation of resources to support the QMS is not enough. For example, it was cited that: Internal Quality Auditors were paid a certain amount from 2003 to 2010 for every audit engaged which is no longer the case. In order to ensure a proper functioning QMS, Internal quality audits are used to check its performance and highlight areas which need special attention. The management withdrew this payment which they considered as a cost to the firm. External training programs are no longer valued as pivotal to firm growth by top management, the participants' highlighted lack of funding to train senior staff outside the firm at seminars, colleges, and universities; among others. According to Davies et al. (2003), the firm is trying to run away from appraisal costs of maintaining the QMS.

Results show that management withdrew critical resourcing that was available to support the QMS. This includes incentives for Internal Quality Auditors as well as continuous training of employees

that support the QMS. Archival records revealed consistency in employee training from 2003 to 2010 and thereafter the training records were missing and thus showing inconsistency. This shows a slack in training needs analysis. The human resource files for most employees or machine operators showed that training was done before a job title was given through a 3 months training and induction period after which a test was written to assess competence. Training of employees to cover for new technology was missing.

2) Process approach

a. Non-conforming (NC) product rate

Non-conforming products coming from a system are a measure of quality delivery of the organisation. The general trend should be that when you implement a QMS, there should be a decline in the number of non-conforming product. There was a decrease thereafter from 2010 to 2011. It is imperative that adoption and implementation of ISO 9001:2008 has given a general understanding of ensuring that the process must be consistent in quality provision.

This is inconsistent with the QMS which should show a continuous decline in non-conforming product.

Continual Improvement

Internal Audits

One critical aspect of a QMS is the Internal Audit system. The internal auditors if well trained can ensure that the AMS remains sustainable in an organization. The QMS require a company to gain improvement actions from the audit results. Their unique advantage against external auditors is that they have knowledge of the particular management system that they are auditing. This gives them a chance to properly identify non-conformances.

Corrective Action

Corrective actions are used as a tool for improvement by focusing on eliminating causes of NCs in order to avoid recurrence. The researchers sought archival records on NC reports, audit reports, process monitoring and measurement results, outputs from data analysis, minutes of management reviews and customer complaints. It was noted that the organization has plenty of information to highlight areas which need management attention. This information is however not being utilized to derive the required results. Very little has been done to reduce NCs in most departments as proven by number of NCs raised in the NC report book. Most of the NCs were not closed and no action plans have been developed. This shows that while the system identifies NCs, management is not following through to close them out.

Preventive Action

This is loss prevention which is applied to all processes, activities and products to avoid recurrence of NCs. The study found out that there is little use of information generated in the company to analyze and evaluate data to highlight areas which need special attention to prevent NCs. For example, the organization needs a plant audit to examine losses due to steam and condensate leakages, water usage, cleaning of machines and electricity consumption.

Factual approach to decision making

Calibration and Maintenance records

The organization has a system in place for calibration, maintenance and controlling measuring devices. This ensures that results obtained from equipment and measuring devices are valid. This is important because these results are the basis of many decisions on the system, processes and products. Most of the company's equipment is controlled by external calibration bodies and research observations through the plant revealed that the current calibration status is being met. Although maintenance schedule records showed frequent preventive plant and machinery maintenance, the annual downtime records revealed an increase in machine

CONCLUSION

The study established that implementation of ISO 9001:2008 QMS is important in improving quality performance. KT Textiles benefited from its implementation though there are challenges during operation. The system has brought a substantial reduction in time spent on fire fighting at the company. Firefighting is usually a characteristic of organizations operating without procedures and line of command.

It was highlighted in the study that there are benefits that manufacturing firms can derive from ISO 9001:2008 certification, in terms of improved product quality, customer satisfaction, improved efficiency, reduced waste, and meeting stakeholder expectations. Nevertheless, the study found out that there are challenges which the manufacturing organization must overcome in order to conform to ISO 9001:2008 QMS. Such challenges are as outlined below:

Inadequate resource allocation to the QMS as some of the quality development budgeted funds are diverted to other projects.

Customer complaints and some other information relating to customers are not well communicated to low level employees.

Withdrawal of weekly and monthly employee recognition and awards to once a year, and also the withdrawal of Internal Quality Auditors' fees by top management which was paid as a motivation incentive for every audit performed.

Minimal resource allocation to employee training and training syllabus not relevant to employee needs in tandem with new plant machinery.

Employee suggestions are not being implemented and no resource allocation to these suggestions to drive continual improvement.

Failing to meet quality objectives in some departments for the past 3 years. The company has set unrealistic quality objective targets.

Internal audits lack focus on key issues due to little effort or work being done on NCs raised to improve system performance.

NC report book for most departments highlighted that over 40 percent of NCs raised were not closed, showing lack of commitment towards corrective action to eliminate causes of NCs in order to avoid recurrence. There is also less focus on data analysis to highlight areas which need special attention to prevent NCs.

Erosion of the supplier base for the firm due to the devastating economic meltdown of 2007 to 2008. Many companies have shut down operations during this period and for those that remained operational, there was massive compromise on the requirements of the QMS

The company failed to accept that ISO 9001:2008 QMS is a continuum, that is, it is an ongoing project. As the QMS matured the employees and management slackened in their drive towards quality improvement.

RECOMMENDATIONS

This research has been exploratory in nature which limited the scope of the theory testing process to a single manufacturing firm and this approach was essentially controlled for the organization's specific factors. This framework captured key benefits derived from the implementation of ISO 9001:2008 QMS certification which could be adopted by other manufacturing firms, as well as challenges which must be dealt with. However, the framework can be modified to handle firm specific contingencies and be developed into a model which can be applied across the manufacturing industry. Despite the research's limited focus on quality management systems, the researchers believe that the findings of this study may be applicable to other industries in Zimbabwe. Therefore, further research need to be done to test the framework on other industries especially with the current economic conditions prevailing in the country.

REFERENCES

1. Azizivahed, A., Ghavidel, S., Ghadi, M. J., Li, L., & Zhang, J. (2019, February). Multi-Objective Energy Management Approach Considering Energy Storages in Distribution Networks with Respect to Voltage Security. In *2019 IEEE International Conference on Industrial Technology (ICIT)* (pp. 661-666). IEEE
2. Ghoflghari, P., & Nasiraghdam, H. (2018). Electrical Energy Storage on the Hybrid Grid of Renewable Energy System Using Fuzzy Controller Optimization Algorithm. *Journal of Artificial Intelligence in Electrical Engineering*, 6(24), 17-28.
3. Chansareewittaya, S. (2018, July). Hybrid differential evolutionary/tabu search for economic dispatch and environmental dispatch. In *2018 15th International Conference on Electrical Engineering/Electronics, Computer, Telecommunications and Information Technology (ECTI-CON)* (pp. 9-12). IEEE.
4. Liu, X., Song, Y., & Li, Z. (2019). Dummy data attacks in power systems. *IEEE Transactions on Smart Grid*, 11(2), 1792-1795.
5. Rajeswari, N., Venkatanarayanan, S., Priya, R. K., & Kannan, S. (2018). Optimum Location of Distributed System Using Shuffled Frog Leaping Algorithm. *Asian J Appl Res*, 4(10), 11.
6. Rezk, H., Aly, M., Al-Dhaifallah, M., & Shoyama, M. (2019). Design and hardware

implementation of new adaptive fuzzy logic-based MPPT control method for photovoltaic applications. *Ieee Access*, 7, 106427-106438.

7. Naz, M., Iqbal, Z., Javaid, N., Khan, Z. A., Abdul, W., Almogren, A., & Alamri, A. (2018). Efficient power scheduling in smart homes using hybrid grey wolf differential evolution optimization technique with real time and critical peak pricing schemes. *Energies*, 11(2), 384.
8. Masrob, M. A., & Rahman, M. A. (2017). Design of a simplified fuzzy logic power system stabilizer for dynamic reduction of a power system model
9. Ardakani, F. J., & Ardehali, M. M. (2017). Optimization of mixed-integer non-linear electricity generation expansion planning problem based on newly improved gravitational search algorithm. *AUT Journal of Electrical Engineering*, 49(2), 161-172.