

Impact of Continual Improvement on Performance of ISO 9001:2015 Certified Organisations in Zimbabwe

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Abstract: The purpose of this study was to establish the impact of continual improvement, one of the principle of the ISO 9001 (QMS) on performance of ISO certified organisations in Zimbabwe. The study was grounded on the positivist philosophy informed by the quantitative paradigm. The target population comprised of all ISO 9001 certified organisations in Zimbabwe and a sample size of 121 respondents. The study adopted census sampling technique and primary data was collected using self-administered questionnaires. Data was analysed using descriptive and inferential statistics. Descriptive statistics was used to summarize data while inferential statistics, specifically Multiple Linear Regression, was used to test hypothesis. Based on the findings of the study, the researcher inferred some important conclusions that continual improvement was found to be positive and significant, and thus all variables had a positive effect on performance. The study recommends that management should be committed to continual improvement with respect to the dynamics of quality management practices, which should be aligned to the organisations' objectives. Policy makers should create a quality framework that is geared towards improving performance and ensure it is adhered to by all stakeholders in all ISO certified organisations in Zimbabwe.

Keywords: Quality, Quality management system, International Standardization organisation (ISO), Performance, Zimbabwe

1. INTRODUCTION

The dynamics of quality management systems are putting companies across the globe under pressure to provide quality products and services to their customers (Amankwah, 2018). Today, market demands require companies to operate under a dynamic and flexible system, which is responsive to changes and uncertainties (Phan et al., 2019). To respond to the increase on global competition, a considerable number of organizations have implemented ISO 9001 Quality Management Systems (QMS), aiming to respond to external stakeholder pressures or to internal motivations and achieve increased performance (Fonseca, 2015). Delivering quality services and products to customers is thus a rocky road for firms that do not employ quality management systems. The process of change embedded in QMS should help firms progress continuously and gradually leading to shared responsibilities among empowered work forces under a harmonious, balanced and team working environment towards quality (Yam et al., 2018). Quality management system is a powerful tool that is dynamic, and a series of quality management systems have been put in place since time immemorial. Companies have survived decadence by making use of the changing quality management systems.

According to World Bank in the *Newsday* of 3 July 2016, reported that only 9,7% of firms in Zimbabwe have an international recognised quality certificate, a situation that puts local firms on the negative with regards to global competitiveness. A majority of Zimbabwean firms' products and systems are not certified to national or global quality standards, with only

140 out of a possible 5 000 having taken certification standards, according to the report on the 13 August 2017 by Standards Association of Zimbabwe. Failure by local firms to certify to minimum national and international quality standards might partly be the reason they have struggled to match competition on global markets due to inferiority of products or processes.

Many African countries, including Zimbabwe, have adopted ISO standards and have noted that the ISO certification is applicable to any type of organization, including the manufacturing sector, and it drives performance improvement. The big question is whether ISO certification brings about quality or whether quality has to be inbuilt.

Putting studies from various countries into the Zimbabwean context, ISO 9001 is a tool that organisations can use to gain the benefits it brings to aid in the revival of the economy. According to the Sunday Mail Newspaper of 5 July 2015, direct foreign competition had increased from 58% in 2013 to above 90% in 2014. This could be witnessed by an influx of foreign produced products to the local market, (CZI Report, 2014). All this led to loss of both local and foreign market share by the Zimbabwean manufacturing sector. Local customers told The Daily Newspaper of 19 May 2014, that they preferred imported products because they were of better quality than locally produced products. This confirmed that local firms' performance was affected by perceived low quality products. The CZI report for the year 2014, also found out that some Zimbabwean manufacturing companies were not exporting their products because they did not meet international quality standards. It seemed these firms were not confident to export their products because they were of inferior quality to those of other international players.

2. Statement of the Problem

Organisations in Zimbabwe are against a backdrop of an ever-changing environment. In order to survive, they need to adopt philosophies that are applied to other countries and are known to succeed. One such philosophy is ISO 9001 practice, and it has been implemented successfully in other countries. Local products and services are being forced to compete with imported goods and they have been found worrying in terms of quality and prices. Related literature showed that the food and beverage industry seemed to be losing market share because of quality related challenges. For example, Delta, the major player in this industry lost 12% and 10% sales in lager beer and soft drinks respectively because of the proliferation of imported beverages into the country, (Delta Corporation Full Year Report 31 March 2015). Similarly, Dairiboard seemed to be facing quality problems in raw milk and this resulted in related imports gaining ground (Dairiboard Annual Report, 2014).

To date, and despite the fact that many Zimbabwean companies began to adopt ISO 9001 certification in the last two decades, the literature on ISO 9001 practices and its impact is still limited. Therefore, this motivates the researcher to investigate the impact of ISO 9001 quality management practices on all ISO 9001 certified companies in Zimbabwe focusing on one of the principle which is continual improvement. The problem can be stated thus: What is the impact of continual improvement on performance of ISO certified companies.

3. Purpose/Aim of the Study

The purpose of the study was to establish the impact of of continual improvement on performance of ISO certified organisations in Zimbabwe.

4. Objectives of the Study

This study was aimed at discovering the impact of continual improvement on performance of ISO certified companies in Zimbabwe.

5. The Research Question

How does continual improvement affect performance of ISO certified organisations in Zimbabwe?

6. Research Hypotheses

On the basis of review of literature, following hypotheses are formulated:

H₀₁: Continual improvement has no effect on performance of ISO certified organisations in Zimbabwe.

7. Significance/Justification of the Study

The findings of this study can assist the government and industry regulators when they are crafting quality management policies so that quality managers and management representatives operate from an informed position with regard to quality matters and when drawing quality improvement plans.

The findings of the study will benefit the management in developing written policies and standard procedures based on the requirements of the ISO standard. These procedures describe how operations in the firm should be conducted and maintained for consistency. They are meant to ensure that the output (products or services) of organisations are of a quality high enough to meet the specifications set by the customers.

8. Assumptions

In undertaking this research study, the researcher made the following underlying assumptions;

- a. ISO 9001 certification refers to certification to ISO 9001:2015 version.
- b. The organisations selected have the same experiences in terms of the parameters being assessed by the study.
- c. The information provided for the study by the respondents will be a true representation of the facts.

9. Delimitation of Study

The study was delimited to:

1. The study was done on all ISO certified companies in Zimbabwe.
2. Responses were collected from either shop floor manager or quality control manager.
3. The sample of organisations chosen covered the manufacturing, service and mining sectors of industry. It covered the period 2015 - 2021.

10. Conceptual Framework

The concept of 'quality' has existed for many years, though the meaning has changed and evolved over time. In the early twentieth century, quality management meant inspecting products to ensure that they met specifications. In the 1940s, during World War II, quality became more statistical in nature. Statistical sampling techniques were used to evaluate quality, and quality control charts were used to monitor the production process. In the 1960s, with the help of so-called 'quality gurus', the concept took on a broader meaning. Quality began to be viewed as something that encompassed the entire organization, not only the production process. Since all functions are responsible for product quality and all shared the costs of poor quality and finally quality was considered as a concept that affected the entire

organization. ISO 9000's definition of quality is "degree to which a set of inherent characteristics fulfils requirement.

Based on the theoretical and literature review, the conceptual framework in Figure 1 overleaf shows the interaction between research variables.

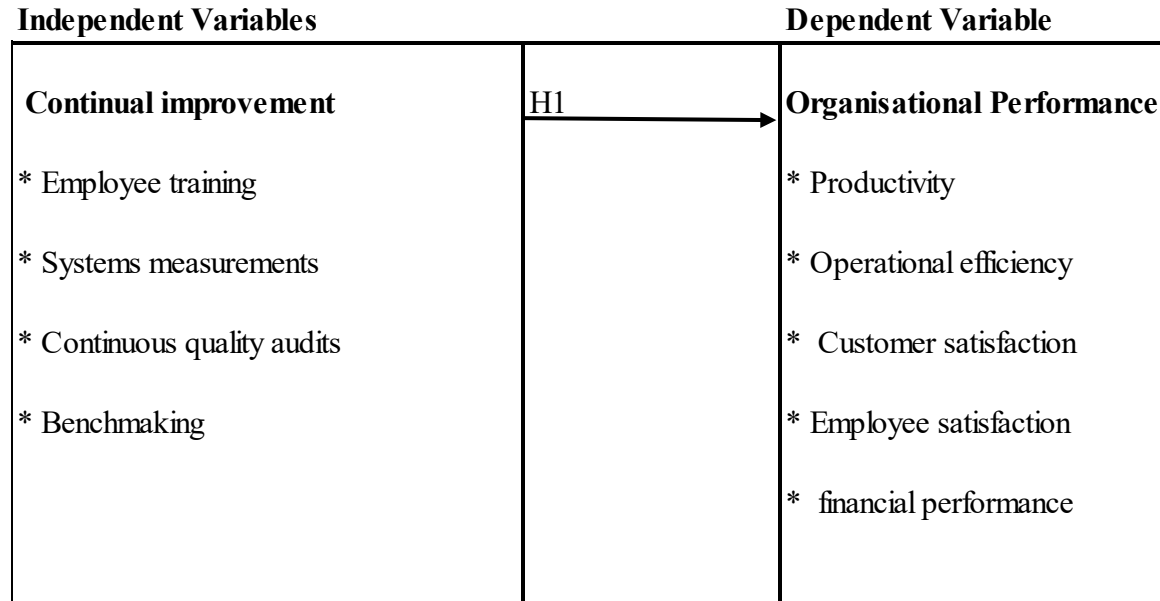


Figure 1: sysmetic diagram

Source: Researcher

11. Theoretical Framework

11.1 Theoretical Framework: Deming's Theory of Profound Knowledge

Deming proffers the theoretical, philosophical, epistemological, and ontological foundations of the QMS (Koskela, Tezel and Patel, 2019). The current study is underpinned by Deming's theory of Profound Knowledge. The basis of the theory is that knowledge comes from theory and without the theory there is no way to use the information that comes to us (Deshmukh, 2015). Deming identified four aspects of profound knowledge:

- **Structure of systems** - understanding the system in which work is being done (process management).
- **Control of variation** - knowledge of system operation comes from a study of performance variation, improvement requires the control of the sources of variation (statistical thinking).
- **Development of knowledge** - knowledge comes by observing work, defining a theory, testing, and confirming it.
- **Psychological Impact** - human behavior must be understood, motivated, and coordinated to achieve results, that is, collaborative culture (Deming, 1993, p. xi).

12. Related Literature Review

The ISO 9001 standard is an internationally recognized document that specifies requirements for the quality management system (QMS) of any organisation. The ISO 9001 standard set of requirements are based on a number of quality management principles which include customer focus, leadership, relationship management, process approach and continual improvement (ISO, 2015).

12.1 ISO 9001:2015 Standard

ISO 9001:2015 is the latest version of the standard and it takes a much less procedural approach and stresses the application of the Plan-Do-Check-Act cycle at all levels of the organization (Koskele, Tezel and Patel, 2019). According to Heras-Saizarbitoria and Boiral (2015), ISO 9001:2015 provides the guidelines for QMS. This is considered as the single standard in the ISO family that can be used by any organization (regardless of size, action, or business activities). There are more than 1 million companies certified to ISO 9001 in more than 170 different countries (Chen, 2018). A wide range of principles related to QMS are included in this standard (Jasper and Jamison, 2016). According to Chen et al., (2016), the major role of ISO 9001:2015 is to check whether the system is working properly or not.

These seven quality management principles are customer focus, leadership, engagement of people, process approach, continual improvement, evidence-based decision making, and relationship management. Thus, these seven quality management principles represent the observed variables that measure the extent of the implementation of ISO quality management principles.

12.2 Continual Improvement

Principle 5 talks of Continual Improvement. "Continual improvement of the organization's overall performance should be a permanent objective of the organization" (International Organization of Standardization, 2011f). Deming promotes continual improvement in order to reduce variability in process, service, and design (Evans and Lindsay, 2008) because when the variability increases the quality decreases (Montgomery, 2007, p. 6). The principle states that successful organizations have an ongoing focus on improvement. The notion of continual improvement has it that improvement is essential for an organization to maintain current levels of performance, to react to changes in its internal and external conditions and to create new opportunities.

According to ISO, like other principles to be fully realised, there are some actions which need to be done on continual improvement which includes promoting establishment of improvement objectives at all levels of the organization. Educating and train people at all levels on how to apply basic tools and methodologies to achieve improvement objectives. Ensuring that people are competent to successfully promote and complete improvement projects. Developing and deploying processes to implement improvement projects throughout the organization. Tracking, reviewing, and auditing the planning, implementation, completion, and result of improvement projects.

13. Research Methodology

The research methodology section covers research philosophy, research paradigm, the design and the population of the study, sampling and sampling techniques, data collection and methods of data analysis that will be employed.

13.1 Research Philosophy

This study adopted positivism research philosophy and its literature is characterized by testing of hypothesis from existing theories through measurement of observable social realities, using data originally collected from the field (Saunders *et al.*, 2007; Ericksson and Kovalainen, 2008).

In the study the scientific paradigm as guided by the positivist philosophy will be used to explore the impact of continual improvement on performance of ISO 9001 certified organisations in Zimbabwe.

13.2 Research Design

There is no single design that exists in isolation (Saunders *et al.*, 2007); therefore, combining different designs in one study enables triangulation and increases validity of the findings. The study employed a combination of both explanatory and descriptive research designs to explain

the relationship between ISO 9001 practices and performance of ISO 9001 certified organisations in Zimbabwe. According to Mugenda and Mugenda (2006), descriptive research design is preferable, as it tries to answers the 'who', 'what', 'when', 'where' and sometimes 'how' questions. It also enables researchers to summarize and organize the data in an effective and meaningful way. According to Eriksson and Kovalainen (2008), descriptive research involves producing data that is holistic, contextual and one that is rich in details to test hypothesis or answer questions concerning the current status of the subject of the study. The study used Regression Model because the dependent variable is continuous, as recommended by Muthen and Muthen (2007). Multiple Linear Regression is used to establish the combined effect of all independent variables on the dependent variable. (Field, 2009). The model will be presented using linear equation. Using multiple linear regression analysis, it is possible to calculate the values of the constant coefficient (β_0) and the slope coefficient (β) from data already collected.

The overall equation of the effect of independent variables on organisation's performance
 $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$

Where;

Y= Firms performance

B0= Constant (intercept)

β_1 - β_3 = Coefficients of independent variable

X1- X3= Composite index of independent variable

ϵ = Error term.

The dependent variable in this study was firm's performance, while quality management practices indicators (quality management principles) will be the independent variables.

13.3 Population

The target population for this study is for all ISO 9001 Certified Organizations in Zimbabwe and which are at the time of study actively involved in business related to the Zimbabwean market.

13.4 Sample

The sample list is drawn from the collection of firms that are ISO 9001:2015 certified as of 1st September 2015 according to Zimbabwe's authoritative standards organization, namely Zimbabwe Standard Association (SAZ) of Zimbabwe. It is also decided that at least three responses to be collected from each and every company to have data accuracy.

13.5 Sampling Procedure

Random sampling technique will be used to draw the sample in which member of the population to be studied has an equal and independent chance of being chosen to participate in the sample.

If random selection is carried out, there will be no chance of the systematic bias which can arise from subjective judgement in sample selection.

13.6 Research Instruments

Primary data will be collected using closed-ended questionnaires. The questionnaires will be used to explore the departmental manager's, quality manager's and internal auditor's views and observations on the study variables identified in the conceptual framework.

13.7 Data Collection

Questionnaires are send to various ISO certified company in Zimbabwe via email to Quality Managers, Senior managers and Junior managers. A covering letter will accompany each questionnaire, explaining the nature of the study, requesting the participants to fill in and return the questionnaire via email.

14. Data Presentation, Interpretation and Discussion

14.1 Response Rate

Data were coded and then cleaned to ensure consistency. As indicated in Table 1 below, out of 162 questionnaires distributed, 121 were correctly filled and returned. This constitutes a response rate of 74.6%, which was satisfactory to make conclusions for the study. According to Mugenda and Mugenda (2003), Rogelberg and Stanton (2007) and Saunders *et al.* (2007), a response rate of 50% is adequate, a rate of 60% is good, and a response rate of 70% and over is very good. Based on this awareness, the response rate in this study was considered to be very good for the study.

14.2 Continual improvement

14.2.1 Descriptive Statistics

Table 1: Continual improvement responses results

The range of the responses were 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree) and 5 (strongly agree).

No.	Statements	N	Mean	STD	Remarks
1	Providing opportunities for employees to learn and acquire knowledge and skills are required in this company.	121	4.02	0.683	Agree
2	There is continuous training of employees to improve their problem- solving skills at our workplace	121	4.20	0.691	Agree
3	Our quality management practices and processes are doing very well due ISO standards	121	4.31	0.796	Agree
4	The quality systems contribute to zero defect of quality objectives	121	4.22	0.832	Agree
5	There is continuous monitoring and improvement of quality systems and procedures to enhance performance	121	4.13	0.695	Agree
6	Setting quality standards in relation to best performance	121	4.11	0.716	Agree
7	The company has set time limit to meet efficiency of products delivery	121	4.12	0.781	Agree
8	There are set benchmarks for internal quality realization and conformity.	121	4.13	0.682	Agree
9	Improved quality management systems through continuous review of quality systems	121	4.21	0.718	Agree
10	There is continuous improvement reviews through internal quality audits.	121	4.06	0.788	Agree
	Aggregate scores		4.15	0.738	Agree

As shown in Table 1, the overall mean score of 4.15 indicates that study respondents agreed that continuous improvement contributes to performance of ISO 9001 certified organisations in Zimbabwe. Successful organizations have an ongoing focus on improvement. Improvement is essential for an organization to maintain current levels of performance, to react to changes in its internal and external conditions and to create new opportunities. In a similar study, Kaziliunas (2010) noted that success factors for quality management systems include continuous improvement of processes, top management, people and systems, reward systems, team, motivational factors and education and training.

Respondents agreed that providing opportunities for employees to learn and acquire knowledge and skills are required in the company as shown by a mean of 4.02. Various studies have established a positive relationship between human capital and organizational effectiveness (Sung SY, Choi JN 2016). A synergistic combination of selection procedures and training practices provides a solid platform to build a skillful workforce by selecting employees having basic KSAs and training them well to achieve high levels of organizational performance (Becker B 1998).

A mean of 4.20 indicated that there was continuous training of employees to improve their problem- solving skills at our workplace. The results are similar to Quazi and Jacobs (2014) who conducted a study on the impact of ISO 9000 certification on training and development activities. This exploratory study examined the impact of ISO certification on training and human resource development activities using a target population of 177 ISO certified firms

The study respondents agreed that quality management practices and processes are doing very well due ISO standards as shown by a mean of 4.3. A company that succeeds in having high-quality products is more likely to keep its customers and to be recommended for others and, in that way, attract new customers (Patel S. 2016).

Respondents agreed that the quality systems contribute to zero defect of quality objectives as indicated by a mean of 4.22. To meet the customers' demands in the industry today, high quality is needed (Chahar, Hatwal, and Sen, 2019). If a product fails to keep what it promises, the customer is likely to complain. In today's society with easy access to social media, it can have enormous consequences, for example loss of customers. Therefore, it is of great importance for the manufacturing companies to ensure the quality of the products and to have as few defected items as possible, maybe more important now than ever.

A mean of 4.13 indicated that the respondents agreed that there was continuous monitoring and improvement of quality systems and procedures to enhance performance. Improvement is essential for an organization to maintain current levels of performance, to react to changes in its internal and external conditions and to create new opportunities. Improvement is an improvement in organizational efficiency and effectiveness.

Mean of 4.11 showed that the respondents agreed that setting quality standards in relation to best performance. With high quality comes more satisfied customers that are more likely to return and buy the products again, and also recommend them to others (Bergman and Klefsjo, 2007). The emphasis on sustainable production is increasing, and to be able to meet the customer's demands, it is of great importance to use the resources efficiently (Colledaniab, et al., 2014).

There was an agreement by respondents that the company had set time limit to meet efficiency of products delivery as shown by a mean of 4.12. In a similar study, Kyritsis (2018) described the importance of monitoring and understanding the humans' role in the production to maintain the high quality.

A mean of 4.13 showed that responded agreed that there are set benchmarks for internal quality realization and conformity as shown by a mean of 4.13. Today there are various established methods available to analyze, improve and confirm the quality of a company, for

example failure mode and effect analysis (Xiuxu and Yuming, 2010), fishbone diagram (Tongyuan, Chao, and Lixiang, 2018) and zero defect manufacturing (Eger, et al., 2018), depending on the desired outcome. Examples of desired outcomes could be minimizing waste, minimize defected items or decrease the number of customer claims.

Respondents agreed that there was improved quality management systems through continuous review of quality systems as indicated by a mean of 4.21. Companies that successfully meet the customers' need and expectations of the products' quality by working in a systematically and innovatively way, often gains competitive advantage compared to companies that do not do that (Bergman and Klefsjo, 2007). Similar, according to Patel (2016), quality improvements were included in the manufacturing process in the early twentieth century. Regardless of the long involvement of quality in the manufacturing industries, challenges of how to manage quality optimizations still exist.

There was continuous improvement reviews through internal quality audits as shown by a mean of 4.06. In order to have an effective group problem-solving and collaborated decision making, work processes must be revised and upgraded constantly (Spencer B,A 1994) and process management techniques need to be applied effectively (Hackman JR 1995). Organizations can improve their output and product quality through reduction in variation, decrease in rework and wastage of materials, mechanical efforts and workforce (Johston C G 1991).

14.2.2 Regression Analysis

14.2.2.1 Test of Hypotheses

This section presented the study findings based on the objective. The hypotheses were tested at 5 percent level of significance as a statistic basis for drawing conclusions.

b). H01: Continual Improvement has no Effect on Performance of ISO Certified Organisations in Zimbabwe

The objective sought to assess the effect of continual improvement on ISO certified organisations' performance in Zimbabwe. A null hypothesis, H01, was formulated with the assumption that continual improvement has no effect on performance of ISO certified organisations in Zimbabwe. Linear regression was used to establish the relationship between continual improvement and organisation's performance.

Table 2: Model of fit on continual improvement and organisations performance

Model	R	R Square	Adjusted R Square	Standard error
1	0.237	0.056	0.048	0.475
a) a; Predictor constant: Customer focus				

Source: Survey data, 2021

Table 34 results shows that under Model One, the value of adjusted R² was 0.048. This meant that continuous improvement explained 4.8 % of the variations in organisation's performance, while 95.2% is explained by other variables not fitted in the model.

The ANOVA Test in Table 3 shows the results for the Regression Model. The null hypothesis was rejected because the linear regression F-test result, (1,119) = 7.108, was significant at 5% level of significance. Therefore, the null hypothesis was rejected and concluded that there was a significant relationship between continuous improvement and organisation's performance.

Table 1: Analysis of variance statistics on Continuous Improvement

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1.601	1	1.601	7.108	0.009
Residual	26.812	119	0.225		
Total	28.413	120			
performance					

Source: Survey data, 2021

Table 4: Coefficient of continuous improvement and organisation's Performance

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	3.232	0.371		8.711	0.000
Customer focus	0.234	0.086	0.237	2.666	0.009

Source: Survey data, 2021

Results in Table 4.19 (c) indicate the model relating to Continuous Improvement and organisation's performance. The model had an R²= 0.237, which meant the model provided a moderate fit. Following the linear regression analysis of continuous improvement and organisation's performance, the fitted model was determined as:

$$CP = 3.232 + 0.237CI + e$$

Where:

CP = Organisations Performance.

CI= Continuous Improvement.

The equation shows that Continuous Improvement had a coefficient (β_0) of 0.237. This meant that a unit change in Continuous Improvement would result in a 23.7% change in organisation's performance. The t-statistic and corresponding p-value were t-value, = 2.666 and p value= 0.009 respectively. Therefore, at 5 percent level of significance, the null hypothesis was rejected, implying that continuous improvement had a positive significance relationship on performance of ISO certified organisations in Zimbabwe.

The findings of this study were in line with the cited studies which indicated that for there to be continuous improvement under ISO certification, systems measurement, continuous quality audit, total involvement of employees, benchmarking and training play a crucial role. Psomaset al. (2012) and Kaziliunas (2010) argue that benchmarking against continuous improvement raises the performance of organizations, leading to competitive advantage.

The observation was also supported by quality Improvement Theory (Deming, 1986), which assumes that continuous improvement idea is a universal quality improvement idea whose aim is to constantly improve on performance. The researcher believes that continuous improvement results provide an additional important contribution to the study of management systems diffusion, aimed at providing more fact-based insights and understanding on ISO certification, leading to organisation's performance.

The findings are also in line with studied done by Kandie K, Kembo A, Oloko M (2018) on investigation on Effect of continuous improvement on performance of public universities in Kenya. The study used cross-sectional descriptive survey research design to ascertain the moderating effect of continuous improvement on organisation performance in Kenya's Public Universities. A census survey was used since all 22 Kenyan Public Universities in Kenya were studied. The key findings of the study indicate that continuous improvement had a positive influence on the level of performance of Kenya's Public Universities.

15. Summary, Conclusions and Recommendations

15.1 Summary

The objectives sought to establish the extent to which continuous improvement affects performance of quality management practices on ISO certified organizations in Zimbabwe. Descriptive analysis of responses from respondents had an overall mean score of 4.15 indicating that respondents agreed that continuous improvement contributes to performance of ISO 9001 certified organisations in Zimbabwe. Kaziliunas (2010) study noted that success factors for quality management systems include continuous improvement of processes, top management, people and systems, reward systems, team, motivational factors and education and

15.2 Conclusions

Continuous improvement was found to be statistically significant in influencing the organization's performance; therefore, managers should look for ways of monitoring and sustaining performance through training employees and by ensuring continuous quality audits and system measurements of ISO certified organizations.

15.3 Contributions to Knowledge

Contribution of the study is as follows:

1. A few studies were taken to find out the impact of continual improvement on performance of ISO certified organizations in Zimbabwe. The study may be considered an attempt to unearth some information regarding implementation of ISO 9001 practices in all ISO certified organization in Zimbabwe.
2. The study reveals various motivating factors that encourage implementation of ISO practices in various organizations in Zimbabwe. This will certainly give impetus, industries to adopt quality management tools and techniques.

15.4 Recommendations

The research encourages all business to be ISO 9001 certified and to implement effectively since it enhances the organizational performance both in short and long run. Furthermore, it also helps organizations to be competitive in both local and international market at the same time helping newcomers to penetrate the market.

The study also recommends that the government uses ISO 9001 as a tool for economic revival by encouraging organizations whether public or private to be ISO 9001 certified so they can be regionally and internationally competitive.

15.5 Recommendations for Further Research

Future course of the work is as follows:

1. Future study may take consideration influence of the external environment in order to explore how the external environment affects quality management implementation.
2. The research used entirely quantitative data hence the use of more qualitative data will enable more information in terms of perception to be discovered. This creates an opportunity for future researchers to unearth some information that cannot be reviewed by a more quantitative approach.

Conflict of Interests

The author declare no coblicts of interest regarding the publication of this paper.

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