

ISSN e2311-7575

International Journal of  
**Management and  
Leadership Studies**  
**(IJMLS)**



---

Volume 3, Issue II, October, 2021

---



**INTERNATIONAL JOURNAL OF MANAGEMENT  
AND LEADERSHIP STUDIES**

# International Journal of Management and Leadership Studies (IJLMS)

## Editorial Board

1. Prof. Washington Okeyo – Chief Editor
2. Dr. John Cheluget – Corresponding Editor
3. Dr. Thomas Ngui – Director, Research Development & Innovation
4. Prof. Peter K’Obonyo – Member (School of Business, University of Nairobi, Kenya)
5. Prof. Richard Miller – Member (Osaka Jogakuin University, Japan)
6. Prof. Zane Ritchie – Member (Josai University, Japan)
7. Prof. Michael Parrish – Member (Kwansei Gakuin University - Japan)
8. Prof. Kalyan Sahoo – Member (Ghana)
9. Dr. Michael Greisamer – Member (Kobe City University of Foreign Studies, Japan)
10. Prof. Peter Paul Kithae – Member (Management University of Africa, Kenya)
11. Prof. Emmanuel Awuor – Member (Management University of Africa, Kenya)
12. Dr. Paul Machoka – Member (Management University of Africa, Kenya)
13. Prof. Padma C. Mishra – Member (Biju Patnaik University of Technology, India)
14. Prof. Subhankar Das – Member (Duy Tan University, Vietnam)
15. Mr. Francis Macharia – Member (Management University of Africa, Kenya)
16. Dr. Domeniter Naomi Kathula – Member (Management University of Africa, Kenya)

## Editorial Advisory Committee

1. Prof. Peter K’Obonyo – School of Business, University of Nairobi, Kenya)
2. Prof. Richard Miller – (Full professor - Osaka Jogakuin University, Japan)
3. Prof. Zane Ritchie – (Associate professor - Josai University, Japan)

## Corresponding Editor

Dr. John Cheluget

Email: [jcheluget@mua.ac.ke](mailto:jcheluget@mua.ac.ke)

## Publisher

The Management University of Africa

P. O. Box 29677 - 00100, Nairobi, Kenya.

Belleview, Popo Road, off Mombasa Road, South C.

[Tel:+254 20 2361161](tel:+254202361161)

**Mobile:** +254 722 224193, +254 706 035299

Copyright © 2021 Management University of Africa  
All Rights Reserved

No part of this book may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopy or otherwise without prior permission from the authors except as provided by copyright law.

**THE EFFECT OF USE OF STANDARDS ON FINANCIAL  
PERFORMANCE OF SMALL AND MEDIUM ENTERPRISES IN  
KENYA: A SURVEY OF TOP 100 SMES IN KENYA**

**Otieno, Walter Ochieng**  
*Management University of Africa, Kenya*

**Prof. Peter Kithae**  
*Management University of Africa, Kenya*

**ABSTRACT**

*In the current globalized economy, quality of products and services offered by an enterprise is a critical factor for gaining competitive advantage in the market. Recent trends indicate increased adoption of different quality improvement initiatives by organizations as they focus on quality to improve their business performance. Studies that have been conducted on adoption of quality improvement initiatives and their effects on financial performance of organizations in different sectors of Kenyan economy are limited and their outcomes are inconclusive. The purpose of this study was to determine the effect of use of standards as a quality improvement initiative on the financial performance of SMEs in Kenya. Financial performance was measured by growth in revenue, Return on Assets, Return on Investment, Profit and reduction in unit cost of production. The sample for the study were the Top 100 SMEs in Kenya in 2019 according to the survey carried out by the consulting group KPMG and Nation Media Group. Descriptive research survey was applied in this study. A census approach was adopted for data collection. The primary data was collected from each enterprise using a questionnaire which was administered online. The descriptive statistics were analysed using Statistical Package for Social Scientist (SPSS). The results showed that the use of standards has statistically no significant effect on financial performance of SMEs in Kenya. However, awareness on relevant standards is high (81.8%) and the use of standards has a potential to explain 0.8% of financial performance of SMEs in Kenya. According to this study, financial performance of SMEs in Kenya is explained by other factors other than the use of standards. Considering the potential of Standards to contribute to financial performance of SMEs and being the foundation for meeting minimum quality requirements, it is recommended that the relevant stakeholders should actively engage SMEs to develop relevant standards that*

*apply to their products and services and support them to use standards in conjunction with other quality improvement strategies to improve their financial performance in the long term.*

**Key words:** Financial performance, Standards, SMEs, Quality improvement initiatives

## INTRODUCTION

Worldwide, Small and Medium Enterprises (SMEs) constitute a critical segment which plays a huge role in job creation and economic development of any country. They represent about 90% of all businesses and more than 50% of employment worldwide (World Bank, 2016). In Japan, SMEs constitute more than 99% of all businesses and employ the majority of the working population and also account for a larger proportion of the economic output (Economist Intelligence Unit, 2010). SMEs in China constitute 99% of total enterprises and contribute 60% of the Gross Domestic Product (GDP) and account for 60% of industrial output volume (Ngui, 2014). In South Africa, it is estimated that over 90% of the formal business entities are SMEs that contribute about 34% of the Country's GDP (International Finance Corporation, 2017). According to Banwo (2016), SMEs contribute about 47% of the GDP of Nigeria. In Kenya, a survey conducted by the Kenya National Bureau of Statistics (KNBS) in 2016 indicated that Micro, Small and Medium Enterprises (MSMEs) collectively contributed 28.5% of the Total Economy of Kenya and had employed 14.9 Million people (KNBS, 2016).

Notwithstanding the important roles SMEs play in socio-economic development in many countries, they face a myriad of problems that impede their growth. The constraints include lack of capital, poor infrastructure, lack of access to appropriate technology, poor quality, unfavorable regulatory environment and weak institutional capacity among others. In Kenya, 46% (about 500,000) of these enterprises close within the first year of establishment, and only about 10% survive beyond five years (KNBS, 2016).

Globalization of markets provides opportunities to SMEs in Kenya to compete and trade both locally and internationally. Several studies show that quality has increasingly become an essential driver for demand for products and services and hence financial performance of the enterprises. McMahon (2001), established that lack of focus on quality by SMEs causes between 5%-15% loss of sales revenue. As a result, the SMEs are increasingly under pressure to implement quality improvement initiatives to meet requirements of customers in domestic and international markets to remain competitive. The objectives of adopting quality improvement initiatives are to improve the products and services and processes to consistently

meet the ever changing customer requirements. The outcome ought to be improved financial performance through reduction of defects, increased operational efficiency and customer satisfaction. The Government of Kenya has identified strengthening of SMEs to become the key industries of tomorrow as a cross-cutting strategy towards a robust, diversified and competitive manufacturing in the Kenya Vision 2030 (GOK, 2007). The strategy is aimed at improving productivity and innovation in the sector.

Sabancı Özer, (2012) defines performance as the achievement of defined business objectives and goals measured against known cost, standards and completeness. While financial performance emphasizes on the general measurement regarding the current financial position of a firm, it can also be termed as measurement of proper utilization of the assets in a firm based on its mode of operation and how revenues are generated. Codjia, (2010) terms financial performance as an analysis of financial statements which includes the account summary and it relates to revenues and expenses, profit / loss, and changes into assets and liabilities. On the other hand, Sarangarajan et al. (2013) defines financial performance in terms of how efficient a firm utilizes its assets in providing products or services and ultimately generates incomes. Kenya's Top 100 SMEs Survey (Top 100 Survey) ranks SMEs in terms of profit growth, returns to shareholders and liquidity (KPMG, 2018). This study used growth in revenue, Return on Assets, Return on Investment, Profit and reduction in unit cost of production to measure financial performance of SMEs in Kenya.

Standards are established by subject matter experts by consensus and are approved by a recognized body. Standards are aimed at achieving optimum performance of a product, a service or a process. There are company, national, regional and international standards that are used in trade. Application of standards is voluntary, except where legal provisions make them part of the technical regulations for specific products and services. Standards give requirements, rules and guidelines for processes, products, services, systems or persons that define the minimum quality and other requirements in order to create value to the customers, protect health and safety and the environment as may be applicable. Standards also promote common understanding, reduce variation, disseminate knowledge in industries and speed up introduction of new technologies and innovations. Standards enable companies to comply with relevant laws and regulations and hence facilitate trade by removing trade barriers and building customer confidence. Standards contain technical information which if applied effectively in operations, can enhance efficiency and reduce cost of production. Products and services that meet international standards have a competitive edge and can access the international markets.

Where required for trade purposes, application of standards lead to product or service certification. Product or Service certification is based on the concept that a product or service consistently meets the requirements of a specific standard or other agreed criteria. Product certification may be mandatory or voluntary depending on the regulatory requirements in each country. The process involves product testing or inspection and/or assessment of the quality assurance practices that have been established to provide confidence that quality shall be met consistently. Product or service certification schemes are operated by recognized Conformity Assessment Bodies (CABs). Such bodies may apply guidelines provided by the international standard ISO/IEC 17065 (Requirements for bodies certifying products, processes and services) to ensure consistency, impartiality and competence. The value of certification is the assurance by a third party that a product or a service complies with specified requirements in standards or other agreed criteria, thus creating confidence and trust by customers. Different national and regional markets have set varying conformity requirements, depending on product or service type.

In jurisdictions where product or service certification is required by law, only products and services that have been certified against the relevant standards or other agreed criteria can access such markets. In Kenya, for example, the Standardization Mark (SM) is a mandatory product certification scheme for locally manufactured products provided for under section 10 of the Standards Act Cap 496, Laws of Kenya. The Food Fortification Mark of Quality is also a mandatory scheme provided for under the Ministry of Public Health and Sanitation, Legal Notice no. 62 of 2012 which is applicable to Wheat flour, Dry Milled Maize products, Salt and Vegetable Fats and Oils. To acquire these mark marks of quality, locally manufactured goods are required to meet quality criteria specified in the various Kenyan or other approved Standards. Kenyan products that bear the mandatory Standardization Mark of quality (S-Mark) can access the East African Community (EAC) common market area without further testing under Article 81 of the Treaty establishing the East African Community, and operationalized by the EAC Standards, Quality, Metrology and Testing Act (EAC SQMT Act, 2006) (KEBS, 2020)

SMEs are a major source of entrepreneurial skills, innovation, employment opportunities and social integration in Kenya. It is essential to assess the quality improvement practices that can have positive impact on their financial performance to provide information for decision making by owners and other stakeholders of SME sector. Studies on the effect of the wide range of quality initiatives on financial performance of organizations in different sectors in Kenya is not exhaustive. Furthermore, the findings on the impact of quality initiatives on performance of the

organizations in different sectors and regions is unclear or contradictory, thus lending itself for more scrutiny. This study was conducted to determine the effect of use of standards on the financial performance of SMEs in Kenya. To evaluate the effects of use of standards on the financial performance of SMEs in Kenya, the following null hypothesis was tested.

**H<sub>1</sub>:** Use of standards has no effect on financial performance of SMEs in Kenya

## **LITERATURE REVIEW**

### **Theoretical literature review**

Scholars have developed various contemporary theories that link quality improvement initiatives and organizational performance. Three important theories, namely, Deming's Theory of Profound Knowledge and PDCA Cycle (the anchor theory), Quality Trilogy and Dynamic capabilities are relevant to this study.

### **Theory of Profound Knowledge and PDCA Cycle**

Edwards Deming is recognized as the architect of quality improvement in the Japanese manufacturing industry that transformed Japan into a modern leader of technology and innovation after the Second World War. Deming developed the system of profound knowledge to underpin transformation of organizations. Deming's system of profound knowledge consists of four components: Appreciation of the System - an understanding of the way the company's processes interact and work as a system; Knowledge about variation - an understanding of the variation occurring and their causes; Theory of Knowledge - the understanding of what is known, and Knowledge of Psychology - the understanding of interaction between work systems and people. Deming believed that application of the system of profound knowledge would help to transform individuals within their organizations and create a better leadership culture. This would in turn lead to effective quality improvement efforts.

Deming further developed fourteen points of management as application of the philosophy of profound knowledge. According to the fourteen management principles, the focus for SMEs should be a long term plan for quality with the aim of continually getting better and better. To this end, SMEs should adapt to the changing environment to respond to the changing customer expectations by providing the necessary resources, build capacity of employees to adopt new technologies and continually improve the processes to improve quality, reduce waste and reduce cost of operations. SMEs should build relationships with suppliers and adopt modern methods of people management that promote teamwork, accountability and empowerment of employees. Further, SMEs should promote effective communication at all levels and manage

feedback objectively to enable employees make decisions and exploit their potential without fear.

Deming also promoted the model of Plan-Do-Check-Act (PDCA) cycle as a framework for continuous improvement starting by establishing objectives, resources and actions to achieve them (Plan), implementing the actions as planned (Do), checking quality results against the objectives (Check) and taking action on the outcome (Act) before starting to plan for next improvement. According to the PDCA model, SMEs should identify what improvement is needed, provide the required resources and facilitate teams to execute the project, monitor and measure the progress of the project at suitable intervals, and finally evaluate, communicate and recognize the outcome of the project.

Deming's theory provides a rich perspective on management principles and a model that can be applied by SMEs to implement quality improvement projects to achieve better performance.

### **Quality Trilogy theory**

This theory was proposed by Joseph-Juran in 1986. The three elements of quality trilogy theory are quality planning, quality control and quality improvement. These three components should work together in order to make any quality improvement effort succeed. Through quality planning, the SME identifies its customers and their needs and then designs and develops a product or service that meet the customer's needs. Quality planning ensures that quality is designed into goods and services and processes by the SME by carefully listening to the voice of the customer. Quality planning eliminates the risk of the quality improvement effort not achieving customer satisfaction or the desired objective.

Quality control involves developing and maintaining operational methods to ensure that the targeted levels of performance are being achieved. Therefore, the SME should clearly define quality, establish the expected performance or targets, evaluate the actual operating performance, compare the actual performance to goals or targets and finally take action on the difference between actual and expected performances. Quality control helps SME to prevent faulty goods and services getting out to the customer, hence improved reputation for quality and this may increase sales.

Quality improvement is a systematic approach to improve the level of performance of the processes and quality of the product or service. The improvements can be achieved through new innovations (breakthrough improvement) or by continually improving the existing processes and products to get better performance levels through setting higher objectives and

corrective action processes. The gains made are then sustained using quality control mechanisms as the organization plans and implements a new phase of improvement.

Scudder (2013) emphasizes that quality improvement actions must be carefully planned and controlled in order to achieve the objectives. Joseph Juran developed Ten quality improvement steps (Mokamba et al., 2013). In applying these Ten steps, the SME should instill a culture of continual improvement in the organization, prioritize improvement projects and clearly define the problem to be solved and the objectives to be achieved for each project. Project Teams should be identified, trained and facilitated to carry out the projects. The planned milestones should be monitored and the results communicated within the organization to encourage the team, and once the project is complete, the team should be recognized for their efforts.

This theory provides knowledge on the interaction of quality management processes and the steps that can be applied by SMEs to effectively plan, execute and sustain quality improvement.

### **Dynamic Capabilities Theory**

The business environment is ever changing. According to Teece et al. (1997), Dynamic Capabilities emphasizes two critical aspects: The agility with which firms can build new internal and external competencies and the strategic management required to apply these competencies to match the rapidly changing business environment. According to Helfat et al. (2007), the Dynamic capability of a firm is how well it can create, extend, or modify its current resource base to match the requirements of the business environment. Teece (2012) grouped dynamic capabilities into three categories: capabilities to identify and assess opportunities and threats (sensing); capabilities to mobilize resources to address an opportunity (seizing) and capabilities for continued renewal or combination of assets to meet external demands (transforming). Fernandes et al. (2017) opines that when dealing with dynamic capabilities, it must be considered that external conditions are present and affect all organizations. However, not all organizations can understand and take advantage of opportunities or even change to minimize the risks present in the environment.

The dynamic capabilities of SMEs will determine how well they can implement quality improvement opportunities. Quality improvement initiatives are change projects that require employees to learn quickly and build and integrate new capabilities into the company's processes in order to transform the existing assets to respond appropriately to the dynamic business environment. SMEs need capability to leverage on knowledge and skills to perceive and sense changes in its competitive environment and identify opportunities for improvement of its quality performance. These changes may be technological, market or regulatory. Seizing

quality improvement opportunities requires SMEs capability to enhance, combine or reconfigure its resources to implement quality improvement projects, thus transforming the opportunity into reality within the organization. Transformation capabilities enable SMEs to leverage on existing assets to maintain or gain advantage over competition.

SMEs should invest in staff training and development as a means of developing their capabilities to make transition to new technologies, products and processes and comply with regulatory and standards requirements. Human resource management initiatives such as empowerment of employees, flexible structures, performance based rewards, and recognition for new initiatives, can inculcate such an entrepreneurial and dynamic culture within the firm. Dynamic Capabilities theory helps SMEs to understand the capabilities that are required to identify and implement quality improvement initiatives that can lead to better financial performance.

### **Empirical Literature Review**

A number of studies have been conducted to evaluate the effect of use of standards on performance of enterprises. According to a study by the British Standards Institute and the Centre for Economics and Business Research in 2015, use of standards in the United Kingdom contributed towards 37.4% of annual productivity growth. The impacts on annual turnover ranged from 1.7% in the aerospace and defense sector to 5.3% in the food and drink manufacturing sector (BSI, 2015).

In Singapore, an independent case study commissioned by Singapore Chemical Industry Council in 2019 titled “The economic benefit of Technical Reference (TR) 48:2015- Bunker Flow mass metering” found that implementation of TR 48:2015 had a significant positive impact, with estimated potential annual net savings of between USD 59.3 Million to USD146.6 Million arising mainly from reduction in the costs of operations (Singapore Standards Council, 2020).

According to a study which was conducted by the International Organization of Standardization in 10 countries in 2014, managers of SMEs identified benefits of using international standards which include quality improvement, cost reduction and increase in profits, open up export markets, increase customer confidence and compliance with regulatory requirements (ISO, 2014).

The studies above were conducted in other countries and therefore exhibit contextual gap. The current study focused on the impact of use of standards by SMEs in Kenya.

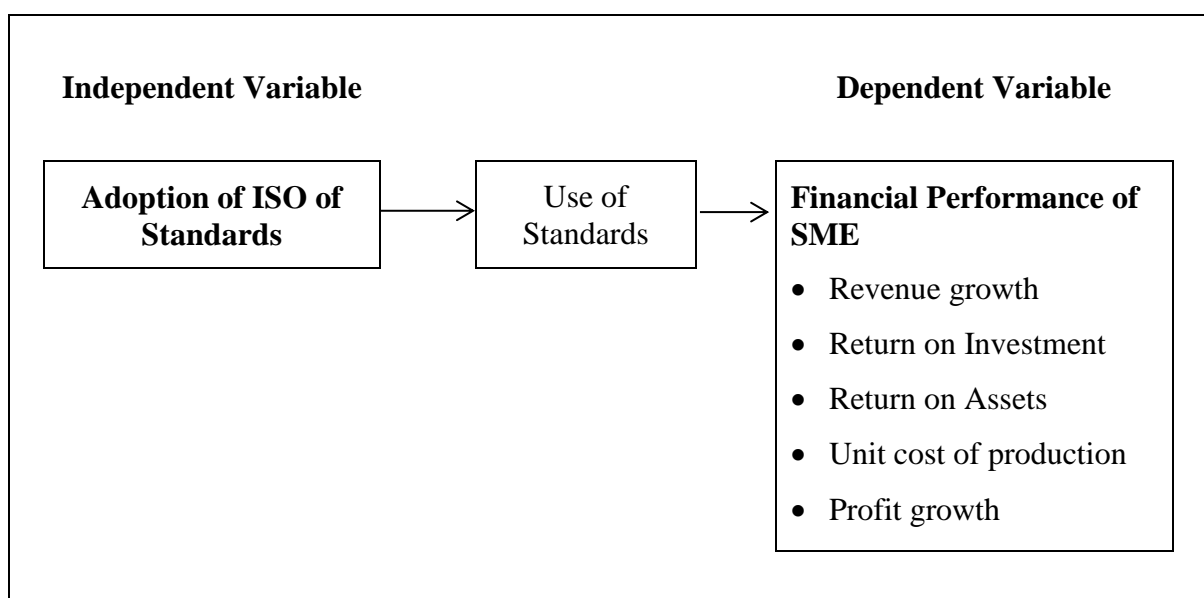
Mokamba (2010) investigated the factors that affect acquisition and implementation of product quality standards by SMEs based in Nairobi, Kariobangi Light Industries. The study established low adoption of standards that are not mandatory among SMEs. This study was limited to manufacturing SMEs in Nairobi, Kariobangi Light Industries, thus exhibiting contextual gap.

### Summary and Research Gaps

The review of literature above identified several knowledge gaps on the effect of use of standards on the financial performance of SMEs in Kenya. The gaps are methodological and contextual in nature. The methodological gaps relate to the target population of study, sample size, and methods for data collection. The contextual gaps relate to the relatively few studies that have been conducted in Kenya on the effects of use of standards on the financial performance of SMEs.

### Conceptual Framework

The study adopted the conceptual framework that postulates that adoption of quality improvement initiatives (independent variable) affects the financial performance of SMEs (dependent variable). However, this relationship is influenced by the type of quality improvement initiative implemented by the organization. Figure 1 depicts this relationship with respect to the effects of use of standards. The framework conceptualizes the total effect of use of standards and not its constructs.



*Figure 1: Conceptual framework*

## RESEARCH METHODOLOGY

The main objective of this research was to determine the effect of use of standards on the financial performance of SMEs in Kenya.

This study adopted descriptive survey design. Descriptive studies involve measurement, classification, analysis, comparison and interpretation of data (Kothari & Garg, 2014). Detailed information can be gathered by subjecting the respondents to a series of items in a questionnaire or interview schedule. Descriptive survey is also useful in the collection of original data from a large population.

For this study, the top 100 SMEs in Kenya selected and ranked by NMG and KPMG in the year 2019 were the target population. One questionnaire was sent to each enterprise to fill online. The targeted respondents to the questionnaire were the Directors or senior managers who are conversant with quality initiatives that are implemented in their companies and the relationship, if any, with financial performance of their enterprises.

The target population being well defined, small and manageable, a census approach was adopted to cover the entire population of top 100 SMEs in Kenya in 2019. The census approach enabled equal representation of all the Top 100 SMEs without any information being left out for complete generalization of the study's findings. As argued by Kothari and Garg (2014), a census approach enhances the generalizability of the research findings. This is because the method eliminates both sampling error and sampling bias.

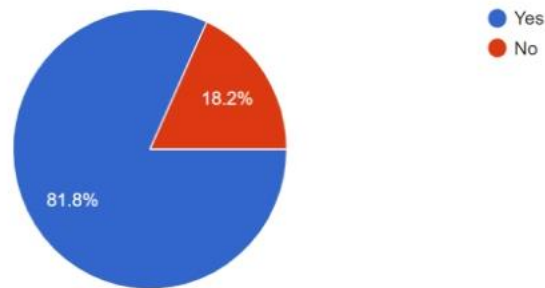
A questionnaire was used to collect the primary data. According to Collis & Hussey (2013), a questionnaire comprises a set of questions for gathering data from the respondents. Mugenda & Mugenda (2003) opines that a questionnaire is an efficient tool for collecting a lot of data within a short period of time with minimal interruption to the respondents' activities. The questionnaire was converted into an online google form and sent by e-mail to the respondents. The responses were automatically captured and presented by Google in the form of Excel tables, pie charts and bar graphs. The descriptive statistics were analyzed using SPSS. Simple Linear regression model  $y = a + \beta_1 X_1 + e$ ; as used to evaluate the effect of use of standards on financial performance of SMEs in Kenya, where;  $Y$  = is Financial performance of SMEs in Kenya;  $\beta_1$  = regression coefficient;  $X_1$  = the use of standards (independent variable) and  $e$  - Constant error

## FINDINGS AND DISCUSSIONS

### Awareness of the standards relevant to the SMEs

Figure 2 shows that 81.8% of the respondents were aware of the standards that are applicable to their products and services, while 18.2% were not aware.

We are aware of the standards that are applicable to our products and services?  
33 responses



*Figure 2: Awareness of the relevant standards*

### Mean Scores of the effect of use of standards on financial performance of SMEs in Kenya

Table 1 shows the mean scores (MS) and Standard Deviations (SD) of each of the statements. The closer the mean score to '1' the poorer the score and the closer the mean score is to '5' the better the score. The mean scores generally show that there is agreement that use of standards has a positive effect on financial performance of SMEs in Kenya.

**Table 1: Mean Scores of Effect of Use of Quality Standards on Financial Performance of SMEs in Kenya**

Statement	N	Mean	Std. Deviation
Use of standards has led to improved growth in revenue	26	4.19	.939
Use of standards has led to improved growth in profits	10	4.10	.738
Use of standards has led to reduction in unit cost of production	10	4.00	1.155
Use of standards has led to growth in return of Investment	10	3.90	1.197

Statement	N	Mean	Std. Deviation
Use of standards has led to improved growth in return on Assets	10	3.90	.876

### Correlation of use of standards and financial performance of SMEs in Kenya

Table 2 shows that use of standards has generally a weak correlation with financial performance of SMEs: Growth in revenue ( $r = -0.462$ ); growth in profits ( $r = 0.447$ ); reduction in unit cost of production ( $r = 0.423$ ); return of Investment ( $r = -0.283$ ) and growth in return on Assets ( $r = 0.116$ ).

**Table 2: Correlation between Use of Standards and Financial Performance of SMEs in Kenya**

Statement	Financial performance (r)	Sig. (2-tailed)	N
Use of standards has led to growth in revenue	-0.462	.210	9
Use of standards has improved growth in profits	0.447	.228	9
Use of standards has led to reduction in unit cost of production	0.423	.256	9
Use of standards has led to growth in return of Investment	0.283	.461	9
Use of standards has led to improved growth in return on Assets	0.116	.589	24

\*\* . Correlation is significant at the 0.01 level (2-tailed).

### Inferential analysis of use of standards and financial performance of SMEs in Kenya

Table 3 shows the results of simple linear regression analysis of the effect of use of standards on financial performance of SMEs in Kenya. The null hypothesis was accepted ( $P \text{ Value} = 0.670 > 0.05$ ): Use of standards has no significant effect on financial performance of SMEs in

Kenya. However,  $r = 0.092$ ,  $R^2 = 0.008$  which implies that implementation of ISO 9001 quality management system can explain 0.8% of financial performance of SMEs in Kenya.

**Table 3: Regression Analysis of Use of Standards and Financial Performance of SMEs in Kenya**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.294	.313		10.523	.000
Use of standards	-.051	.119	-.092	-.431	.670

R=0.092; R Square =0.008 F=0.186 P Value =0.670>0.05

## Discussion

The study found that over 80% of the SMEs are aware of the standards that are relevant to their businesses. According to this study, the use of standards has statistically no significant effect on financial performance of SMEs in Kenya (P Value =0.670 > 0.05). However, the study also shows that use of standards has the potential to contribute 0.8% of financial performance of SMEs in Kenya. The potential positive impact of use of standards found in this study generally agrees with empirical studies that have been undertaken that shows that use of standards improves performance of organizations. For example, the study conducted by the British Standards Institute and the United Kingdom Centre for Economics and Business Research in 2015 found that use of standards in the UK had a positive impact on annual turnover ranging from 1.7% in the aerospace and defense sector to 5.3% in the food and drink manufacturing sector (BSI, 2015). In a recent study in Singapore on the economic benefit of Technical Reference (TR) 48:2015- Bunker Flow mass metering, it was found that implementation of the standard had a significantly positive impact on the Singapore Bunkering ecosystem, with estimated potential annual net savings of between USD 59.3 Million to USD146.6 Million (Singapore Standards Council, 2020)

Use of standards can help businesses to enhance the quality of their products and services and the efficiency of their processes hence improve customer satisfaction and minimize costs. The use of standards, however, is voluntary unless they are part of the technical regulations in a

given jurisdiction. In Kenya, it's a regulatory requirement for locally and imported manufactured products to comply with the relevant Kenya or international standards. This is not the case for the service sector where application of the relevant standards is purely voluntary. Mokamba (2010) found that there was a very low adoption of standards that are not mandatory among SMEs based in Nairobi, Kariobangi Light Industries. This may partially explain the insignificant impact of use of standards on financial performance of SMEs in Kenya.

## CONCLUSIONS & RECOMMENDATIONS

### Conclusions

The use of standards by SMEs in Kenya has no significant effect on their financial performance. However, other than the potential beneficial effect on financial performance as an outcome, use of standards is the foundation for meeting minimum quality and applicable regulatory requirements for product and services. SMEs should therefore embrace standardization for their products and services and adopt the relevant standards to satisfy their customers and comply with legal requirements where applicable.

### Recommendations

Standardization ensures uniformity of products and services and best practices aimed at meeting quality requirements. However, due to the varied nature of products and services offered by SMEs in Kenya, some of the products and services may not be covered by the existing standards that have been approved by authorized bodies. The relevant authorities should actively engage SMEs to develop such standards.

SMEs should also be supported to embrace and use the relevant standards that apply to their products and services. In this regard, the National Standards Body, Kenya Bureau of Standards, should enhance standardization activities that target SMEs products and services and also create awareness on the importance of standards. Further research is also recommended on the impact of application of standards by business enterprises in different sectors of the Kenyan economy.

## REFERENCES

American Society for Quality. (2019). *The rising economic power of Quality -White paper How quality ensures growth and enhances profitability*. Retrieved May 20, 2020, from ASQ-Forbes Insight: <https://asq.org/quality-resources/research/economics-of-quality/whitepaper#mid>

- British Standards Institute. (2015). *Economic contributions of Standards to the UK economy*. Retrieved February 17, 2020, from Standards research report Economic contributions of Standards to the UK economy: <https://www.bsigroup.com/LocalFiles/en-GB/standards/>
- Collis, J., & Hussey, R. (2013). *Business research: A practical guide for undergraduate and postgraduate students*. Palgrave macmillan.
- Codjia, M. (2010). Definition of a statement of financial performance. Retrieved from definition of a statement of financial performance.: [http://www.ehow.com/about\\_6627481](http://www.ehow.com/about_6627481)
- DeFeo, Joseph, A., Juran, & Joseph, M. (2010). *Juran's Quality Handbook: The Complete Guide to Performance Excellence (6th ed.)*. McGraw Hill.
- Economist Intelligence Unit. (2010). *SMEs in Japan. A new Growth drive?* Retrieved March 14, 2021, from <https://eiuperspectives.economist.com/economic-development/smes-japan>
- Fernandes, B., Ferreira, M. J., & Rese, N. (2017). The inception of Dynamic capabilities in SMEs. *International Journal of Entrepreneurship*. Retrieved from <https://www.abacademies.org/articles/the-inception-of-dynamic-capabilities-in-smes-6661.html>
- Government of Kenya. (2007). *Kenya Vision 2030. A Globally Competitive and Prosperous Kenya. Ministry of Planning & National Development and Vision 2030*. Government Printer, Nairobi.
- Harrington, J. H. (1996). *The Complete Benchmarking Implementation Guide – Total Benchmarking Management*. New York: McGraw Hill.
- International Finance Corporation. (2017). *A Report On The MSME Landscape In South Africa*. Retrieved May 20, 2020, from <https://doi.org/10.1596/26058> on
- International Organization for Standardization. (2014). *10 good things for SMEs*. Retrieved March 17, 2020, from <http://www.iso.org/>.
- Karthi, S., Devadasan, R. S., Murugesh, R., Screenvasa, G. C., & Sivaram, M. N. (2012). Global views on integrating six sigma and ISO certification. *Total Quality Management, Vol.107 No.1*, 103-24.

- Kenya Bureau Of Standards.(2020). Standards marks of Quality. Retrieved February 22, 2021, from <https://www.kebs.org/>.
- Kenya National Bureau of Statistics. (2016). *The National MSME survey Basic Report*. Retrieved June 10, 2020, from <https://www.knbs.or.ke/?p=2704>.
- Kothari, R. C., & Garg, G. (2014 ). *Research Methodology methods and techniques (3rd ed.)*. India: New Age International Limited.
- KPMG. (2019). Top 100 SMEs in Kenya 2019. Retrieved from June 15,2020, from <https://www.businessdailyafrica.com/bd/news/stage-set-for-12th-edition-of-top-100-smes-competition-2258374>
- Marczyk, R. G., DeMatteo, D., & Festinger, D. (2005). *Essentials of Research Design and Methodology*. Hoboken: John Wiley & Sons .
- McMahon, P. R. (2001). Deriving empirical development taxonomy for manufacturing SMEs using data from Australia’s Business Longitudinal Survey. *Small Business Economics*, 17(3), 197-212.
- Mokamba, J. A. (2010). Factors affecting the implementation of quality standards among small and medium enterprises(SMEs) based in Nairobi Kenya. Nairobi. Kenyatta University.
- Mokamba, J. A., Gakure, W. R., & Keraro, N. V. (2013). Influence of quality management systems in the performance of small and medium size enterprises in Nairobi-A critical literature review. *Prime Journal of Business Administration and Management (BAM)* 3(6), 1033-1042.
- Mugenda, M., & Mugenda . (2003). *Research Methods: Qualitative and Quantitative approaches*. Nairobi: ACt press.
- Ngui, K. T. (2014). Role of SMEs in Employment Creation and Economic Development in selected Countries. *International Journal of Education and Research*, Vol. 2 No. 12, 461-471.
- Pandya, V. (2012). Comparative analysis of development of SMEs in developed and developing countries. *International Conference on Business and Management* (pp. 6-7). Research gate. Retrieved January 15, 2021, from [https:// www.reserach gate .net/publication/266594413](https://www.researchgate.net/publication/266594413)

- Pilkienė, M., Nedzinkas, S., & Pundziene, A. (2013). The impact of dynamic capabilities on SME performance in a volatile environment as moderated by organizational inertia. *Baltic Journal of Management, Vol. 8 Issue: 4,* 376.
- Sabancı Özer, H. (2012). The Role of Family Control on Financial Performance of Family Business in Gebze. *International Review of Management and Marketing 2(2).*, 2.
- Singapore Standards Council. (2020). Singapore bunkering Industry case study: Economic Benefits of Technical Reference (TR) 48: 2015- Bunker mass flow metering: Retrieved April 12, 2021 from [https://scic.sg/sdoscic/images/Public\\_TR\\_48\\_Case\\_Study\\_Presentation.pdf](https://scic.sg/sdoscic/images/Public_TR_48_Case_Study_Presentation.pdf)
- World Bank. (2016). *SMEs Finance. Improving SMEs access to finance and finding innovative solutions to unlock sources of capital.* Retrieved January 15 2021, from [www.worldbank.org](http://www.worldbank.org)

