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Total Quality Management Strategies on Sustainability of Selected Small to Medium (SMEs) Hardware Sector in Harare Metropolitan Province, Zimbabwe

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Abstract

The main objective of this study was to examine the effect of total quality management strategies on sustainability of selected SMEs hardware sector in Zimbabwe, Harare Metropolitan Province. The study was guided by Positivism research Philosophy in a quantitative research approach. Probability sampling method was used. This study adopted a descriptive research design as the study was exploratory in nature. The study's population was 85 managers and senior employees in the registered hardware sector in Harare Metropolitan Province. The study sample size was 70 respondents constituting of managers and senior employees in Zimbabwe hardware sector. The researcher used the Krejcie and Morgan (1970) formula to determine the absolute sample size for the entire population. Structured questionnaires were used to collect data. In processing the questionnaire, the researcher placed reliance on the descriptive statistics particularly the mean and standard deviation. The researcher also undertook inferential statistical analysis in which multiple linear regression analysis were used to establish the presence and strength of linear relationships as well as the statistical significance of the relationships between variables. Study results show that ISO played a significant role in improving quality standards for hardware in Zimbabwe and these were: Improves operational performance, Improves continuous improvement in business, improves organisational productivity, improves product quality and increase customer satisfaction. Study results also show that there is strong evidence on the relationship between continuous improvement and profitability of selected hardware sector in Harare Metropolitan Province. Study results show that innovation influences sales growth of selected hardware in Zimbabwe. There is need therefore, for the hardware management to take advantage of their sources of competitive advantage by consolidating corporate wide technologies and skills into competencies that empower their respective organizations to adapt quickly to changing opportunities to enhance their performance by reinventing or redesigning its strategies that help it to drive its business growth. Future research need to focus on longitudinal study on total quality management strategies for sustainability of SMEs hardware sector in Zimbabwe.

Key Words: Total Quality Management, Organisational Performance, Hardware Sector, Zimbabwe

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Introduction and Background of the Study

Managers/leaders put their energy through satisfying customer needs and organisational survival in the business competitive environment. A holistic quality improvement approach to firms for the purpose of improving performance and customer satisfaction would call for total quality management (Zehir, Ertosun, Zehir and Muceldilli, (2012). According to Sadikoglu and Olcay (2014), total quality management (TQM) is a firm-wide management philosophy of continuously improving the quality of the products/services/processes by focusing on the customers' needs and expectations to enhance customer satisfaction and firm performance. TQM concept is defined as an administration concept, which allows every contributor involved in the corporation to enhance and improve the corporation quality and the performance as well to instill and establish the quality pillars and concepts (Talib, Rahman, and Azam, 2010). Quality management practices are toolkits that organizational managers use to improve procurement performance (Anil and Satish, 2016; Bowles and Morgan, 2016). TQM forms the basis of any organisation's success as it leads to reasonable corporation performance.

The Hardware industry has continued to face performance related challenges in the area of organisational performance and customer satisfaction. The performance of organisations was largely neglected in past research, whereas some other authors like (Katou, 2008) discussed organisational performance with reference to the financial performance only. Stock et al. (2000) deliberated that organisational performance through measuring both financial and market harmonic performance which includes the return-on-investment measures (ROI), sales profit and growth and market share progress. Empirical evidence show that there is a positive association between TQM implementation and organisational performance (Bou-Llusar et al. 2009; Tari, Molina and Castejon 2007; Kaynak, 2003; Douglas and Judge, 2001; Easton and Jarrel, 1998).

Business is likely to exist in the long term and increases its performance and profitability if there is use of organizational innovation activities (Yavuz, 2010). In as much there is empirical studies revealing contradictory findings on the link between TQM and Organisational performance, research provides empirical evidence that there is a positive association between TQM implementation and organisational performance (Bou-Llusar et al. 2009; Tari, Molina and Castejon 2007; Kaynak, 2003; Douglas and Judge, 2001; Easton and Jarrel, 1998) and some other studies indicate that there is a weak or no relationship between TQM practices and organisational performance, especially financial results (Corredor and Goni, 2010; Macinati, 2008; Benner and Veloso, 2008; Samson and Terziovski, 1999; Dow, Samson and Ford, 1999; Ho, Duffy and Shih 2001). The above scholars however focused on organisational performance and Total quality management but not in the Zimbabwean context of the hardware sector.

Most managers in the Hardware sector have on various fora bemoaned saddening organisational performance and service delivery process particularly an increase in defected products and procurement bottle neck. Zollo and Winter (2002) suggests that TQM is not just

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another management fad it is capable of delivering real competitive advantage. Halis, Twati, and Halis (2017) outline the major aim of TQM as it defines the culture, organization, and attitude of any company or association, which tries to offer consumers with the required products and services that meet and fulfil their need. As such TQM is important to organisations as it boosts efficiency and effectiveness. According to Saini (2016), the principal notion of quality management is quality planning, quality controlling and quality improvement. Agbola and Ankrah, (2013) and UNIDO (2007) concurs that key features of TQM include managerial leadership and commitment to quality; preparation of a quality policy and a quality strategy that sets the overall intentions and direction of the firm with regard to quality; pursuit of customer satisfaction and putting the customer first; the search for continuous improvement; use of new technology to enhance products, services and processes; and , continuous training and development of the workforce (Hackman and Wageman,1995), involvement of people in decision making and supervision and enforcement of quality standards (Okpala, 2012).

TQM is an integrative management concept which highlights the need to improve the processes, products and services to achieve and exceed customer expectations and hence to help enterprises to achieve their business objectives. Das et al., (2006) found a positive association between TQM implementation and organizational performance and five of TQM principles, customer focus, continuous improvement, top management commitment, employee involvement, and product innovation have a significantly positive effect on product quality, recommending the use of reward and recognition for involving employees in TQM efforts.

Ebrahimpour (2005) suggest that relationship between TQM and organisational performance need to be explored in the context of a specific country. Forza and Filippini (1998) and Flynn and Saladin (2006) also suggest that the relationship between TQM and organisational performance needs to be examined in the context of other countries. Therefore, this research will contribute by providing empirical evidence about the relationship between TQM practices and organisational performance from an under-researched hardware sector for a developing country like Zimbabwe. Similarly, Forza and Filippini (1998) and Flynn and Saladin (2006) suggest that the relationship between TQM and organisational performance needs to be examined in the context of other countries.

In order to cope with the increasing pressure towards continuous improvement and attaining business excellence, adoption of TQM practices has become a common occurrence especially in fast-growing industries and businesses (Thawesaengskulthai, 2010). Quality Management (QM) approaches and techniques such as TQM and the ISO 9000 series of standards have been developed and adopted internationally, which has facilitated the international supply chains of today's business (Qui & Tannock,, 2010).ISO 9001 standard is one of effective and efficient technique to improve continuously performance in the organizations. Lushi et al. Furthermore, several government entities are charged with the duty of ensuring the quality of goods and services as well as educating manufacturers, entrepreneurs and consumers on quality standards namely Standards Association of Zimbabwe (SAZ) and the Environmental Management Agency (EMA). Therefore, this study has attempted to bridge the gap in the existing TQM literature by providing empirical evidence about the relationship of TQM with organisational performance from an under-researched developing country's hardware sector. This study will help practitioners and policy makers in extending their knowledge base of effective applications of TQM.

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According to Polat et al (2011), the process of producing quality work and improvement must start with the leadership, commitment and involvement of the top management as it is responsible for creating an organization culture for quality, defining organizational quality values and goals, and providing necessary resources and infrastructure for operating a quality management system. Customer satisfaction is the key principle of TQM. All goods and services should fulfill the customer's needs. For this purpose, communication and feedback processes on the customer's concerns and satisfaction should be developed. Hence, focusing on the customer becomes one of the fundamental concerns of TQM. As such, TQM adopts the system approach to management, which involves collaboration between all parties including employees at operational and managerial levels, customers, suppliers, among others as the performance can be improved through partnership among the parties and creating teamwork environment (Polat et al, 2011).

The above cited empirical studies show that the concept of TQM to Organizational Performance has been widely explored. Empirical studies reveal contradictory findings. For example, substantial research provides empirical evidence that there is a positive association between TQM implementation and organisational performance (Bou-Llusar et al. 2009; Tari, Molina and Castejon 2007; Kaynak, 2003; Douglas and Judge, 2001; Easton and Jarrel, 1998). On the other hand, many studies indicate that there is a weak or no relationship between TQM practices and organisational performance, especially financial results (Corredor and Goni, 2010; Macinati, 2008; Benner and Veloso, 2008; Samson and Terziowski, 1999; Dow, Samson and Ford, 1999; Ho, Duffy and Shih 2001).

Therefore, this study seeks to assess the effect of TQM practices to organisational performance in Zimbabwean Hardwares. Furthermore, the evidence on innovation and performance in the Hardware Industry Case of Zimbabwe SME'S suggests a positive effect on productivity and growth. There is evidence suggesting that external links, in particular with the customers, have a positive impact on innovation (Tether, 2005; Leiponen, 2005; Soosay & Hyland, 2005) and other evidence showing that innovation positively affects performance. In addition, some authors found that innovation has a positive effect on the sales growth but not on productivity (Mansury and Love, 2008) Organizational innovation significantly contributes to the performance, productivity and improvement of new goods and services and hence competitiveness and growth (Mayor, 2003; Damanpour & Wiliam, 1984). Similarly, Forza and Filippini (1998) and Flynn and Saladin (2006) supports that the relationship between TQM and Organisational performance needs to be examined in the context of other countries hence the need of study in Zimbabwe. There is dearth of information on the effect of Total Quality Management on organisational performance in the Zimbabwean Hardware Sector .Therefore, this research could contribute by providing empirical evidence about the relationship between TQM practices and organisational performance from an under-researched hardware sector like Zimbabwe

Statement of the Problem

Over the years emphasis was merely on production rather than quality which has resulted in excessive expenditure in terms of repairs which eventually affects customer retention, hence hardware companies have the need to produce items correctly over wasting resources by producing substandard items. Positive outcomes in the manufacturing industry greatly depends on the level of quality services and products provided by the industry as well as the nature of the internal and external environment in which the industry operates (Bhuiyan et al., 2014). The general level of quality products and service delivery in Zimbabwean Hardware's

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is viewed as deplorable. Various material ranging from cement and electrical equipment to bricks have been questionable by installers and customers. These have brought negative results for the organisational performance. This is being evidenced by the returning of water pumps and electrical equipment by customers. Huge chunks of revenue have thus been lost in the process due to goods returned. It is perceived that the challenges could be emanating from the management systems being used at the organisation and lack of some basic underlying principles which define TQM philosophy. Most studies have focused on establishing the level to which TQM practices influence customer satisfaction and not the whole organization. There is also little evidence on how Total quality management influence organizational performance in the Hardware sector. This study therefore seeks to assess the effects of Total Quality management practices on organizational performance.

Objectives

To assess the effect of Total Quality Management strategies on sustainability of SMEs hardware sector in Zimbabwe, Harare Metropolitan Province.

Research Hypotheses

- H₁: Innovation has a positive influence on profitability of Hardware's in Zimbabwe.
- H₀: Innovation has no influence on profitability of Hardware's in Zimbabwe.
- H₂: There is positive relationship between ISO Standards and customer retention
- H₀: Customer retention has no relationship with ISO Standards.
- H₃: Innovative has a positive impact on Sales growth in the Hardware sector.
- H₀: Innovative has no impact on Sales growth in the Hardware sector.

Theoretical Framework

The study was underpinned by Demming theory of TQM. The theoretical essence of the Deming approach to TQM concerns the creation of an organizational system that fosters cooperation and learning for facilitating the implementation of process management practices, which, in turn, leads to continuous improvement of processes, products, and services as well as to employee fulfillment, both of which are critical to customer satisfaction, and ultimately, to firm survival (Anderson et al., 2014). Deming (1986) stressed the responsibilities of top management to take the lead in changing processes and systems. Leadership plays in ensuring the success of quality management, because it is the top management's responsibility to create and communicate a vision to move the firm toward continuous improvement.

Top management is responsible for most quality problems; it should give employees clear standards for what is considered acceptable work, and provide the methods to achieve it. These methods include an appropriate working environment and climate for work-free of faultfinding, blame or fear. Deming (1986) also emphasized the importance of identification and measurement of customer requirements, creation of supplier partnership, use of functional teams to identify and solve quality problems, enhancement of employee skills, participation of employees, and pursuit of continuous improvement. Anderson et al. (1994a) developed a theory of quality management underlying the Deming management method. They proposed that: The effectiveness of the Deming management method arises from leadership efforts toward the simultaneous creation of a cooperative and learning organization to facilitate the implementation of process-management practices, which, when implemented, support customer satisfaction and organizational survival through sustained

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employee fulfillment and continuous improvement of processes, products, and services. The means to improve quality lie in the ability to control and manage systems and processes properly, and in the role of management responsibilities in achieving this. Deming (1986) advocated methodological practices, including the use of specific tools and statistical methods in the design, management, and improvement of process, which aim to reduce the inevitable variation that occurs from “common causes” and “special causes” in production.

Review of Related Literature

The effect of Total Quality Management strategies on sustainability of SMEs hardware sector in Zimbabwe, Harare Metropolitan Province

The study dwells on ISO strategies, innovation strategies, continuous improvement on sustainability of SMEs hardware sector in Zimbabwe. Salaheldin (2008) revealed that the implementation of TQM has a positive effect on both the operational and the organizational performance. The results show that customer focus, continuous improvement, top management commitment, employee involvement and product innovation are significantly and positively related to product quality. Sadikoglu and Olcay (2014) found that different TQM practices significantly affect different performance outcomes and the main obstacles were lack of employee involvement, awareness and commitment of the employees, inappropriate firm structure, and lack of the resources. The relationship between TQM and Performance represents a major topic of academic discourse in recent years (Ahmad et al., 2013; Anderson & Sohal, 1999; Anil, 2019; Aquilani et al., 2017).

Several studies consider customer focus as one of the important TQM elements that is fundamental for customer satisfaction. Juran (1988) stated that customer focus encourages firms to consistently search for new customer requirements, needs and expectations, which leads firms to be innovative in developing and introducing new services as a continual adaptation to the changes in market’s needs. According to Sink and Tuttle (2018), customer-focus means how to fulfill clients’ needs. According to Chin, et. al. (2012), customer focus is about knowing the customers’ requirements and expectations. Kuei, et. al. (2018) stated that focusing on the client emphasizes the mechanisms for communication with the client, also to know the needs of clients and the degree of their satisfaction. Azizi, et. al. (2016) stated that customer focus means mechanisms, and tools are created which are required to manage the relationship with clients in the system. Goetsch and Davis (2016) stated that customer needs should be known and understood by putting employees in touch with customers and adopting the concept customer defines quality. In summary, customer focus means focus on the understanding, knowing and meeting the external customer needs and expectations.

Additionally, quality is a performance dimension that allows efficient utilization of resources, provides suitability for use for products and services, and establishes a production concept in accordance with customer requirements. A successful business can be maintained by ensuring, first of all, the quality of work life for members of the organization. Several techniques such as alternative working models like job enrichment and independent work groups, quality control groups, representation of the staff in the board of management, making staff partners to the company are included in programs on work life quality (Dinçer and Fidan, 2016).

Today customer desires and needs are continuously increasing together with the rapid progress in science and technology and businesses can be successful to the degree they can

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produce goods and services that are more creative of higher quality and more suitable to customer requirements (Nicholas, 2018). Profit planning, one of the important standards of performance dimensions is considered as a management activity involving careful consideration of various factors determining the profit and maintaining the necessary accord between them. Profit could be generally defined as, the increase of the equity capital in hand prior to activities in the equity capital.

Many studies tackled the relationship between TQM practices and achieving competitive priorities, for example: Flynn, et. al. (2015) in their research investigated the relationship between total quality management practices and organization performance and competitive advantage, which includes low cost, quality, flexibility, innovation and deliverability. Prajogo and Sohal (2013) in their study investigated the relationship between TQM practices and achieving quality performance, and innovation performance. Thai Hoang, et. al. (2016) in their study tried to investigate the effect of TQM on firm innovation. Long, et. al. (2015) aimed to analyze the impact of TQM practices on organization innovation performance among manufacturing industry in Malaysia, while they used leadership, customer focus, and process/people management as elements of TQM to see their effects on the process innovation and product innovation. All the studies mentioned above showed a positive relationship between TQM variables and competitive priorities dimensions. Therefore, the current study will investigate the impact of TQM practices as total and for each variable on competitive priorities dimensions

Methodology

The study was guided by Positivism research Philosophy in a quantitative research approach. Probability sampling method was used. This study adopted a descriptive research design as the study was exploratory in nature. The study's population was 85 managers and senior employees in the registered hardware sector in Harare Metropolitan Province. The study sample size was 70 respondents constituting of managers and senior employees in Zimbabwe hardware sector. The researcher used the Krejcie and Morgan (1970) formula to determine the absolute sample size for the entire population. Structured questionnaires were used to collect data. In processing the questionnaire, the researcher placed reliance on the descriptive statistics particularly the mean and standard deviation. The researcher also undertook inferential statistical analysis in which multiple linear regression analysis were used to establish the presence and strength of linear relationships as well as the statistical significance of the relationships between variables.

Results and Discussion

Response rate

The response rate was taken from 85 respondents from selected SMEs selected hard-wares in Harare Metropolitan Province. The sample frame comprised of managerial and senior employees from selected organizations. To gather information from these respondents, structured questionnaires were used. The study's response rate is shown in Table 1.1.

Table 1.1 Response rate

Sample frame	Instrument administered	Sample size	Questionnaire returned	Response rate %
	Questionnaire	70	60	86
Total	Questionnaire	70	60	86

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An 86% overall response rate was achieved by the researcher. The vast majority of those who were eligible to participate in the study did so as research subjects. Reliability is increased when a study's participants respond well (Marshall and Rossman, 2006). The more respondents that participate, the better the results will be. According to the researcher's expectations, the response rate of 60% was sufficient for completing the study's data.

Descriptive Statistics

The section presents findings on descriptive statistics which comprise arithmetic means (M), and standard deviations (SD) on all the study's constructs. The SD refers to the extent to which responses are consistent meaning the distribution of the responses around the mean. As a result, the understanding of the data is improved if mean and SD are used together. The scale used in the study had the following response points: 1 strongly disagree, 2 disagree, 3 Neutral, 4 agree, 5 strongly agree.

Descriptive statistics on the influence of innovation strategies on profitability of SMEs hardware sector in Zimbabwe.

Study results as presented in Table 1.2 show the mean scores and the standard deviations of items that were used to measure the influence of innovation on profitability in the Hardware Industry in Harare Metropolitan Province. The mean scores and standard deviations of every item are shown in Table 1.2.

Table 1. 2 Descriptive Statistics on the influence of innovation on profitability in the Hardware Industry

Item Code	Item Description	Mean score	Mean response	SD
AUT1	Customer focus	4.65	Agree	0.925
AUT2	Continuous improvement in business	3.62	Agree	0.923
AUT3	Strategically based	4.62	Agree	0.743
AUT 4	Market functionality	4.61	Agree	0.7.40
AUT5	Accountability	3.24	Neither Agree nor Disagree	0.830
AUT6	Strengthen integrity among stakeholders	4.06	Agree	0.898
AUT7	Learning and Growth	2.32	Strongly Disagree	0.513
AUT 8	Strategic Planning	3.56	Neither Agree nor Disagree	0.769

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Results in Table 1.2 show that the mean responses ranged between 4.65, SD = 0.936 (item AUT1) and 2.32, SD = 0.513 (item AUT7). The mean total was calculated and it averaged (overall mean = 3.56; SD = 0.769) slightly agree out of a possible score of 5 (strongly agree). This suggests that the respondents agreed on diverse influence of the influence of innovation on profitability in the Hardware Industry in Zimbabwe. The identified factors were: customer focus, continuous improvement in business, business strategy, market functionality, accountability, Strengthen integrity among stakeholders, Learning and Growth and finally for strategic planning. Inference to literature shows that managers of hardware must also be flexible enough to allow for changes from the current method of operation (Kinney, 2011). Jim (2015) supported this by saying that; employees should be involved in decisions relating to strategy formulation and implementation for hard-ware sector to be successful in their operations.

Descriptive statistics on the effect ISO Standards on customer retention in the Hardware Industry in Zimbabwe

The mean scores and standard deviations of every item that was used to measure the effect ISO Standards on customer retention in the Hardware Industry in Zimbabwe were presented in Table 1.3.

Table 1.3 Descriptive Statistics on the effect ISO Standards on customer retention in the Hardware Industry in Zimbabwe

Item Code	Item Description	Mean score	Mean response	SD
DEM1	Improves operational performance	3.89	Agree	0.995
DEM2	Improves continuous improvement in business	3.78	Agree	0.930
DEM3	Improves organisational productivity	4.06	Agree	0.938
DEM 4	Improves product quality	4.16	Agree	0.948
DEM 5	Improves quality control	4.07	Agree	0.846
DEM 6	Increase customer satisfaction	0.390	Agree	0.932

Results in Table 1.3 indicate that the mean responses ranged between 3.78, SD = 0.930 (item DEM2) and 4.06, SD = 0.938 (item DEM3). The mean total was computed and it averaged (overall mean = 4.16; SD = 0.948) agree out of a possible score of 5 (strongly agree). This implies that ISO played a significant role in improving quality standards for hardware in Zimbabwe and these were: Improves operational performance, Improves continuous improvement in business, improves organisational productivity, improves product quality and increase customer satisfaction.

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Descriptive statistics on the influences of innovation on sales growth in the Hardware sector in Zimbabwe

Table 1. 4 Descriptive Statistics the influences of innovation on sales growth in the Hardware sector in Zimbabwe

Item Code	Item Description	Mean score	Mean response	SD
TFM1	Least Cost operation	3.87	Agree	0.698
TFM2	Shield against competition threats	3.69	Agree	0.694
TFM3	Employee satisfaction	3.78	Agree	0.669
TFM4	Enhance the competitiveness of the organization	2.40	Agree	0.574
TFM4	Achieving organizational and economic growth	3.43	Neither Agree nor Disagree	0.658

Results shown in Table 1.4 show that the mean responses ranged from 2.40 to 3.87, with a standard deviation of 0.574 for item TFM4 (item TFM1). There was no agreement or disagreement in the mean score (total mean = 3.43; standard deviation = 0.658) from a possible score of 5 (strongly agree). Study results show that all respondents concurred that innovation influences sales growth of selected hardware in Zimbabwe. Kaplan and Norton (1992) further point that strategy evaluation helps the organization to re-align its efforts and resources to reflect the impact felt from proper implementation of the strategic plan. An effective strategy needs to communicate compelling purpose to others, connect organizational strengths with environmental opportunities, exploit current success while exploring the opportunities, generate more resources, coordinate and guide activities and respond to new conditions over time (Fitzpatrick, Sander & Worthen, 2014).

Hypothesis Testing and Goodness of Fit

The following Hypotheses were tested.

H₁: Innovation has a positive influence on profitability of Hardware's in Zimbabwe.

H₂: There is positive relationship between ISO Standards and customer retention in Zimbabwe

H₃: Innovative has a positive impact on Sales growth in the Hardware sector in Zimbabwe.

Table 1.5: SEM hypotheses test results

Hypothesis	Relationship path	Coefficient	T Statistics	P-values	Decision
H ₁	SOCE → GEBM	0.214	5.217	0.000***	Supported
H ₂	ENE → GEBM	0.172	6.379	0.000***	Supported
H ₃	ECE → GEBM	0.251	6.343	0.000***	Supported

Note that: *** p< 0.001

Study results as presented in Table 1.5 shows that there is a statistically significant positive relationship between H₁. H₂ and H₃. It can be concluded that, hypotheses represented by H₁, H₂ and H₃ are positively correlated.

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Conclusions and Recommendations

Basing on the study findings, it can thus be concluded that for hardwares to be profitable they need to embrace innovative strategies for them to be at par with other players in the same industry as a differentiation strategy. Hardware sector need to adhere to ISO standards for them to improve on quality service delivery and as such be in a position to retain customers for their sustainability.

There is need therefore, for the hardware management to take advantage of their sources of competitive advantage by consolidating corporate wide technologies and skills into competencies that empower their respective organizations to adapt quickly to changing opportunities to enhance their performance by reinventing or redesigning its strategies that help it to drive its business growth. There is need therefore, for the hardware management to take advantage of their sources of competitive advantage by consolidating corporate wide technologies and skills into competencies that empower their respective organizations to adapt quickly to changing opportunities to enhance their performance by reinventing or redesigning its strategies that help it to drive its business growth, generate value for the organization, its customers, and create competitive advantage.

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Citation: Sithole, M & Kajongwe, C. (2022). Total Quality Management Strategies on Sustainability of Selected Small to Medium (SMEs) Hardware Sector in Harare Metropolitan Province, Zimbabwe. *Journal of African Interdisciplinary Studies*, 6(8), 52 – 64.

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