

Original Article

Total Quality Management (TQM) Practices and Manufacturing SMEs' Performance in Dar-es-Salaam Region

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Abstract: This study examined the effectiveness of Total Quality Management (TQM) practices and their impact on the business performance of manufacturing SMEs in Tanzania. The idea that SMEs can improve their performance by adopting TQM methods and so improve their business performance served as the driving force behind the study. The researcher collected data from 200 SMEs who are registered by the Small Industries Development Organization (SIDO) in Dar-es-Salaam. The study involved a survey design and primarily employed descriptive statistics such as frequency and percentage as well as weighted mean and ranking. Interpretations of means based on a 5-point Likert. Also, chi-square and multiple linear regression were used to estimate the impact of TQM on firm performance. Purposive sampling, convenience sampling, and snowball sampling were used to correct data. A survey research questionnaire that combined both open-ended and closed-ended questions was used. Results from the first hypothesis showed that leadership had significant impact on effect on the business performance of manufacturing SMEs in Tanzania ($p < .05$). Second hypothesis showed that effective implementation of management of process quality had significant impact on business performance ($p < .05$). Also, the result of the third hypothesis revealed that effective implementation of supplier quality had significant impact on business performance ($p < .05$). Furthermore, hypothesis four results revealed that strategy evaluation and control had impact on business expansion with ($p < .05$ and $t\text{-value} = 7.708$). From this study it is concluded that manufacturing SMEs need to focus more on leadership, management process quality, and supply quality management so as to realise high organisational performance.

Keywords: Effectiveness, Business Performance, SIDO, SMEs, TQM.

I. INTRODUCTION

From consumers' perspectives, many consumers would like to consume products of high quality and those that meet their expectations. Consumers are increasingly in demand of goods of high quality; therefore, manufacturers need to produce products and services that are highly reliable and of high quality to give them a competitive edge/advantage over other competitors.

Product quality is of paramount importance as a means of competition in the world market. It is a management strategy dedicated to product improvement, facilitating the maintenance of its position in the market. Otherwise, rivals that understand the highest quality will get significant market shares [1]. In the modern consumer-driven economy, businesses must provide high-quality products and competitive prices to stay ahead of both internal and external rivals. Today's consumer not only understands but also has the common sense to evaluate such products for their quality. This smart and knowledgeable user forces the company to be careful in providing quality products at competitive prices. Product quality is an important factor in the success of manufacturing industries especially when it is in competition with other competitors.

Small and Medium-sized Enterprises (SMEs) have contributed a significant portion to many economies throughout the world. In this regard, many SMEs have played a central role in the economic development of most countries in the world. Many civilisations have benefited greatly from the enterprises' inventiveness, expansion, and success.

In order to compete with both internal and foreign producers, Small and Medium Enterprises (SMEs) need to focus on quality so that they can survive in such a competitive market for domestic and foreign products. Small and medium producers have been complaining about the lack of markets for their products, and instead, consumers are buying imported goods. This may be due to their products having poor quality standards. For this reason, the small and medium producer sectors should focus on Total Quality Management (TQM).

The concept of TQM was introduced by Japanese quality gurus, including Ishikawa, Deming, Crosby, and Feigenbaum, in the late 1980s in the wake of the dominance of Japanese car manufacturing in the world markets, especially in Europe and



North America [2]. During the 1980s and 1990s, when Japanese firms entered the North American market suffered from stiff competition from the market due poor state of their products [3].

Total Quality Management (TQM) has for a long time been practice-oriented and managers and practitioners are carrying it out. There are a number of advantages and benefits of using TQM than the disadvantages of not using it. The benefits include improving the quality of products through optimisation techniques and reduction in wastes and defects because workers are provided with adequate training and the right types of equipment to motivate workers to produce high-quality products. The top management must ensure that every individual in the organisation is practicing TQM.

Small and Medium Enterprises (SMEs) in Tanzania are crucial for the social and economic development of the country. They play a key role in economic growth through creating employment and generating income for low-income earners and are a key to the development of the private sector. On the other hand, for a long time, many manufacturing companies and other stakeholders have disregarded or dismissed quality management challenges. Lack of compliance with total quality management practices by owners/managers has been one of the causes of the failure of many SMEs. Most of these manufacturing SMEs work hard to produce, manage, improve and sustain their business efficiency in order to reliably distribute/deliver quality products that meet customer needs and satisfaction and compete successfully with their domestic and international competitors. Thus, manufacturing SMEs in Tanzania have no choice but to embrace TQM practices in order to deliver goods and services effectively and efficiently. It is only through this concept that the SMEs can be able to obtain a competitive edge within and outside the country.

This study aims to evaluate the extent to which manufacturing SMEs in Tanzania embrace and apply quality management methods in their businesses, as well as the influence of quality management on economic viability, production defect reduction, and client satisfaction/loyalty. It also identified key competencies that any industry player needs to address to stay ahead and offer best practices for benchmarking by others.

The general objective of the study is to analyse the degree of effectiveness of TQM in manufacturing SMEs in the Dar-es-Salaam region based on Business Performance. The specific objectives are to:

- 1) Analyse the degree of effectiveness of leadership in the Business Performance of manufacturing SMEs in the Dar-es-Salaam region.
- 2) Analyse the degree of effectiveness of management process quality in the Business Performance of manufacturing SMEs in Dar-es-Salaam region.
- 3) Analyse the degree of effectiveness of supplier quality in the Business Performance of manufacturing SMEs in the Dar-es-Salaam region.

The following Research Questions were developed:

- 1) What is the degree of effectiveness of leadership in the Business Performance of manufacturing SMEs in Dar-es-Salaam region?
- 2) What is the degree of effectiveness of management process quality in the Business Performance of manufacturing SMEs in the Dar-es-Salaam region?
- 3) What is the level of effectiveness of supplier quality in the Business Performance of manufacturing SMEs in the Dar-es-Salaam region?

The following research hypotheses are also formulated:

- Ho₁ : There is no significant effect of leadership on the business performance of manufacturing SMEs in in Dar-es-Salaam region.
- Ho₂ : There is no significant effect of management of process quality on the business performance of manufacturing SMEs in the Dar-es-Salaam region.
- Ho₃ : There is no significant effect of supplier quality on the business performance of manufacturing SMEs in the Dar-es-Salaam region.

Despite the fact that SMEs in Tanzania are aware of quality initiatives, according to our knowledge, studies on the extent of the application of quality initiatives in Tanzania are very rare. Research questions arising from these observations include the following:

- To what extent have QM techniques and tools been applied among manufacturing SMEs in Tanzania?
- What critical success factors (CSFs) are required for the effective use of quality tools and techniques in developing economies such as Tanzania?
- What are the reasons for not implementing QM tools and techniques among the manufacturing SMEs in Tanzania?

To address these discrepancies and voids, the article examines the background of Tanzanian manufacturing small businesses and provides empirical evidence on quality programs in an emerging nation. As a result, the purpose of this study is to look into the present state of quality efforts being implemented in Tanzanian manufacturing SMEs.

This research offers significant contributions to knowledge and practice in the field of TQM in manufacturing SMEs.

First, the study explores the implementation of quality tools and techniques in Tanzanian manufacturing SMEs.

Second, the study provides empirical evidence of the application of QM practices in Tanzanian manufacturing SMEs.

Third, the research offers policymakers and top management valuable insights into the effective implementation of quality programs to prepare businesses for regional and worldwide competition.

II. LITERATURE REVIEW

A) A Review of Theories of Total Quality Management

Total quality management issues have been addressed by several theories [4]. Ishikawa theory was developed by a Japanese Researcher in 1990. His model, popularly known as the Fishbone Model, analyses the causes and effects of quality improvements. The author argues that it is essential to observe all sources of quality problems before looking for solutions. Ishikawa has further pointed out that there are seven tools for quality improvement, namely, Pareto analysis, cause and effects diagram, stratification, check sheets, histograms, scatter charts, and process control charts.

Crosby's Theory was propounded by Phillip Crosby, who pointed out that the money that is spent on quality matters is money well spent and does not belong to costs [4].

Another theory on quality trilogy was developed by Joseph Juran, hence known as Joseph Juran's Theory [4]. Furthermore, Bright Hub PM points out that "the quality trilogy is made up of quality planning, quality improvement, and quality control. Thus, the success of a quality improvement project depends on careful planning and control of all quality improvement actions.

III. THEORETICAL LITERATURE REVIEW

Since the 1980s, many firms/companies around the world have adopted TQM techniques, striving to retain and maintain their competitive edge as well as to improve and enhance/sustain the quality of their products and/or services. All these were aimed at achieving customer satisfaction. In order to sustain TQM, all parties involved in the production are to be accountable for the general ultimate product/service [5].

Barone (2021) postulates that point out that Total Quality Management (TQM) is a repetitive practice of sensing and eliminating oversights in the manufacturing process, restructuring or reorganising supply chain management, refining customer knowledge, and making sure that employee performances are improved through training.

In order for TQM to be a success, firms are supposed to acquire and comply with the TQM practices. According to [6], there are ten practices common to TQM, namely: employee involvement, strategic planning, leadership, cross-functional training, human resource management, supplier quality management, management of process quality, customer focus, business outcome competitiveness, and information and feedback. However, the three practices are more influential: leadership, management of process quality, and supplier quality management.

A) Leadership

Effective leadership is a key factor in effecting TQM change. A good and long-term relationship between managers, employees, customers, suppliers, and other stakeholders is of paramount importance for a firm to have a competitive edge against other competitors. Thus, a good and committed leader should work together with subordinates towards a common shared vision [7].

B) Management of process quality

In order to have an effective management of quality, a firm is supposed to link process management and control. [8, p. 2] points out that "effective process management includes clarity of process ownership and boundaries, documenting process management procedures, and cleanliness/organisation of the workplace". Thus, there is a need to have strategies and individuals who will lead the execution of these strategic plans.

C) Supplier Quality Management

Supplier Quality Management (SQM) is a crucial endeavor for any manufacturing firm that relies on vendors/suppliers in the provision of their raw materials or services for the production of final products. Supplier quality management is a critical activity; it ensures that vendors/suppliers supply materials of high quality and that meet customer expectations [9].

IV. EMPIRICAL LITERATURE REVIEW

[8] conducted a study to investigate Total Quality Management in Northern Cyprus' manufacturing SMEs, which engaged themselves in the light industries of food, clothing, furniture and light metal Works. The empirical finding of their study indicated that 88.7% of the respondents perceived that their organisations know of and apply the TQM concept in their SMEs. It was also found that one-third of the above-mentioned SMEs possessed an international quality certificate. In contrast, one in five SMEs engaged in the manufacturing sector were found to possess an ISO9000/9001 certificate.

A study by [10] focused on entrepreneurs of SMEs in Mexico who were not aware of the TQM techniques and how their correct implementation should be undertaken. The findings indicate that TQM has no impact on SMEs because they lack knowledge about this technique and the implementation of this instrument in their enterprises. Therefore, in order to have a competitive advantage, they need to adapt the TQM tool.

[11] conducted a study to identify the relationship between Total Quality Management (TQM) practices and financial performance in manufacturing SMEs in the Philippines. The statistical analysis showed that TQM practices in the areas of management leadership and dedication, satisfaction with clients, and ongoing enhancement were highly prevalent among manufacturing SMEs. In contrast, methods including employee involvement, education and training, and recognition and incentives were moderately prevalent among participating SMEs. Furthermore, their findings revealed no significant association between the financial success of manufacturing SMEs and the prevalence of TQM methods.

Also, [12] conducted an empirical study to provide insight into the status of Quality Management (QM) practices in Namibian 106 SMEs. It was found out that only 52 per cent of them had implemented some QM practices to some extent, whereas 33 per cent had not introduced TQM practices or processes. As such, the rest of the SMEs need further training on QM tools and techniques and the associated competitive advantages" [12, p. 385].

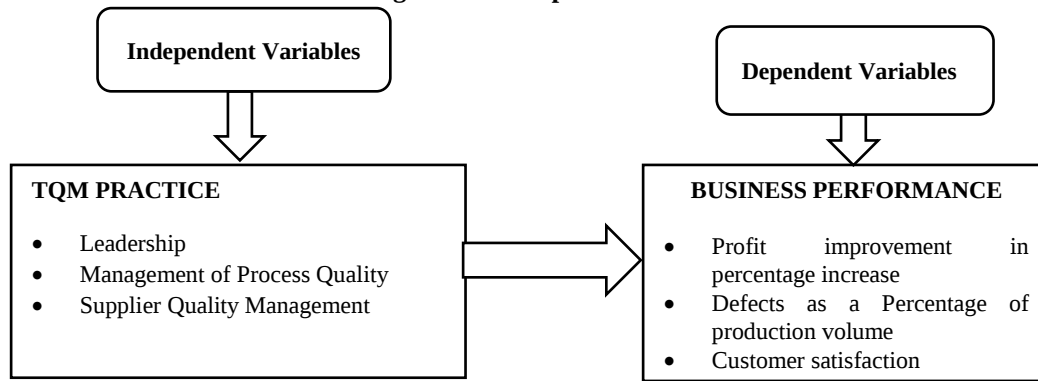
Similarly, a study by [13] suggests that the impact of the first two factors (i.e. financial resources and human resources) was proved by statistical tests. The third component, the discordance of the managers' thoughts, was not statistically validated, indicating that it had no substantial impact on the use of the TQM tool.

[14] conducted a study to examine the relationship between TQM practices of SMEs and their performance as well as their profitability in Ghana. It was found that managers with a background in tertiary education are more likely to employ new technology because they are aware of TQM, they are able to develop a quality assurance policy and show leadership commitment to the implementation of TQM. In addition, successful execution was found to have a clear beneficial association with both customer happiness and loyalty.

A) Research Gap

A number of studies, including those of [7], [11], [12], and [14]) have studied the effectiveness of Total Quality Management (TQM) practices and their impact on manufacturing SMEs' business performance in developed and emerging economies. However, to our understanding, such studies have not been conducted in Tanzania. Thus, this study aimed to bridge that gap.

Figure 1 represents the conceptual framework of the study. The independent variable is TQM practice (i.e. leadership, management of process quality and supplier quality management). The dependent variable is business performance (i.e. profit increase, production defects reduction, and customer satisfaction).

Figure 1: Conceptual Framework

V. RESEARCH METHODOLOGY AND DESIGN

A) Research design

The research project employed the survey research method to track the SMEs' manufacturing profile and the link between their business performance and total quality practices. The method was also used to appraise the relevance and applicability of TQM practices to the selected SMEs.

B) Locus of the Study

The study was conducted in five districts of the Dar-es-Salaam region, in Tanzania mainland. These districts are Ilala, Kigamboni, Kinondoni, Temeke, and Ubungu.

C) Sampling Methods/Techniques

The sampling methods that were conducted in this study were purposive sampling, convenience sampling, and snowball sampling. According to [15, p. 230] purposive or judgmental sampling is the one which assists the researcher in making use of his/her own judgment in selecting subjects that best enable him/her to answer the research questions and have research objectives being fulfilled. Convenience sampling refers to the gathering of information from representatives of the population who are easily available or accessible to provide it [16]. Snowball sampling is usually used when it is difficult to identify subjects because there is no or limited register or sampling frame ([15], [17]). Research participants were involved in recruiting other participants for the study.

D) Data Collection Techniques

The study utilised a researcher-made questionnaire crafted through item pooling from the relevant past studies, which will be slightly modified for the purpose of this study. A five-point Likert scale was used (1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree).

E) Data Analysis

The data were imported into IBM's Statistical Package for the Social Sciences (SPSS) software (version 23.0). Data analysis in this study primarily employed descriptive statistics such as frequency and percentage as well as weighted mean and ranking. Interpretations of means were based on a 5-point Likert. SMEs owners' perception is most important in determining the applicability of TQM practices. Also, chi-square and multiple regression were used.

F) Validity and Reliability

To define the content validity of the questionnaires, the questionnaires were pretested with a sampled population who were not the actual respondents of the study. The outcomes were then tested for dependability. As a result, the researcher did the Cronbach's alpha coefficient test.

VI. RESULTS AND FINDINGS

A) Chi-Square

Ho₁ : There is no significant effect of leadership on the business performance of manufacturing SMEs in Tanzania.

The chi-square test results for Hypothesis 1 showed that there is evidence of an association between leadership and business performance, which is significant ($p = 0.001$) at 0.05 confidence level, as shown in Table 1, which demonstrates that there is a significant effect between leadership that translates to having good organisation performance in terms of profit improvement, production defects reduction, and customer satisfaction. Therefore, the null hypothesis that there is no significant effect of leadership on the business performance of manufacturing SMEs in Tanzania is rejected.

Table 1: Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	38.889 ^a	16	.001
Likelihood Ratio	50.279	16	.000
Linear-by-Linear Association	3.787	1	.052
N of Valid Cases	200		
a. 8 cells (32.0%) have an expected count of less than 5. The minimum expected count is 2.00.			

Ho₂ : There is no significant effect of management of process quality on the business performance of manufacturing SMEs in Tanzania

The chi-square test results for Hypothesis 2 showed that there is evidence of an association of management of process quality and business performance, which is significant ($p = 0.004$) at 0.05 confidence level as shown in Table 2 which demonstrates that there is a significant effect between management of process quality that translates to having good organisation performance in terms of profit improvement, production defects reduction and customer satisfaction. Therefore, the null hypothesis that there is no significant effect of management of process quality on the business performance of manufacturing SMEs in Tanzania is rejected.

Table 2: Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	35.062 ^a	16	.004
Likelihood Ratio	41.016	16	.001
Linear-by-Linear Association	3.865	1	.049
N of Valid Cases	200		
a. 8 cells (32.0%) have an expected count of less than 5. The minimum expected count is 2.00.			

Ho₃ : There is no significant effect of supplier quality on the business performance of manufacturing SMEs in Tanzania.

The chi-square test results for Hypothesis 3 showed that there is evidence of an association between supplier quality and business performance, which is significant ($p = 0.034$) at 0.05 confidence level as shown in Table 3, which demonstrates that there is a significant effect between supplier quality that translates to having good organisation performance in terms of profit improvement, production defects reduction, and customer satisfaction. Therefore, the null hypothesis that there is no significant effect of supplier quality on the business performance of manufacturing SMEs in Tanzania is rejected.

Table 3: Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	38.119 ^a	24	.034
Likelihood Ratio	34.915	24	.070
Linear-by-Linear Association	1.936	1	.164
N of Valid Cases	198		
a. 20 cells (57.1%) have an expected count of less than 5. The minimum expected count is .07.			

B) Regression Analysis

a. Organisation performance in terms of Profit Improvement of manufacturing SMEs in Tanzania

Adjusted R^2 which is termed as the coefficient of determination tells us how organisation performance in terms of profit improvement varies with leadership, management process quality, and supplier quality management. As per illustration in Table 4 below, the value of adjusted R^2 is 0.008. At a 95% confidence level, this suggests that changes in leadership, management procedures for excellence, and vendor management of quality resulted in a 0.8% difference in organisational performance.

R is the correlation coefficient, which shows that there is some correlation between the study variables, as shown by the correlation coefficient of 0.151. This is a very tiny modification.

Table 4: Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.151 ^a	.023	.008	1.25444	1.569
a. Predictors: (constant), Leadership: A large percentage of equipment are under statistical quality control, Management Process Quality: All major department heads accept responsibility for quality, Supplier Quality Management: Our company regards product quality as a major factor in selecting suppliers					
b. Dependent Variable: Profit improvement in percentage increase					

From the findings in Table 5, the established regression equation becomes

$$Y = 3.039 + 0.023 X_1 - 0.08 X_2 - 0.077 X_3 \quad (1)$$

From the above regression model, holding leadership, management process quality, and supplier quality management to constant zero organisation performance (i.e. Profit improvement in percentage increase) would be 3.039. It, therefore, shows that any variation in **leadership** would cause a change in organisation performance by 0.23. A variation in **management process quality** would lead to a change in organisational performance by -0.080. Also, variation in **supply quality management** would create a difference in organisational performance of -0.077. This shows that there is strong evidence of the positive relationship between organisational performance, i.e. profit improvement in percentage increase) with leadership, while other relationships are inverse.

Table 5: Summary of Coefficients

Coefficients ^a					
Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	3.039	.306		9.934	.000
Leadership: Our company regards product quality as a major factor in selecting suppliers (X_1)	.023	.064	.026	.364	.716
Management Process Quality: All major department heads accept responsibility for quality (X_2)	-.080	.108	-.079	-.745	.457
Supplier quality management: A large percentage of equipment is under statistical quality control (X_3)	-.077	.109	-.076	-.707	.480

a. Dependent Variable: Profit improvement in percentage increase

b. Organisation performance in terms of production defects reduction of manufacturing SMEs in Tanzania

Adjusted R^2 , which is termed as the coefficient of determination tells us how organisation performance in terms of profit improvement varies with leadership, management process quality, and supplier quality management. As per illustration in Table 6 below, the value of adjusted R^2 is 0.004. This implies that, there was a variation of 0.4% of organisation performance with changes in leadership, management process quality, and supplier quality management at a confidence interval of 95%. R is the correlation coefficient, which indicates that there is some association between the research variables, as evidenced by a coefficient of 0.140. This is a very tiny modification.

Table 6: Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.140 ^a	.019	.004	1.42249	1.605
a. Predictors: (Constant), Leadership: A large percentage of equipment are under statistical quality control, Management Process Quality: All major department heads accept responsibility for quality, Supplier Quality Management: Our company regards product quality as a major factor in selecting suppliers					
b. Dependent Variable: defects as a percentage of production volume					

From the findings in Table 7, the established regression equation becomes

$$Y = 2.458 - 0.025 X_1 + 0.182 X_2 - 0.037 X_3 \quad (2)$$

From the above regression model, holding leadership, management process quality, and supplier quality management to constant zero organisation performance (i.e. Defects as a percentage of production volume) would be 2.458. It, therefore, shows that any variation in **leadership** would cause a change in organisational performance by -0.025. A variation in **management process quality** would lead to a change in organisational performance by 0.182. Also, variation in **supply quality management** would create a difference in organisational performance of -0.037. This shows that there is strong evidence of a positive relationship between organisational performance (i.e. Defects as a percentage of production volume) with management process quality, while other relationships are inverse.

Table 7: Summary of Coefficients

Model	Coefficients ^a				
	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.458	.347		7.088	.000
Leadership: Our company regards product quality as a major factor in selecting suppliers (X_1)	-.025	.072	-.025	-.347	.729
Management Process Quality: All major department heads accept responsibility for quality (X_2)	.182	.122	.158	1.487	.139
Supplier quality management: A large percentage of equipment is under statistical quality control (X_3)	-.037	.123	-.032	-.300	.764

a. Dependent Variable: Defects as a percentage of production volume

c. Organisation performance in terms of Customer satisfaction of manufacturing SMEs in Tanzania

Adjusted R^2 , which is termed as the coefficient of determination tells us how organisation performance in terms of profit improvement varies with leadership, management process quality, and supplier quality management. As per illustration in Table 8 below, the value of adjusted R^2 is 0.010. This implies that there was a variation of 1% of organisation performance with changes in leadership, management process quality, and supplier quality management at a confidence interval of 95%. R is the correlation coefficient, which indicates that there is some relationship between the studied variables, as evidenced by the correlation coefficient of 0.093. This is a very tiny modification.

Table 8: Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.093 ^a	.050	.010	1.53169	1.384
a. Predictors: (constant), A large percentage of equipment is under statistical quality control, All major department heads accept responsibility for quality, Our company regards product quality as a major factor in selecting suppliers					
b. Dependent Variable: Profit improvement in percentage increase					

From the findings in the table, the established regression equation becomes

$$Y = 2.730 + 0.007 X_1 + 0.027 X_2 + 0.063 X_3 \quad (3)$$

From the above regression model, holding leadership, management process quality, and supplier quality management to constant zero organisation performance (i.e. customer satisfaction) would be 2.730. It, therefore, shows that any variation in **leadership** would cause a change in organisation performance by 0.007. A variation in **management process quality** would lead to a change in organisational performance by 0.027. Also, variation in **supply quality management** would create a

difference in organisational performance of 0.063. This shows that there is strong evidence of a positive relationship between organisational performance (i.e. customer care) with leadership, management process quality, and supply quality management.

Table 9: Summary of Coefficients

Coefficients ^a					
Model		Unstandardised Coefficients		Standardised Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	2.730	.349		7.820 .000
	Leadership: Our company regards product quality as a major factor in selecting suppliers (X ₁)	.007	.073	.007	.096 .924
	Management Process Quality: All major department heads accept responsibility for quality (X ₂)	.027	.123	.023	.216 .829
	Supplier quality management: A large percentage of equipment is under statistical quality control (X ₃)	.063	.124	.055	.512 .609
a. Dependent Variable: Customer Satisfaction					

VII. DISCUSSION OF FINDINGS

A) Organisation Performance: Profit Improvement

Based on goodness of fit data, the model is trustworthy, with a coefficient of determination (Adjusted R²) of 0.8%. This suggests that modifications in leadership, management procedure excellence, and supplier quality management result in a 0.8% variation in organisational performance (as measured by profit improvement). As a result, it is obvious that more aspects contribute to organisational performance, which need to be researched, as the three jointly contribute to 0.8%, leaving about 99.2% to unexplained variables. According to the study's conclusions, numerous elements influence organisational success (i.e. profit improvement), including leadership, management process quality, and supplier quality management.

The study found that organisation performance (i.e. profit improvement) has strong evidence of a positive relationship with leadership and strong evidence of a negative relationship with management process quality, and supplier quality management.

B) Organisation Performance: Production Defects Reduction

Based on goodness of fit data, the model is credible, with a coefficient of determination (Adjusted R²) of 0.4%. This means that there is a 0.8% difference in organisational performance (presented by production defects reduction) with joint changes in leadership, management process quality, and supplier quality management. As a result, it is obvious that more aspects contribute to organisational performance that needs to be researched, as all three jointly contribute to 0.4%, leaving about 99.6% to unexplained variables. From the findings, the study found that there were many factors affecting organisation performance (i.e. production defects reduction) including leadership, management process quality, and supplier quality management.

The study also found that organisational performance (i.e. Defects as a percentage of production volume) has strong evidence of a positive relationship with management process quality and strong evidence of a negative relationship with leadership and supplier quality management.

C) Organisation Performance: Customer Satisfaction

Based on the strength of fit data, the model is credible, with a coefficient of determination (Adjusted R²) of 1%. This means that there is a 1% difference in organisational performance (presented by production defects reduction) with joint changes in leadership, management process quality, and supplier quality management. Therefore, it is evident that there are more factors that contribute to organisation performance that need to be investigated since the three jointly contribute to 1%, leaving about 99% to unexplained variables. According to the study's conclusions, numerous factors influence organisational success (i.e. production defects reduction), including leadership, management process quality, and supplier quality management.

Furthermore, the study found that organisational performance (i.e. customer care) has strong evidence of a positive relationship with leadership, management process quality, and supply quality management.

VIII. CONCLUSION

From this study, it is concluded that manufacturing SMEs need to focus more on leadership, management process quality, and supply quality management so as to realise high organisation performance. When all production process is done towards satisfying customer needs, optimising profit and reducing or eliminating production defects, it is easier to achieve high organisation performance through customer retention by providing goods of high quality. The data analysis revealed a strong association between TQM practices and organisational performance, with leadership, management process quality, and supply quality management remaining fundamental. To achieve high earnings and growth, a firm must ensure that the needs of its clients are carefully regarded in its manufacturing.

Recommendations for Further Research

According to the goodness of fit results, this study only looked at three total quality management (TQM) elements that account for a minor fraction of the improvement. The study also covered only one region and a small sample of 200 SMEs. At this point, therefore, there is a need for further research to determine other factors that contribute to good business/organisation performance among manufacturing SMEs.

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