

# Empirical Study on the Effect of Total Quality Management on Sustainable Performance of Small and Medium Enterprises in Kano State

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## Abstract

*This study examines the effect of TQM on sustainable performance of small and medium enterprises (SMEs) in Kano State. The study uses simple descriptive statistics, and regression model to analyse the relationship between TQM and sustainable performance of SMEs in Kano State. Primary data were sourced from 394 respondents who constituted the study population. Since the population was small, census sampling method was used to collect data using structure questionnaire measured on a 5-point Likert-scale. All statistical analyses were done with the aid of SPSS version 10 and Econometrics views 10.0. The study revealed that there is a significant positive effect of leadership commitment, employee involvement, continuous improvement, Customer Focus, Data-Driven Decision Making, Training & Development, and Recognition & Rewards on sustainable performance of SMEs in Kano State. However, the study also shows that the introduction of TQM will increase sales and profit of SMEs and also minimize cost. Based on the findings, the study recommends the introduction and effective implementations of TQM by SMEs in Kano State.*

**Keywords:** Sustainable Performance, TQM, SMSs, Kano State

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## 1. Introduction

As the business environment is fast changing and becoming more complex with technological breakthroughs, the continued existence of small and medium enterprises (SMEs) is the number one fundamental concern of firms in developing and most industrialized economies. As such, SMEs are essentially known and described as mechanisms for the continuous growth of both developing and most technologically advanced economies (Ali & Johl, 2022). Accordingly, the Nigerian government has realized the importance of SMEs in creating jobs and reducing inequality, contributing 48% of GDP and creating employment for 17.4 million people (Ali & Johl, 2022). Likewise, International Labour Organisation (ILO) has disclosed that SMEs contributed a lot to economic growth; in Nigeria have contributed to National Gross Domestic Product (GDP) amounting to (48%), accounting for a significant number of businesses to the tune of (96%) and employed up to (84%) out of the total employment (Mahmud, Hilmi, Mustapha & Abu Karim, 2019). Thus, SMEs contributed significantly to economic growth by providing platforms for wealth creation, alleviating poverty, and increasing job creation.

In general, SMEs as the backbone of any economy, and globally, the advent of the digital economy has shifted the focus of scholarly work on factors that arouse SMEs' performance, where total quality management play a key role. Hence, SME performance is very vital to the economic development of every nation, which has a multiplier effect on job creation, income generation, and an increase in GDP (Alalawi, 2020). However, with the recession symptoms faced globally, there has been a decline in the performance of SMEs, which halted commercial and business activities (Pambreni, Khatibi, Azam & Tham, 2019).

Meanwhile, SME performance is an organizational concept that seeks to satisfy the needs of customers, integrate all organizational tasks, achieve business objectives, enhance operational efficiency, and increase firms' profitability. However, a greater number of SMEs have been poorly performing (Jimoh, Oyewobi, Isa & Waziri, 2019). Accordingly, Salman and Yusuf (2018) contend that although the number of SMEs in Nigeria is increasing, literature shows that as a business entity, Nigerian SMEs especially in Kano state are struggling with different barriers. Consequently, Niyi Anifowose, Ghasemi, and Olaleye (2022) as well as Okoli Nwosu and Okechukwu (2021) emphasized total quality management implementation and adoption of appropriate entrepreneurial spirit or orientation that would ensure the improvement of SMEs performance in Nigeria.

In line with the above, divergent outcome has been reported by scholars on total quality management and its effect on SMEs' performance (Ibrahim & Mustapha, 2019). Hence, only a few academics have addressed or empirically tested total quality management's effect on sustainable SMEs performance, orientation's effect on SMEs performance in Kano state, Nigeria (Rogo, 2022; Hilman, Ali & Gorondutse, 2020). As such, many scholars have established that relationship between total quality management and performance, as well as between entrepreneurial orientation and SMEs performance is highly positive and significant (Olaleye et al., 2021; Tajeddini, Martin & Ali, 2020).

Nevertheless, Ali and Johl (2022) as well as Donbesuur, Boso, and Hultman (2020) believed that total quality management and entrepreneurial orientation may sometimes presumed negative connotations in terms of their effect on the performance of SMEs. Therefore, contradictory or inconsistent findings paved the way for the need to be explored further. Likewise, more understanding of the effect of TQM within the performance context of Nigerian SMEs will bring new insights into the relationship, especially when the independent variable is studied with supportive empirical evidence from survey research (Fan et al., 2021; Hilman et al., 2020). Equally, studies that examine how TQM affect or influence SME performance are limited. Therefore, this study empirically tests the effect of TQM on SMEs' Sustainable Performance in Kano, Nigeria.

Small and medium scale enterprises in Nigeria have been facing with various problems, top of which are mismanagement and lack of top-quality goods. These problems resulted in for instance, the failure of many banks from the late 1980s into the early 1990s and in the current period to stimulate small and medium scale enterprises through given out loans at moderate or small interest rate that will improve the performances of this sector. Other sectors, like the manufacturing sectors have also been affected by the scourge of mismanagement and disregard for quality. Many of these organizations especially those in the banking industry reorganized themselves after the problems they faced during this period. But they also had to put structures in place to ensure that what caused their initial demise did not reoccur. One of the strategies adopted was Total Quality Management (TQM). The focus was now on the customer and what to do to satisfy them, rather than the 'bottom line'. The adoption of TQM has gone a long way towards improving management processes and service delivery and has helped restore the confidence of the populace in the small and medium scale enterprises sector. The objective of the study is to examine the effect of total quality management on sustainable performance of small and medium scale enterprise in Kano State. The paper is structure into five section: the introduction in section one, literature review in the second section and methodology in the third section. Results and discussion in section four and finally conclusion and recommendations in the last section.

## **2. Literature Review**

### **2.1 Conceptual Issues**

#### **2.2.1 Concept of SMEs Performance**

Universally, SMEs' performance interconnects with the progress and improvement of a national economy (Karami & Tang, 2019). This explains the worthiness of this sector being a mechanism for economic growth in most nations such as developing and developed countries. In the same vein, SMEs globally, are recognized as the great contributor in terms of poverty reduction, increase in GDP, wealth creation, income distribution, creation of employment, and rapid development, as well as technological advancement, and innovation. In essence, Nigerian SMEs have contributed to the economy and also benefited the country in terms of empowerment, employment, wealth creation, and economic growth (Mahmud, Hilmi, Mustapha & Abu Karim, 2019).

#### **2.2.2 Concept of Total Quality Management (TQM)**

TQM is a strategic management philosophy of continuous firm-wide integration, product and service quality improvement, process management, and actions to enhance customer satisfaction, meet customer expectations and organizational performance (Sahoo & Yadav, 2018). Therefore, organizations used to implement TQM to gain competitive repositioning, by differentiating products in a marketplace to increase the level of business success. As such, yielding positive outcomes such as achieving superior performance, increasing market share, and acquisition of higher profits margin. Thus, TQM is a strategic managerial arrangement introduced in the early 1980s, in Japan, as a way of increasing production levels and enhancing product quality to satisfy customers' needs.

### **2.2 Theoretical Literature**

#### **The stakeholder's theory**

The stakeholder's theory is a theory of organizational management and business ethics that addresses morals and values in managing an organization (Kaynak, 2018). It was originally detailed by Edward Freeman in the book strategic management. A stakeholder approach identifies the group which are stakeholders of a company and they include shareholders, employers (management) employees, suppliers, government political groups, creditors, prospective customers, consumers, trade unions, competitors, associations and the general public. The theory identifies consumers of quality product and the stakeholders that control total quality management. The theory addresses the principles of who or what really concern in TQM, (Rahman 2017). A firm's product and services design decisions affect the wellbeing of various stakeholders' organizations primary responsibility should be to meet the demand of their customers not only in terms of quantity but most importantly in terms of quality so as to enhance the quality of life and satisfaction of the stakeholder; while at the same time give them the values for their money. The concept of TQM practices is more closely aligned with the stakeholders' theory because the customers (stakeholder) expect quality product or services from the SMEs that deals with a good number of customers. Also, the public at large expects quality products or services so as to have value for the money paid for. Summarily since needs, wants and products desired are very important to customers their interest in the business that meets their aspiration cannot be systematically separated from the business enterprise (Ogbada, 2012).

### **2.3 Empirical Review**

Kari, Mina, and Juhani (2023) investigate the soft total quality management (soft TQM) dimensions that affect the environmental and social sustainability of Finnish small and medium-sized enterprises (SMEs), considering the company's business, size, and possible

certificates as control variables. Sustainable business has been found to be key to the success of companies, so investing in it is essential for companies. With the help of extensive literature research, the TQM dimensions covering the entire business activity were determined, from which detailed issues were identified. To ascertain the level of implementation of detailed issues, the survey was constructed and sent to 6889 randomly selected CEOs in autumn 2020. A total of 271 responses were received. Based on prior literature and studies, 10 hypotheses were proposed. The collected data were analyzed using regression analysis. The results reveal that two practices business management systems and human resources (HR) practices were related to environmental sustainability, while only business management system was related to social sustainability. None of the control variables affected environmental sustainability; however, the industrial sector influenced social sustainability.

Ali and Johl (2022) empirically analyzes the relationship of digital Total Quality Management (TQM) or Quality 4.0 practices on the sustainable performance in Malaysian small & medium (SMEs) manufacturing industries. The study hypotheses are formulated and analyzed by multiple regressions technique. The data was collected from 73 respondents at managerial levels from ISO 9000 certified small & medium manufacturing industries in Malaysia through a stratified sampling technique. The study results indicate positive and significant impact of soft TQM practices (top management commitment, customer focus and employee training) on financial, social, and environmental performance with  $R^2$  values of 0.839, 0.739 and 0.656, respectively. This study also indicates that hard TQM practices (process management, quality information analysis and advance manufacturing technology) significantly enhances financial ( $R^2=0.775$ ), social ( $R^2=0.797$ ) and environmental ( $R^2=0.712$ ) sustainable performance. In order to implement Quality 4.0 properly in SMEs manufacturing industries, industry personnel need to recognize the different role of hard and soft TQM.

In the same vein, Asif, Muhammad, Sonia, and Muhammad (2022) examined the impact of total quality management (TQM) practices on sustainability and organisational performance. Organizational culture, along with TQM and sustainability has been investigated to understand its contributions to organizational performance. TQM has become a crucial pillar for growth and development due to the growing expansion of manufacturing sectors of the world. TQM practices, which may differ in manufacturing firms, are said to be important for effective TQM adoption. However, it was found that organizational performance can be achieved if TQM practices in manufacturing businesses are well managed. Therefore, this study is carried out and the purpose of the study is to propose a conceptual model to investigate the relationship between TQM practices, sustainability, and organizational performance and to demonstrate the impact on organizational performance. The data underlying this study was collected by using a questionnaire survey in the manufacturing industries. The findings of the study revealed that total quality management and sustainability are the most important approaches to the success of the performance of manufacturing industries. The results show that TQM and sustainability have a positive impact on organizational performance.

Moreso, Kashif and Satirenjit (2022) empirically analyzes the relationship of digital Total Quality Management (TQM) or Quality 4.0 practices on the sustainable performance in Malaysian small & medium (SMEs) manufacturing industries. The data was collected from 73 respondents at managerial levels from ISO 9000 certified small & medium manufacturing industries in Malaysia through a stratified sampling technique. The study results indicate positive and significant impact of soft TQM practices (top management commitment, customer focus and employee training) on financial, social, and environmental performance with  $R^2$  values of 0.839, 0.739 and 0.656, respectively. This study also indicates that hard TQM practices (process management, quality information analysis and advance manufacturing technology) significantly enhances financial ( $R^2 = 0.775$ ), social ( $R^2 = 0.797$ ) and



environmental ( $R^2 = 0.712$ ) sustainable performance. In order to implement Quality 4.0 properly in SMEs manufacturing industries, industry personnel need to recognize the different role of hard and soft TQM. Relatedly, Niyi, Ghasemi and Olaleye (2022) investigate the role of innovation speed in mediating the relationship between total quality management and small and medium-sized enterprise performance. Cross-sectional data from 484 Nigerian small and medium-sized manufacturing enterprises were collected using judgmental sampling, which was targeted at the owners and managers of small-scale manufacturing enterprises within Nigeria. The obtained data were evaluated using both descriptive and inferential statistical techniques. Hence, the heuristic model for the relationship was subjected to a string of tests using the partial least squares structural equation modeling technique. The results show that total quality management is positively related to operational performance as well as innovation speed, which has a substantial influence on the nexus between total quality management (TQM) and small and medium-sized enterprises' (SME) performance.

Daniel and Reitsperger (2017) visualize TQM as constructing a house. First, putting top management commitment to TQM as the base or foundation. Without a strong foundation, the house will never stand. Once the foundation is in place, attention should be given to employee training and empowerment, quality measurement and benchmarking, process management, and customer involvement and satisfaction. These factors can be viewed as the four pillars of a house. Once the pillars are being put in place and enriched, it is time to incorporate the factors of vendor quality management and product design. These are the final elements to achieving TQM.

### **3. Methodology**

#### **3.1 Research Design**

The design of this research defines a genuine image of quality in manufacturing companies in Karachi and Hyderabad. The questionnaire survey was utilized as a research instrument for collecting the responses from manufacturing enterprises. This study is a quantitative survey design, which relies on information/responses of SME managers/owners in Kano State. Hence,

#### **3.2 Population and Sampling Method**

The population of this study comprises of registered selected Small and medium enterprises operating in three senatorial districts of Kano state, Nigeria (SMEDAN, 2023). The choice of Kano State was because the three districts have a considerable portion of SMEs in the Northwestern region of Nigeria. Therefore, this study distributed questionnaires to randomly selected 394 SMEs based on Krejcie and Morgan (1970). All instruments in this study were adopted SMEs performance (4 items), total quality management (6 items), and entrepreneurial orientation (8 items) were adopted from Cui et al. (2018), Saragih et al. (2020) and Abdullah and Mansor (2018).

#### **3.3 Survey Instrument and Measurements**

The questionnaire survey for this study will had 45 components for calculating TQM, sustainability, and small and medium scale businesses performance. In this study there is dependent and independent variables, total quality management (independent), sustainability and small and medium scale businesses performance (dependent) which will be distinguished with scale. The responses will be logged on a Likert scale. It will involves five (5) points (Strongly agree (SA), Agree (A), Neutral (N), Disagree (D), Strongly Disagree (SD)) and used as a measure of the questionnaire. Responses will be collected from small and medium scale businesses across Kano State.

### 3.4 Sample and Data Collection

The objective of this study accommodates small and medium businesses who engage in various businesses in Kano State. All small and medium businesses at various levels served as the study's unit. The protocol specifies how personal information is acquired, kept private and maintained for all participants, including confidentiality for all participants. The purposive sampling method will be used to choose the study's sample. The questionnaire will be set into Google form and sent to small and medium businesses about 394 questionnaires will be dispersed to the various small and medium businesses.

### 3.4 Model Specification

In order to estimate and analysis the effect of TQM on sustainable performance of SMEs in Kano State, the study uses the multiple regression model as specified as:

$$SP = LC + EI + CF + DDM + TD + CI \quad (1)$$

The mathematical model in equation 1 is transformed to econometrics model as:

$$SP_t = \beta_0 + \beta_1 LC_t + \beta_2 EI_t + \beta_3 CF_t + \beta_4 DDM_t + \beta_5 TD_t + \beta_6 CI_t + \varepsilon_t \quad (2)$$

Where

$SP_t$  = Sustainable Performance of SMEs in Kano State at period t

$LC_t$  = Leadership Commitment at period t

$EI_t$  = Employee Involvement at period t

$CF_t$  = Customer Focus at period t

$DDM_t$  = Data-Driven Decision Making at period t

$TD_t$  = Training & Development at period t

$CI_t$  = Continuous Improvement at period t

$\beta_0$  = Intercept parameter

$\beta_1 - \beta_6$  = Parameters to be estimated

$\varepsilon$  = error term

### 3.5 Method of Data Analysis

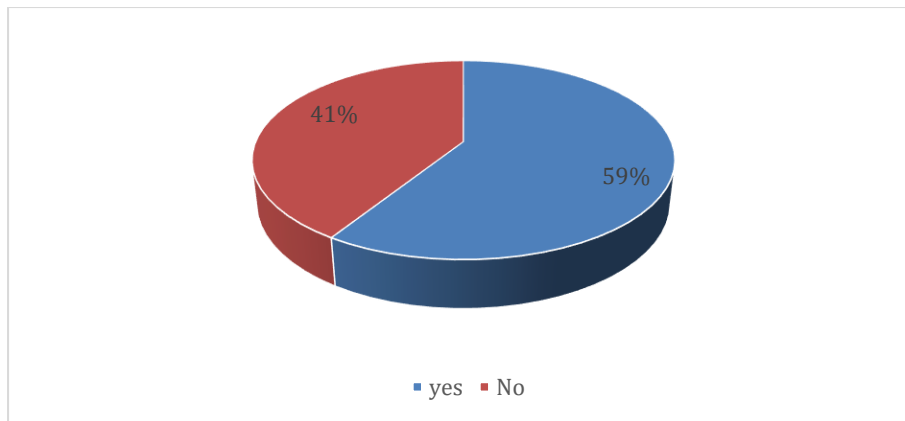
The quantitative analysis technique (simple descriptive statistics), multiple regression model will be applied to analyse the relevant data collected from respondents (small and medium businesses) in Kano State.

## 4. Results and Discussion

### 4.1 Simple Descriptive statistics of Results

From the data generated from the structure questionnaire administered, simple descriptive statistics using pie chart were analysed on the effect of Total Quality Management (TQM) on small and medium enterprises (SMEs) operating in Kano State, Nigeria

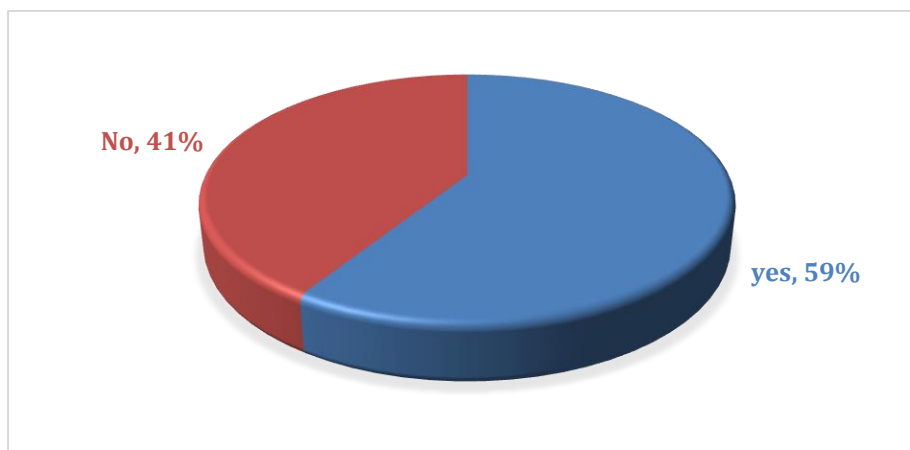
**Question 1:** Does Total Quality Management act as a means of achieving sustainable performance of the SMEs in Kano State Nigeria?



**Fig 1:** Percentage of the effectiveness of TQM to SMEs' sustainable performance in Kano State

Figure 1 shows the percentage analysis of TQM on sustainable performance. From the figure, 89% of the respondents agreed that Total Quality Management act as a means of achieving sustainable performance of the SMEs in Kano State Nigeria while only 11% disagreed. This concludes that Total Quality Management act as a means of achieving sustainable performance of the SMEs in Kano State Nigeria.

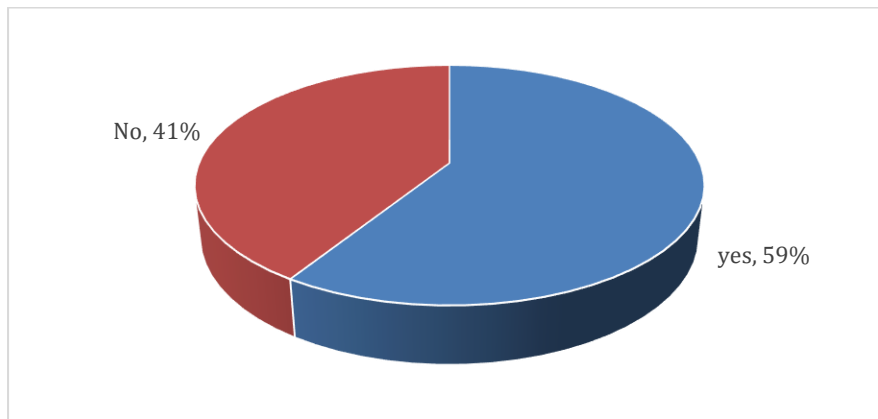
**Question 2:** is there any increase or positive changes in the sales and profit of your business with TQM implementations?



**Fig 2:** Changes in the sales and profit of your business with TQM implementations

Figure 2 displayed the pie chart showing the changes in the sales and profit of businesses after the implementation of TQM. The data indicates that, 64% observed changes to their business performance as their sales and profit expand. On the other hand, 36% of respondents did not observe any positive changes in their sales and profit when the implement TQM. This means that the introduction of TQM has positive and significant impact in the sales and profit of their business.

**Question 3: where you able to minimize cost as you introduced Total Quality Management in your business?**



**Fig 3: TQM and cost minimization**

From the figure, 59% of the respondents said that, on the introduction of TQM, the cost of operation has drastically reduce. This means that, if the cost of doing business reduced, the unit cost of items will reduce, per unit price will also reduce. In the same vein, the data shows that 41% of the respondent do not noticed the reduction in their cost of doing business. This is likely due to their inability to efficiently apply the TQM in their business. The conclusion is that, the introduction of TQM in their businesses has minimize their cost of business.

**4.2 Analysis of Questionnaires on the effect of TQM on SMSs Performance in Kano State**

The table below present the results in unit and percentage of the major factors that are responsible in influencing Total Quality Management (TQM) in small and medium enterprises (SMEs) operating in Kano State, Nigeria

**Table 2: Factors of Total Quality Management (TQM) in Kano State SMEs**

Variables	SD	D	AV	AG	SA	Total
Leadership Commitment	12 (3.0%)	13 (3.3%)	7 (1.8%)	17 (4.3%)	345 (87.6%)	394 (100%)
Employee Involvement	0 (0.0%)	36 (9.1%)	31 (7.9%)	2 (0.5%)	318 (82.5%)	394 (100%)
Customer Focus	0 (0.0%)	19 (4.8%)	21 (5.3%)	52 (13.2%)	302 (76.7%)	394 (100%)
Continuous Improvement	0 (0.0%)	41 (10.4%)	29 (7.4%)	36 (9.1%)	288 (73.1%)	394 (100%)
Data-Driven Decision Making	0 (0.0%)	19 (4.8%)	22 (5.6%)	24 (6.1%)	329 (83.5%)	394 (100%)
Training & Development	0 (0.0%)	2 (0.5%)	26 (6.6%)	39 (9.9%)	327 (83.0%)	394 (100%)
Recognition & Rewards	10 (2.5%)	30 (7.6%)	6 (1.5%)	40 (10.2%)	308 (78.2%)	394 (100%)

**Source: SPSS Output, 2025**

Table 2 shows the factors responsible for influencing Total Quality Management (TQM) variables in Kano State Nigeria. The findings indicates that, the effect of all the determinants variables have significant influence of how Total Quality Management (TQM) will influence



quality control target. Based on the findings, leadership commitment has 87.6% strongly agreed (SA), Employee Involvement has 82.5% strongly agreed (SA). Data-Driven Decision Making and Training & Development has 83.5% and 83.0% strongly agreed (SA) respectively. The result shows that all the variables are major factors with leadership commitment as most influential of Total Quality Management (TQM) practices among the SMEs owners in Kano State Nigeria. Other determinants are also important factors with high percentage.

**Table 3: Responses on the Effect of TQM Practices on sustainable performances of SMSs by their Management and Employees**

Effect of TQM on Sustainable Performance of SMSs	Frequency (F)	Mean	Percentage (%)
All the time	7	0.01	1.8(%)
Most of the time	94	0.23	23.9(%)
Sometimes	257	0.65	65.2(%)
Not at all	36	0.09	9.1(%)
Total	394		100(%)

**Source: SPSS 12, 2025**

The results presented in Table 3 shows that Total Quality Management (TQM) practice lead to sustainable performance of SMSs in Kano State all the time with mean of 0.01 represent 1.8%, most of the time with mean of 0.23 represents 23.9%, some time with mean of 0.65 represents 65.2% and not at all with mean of 0.09 represents 9.1%. The findings indicate that Total Quality Management (TQM) practice has significant effect on the customers' satisfaction. The dominant score of 48% signifies the non-applicability of TQM by Nigerian SMEs. The finding of responses on the effect of TQM practices among SMEs in Nigeria on sustainable performance of SMEs in Kano State.

#### 4.3 Regression Analysis

In order to examine the effect of Total Quality Management (TQM) on sustainable performance of SMEs in Kano State, the study employed regression analysis and estimate the relationship. The results is presented in table 4 below:

**Table 4: Regression Results on the effect of TQM on SMSs Performance in Kano State**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.27193	125372	3.26622	0.021
Leadership Commitment (LC)	0.52101	1.53411	4.2811	0.017
Employee Involvement (EI)	0.00327	4.72376	0.74231	1.341
Customer Focus (CF)	0.47310	1.026212	2.0178	0.032
Data-Driven Decision Making (DDM)	0.89134	5.25626	1.83022	0.826
Training & Development (TD)	0.16347	0.916237	2.2389	0.025
Continuous Improvement (CI)	0.13801	4.18261	1.3210	0.535
$R^2 = 0.329$	$F\text{-statistic} = 4.34553$	$Prob(F\text{-statistic}) = 0.0389$		

**Source: E-views 10, 2025**

Table 4 shows the estimated relationship between Total Quality Management (TQM) dimensions of Leadership commitment (LC), Employee Involvement (EI), customer focus

(CF), Data-Driven Decision Making (DDM), Training & Development (TD, continuous improvement and sustainable performance of SMEs in Kano State. The regression analysis result indicated that all the variables have positive relationship with sustainable performance of SMEs in Kano State. The result also shows that Leadership Commitment (LC), Customer Focus (CF) and Training & Development (TD) are statistically significant as indicates by their respective t-statistics and probability values, while employee Involvement (EI), Data-Driven Decision Making (DDM) and Continuous Improvement (CI) are not significant. The coefficient of determination of 0.329 indicates that 33% of the behavior of sustainable performance of SMEs in Kano State is influenced by all the variables while the remaining percentage are captured by variables not included in the model. The findings is in line with the conclusion by Ali and Johl (2022), Asif, Muhammad, Sonia, and Muhammad (2022) and Kashif and Satirenjit (2022).

#### **4.4 Discussion of Major Findings**

From the simple descriptive analysis, the result shows that 89% of the respondents agreed that Total Quality Management act as a means of achieving sustainable performance of the SMEs in Kano State Nigeria while only 11% disagreed. The result indicates that, 64% observed changes to their business performance as their sales and profit expand. On the other hand, 36% of respondents did not observed any positive changes in their sales and profit when the implement TQM. Also, 59% of the respondents said that, on the introduction of TQM, the cost of operation has drastically reduce. In the same vein, the data shows that 41% of the respondent do not noticed the reduction in their cost of doing business.

The results also shows that, the effect of all the determinants variables have significant influence of how Total Quality Management (TQM) will influence quality control target. Based on the findings, leadership commitment has 87.6% strongly agreed (SA), Employee Involvement has 82.5% strongly agreed (SA). Data-Driven Decision Making and Training & Development has 83.5% and 83.0% strongly agreed (SA) respectively.

The results shows that Total Quality Management (TQM) practice lead to sustainable performance of SMEs in Kano State all the time with mean of 0.01 represent 1.8%, most of the time with mean of 0.23 represents 23.9%, some time with mean of 0.65 represents 65.2% and not at all with mean of 0.09 represents 9.1%. The findings indicate that Total Quality Management (TQM) practice has significant effect on the customers' satisfaction. The dominant score of 48% signifies the non-applicability of TQM by Nigerian SMEs.

The estimated relationship between Total Quality Management (TQM) dimensions of Leadership commitment (LC), Employee Involvement (EI), customer focus (CF), Data-Driven Decision Making (DDM), Training & Development (TD, continuous improvement and sustainable performance of SMEs in Kano State. The regression analysis result indicated that all the variables have positive relationship with sustainable performance of SMEs in Kano State. The result also shows that Leadership Commitment (LC), Customer Focus (CF) and Training & Development (TD) are statistically significant as indicates by their respective t-statistics and probability values, while employee Involvement (EI), Data-Driven Decision Making (DDM) and Continuous Improvement (CI) are not significant.

#### **5. Conclusion and Recommendations**

The study concludes that effective implementation of Total Quality Management in Small and Medium sized Enterprises in Kano State will improved the performance and growth of SMEs in the state. The findings reveals that 89% of the respondents agreed that Total Quality Management act as a means of achieving sustainable performance of the SMEs in Kano State Nigeria while only 11% disagreed. The data also indicates that, 64% observed changes to their business performance as their sales and profit expand. On the other hand, 36% of respondents

did not observed any positive changes in their sales and profit when the implement. The regression analysis result indicated that all the variables have positive relationship with sustainable performance of SMEs in Kano State. The result also shows that Leadership Commitment (LC), Customer Focus (CF) and Training & Development (TD) are statistically significant. This concludes that Total Quality Management act as a means of achieving sustainable performance of the SMEs in Kano State Nigeria After introducing the quality management system.

Based on the findings of the study, the following recommendations were outline:

- i. The Kano State Government should create permitting atmosphere for the development of technology in the state and supply support for businesses to acquire the necessary equipment's required for enhancing productivity and quality of goods and services.
- ii. The Kano State Government should make TQM policies mandatory for SMEs in the state to help in expanding sales and profit of SMEs
- iii. The Kano State SMEs owners should create annual workshops for training and development of SMEs and ensure proper implementations and functioning of the TQM practices.

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