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The Mediation Effects of TQM on the Relationship between Differentiation Strategy and Financial Performance of Manufacturing Firms in Kenya

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Abstract:
Firms that adapt Differentiation strategy develop competitive advantage by creating a product or service that is unique or creates the perception in the minds of customers that the firm or its products and services are superior to those of its 'competitors and also possess characteristics that are distinctive from those of its competitor's. TQM elements; continuous improvement; leadership and Customer-orientation encourages innovation within the organization leading to development of unique products and quality customer service; leadership encourages generation of ideas from employees for solving problems or developing new products while Customer-orientation encourages organizations to search consistently for new customer needs and expectations, so companies can survive in this globally competitive environment . There is strong link between differentiation strategy and TQM. The study aimed to establish the mediation effects of TQM on the relationship between differentiation strategy and financial performance of manufacturing firms in Kenya. The target population for the study was be 39 ISO certified, manufacturing firms. The target respondents were the CEO, Strategic managers and Quality Assurance Managers from the 39 ISO certified manufacturing firms a total of 117 respondent. Structural equation modelling (SEM) and multiple Regression analysis were used to analyse the relationships between differentiation strategy, TQM and organization performance. The study finding indicated that TQM partially mediates the relationship between generic strategy and financial performance of manufacturing firms in Kenya.

Keywords: *Total Quality Management, mediation effects, differentiation strategy and financial performance*

1. Introduction

Competitive strategy is basically concerned with the patterns of decisions or choices that managers of firms make over which market to compete in and how the business can add more value for buyers in order to gain more advantage than competitors (Acquaah & Agyapong, 2015). Porter (1980) generic competitive strategy posits that an organization can generate competitive advantage and ostensibly maximize performance either through cost-leadership, differentiation or a market focus strategy. Organizations that implement a differentiation strategy develop a competitive advantage by creating a product or service that is unique or creates the perception in the minds of customers that the firm or its products and services are superior to those of its 'competitors and also possess characteristics that are distinctive from those of its competitor's. These perceptions are generated through design quality and innovativeness (Acquaah, Adjei& Mensa-Bonsu, 2008). The product and services must be accepted as unique and different from any product or service which serve the same purpose in the market (Porter, 1980). Munisu (2013) emphasizes on significant relationship between differentiation strategy and product quality, he argued that quality is an aspect of differentiation along with design, style or technological innovation. Therefore, Organizations can charge premium prices and increase its profits margin on sales and return on investment, if they can be able to offer the high-quality products consistently.

Total quality management (TQM) has been widely accepted as a holistic management philosophy that strives for continuous improvement in all functions of an organization (Oakland, 2014). Quality refers to the ability of a product or service to constantly meet or exceed customer expectations (Munisu, 2013). According to Chaudary, Zafar and Salman (2015) TQM is a set of instruments employed by the firm's management that aim to provide better value to customers by recognizing their observable and hidden needs (which are sensitive to the changing markets) and improve the efficiency of the procedure that generate the product or service.Companies that implement TQM have to explore and find ways to serve customers expectations at their best. This creates the impetus for companies to be innovative in developing and launching new products or services to match customers' needs. Several studies have identified positive relationship between TQM and innovation (Hung, Lien, Fang & McLean, 2010; Lee, Ooi, Tan &

Chong, 2010). Arguments proposing a positive relationship between TQM and innovation posited that companies implementing TQM in their business systems and corporate culture are fertile environments because TQM promotes principles coincident with innovation (Prajogo&Sohal, 2006). Total quality management culture requires changes in manager's employees believe attitude and behaviors to focus on continuous improvement. This require organizations commitment to building a new culture emphasizing trust, empowerment, entrepreneurship, teamwork cooperation, risk taking and continuous improvement hence innovation success.

Mielgo, Poen-Monters and Ordas-Vazquez, (2009) study demonstrated the relationship between TQM elements and innovation. TQM elements leadership and Customer-orientation encourages innovation; leadership encourages generation of ideas from employees for solving problems or developing new products while Customer-orientation encourages organizations to search consistently for new customer needs and expectations, so companies can survive in this globally competitive environment. Martinez-Costa and Martinez-Lorente (2008) emphasizes that TQM principle Continuous improvement is also critical to the success of innovation through encourages changes and creative in organizing works. Sadikoglu and Zehir (2010) study found that all elements of TQM are significantly and positively associated with innovative performance. Empirical Literature commonly agrees that there is a positive association between innovation particularly product innovation and differentiation strategy (Prajogo&Sohal, 2006).Past findings from studies carried out on TQM effect on performance of organization strategies have been divisive. While some researchers (Faezi 2014; Prajogo&Sohal, 2006) have suggested that TQM could align with differentiation orientation given the intense customer focus; others (Zatzick, Moliterno& Fang, 2012) argue that TQM is mostly associated with internal process improvement and cost reduction particularly in manufacturing context. They further argue that customer focus could trap organizations into captive markets where they will focus on meeting the needs of existing customers and therefore view their business only through customer's eyes as a result ignoring the unserved potential in their markets (Zatzick, et al., 2012).

To further their argument whiles the link between TQM and innovation is the basis for differentiation strategy. Scholars are not in agreement about the effect of TQM on innovation. Hoang,Igel and Laosirihongthong (2010) and Lee *et al.* (2010) argue that there is a positive link between TQM practice and innovation performance. Other scholars (Hoang et al., 2010) emphasize the negative link between them. According to Hoang *et al.* (2010) the negative relationship between TQM and innovation performance is because the customer focus is concern with product conformance (product quality), but not with product newness. To resolve these controversy in literaturethis study aimed at establishing the mediationeffect of TQM on relationship between differentiation strategy and financial performance of manufacturing firms in Kenya.Hence the study hypothesizes that:

H_{01}: TQM have no significance mediation effects on relationship between differentiation strategy and financial performance among Kenyan manufacturing firms

2. Literature Review and Conceptual Framework

The study is based on knowledge management theory of the firm. Knowledge management theory considers knowledge as the most strategically significant resource of the firm. A firm's competitive advantage depends upon what it knows and how it uses what it knows and how fast it can create something new (Duran, Centinder&Sahan, 2014). The capability to learn, or the ability to create and apply new knowledge is considered a source of sustainable competitive advantage and superior corporate performance (Islam, Low, Kim & Hasan, 2011). Enterprises that have implemented TQM practices are better in the fields of obtaining knowledge from customers and employees participation in dissemination of knowledge. According to Hung, Lien, Fang and McLean (2010) one of TQM greatest benefits is its emphasis on continuous improvement of business processes so that it can improve organizations competitiveness, effectiveness and flexibility. To achieve continuous improvement firms must promote organization learning to create knowledge that can be utilized in future to improve business processes (Islam, Low, Kim and Hasan, 2011). Hung *et al.* (2010) posited that Knowledge Management initiatives have an indirect effect on innovation performance through TQM practice; by focusing on meeting customers' needs and encouraging organizations to continually identify new customer's needs and expectations. Thereby inducing organizations to innovate, continually develop and introduce products that meet markets changing needs. This theory therefore Instigate the study research hypothesis; TQM practice has a significant Mediating effect on the relationship between differentiation strategy and organization performance.

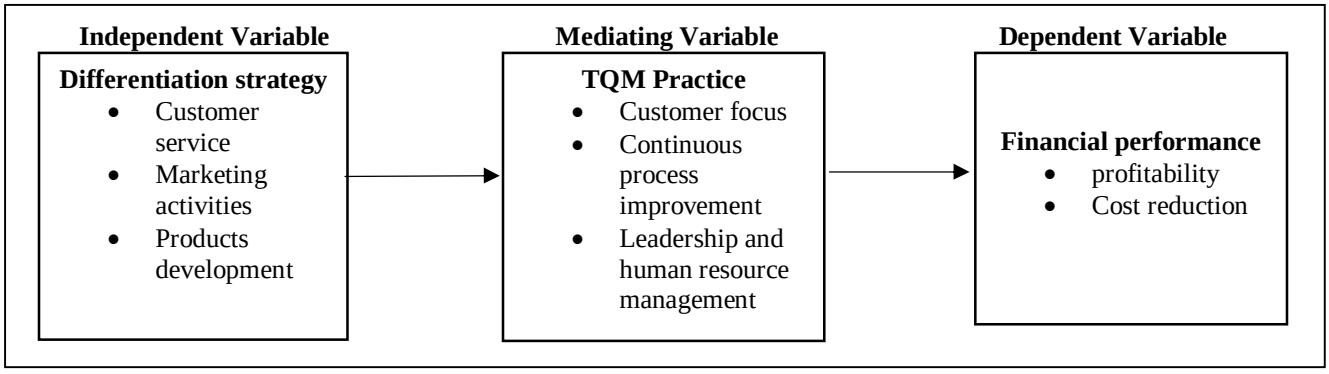

Figure 1: conceptual framework

2.1. Organization Performance

What constitutes an effective strategy can depend on how one measures performance (Cavalier, Ggaiardelli&Ierace, 2007; Pongatich& Johnson, 2008). Scholars (Van der Stede, Chow & Lin, 2006). Have further suggested that different measures are appropriate for different strategies. These measures include effectiveness, efficiency, financial viability and relevance to stakeholders (Shisia, Sang, Matoke&Omwario, 2014). Li, Nathan, Nathan and Rao (2006) defined organization performance as how well an organization achieves its market-oriented as well as its financial goals. Richard, Devinney,Yip and Johnson (2009) uphold that organization performance should encompass three specific areas financial performance, product market performance and shareholder return. According to Madsen and Stenheim (2014) Financial metric is the ultimate measure of a firm's performance as it helps to determine whether a firm's strategy and execution are supporting the overall mission of the firm. The financial performance measures define the long run objectives of the business unit. Businesses with many products in the early stage of their life cycle can stress rapid growth objectives and mature businesses may emphasize maximizing cash flows. Even though TQM emphasizes on goals such as quality improvement, customer satisfaction, cycle time reduction, and reengineering and employee empowerment. It is important that TQM performance should be linked to financial performance (Kaplan and Norton, 1996). TQM programs leads to improved customer satisfaction, internal process improvement, organization learning and growth eventually this leads to improved financial performance (Kaplan and Norton, 1996). Organization performance in this study was thereforemeasured using financial measures manly cost reduction and profitability.

3. Research Methodology

This study adapted a descriptive research design. The target population for the study was 39 ISO Certified manufacturing firms.The study adapted a census approach. Three managers (CEO, Strategic managers, and Quality assurance managers) in each firm were used as a unit of observation to give information on behalf of the organization. This result to a total of 117 respondents.The primary data was collected from the management using questionnaires. A Likert scale was employed to evaluate how each particular item was rated by the respondents in relation to a given variable investigated.

4. Discussion of Research Findings

The study administered 117 questionnaires to (CEO/Human resource managers, strategic managers/Marketing managers and quality assurance managers in 39 ISO certified manufacturing firms. 102 questionnaires were properly filled and returned. The overall response rate was 87%. This response was therefore considered good representative to provide information for analysis and derive conclusions. The assumptions of linear regression models were validated to ensure that the ordinary least squares (OLS) provide reliable estimates of the parameter.The following assumptions of the study variables were tested outlier, normality, homoscedasticity, multicollinearity, independence of residuals and common method bias. To test for normality Kolmogorov-Smirnova and Shapiro-Wilk test were conducted. This was fundamental in order to determine appropriate test to be conducted and make sure the assumptions of a normal distribution were not violated. The test rejects the hypothesis of normality when the p-value is less than or equal to 0.05. The P for the factors were greater than 0.05 for both Kolmogorov-Smirnova and Shapiro-Wilk test. Hence the study assumed that the data was normally distributed. The presence of outliers was detected by the use of MahalanobisD-square test. The results of mahlanobis D-square test show that the distribution ranges from 8.554 to 39.092 with P^2 values being greater than 0.01 hence suggesting incidents of multivariate outliners were not existent. Heteroscedasticity was tested by performing the Breuch-pagan/Cookweisberg test. Breusch/Cook-weisberg test the null hypothesis that the error variances are equal verse the alternative hypothesis that the error covariance are multiplicative function of one or more variables. Heteroscedasticity will be evident when the value of Prob>Chi-Square is greater than 0.05. The result shows Prob> Chi-square = 0.0179. since the Prob> Chi-square value is less than 0.05 the study therefore accepts the null hypothesis the variance in the error term is constant. Hence heteroscedasticity does not exist and that the variance of the error term is constant (Homoscedastic) Multicollinearity can be detected using the value of correlations. A value of 0.8 or 0.9 shows that there is a relation of multi-collinearity between two variables. The study examined the correlations as appears in the Pearsons correlation there was no sign of multicollinearity. The highest correlation coefficient between the variable was 0.690 which does not exceed 0.8 as suggested by Hair,Black,Rabin, Anderson and Tatham (2010). Multicollinearity existence was examined using the variance of inflation (VIF) for independent variables The VIF values in this case ranges from 2.070 to 3.293 which suggest that problems of multicollinearity are unlikely to occur. Related to the VIF is the tolerance statistics which is

Convergent validity is used to ensure the measurement items for relevant constructs actually measure that particular construct (Hair et al., 2010). Discriminant validity measures the uniqueness of the constructs to each other in the model. Convergent validity ensures that constructs that are expected to be related are in fact related while discriminant validity test that constructs that should have no relationship do in fact not have any relationship. Convergent validity of the measurement model can be assessed by the Average Variance Extracted (AVE). AVE measures the level of variance captured by a construct versus the level due to measurement error, values above 0.7 are considered very good, whereas, the level of 0.5 is acceptable (Hair et al.,2010). Discriminant validity can be assessed by comparing the amount of the variance capture by the construct (AVE) and the shared variance with other constructs thus the AVE for each construct should be greater than the squared correlation involving the constructs. The AVE values for all the variables was above 0.5 as recommended by Hair *et al.* (2010) and the squared correlations among all the variables were less than AVE values this indicates that the measuring scale exhibited adequate convergent and discriminant validity.

Reliability test was conducted as a test of whether data collecting instrument yield the same results on repeated trials. The measurement of the reliability of a data instrument helps the researcher to gauge the goodness of the variable of the measurement (Sekaran&Bougie 2010). The widely used Cronbach coefficient alpha was employed to assess internal consistency. Bryman and

Cramer (1997) stated that reliability of 0.70 Cronbach alpha is normally accepted in basic research. Zikmund, Babin, Carr and Griffin (2010) also posit that Cronbach alpha of 0.60 as a minimum is accepted. All the alpha coefficient ranged from above 0.731 to 0. 895 as shown in the table 1. Based on the coefficient values the items tested were deemed reliable for this study.

Variable	Number of items	Reliability Cronbach's alpha	Comment
Total quality management	9	0.786	Accepted
Differentiation strategy	8	0.791	Accepted
Financial performance	14	0.778	Accepted

Table 1: Cronbach alpha Reliability results

4.1. Descriptive Analysis

The purpose of the study was to investigate the mediating effect of TQM on the relationship between generic strategies and organization performance. Descriptive statistics for the following variables differentiation strategy, focus strategy, total quality management and financial performance were analysed. The 5- point Likert scale response categories were used. The scale work from left to right where the left end of the scale is smaller, more negative than the right. There are two extreme values that is far left which signifies strongly disagree and the far right which symbolizes strongly agree. Meanwhile the middle answer category (number 3) represents neutral which means neither agree nor disagree.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

5 Point Likert scale response categories

Descriptive statistics of the answers such as frequency, mean and standard deviation were jointly used to summarize response as shown in the data below

4.1.1. Differentiation Strategy and Organization Performance

The respondents were asked to rank the following statement concerning the extent to which manufacturing firms had implemented differentiation strategy. Their responses were as presented in table 2 below

Differentiation Strategy	N	Min	Max	Mean	Std. Deviation
We continuously develop unique products	102	3.00	5.00	3.8549	.70205
We trained our employees on how to handle customers	102	2.00	5.00	3.7053	.61835
We invest in research and development	102	2.00	4.00	3.4453	.56723
Our product and service have a strong brand identity	102	3.00	5.00	4.2059	.64099
We have increased our marketing communication to differentiate ourselves	102	3.00	5.00	3.9422	.70221
we have improved the quality of our products to distinguish ourselves	102	2.00	5.00	3.7943	.53820
We have improved quality of customer services	102	3.00	5.00	4.0932	.43421
we meet our customer needs more than our competitor	102	2.00	5.00	3.9863	.73223

Table 2: Differentiation strategy

The respondents agreed with the following statement concerning differentiation strategy; they continuously develop unique products (3.8549); they trained employees on how to handle customers (3.7053); They had built strong brand identity (4.2059); they had increased marketing communication activities to distinguish themselves (3.9422); they produced higher quality products to differentiate themselves (3.7943); had Improved quality of customer service (4.0932) and lastly they were able to meet their customer needs more than their competitors (3.9863). However, the respondents were neutral about the expenses spend on research and development (3.4453), this is consistent with world bank (2016) report which shows that Kenyan firms did not spend enough on research and development; On average only 0.5% of the total company expenses is spend on research and development. From the findings of the study it is further noted that response to the statement used to measure differentiation strategy ranged from (3.4453 to 4.2059). This shows that majority of the respondents were in agreement with the statement used to measure differentiation strategy in the organization. Similarly, the standard deviation of all the items are below 1.0. It can be deduced that the response for the item were not deviating much from the expected response. This shows that most of the manufacturing firms in Kenya have implemented, differentiation strategy. The findings are consistent with the findings by Waweru (2011) which showed that 89% of firms in Kenya implemented differentiation strategy either exclusive or as a dual strategy with cost leadership. Similarly, Minja and Mutungu (2014) study in the food and beverage manufacturing industry shows similar results. That is 75% of the manufacturing firms have implemented differentiation strategy.

- Total Quality Management

The study sought to find out the extent to which firms had implemented TQM. The respondents were asked to rate the following statements key to TQM implementation. Table 3 shows their ratings of the statements.

Total Quality Management	N	Min	Max	Mean	Std. Deviation
Our top managers are commitment to TQM implementation	102	1.00	5.00	3.7637	.88963
We have implemented continuous improvement philosophy	102	2.00	5.00	3.8235	.79661
We are committed to our Customer	102	1.00	5.00	3.5588	.82356
We partner with our Suppliers	102	1.00	5.00	3.5882	.85697
We all work together as a Team	102	2.00	5.00	3.7945	.76986
We empower our Employee through training	102	2.00	5.00	3.7853	.75111
We have quality Leaders who are our mentors	102	2.00	5.00	3.8935	.75761
We have reduced wastage	102	2.00	5.00	3.6376	.69695
We bench mark with the best in the industry	102	2.00	5.00	3.7677	.78079

Table 3: Total Quality Management

The respondents agreed that the top-level management were commitment to TQM implementation (3.7637) and the organization had quality leaders who drives its vision and mentor others (3.8935). The respondents also agreed that they had implemented continuous improvement philosophy (3.8235); they were committed to the Customer (3.5588); they partner with their Suppliers (3.5882) and they all worked together as a Team (3.7945); they empowered Employees through training (with mean of 3.7853); they were committed to zero defect philosophy (3.6376) and lastly the respondents agreed (mean of 3.7677) that they benchmark with the best in the industry to enabled them to improve operation processes. From the findings of the study it is further noted that response to the statement used to measure the level of TQM adaptation ranged between (3.5588 to 3.8935). This shows that majority of the respondents had implemented TQM in the organization. Similarly, the standard deviation for all the items were below 1.0. It can be deduced that the response for the item were not deviating much from the expected response.

- Financial Performance

The study sought to find out the financial performance of the organization, the respondents were asked to rate the following statement indicating the organization financial performance. The responses were as shown in table 4

Financial Indicator	N	Min	Max	Mean	Std. Deviation
Our Sales growth rate has improved	102	2.00	5.00	3.7941	.76986
Our market share has increased	102	2.00	5.00	3.7153	.89811
Our Profit growth rate has increase	102	2.00	5.00	3.6271	.88360
Our organization has introduced new revenue sources by entering into new markets	102	2.00	5.00	3.7147	.78079
Our organization has introduced new revenue sources by entering introducing new products	102	2.00	5.00	3.7841	.68664
Our organization has improved the existing customers profitability	102	2.00	5.00	3.7471	.81212
We have reduced amount of wastage in the organization	102	2.00	5.00	3.9118	.83003
We have Lowered the direct cost of products and services	102	2.00	5.00	3.6765	.76755
We have reduced indirect cost common resources are shared with other business unit	102	2.00	5.00	3.7981	.72944
We have Improved asset utilization	102	3.00	5.00	3.9218	.71213
We have reduced the working capital needed to support a given level of business	102	2.00	5.00	3.6176	.81704
We have reduced the fixed capital needed to support a given level of business	102	2.00	5.00	3.8765	.87803
We have been more careful in asset acquisition	102	2.00	5.00	3.7352	.89732
We have disposed parts of current and fixed asset base not in use	102	3.00	5.00	3.7607	.69887

Table 4: Financial Performance

The respondents agreed that the their organization had improved their financial performance, in the following areas (the mean score for various variables has been written against the them); their Sales growth rate has improved (3.7941); their market share has increased(3.7153); their Profit growth rate has increased (3.6271); their organization has introduced new revenue sources by entering into new markets (3.7147); their organization has introduced new revenue sources by introducing new products (3.7841) and lastly their organization has improved the existing customers profitability (3.7471). The findings show TQM and generic strategies have positive effect on organization financial performance. There is evidence that TQM has an indirect effect on organization financial performance. Chaudary*et al*., (2015) study showed there is an indirect relationship between TQM and financial performance. Similarly, previous studies by Nandakumar, Ghobadian and Regan (2010) and Atikiya, Mukulu, Kihoro and Waganjo (2015) have found a positive relationship between differentiation strategies and financial performance.

On cost reduction the respondents agree they had reduced wastage in the organization (3.9118); they had Lowed the direct cost of products and service (3.6765); they had reduced indirect cost common resources are shared with other business unit (3.7981) they had Improved asset utilization (3.9218); they had reduced the working capital needed to support a given level of business (3.6176) they had reduced the fixed capital needed to support a given level of business (3.8765); they had been more careful in asset acquisition (3.7352) and lastly they disposed parts of current and fixed asset base not in use (3.7607). Studies (Mehralian, Nazari, Nooriparto and Rasekh, 2017) show that a combination of TQM philosophy and tools positively influence both cost reduction and business

performance. Saleheldin (2009) study further revealed in their studies that TQM has a substantial positive effect on both operational and organization performance.

4.2. Factor Analysis

The study conducted a structural equation, modelling using the analysis of moment structures (SPSS AMOS) to construct a conceptual modelling linking the variables understudy. The study employed confirmatory factor analysis to construct the linkage between the dimension of differentiation strategy, TQM and financial performance. The study followed two step approaches for SEM. The confirmatory measurement model and confirmatory structure model. The first phase involved confirmatory factor analysis (CFA) that involved evaluation of measurement model on multiple criteria. Prior to CFA, exploratory factor analysis (EFA) that involve computation of factor loading matric, communality and principle component analysis (PCA) was conducted.

4.2.1. Exploratory Factor Analysis

To test whether the items were associated with specific factors, exploratory factor analysis (EFA) was used. EFA was used to identify factors based on data and to maximize the amount of variance explained. To assess the factorability of items, two indicators were examined that is Kaise Meyer-Olkin measure of sampling adequacy and Barlett test of sphericity. KMO & Bartlett's Test of Sphericity was used to measure of sampling adequacy that is recommended. the Bartlett's Test of Sphericity relates to the significance of the study and thereby shows the validity and suitability of the responses collected to the problem being addressed through the study. For Factor Analysis to be recommended suitable, the Bartlett's Test of Sphericity must be less than 0.05 in this study the Bartlett test of sphericity is less than 0.01 for all the variables used in the study this shows the data was suitable for factor analysis. Kaiser-Meyer-Olkin (KMO) Test was used to measure the suitability of data is for Factor Analysis. The KMO ranges from 0 to 1. According to Kaiser KMO values of 0.00 to 0.49 are unacceptable; 0.50 to 0.59 are miserable; Values of 0.60 to 0.69 are mediocre; Values of 0.70 to 0.79 are middling; 0.80 to 0.89 meritorious and 0.90 to 1.00 marvellous. The KMO value as indicated in table 5 was 0.875 showing the data was adequate for factor analysis.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.875
Bartlett's Test of Sphericity	Approx. Chi-Square	1450.694
	df	190
	Sig.	.000

Table 5: KMO and Barlett Test

- Factor Analysis for Differentiation Strategy

The KMO value was 0.807 and Bartlett's Test of Sphericity was < 0.00001. This show the data was suitable for factor analysis. Factor analysis was conducted using principal component method. Total variance analysis indicated that the eight statements of differentiation could be factored into three factors as shown in table 6. Differentiation strategy was measured using the following component, high level of customer service (DS1), developing unique products (DS2) and increased marketing activities (DS3). Under customer service the key component included training employees on customer care, quality services and the organization responsive to customer needs. Under marketing services, the variable included marketing communication activities and building brand identity. Lastly under product development the subcomponent included improved product quality, continuous development of new product and lastly diversifying unique product range.

Factor	**Sub-component**	**Factor loading**	**Cronbach alpha**
Customer service (DS1)	Well trained employees on customer care	0.796	0.922
	Offer quality customer services	0.793	
	Responsive to customers' needs	0.809	
Marketing services (DS2)	Build brand identity	0.838	0.739
	Increased marketing communication activities	0.647	
Product development (DS3)	Improve product quality	0.847	0.828
	continuously development of new products	0.730	
	Diversified unique product range	0.696	

Table 6: Factor analysis for differentiation strategy

- Factor Analysis for Financial Performance

The KMO value was 0.764 and Bartlett's Test of Sphericity was < 0.00001. The data was suitable for factor analysis. Factor analysis was conducted using principal component method. The extraction of the factors followed the Kaiser Criterion where an Eigen value of 1 or more indicates a unique factor. Total variance analysis indicated that the fourteen statements of focus strategy could be factored into two factors profitability (F1) and cost reduction (F2) as shown in table 7. Under profitability the subcomponents include Sales growth rate increase, growth in markets share, profit increase and introduction of new sources of revenue. Under cost reduction the subcomponents included waste reduction, reduced direct cost of products and service, reduced indirect cost and Improved asset utilization

Components	Subcomponents	Factor loading	Cronbach alpha
Profitability (F1)	Sales growth rate	0.710	0.847
	growth in markets share	0.822	
	Profit increase	0.875	
	New sources of revenue	0.746	
Cost reduction (F2)	Waste reduction	0.782	0.884
	Reduced direct cost	0.813	
	Reduced indirect cost	0.694	
	Asset utilization	0.878	

Table 7: Factor analysis for Financial performance

- Factor Analysis for Mediating Variable Total Quality Management

The KMO value was 0.874 and Bartlett's Test of Sphericity was < 0.00001. This shows the data was suitable for factor analysis. Factor analysis was conducted using principal component method. The data was appropriate for factor analysis. The extraction of the factors followed the Kaiser Criterion where an Eigen value of 1 or more indicates a unique factor. Total variance analysis indicated that the eight statements of TQM could be factored into three factors as shown in table 8. TQM was measured using three components leadership and human resource management (T1), customer focus (T2) and continuous process improvement (T3). Leadership and human resource management consisted of the following subcomponents leadership, top management commitment, employee empowerment and training. Under continuous process improvement it contained the following sub component supplier partnership. Continuous process improvement, and waste reduction and lastly under customer focus the subcomponents were benchmarking and commitment to meeting customer's needs

Component	Subcomponent	Factor loading	Reliability
Leadership and human resource management (T1)	Team work	0.713	0.929
	Leadership	0.867	
	Training	0.948	
	Employee empowerment	0.947	
	Top management commitment to quality	0.671	
Customer focus (T2)	Bench marking	0.964	0.812
	Commitment to customers	0.704	
Continuous improvement (T3)	Supplier management	0.628	0.821
	Waste reduction	0.724	
	Continuous process improvement	0. 941	

Table 8: Factor Analysis for Total Quality Management

The confirmatory factor analysis was conducted in order to assess the extent to which the observed data fitted the pre-specified theoretically driven model (Hair et al., 2010). CFA was conducted on each construct to shows the extent to which the observed variable (indicators) represent the underlying latent construct by assess whether proposed variable indicators had significant factor loadings the results of confirmatory factor analysis shows that all the factor loading for all hypothesized indicators measuring independence, mediating and dependent variables are above 0. 5 hence they are acceptable.

- Hypothesis Testing

Before testing for mediation effect the study established that models used to measure mediation effects was fit**.** To ascertain that the model provided adequate fit for the data the study considered both absolute fit indices and incremental fit indices. The fit indices were used to verify that the model used to test the hypothesis was adequate. The results were as follows; RMSEA values of 0.065; GFI of 0.979,AGFI of 0.922and lastly CFI index of 0.989this also falls within the acceptance range. RMSEA Values range from 0 to 1 with a smaller RMSEA value indicating better model fit. RMSEA value of less than 0.05 is considered excellent, 0.05 to 0.08 is good while 0.1 is acceptable. GFI, AGFI and CFI values > 0.90 are acceptable. This shows the model was fit.

To test for mediation, Baron and Kenny (1986) test was used. First the study ensured that the independent variable (differentiation strategy) was related to the dependent variable (financial performance) such that Beta in equation one is significant. The study findings as indicated in the table 9 showed that there was a positive significant relationship between differentiation strategy and financial performance ($\beta = 0.767$ and P-value <0.01) therefore a unit increase in differentiation strategy index led to an increase in manufacturing firm financial performance index by 0.767 since the p-value was less than 0.05. This fulfils the first condition for measuring mediation effects. The second condition involves testing if the independent variable (differentiation strategy) should relate to the mediator variable (TQM) such that (β) in equation is significant. This condition establishes the first stage of the mediation effect. The findings as indicated in the table 9 showed that there was a positive significant relationship between differentiation strategy and TQM (β =0.643 and P-value <0.01). Since the p-value was less than 0.05. This fulfils the second condition for measuring mediation effects.Lastly the mediator variable TQM should relate to the dependent variable such that its β is significant. This condition establishes the second stage of the mediation effect the findings as shown in table 4.5 shows the regression coefficients for

TQM is (β = 0.309 and the P-value is 0.028). Which shows that TQM predicts the financial of the organization hence fulfilling the last condition for mediation. For differentiation strategy, the regression coefficient is (β =0.571 and the P-value is 0.01). The p value for regression coefficient for TQM and differentiation strategy are significant at 95% level of confidence.

	Relationship	Regression Weights	Standardized Regression Weights	S.E.	P
Before TQM mediation effects	TQM < DS	0.790	0.643	0.199	0.010
	FP < DS	0.788	0.767	0.171	0.010
After TQM mediation effects	TQM < DS	.758	649	.179	0.010
	FP < DS	.614	.571	.177	0.010
	FP < TQM	.285	.309	.130	.028

Table 9: Differentiation strategy on TQM and financial performance
DS (Differentiation strategy); FP (financial performance)

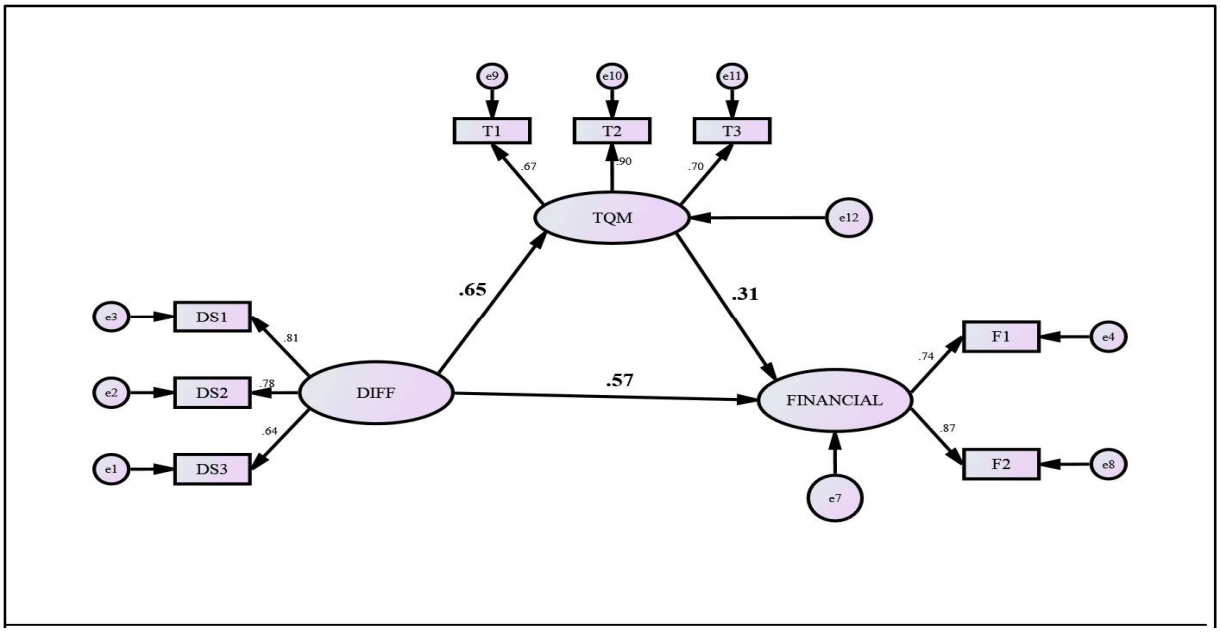

Figure 3: Differentiation strategy, TQM Financial performance

Both differentiation strategy and TQM predicts the financial performance of manufacturing firms. However, the direct effect of differentiation strategy on financial performance have reduced from 0.767 to 0.571. Hence, we can conclude that TQM partially mediate the relationship between differentiation strategy and financial performance.TQM determines but not all of the relationship between differentiation strategy and financial performance. This implies there is a significant relationship between mediator (TQM) and financial performance but also direct relationship between differentiation strategy and financial performance. The relationship between differentiation strategy and financial performance was partially mediated by TQM. The significance of this indirect effect was tested using bootstrapping procedures. The indirect effects were computed for each 5000 bootstrapped samples. The resultsbased on a bootstrap approximation obtained by constructing two-sided percentile- based confidence intervals show the P value was 0.01 which is statistically significant at 99% confident interval. Hence the study concludes that at 99% confidence interval TQM partially mediates the relationship between differentiation strategy and financial performance. The study therefore rejects the null hypothesis and accepts the alternative hypothesis. At 99% confidence interval TQM partially mediate the relationship between differentiation strategy and financial performance of manufacturing firms in Kenya.

The findings show TQM partially mediates the relationship between differentiation strategy and financial performance. This mediation effect can be explained by the fact that TQM is a strategic organization resource that emphasizes on continuous process improvement enhancing efficiency and effectiveness resulting to development of quality products, services and processes that increases the competitiveness of the organization resulting to increased financial performance in the long run. The direct effects of Differentiation strategy on financial after TQM implementation shows that a significant portion of variance in performance is directly explained by differentiation strategies without being mediated by TQM. This finding is important in the sense that when pursuing TQM under the context of differentiation strategies, organization also need to furnish certain resources that are not accommodated by TQM such as market communication, market research, market development, and adopted of technology. Similar to the study's findings are Yunis*et al.*, (2013) findings which indicated that TQM plays the role of a strategic driver, it can be viewed as a company-wide culture that instils a culture of innovation, effective communication, and knowledge sharing and employee involvement and thus had a potential effect on differentiation strategy. This finding is closely related to Banker, Mashruwala and Tripathy(2014) findings which showed that there was significant relationship between differentiation strategy and financial performance and Mehralian*et al.*,(2017) study demonstrates that them was significant relationship between TQM and financial performance.

5. Summary Conclusions and Recommendations

The study findings affirmed that there was a positive significant relationship between differentiation strategy and financial performance it also affirmed that there was a positive significant relationship between differentiation strategy and TQM. On the mediation effects of TQM on relationship between differentiation strategy and organization performance, the study also established that TQM partially mediated the relationships between differentiation strategy and financial performance of manufacturing firms in Kenya. It is important to note that TQM does not fully control this relationship but only partially mediates this relationship. This shows that a significant portion of variance in performance is directly explained by strategies without being mediated by TQM. This finding is important in the sense that when pursuing TQM under the context of differentiation strategy, organization also need to furnish certain resources that are not accommodated by TQM such as market communication, market research, market development, and adopted of technology.

6. Suggestions for Further Study

Future research may opt to confirm the findings of this study by undertaking the research through a longitudinal research approach to detect the dynamic changes the of the relationships between variables through the processes. The focus of this study is only in one industry, future studies can leverage the approach used in the present study in order to examine the impact of TQM on other industries and examine the impact on various dimensions of performance using. The study recommends that a replica of the same study should be carried out in the service industry.

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