

Original Research Article

**Relationships among Structural Adaptations,
Strategy Implementation and Performance of
Manufacturing Small and Medium Firms in Thika,
Kenya**

ABSTRACT

This paper explores the relationships among firm's structural adaptations, strategy implementation and performance of small and medium manufacturing firms (SME) in a developing country like Kenya. The study is underpinned in McKinseys 7-S and Higgins 8-S frameworks of strategy implementation and the dynamic capabilities view of the firm where organizational structure is recognized as one of the key dynamic capabilities required by the firm in maintaining superior performance and competitive edge among the rival firms. A survey questionnaire was used to collect data from 115 firms from the two key industrial subsectors within Thika Sub-County in Kenya. Guided by the philosophy of logical positivism, the study adopted a mixed research design which incorporated both the descriptive and quantitative research designs. Pearson's bivariate linear correlation analysis was used to indicate the relationship between the dependent and independent variables of the study and OLS regression analysis was used to test hypothesis proposed in this study. The study findings indicated that there is a positive and significant relationship between structural adaptations during strategy implementation process and the performance of SME manufacturing firms($r = .442^{**}$, $P < .001$). The study also found that formalization of the firm's structure has a positive and significant relationship with the manufacturing SME firm's performance($r = .456^{**}$, $P < .001$) followed by specialization which positively and significantly relates to the performance of a manufacturing SME firm($r = .350^{**}$, $P < .001$). Centralization of the manufacturing SME firm's structure was found to be positively related to the SME's firm performance but the relationship is insignificant ($r = .159$, $P = .09$). The findings in this study are in line with other scholars in literature who found a positive and a significant relationship between organizational structure and performance in other countries. The study concluded that manufacturing firms interested in enhancing their performance and staying ahead of competition should align their structures to the new strategy and ensure there are adequate formal procedures and maintain a proper balance between tasks and specializations of the employees.

Key Words, Strategy Implementation, Structural adaptations, Dynamic Capabilities, Firm's Performance

1. INTRODUCTION

Strategic management literature has identified Structural adaptations as one of the key drivers in strategy implementation process. The three structural dimensions that affect communication, co-ordination and decision making, which are core to strategy implementation, are formalization,

centralization and specialization (Oslo, Slater & Hult, 2005). The relationship between structure and strategy an organization adopts was first championed by Chandler (1962). He argued that the strategy of an organization determines the long term goals and objectives. In order to do this better, there is the need, in the organization, to determine the course of actions, allocate adequate resources and determine the appropriate structure that supports a given strategy. Organizational structure and strategy are related because organizational strategy helps the organization to define and build an appropriate organization structure that enables the accomplishment of the set goals and objectives. A good structure in an organization defines how employees work together and it clearly establishes the roles and responsibilities each employee performs in order to support the achievement of the set goals and objectives. The type of structure adopted in an organization also determines the number of employees and managers required. Due to the market dynamics such as competition, demographic changes, technological advancements and other environmental changes, strategy formulation and implementation is a dynamic process and organizations generates new strategies from time to time that dictates structural revisions and new alignments to suit the environmental dynamism and the resultant strategic changes that take place in a given industry.

2. OBJECTIVE OF THE STUDY

The main objective of this study was to establish the relationship between structural adaptations practiced during strategy implementation process and the performance of SME manufacturing firms in Kenya

3. HYPOTHESES OF THE STUDY

This study was guided by the following alternative hypotheses;

H₁.There is a significant positive relationship between structural adaptations and performance of SME firms in Kenya

H₂.There is a significant positive relationship between formalization in the structure and performance of SME manufacturing firms in Kenya

H₃.There is a significant positive relationship between centralization in the structure and performance of SME manufacturing firms in Kenya

H₄.There is a significant positive relationship between work specialization and the performance of SME manufacturing firms in Kenya

45 **4. LITERATURE REVIEW**

46 A structure is a hierarchical arrangement of duties and responsibilities, lines of authority,
47 communications and coordination in an organization. It refers to the shape, division of labour, job
48 duties and responsibilities, distribution of power and decision making procedures within a company
49 (Okumus, 2003). Higgins (2005) views an organizational structure in terms of five different
50 elements that make a structure namely, the job itself, the line of authority to perform these jobs,
51 the grouping of jobs in a given order that allows achievement of the objectives, the coordination
52 mechanism applied by managers to supervise jobs effectively and the span of control that shows
53 the number of subordinates that a manager can effectively supervise. He posits that the success
54 in a given organization is determined by how well the organization is structured along its business
55 strategy.

56 Studies on organizational structure dates back in 1960s when Alfred Chandler studied hundreds of
57 American large companies in order to establish the relationship between organization's strategy and
58 its structure (Robbins, 2006). His study came into a conclusion that modifications in the strategy of
59 these companies led to changes in their structure. Expansion of the production line in these
60 companies necessitated revision of their structures so that they can cope with the increased output
61 and conform to the new strategies. According to Chandler (1962) an organization structure must
62 follow her strategy for better performance. Companies with limited product lines initially had
63 centralized structures with less complexity and formality but when they increased and diversified their
64 production lines, they were forced to adapt different structures that matched their new strategy.
65 Chandler (1961) concluded that when an organization diversifies, they must employ different structure
66 compared to firms that follow single-product strategy (Robbins, 2006). Burns and Stalker (1961)
67 studied about 20 British and Scottish companies with an aim of finding out how their managerial
68 activities and structures differed in relation to changes in the environment. They found out that the
69 structures adopted by organizations operating under stable environmental conditions differed from
70 those operating in a dynamic environment. In a stable environment, organizations tended to adopt a
71 mechanistic structure that is characterized by low differentiation of tasks, low integration between
72 departments and functional areas, centralization of decision making and standardization and
73 formalization of tasks. Organizations operating in a dynamic environment tended to adopt a more

flexible organic structure that allows for changes to be made in line with the environmental changes. Organic structures are characterized by high differentiation of tasks, high integration of departments and functional areas with rapid communication and information sharing, decentralized decision making mechanisms and little formalization and standardization of tasks and procedures. They came to a conclusion that firms will adopt a structure in relation to the environment they are operating in. Most of businesses today operate in a dynamic and turbulent environment and therefore are likely to adopt an organic structure that allow for changes and modifications to be made in line with changes taking place in the environment (Robbins, 2006)

However, variant to Burns and Stalker's study, Sine, Mitsuhashi and Kirsch (2006) posits that the effect of structure is contingent to the stage of development in an organization. In their study, they found out that structures increases performance of new ventures even in the context of very dynamic sector. This applies to small organizations and start-ups where the study also found out that firms with a larger number of employees tended to outperform those with small number and that new ventures that formalize functional assignments and assign important tasks to team members who specialize in those assignments outperform firms whose founding teams have relatively undefined roles. They came to a conclusion that in a dynamic, turbulent and uncertain environments, new and mature organizations face fundamentally different challenges requiring different approaches to organizational structure. Whereas mature organizations with well-defined structure and embedded practices need to become more organic and flexible in order to adapt to dynamic environments, the opposite is true for new ventures because they are already flexible and attuned to the environment but what they need are the benefits of organizational structure which they lack, lower role ambiguity, increased individual focus and discretion, lower coordination costs and higher levels of organizational efficiency. A study of 200 senior managers in United States of America by Oslon, Slater and Hult (2005) revealed that performance of an organization is largely influenced by how well a firm's business strategy is matched to its organizational structure and behavioral norms of its employees. The researchers identified three structural dimensions that affect strategy implementation and performance in an organization that is formalization, centralization and specialization. Formalization is the degree to which decisions and working relationships are governed by formal rules and procedures. The benefits of using rules and procedures include defining and shaping of employee behaviour, problems are solved easily,

activities are organized to the benefit of individuals and the organization, efficiency and lower administrative costs and the firm is able to exploit previous discoveries and innovations.

Centralization is the decision making authority which is held by the top, middle or lower level managers in a firm. In a centralized structure, the top layer of management has most of the decision making power and has tight control over departments and divisions. Communication much easier and faster, while there are only few innovative ideas, implementation is much straight forward and faster once the decision has been made. The benefits of a centralized structure are only realized in stable noncomplex environments while specialization refer to the degree to which tasks and activities are divided in an organization (Oslo *et al.*, 2005). A study by Meijaard, Brand and Mosselman (2005) entitled “organizational structure and performance of Dutch small firms” found out that small firms occur in a wide variety of organizational structures with various degree of departmentation. Secondly, departmentation in these firms has a strong correlation with firm’s size. A third finding is that decentralized structures perform well in several contexts notably in business services and manufacturing. Firms with strong centralization and strong vertical specialization only occur and only perform well in relatively simple structures. Apparently for large firms, strict vertical specialization requires at least some decentralization in order to be efficient. The fourth finding is that hierarchical, centralized structure with strong specialized employees occurs frequently in SMEs and performs well in terms of growth. In combination with complex coordination mechanisms, hierarchically structured and departmentalized firms with formalized tasks and specialized employees perform well in terms of growth as well, particularly in manufacturing and financial services. Non specialized, simple organizational structures in business services perform well in term of profit to sale ratios. They finally concluded that given contextual conditions, different types of organizational structures perform well.

Organizations need to pay more attention to their structures and restructure according to the environmental needs from time to time achieve better performance. A study by Leitao and Franco (2011) on the individual entrepreneurship capacity and SMEs performance found out that the economic performance of SMEs is positively affected by maintenance of efficient organizational structure and at the same time the non-economic performance of SMEs is also affected by enthusiasm at work, incentives and maintenance of efficient organizational structure in a dynamic

environment. These findings reinforce the idea that organizational structure affects organizational performance.

5. CONCEPTUAL FRAMEWORK

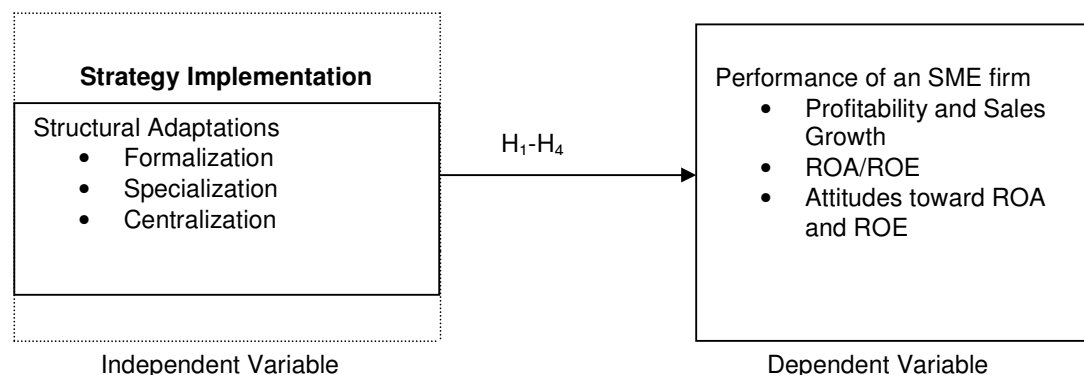


Fig 1.0: Conceptual Framework: Relationship between Structure and Manufacturing SME's Performance

6. THEORETICAL FRAMEWORK

6.1 Higgins 8-S Framework

Higgins (2005) revised the original McKinsey's 7-S framework and developed the 8-S framework for implementing strategies in organizations. The famous and widely applied 7-S strategy implementation framework was developed in 1980's by Tom Peters and Bob Waterman (1982). In their study of the "best run" American companies, Peters and Waterman identified seven key components that managers need to pay attention when implementing organizational strategies. These components (Pearce & Robinson, 1991) include the system, structure, systems, skills, staff, style and shared values which are all intertwined.

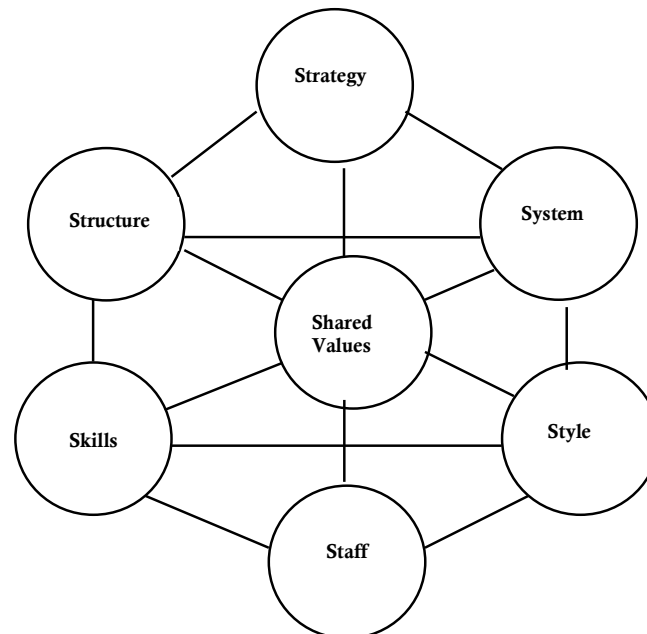


Figure 2.2: McKinsey 7-S Framework: Adopted from *McKinsey's 7-S Framework: (Pearce & Robinson, 1991)*

Higgins (2005) then revised and improved the McKinsey's 7-S model by adding the 8th S component (Strategic performance) which is the derivative or outcome of the interaction of 7-S's components contained in the original McKinsey's 7-S's framework. He also replaced skills as one of the contextual "S" with Re-Sources since organization cannot successfully implement strategy without marshalling additional resources such as money, information, technology and time.

Higgins pointed out that the 8-S's framework enables a manager to work more efficiently and effectively in managing the cross-functional duties and activities associated with strategy implementation. He observed that executives who realize that strategy implementation is as important as strategy formulation usually spend a lot of their time and efforts in strategy execution and this enables their organizations achieve better performance.

The 8-S's framework states that successful strategy implementation revolves around aligning the key organizational components (the 8-S's) with the strategy that the organization intends to implement. However, due to environmental dynamism and changes that take place in organization's business environment now and then, it is important for managers to continue reshaping their strategies in line with these changes. Therefore, this call for a continuous realignment of the 8-S's components in line

with the new strategy and this presents the greatest challenge to managers in their endeavor to successfully implementation strategies.

Since the 8-S's components are intertwined, the executives in the organizations must continuously align all these eight cross-functional components with the new strategy for successful strategy execution and better performance (Higgins, 2005).

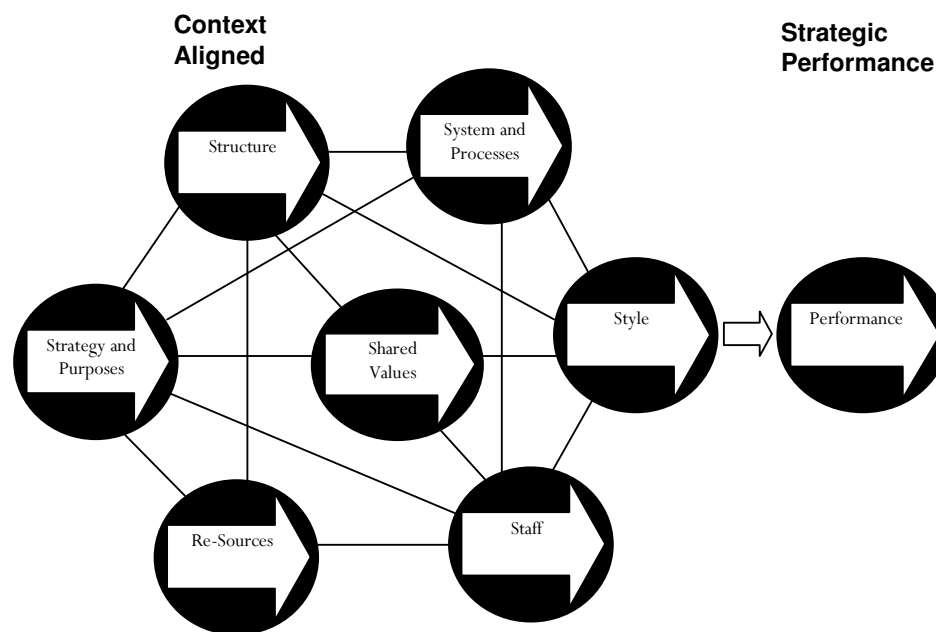


Figure 2.3: Higgin's 8-S Framework: Source: Source: Higgins, (2005):6, *Journal of Change Management* (5)

6.2 The Dynamic Capability View of the Firm

The Dynamic Capabilities View of a firm, which was launched by David Teece in early 1990s, is based on the works of Barney (1991), Rumelt (1984) and Wernerfelt (1984). The framework is an advancement of the Resource-Based View (RBV) of the firm which views resources as the key to superior organization performance. The dynamic capability theory (Eisenhardt & Martin, 2000) is based on the concept that organizations will always attempt to renew their resources in a way that suits the changes taking place in a dynamic environment. According to Teece, Pisano and Shuen

(1997), the dynamic capability view examines how firms are able to integrate, build, and reconfigure their specific competencies (internal or external) into new competencies that match changes taking place in a turbulent environment (Helfat, Finkelstein, Mitchel, Peteraf, Singh, Teece & Winter, 2007). The theory is based on the assumption that firms with greater dynamic capabilities will always outperform those with smaller dynamic capabilities. Therefore, operations in a dynamic environment call for firms to continuously renew, re-engineer and regenerate their internal and external firm's specific capabilities in order to remain competitive (Teece, 2007). The dynamic capabilities are hard to develop and difficult to transfer because they are tacit and are embedded in a unique set of relationships and histories of a firm. Ordinary capabilities, according to RBV, are about doing things right whereas dynamic capabilities are about doing right things at the right time based on unique processes, organizational culture and prescient assessments of the business environment and technological opportunities surrounding a firm (Teece, 2007). Strong dynamic capabilities (Teece, 2014) include processes, business models, technology, and leadership skills needed to effectuate high performance sensing, seizing and transforming an organization.

7. RESEARCH METHODOLOGY

To test the relationship between structural adaptations during strategy implementation and performance of small and medium manufacturing firms, the study, guided by logical positivism philosophy (Scotland, 2012), adopted a mixed research design involving the descriptive and quantitative designs. The data was collected once over a period of eight months from a sample of 115 targeted firms. Pearson's correlation analysis was used to show the correlation among various structural dimensions and the performance of the SME manufacturing firm. The linear regression analysis was used to test the hypotheses and to show the nature of the relationships between structural adaptations and performance. The F-Statistics was used to show the model validity while R^2 was used to show the model's goodness of fit.

8. MEASUREMENT OF VARIABLES

8.1 Manufacturing Firm's Performance

The performance of a firm was measured by the degree of satisfaction on the levels of profitability, Return on Assets (ROA), Return on Equity (ROE) and sales turnover. Due to the sensitivity of

obtaining information related to financial performance where owners of a firm were not willing to cooperate or information was not available, A 5 point Likert scale psychometric instrument (Boone & Boone, 2012) was developed to capture information using the non-financial measures of performance. The scale ranged from (1= Strongly Disagree, 2= Disagree 3= Not Sure, 4=Agree, 5= Strongly Agree). The mean score was then calculated as an average of the 5 items examined on the enterprises' perceived performance. The higher the score obtained, the better the statement is in terms of the firm's perceived performance.

8.2 Structural Adaptations of the Manufacturing SME firm

Structural Adaptations in a manufacturing SME firm was measured by the extent to which the firm matches her new strategy with a good structure that supports what the manufacturing SME firm want to achieve. The variable was broken down into three main structural dimensions identified by the literature namely; formalization, specialization and centralization. In order to measure the structural adaptations during strategy implementation process, a 5-items Likert scale was used (Boone & Boone, 2012) which ranged from (1= Strongly Disagree, 2= Disagree 3= Not Sure, 4=Agree, 5= Strongly Agree). The mean score was then computed as the average of the 5 items. The higher the score, the more the variable is important to the performance of small and medium manufacturing firms in Kenya.

264 **9. RESULTS AND DISCUSSIONS**

265 **Table 1.0: Descriptive Statistics on the Manufacturing SME' Performance**

Performance Constructs	N	Mean	Std. Dev
Our Total Profits (Total sales – Costs) have been increasing yearly	115	4.139	.475
The volume of sales has been increasing ever yearly	115	4.078	.664
The number of employees has been rising every year	115	3.183	1.064
The geographical market size of our products has been expanding	115	3.635	.921
We are highly satisfied by the returns from assets invested (ROA)	115	3.374	1.013
We are highly satisfied by the returns from borrowed money (ROE)	115	3.504	.921
Number of customers satisfied by our products has been rising each year	115	3.913	.695
The size of our organization has been expanding for the last five years	114	3.895	.643
The quality of our products has improved considerably	114	3.851	.755
Efficiency of our internal work processes has improved tremendously	115	3.965	.576
Valid N (listwise)	113		

266 Note: Reliability α – Manufacturing SME Performance = 0.815: Ranked on a scale where 1=Strongly
 267 Disagree, 2= Disagree, 3=Not Sure, 4=Agree, 5=Strongly Agree

268

269 The study results revealed that the respondents agreed with most of the Likert-based performance
 270 constructs apart from the following two statements; we are highly satisfied by the returns from assets
 271 (ROA) invested (mean score, 3.37) and that the number of employees has been rising every year
 272 (mean score, 3.18). Performance of a firm is largely influenced by how well a firm's business strategy
 273 is matched to its organizational structure and behavioral norms of its employees.
 274 Business firms are structured along three different dimensions that affect strategy implementation
 275 namely formalization, centralization and specialization (Osion *et al.*, 2005). The tool developed in this
 276 study to measure structural adaptations consisted of 15 items out of which nine items measured
 277 formalization (item 1, 2, 3, 5, 7, 9, 12, 13 & 15), three items measured centralization (item 4, 6 & 8)
 278 and three items measured specialization (item 10, 11 & 14). The study aimed at determining whether

279 firm's structural adaptations influences strategy implementation performance of manufacturing SME
280 firms (see table 2.0).

281 **Table 2.0: Structural Adaptations of the Manufacturing SME Firm**

282

Structure Constructs	N	Mean Std. Dev
We revise and creates appropriate structures to match the changes in strategy requirements	115	4.165 .561
Our organization gives adequate information before a new strategy is implemented	115	3.357 1.01
We are governed by a clear system of with rules, regulations, policies and procedures	113	4.089 .600
We have a central command center that oversees strategy implementation	114	4.079 .597
Strategic work activities are well coordinated across sections, departments and divisions	114	4.061 .485
Our structure allows quick decisions and feedback	112	3.875 .773
We have a well-designed reporting authority and employees know to whom they report to	113	4.115 .395
We have a centralized decision structure that allows quick decisions to be made	115	3.913 .615
Structures are flexible enough to allow changes to be effected quickly and timely	115	3.696 .880
Our organization makes sure that employees have adequate knowledge, experience and skills	114	3.842 .837
Our organization encourages division of work and specialization	113	4.027 .604
There is adequate level of supervision in every section, department or divisions	113	4.009 .605
Our management encourages team work	115	3.504 1.07

Jobs in our organization are well structured with no overlaps, conflicts or ambiguity	115	3.887	.646
We encourages employees to refer to the past experience when implementing a new strategy	115	3.774	.784
Valid N (listwise)	103		

Note: Reliability α – Structural Adaptations = 0.705

Table 2.0 shows the mean scores based on the structural adaptations of the SME manufacturing firms during the strategy implementation. The results indicated that structures adopted by these firms are highly specialized (composite mean score, 3.68), formalized (composite mean score, 3.67) and centralized (Composite mean score, 3.54).

Table 3.0: Bivariate Correlation Results: Structure and SME's Performance

		Y	X ₁
Performance (Y)	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	115	
Structure (X ₁)	Pearson Correlation	.442**	1
	Sig. (2-tailed)	.000	
	N	115	115

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

Table 3.0 shows the bivariate linear correlations between structural adaptations and performance of a manufacturing SME firms in Kenya. The study revealed that SME's structural adaptations (X₁) has a positive and significant relationship with the performance (Y) of the firm ($r = .442^{**}$, $P < .001$). Structure of the firm has been identified by the literature as one of the key drivers under strategy implementation that influences organization performance (Sorooshian *et al.*, 2010). This implies that

as the firm adjusts their structure to match strategy requirements, there is a significant positive change in the firm's performance. These findings were subjected to further analysis where a univariate linear regression model $Y = \beta_0 + \beta_1 X_1 + \varepsilon$, where Y represents SME's performance and X_1 represents firm's structure was used to determine the effect of structural adaptations on the performance of the SME manufacturing firm. The model containing the explanatory variable (X_1) representing the structural adaptations of the SME firm was found to be valid $F_{(1, 113)} = 27.480$, $P < .001$, meaning that the explanatory variable (X_2) is a good predictor of performance in the manufacturing small and medium enterprises in Kenya.

Table 4.0: Structural Adaptations and Performance: Model Validity

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	5.194	1	5.194	27.480	.000 ^b
Residual	21.359	113	.189		
Total	26.553	114			

a. Dependent Variable: Performance

b. Predictors: (Constant), Structural Adaptations (X_1)

The study further revealed that structural adaptations of the small and medium manufacturing firm (X_1) explains 19.6% of the variations in the performance of the firm ($R^2 = .20$). The value of the constant in table 4.0 indicate that the structural adaptations of the firm will always exist at a certain minimum ($\beta_0 = 3.753$, $P < .001$). The structural adaptations of the firm was found to be positively and significantly related to the performance of the SME manufacturing firm ($\beta_1 = .677$, $P < .001$) meaning that as the SME firm adopts structures that supports strategy implementation initiatives, the performance of the firm will always improve.

Table 4.1: Structural Adaptations and Performance: Regression Weights

Model	Unstandardized Coefficients		Standardized Coefficients	R ²	t	Sig.
	B	Std. Error	Beta			
Constant	3.753	.041			92.570	.000
X ₁	.677	.129	.442	.196	5.242	.000

a. Dependent Variable: Performance

320

321 The univariate model was found to be significant and therefore, supports the study objective that the
 322 structural adaptations of the small and medium manufacturing firm influences the firm's performance
 323 positively and significantly.

324

325 **Test of Hypothesis One**

326 **H₁.** There is a significant positive relationship between structural adaptations and performance of
 327 manufacturing SME firms in Kenya.

328 This hypothesis intended to test whether adjustments to the structural requirements during strategy
 329 implementation positively influence the performance of the manufacturing SME firm's performance i.e.

330 H₀₁: $\beta_1 = 0$ versus H₁: $\beta_1 \neq 0$ was tested. The findings from the bivariate correlations in table 2.0
 331 showed a significant and positive relationship between structural adaptations and SME firms
 332 performance ($r = .442^{**}$, $P < .001$). On the other hand, the univariate regression results in table 4.1

333 showed a positive and significant relationship between structural adaptations of the manufacturing
 334 SME firm and its performance ($\beta_1 = .677$, $P < .001$). This led to the rejection of the null hypothesis

335 (H₀₁) hence the conclusion that there is a positive and significant relationship between the structural
 336 adaptations of the manufacturing SME firm during strategy implementation and its performance. The

337 structural adaptations variable was further broken down into specific structural dimensions identified in
 338 the literature by Osilon *et al.*, (2005) as responsible for influencing organization's performance. This

339 led to the revision of the univariate model $Y = \beta_0 + \beta_1 X_1 + \epsilon$ in order to include these specific structural
 340 dimensions leading to a new multiple linear regression model $Y = \beta_0 + \beta_1 X_{11} + \beta_2 X_{12} + \beta_3 X_{13} + \epsilon$

where: Y = Manufacturing SME's performance, β_0 = Intercept, $\beta_1, \beta_2, \beta_3$ = slope coefficients representing the influence of the associated independent variable over the dependent variable, X_{11} = Formalization of the manufacturing SME structure, X_{12} = Centralization of the manufacturing SME structure, X_{13} = Specialization of functions in the manufacturing SME structure and ε = Error term. A bivariate correlation matrix was then obtained as shown in table 4.2.

Table 4.2: Specific Structural Dimensions: Bivariate Correlation Coefficients

		Y	X_{11}	X_{12}	X_{13}
Performance (Y)	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	115			
FORMAL (X_{11})	Pearson Correlation	.456**	1		
	Sig. (2-tailed)	.000			
	N	115	115		
CENTR (X_{12})	Pearson Correlation	.159	.433**	1	
	Sig. (2-tailed)	.090	.000		
	N	115	115	115	
SPECIAL (X_{13})	Pearson Correlation	.350**	.611**	.107	1
	Sig. (2-tailed)	.000	.000	.253	
	N	115	115	115	115

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

The results obtained from the bivariate linear correlation in table 4.2 revealed that the formalization of the manufacturing SME firm has a significant positive relationship with performance of the firm ($r = .456^{**}$, $P < .001$), followed by specialization of the functions in the manufacturing SME firm ($r = .350^{**}$, $P < .001$). The relationship between centralization of the functions in the manufacturing SME's structure was found to be insignificant ($r = .159$, $P = .09$). These three structural dimensions were further subjected to a multiple regression analysis to test their combined effects on SME's firm's performance. The model containing these structural dimensions was found to be valid, $F_{(3, 111)} = 10.255$, $P < .001$ meaning that the structural dimensions are good predictors of the manufacturing SME firm's performance in Kenya (see table 4.3).

357 **Table 4.3: Specific Structural Dimensions and Performance: Model Validity**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	5.762	3	1.921	10.255	.000 ^b
Residual	20.791	111	.187		
Total	26.553	114			

a. Dependent Variable: Performance

b. Predictors: (Constant), SPECIAL (X₁₁), CENTR (X₁₂), FORMAL(X₁₃)

358

The combined structural dimensions in table 4.4 explains 21.7% of the total variations in manufacturing SME firm's performance ($R^2 = .217$). The constant in the regression model indicates that the structural adaptations will be always exist at a certain minimum ($\beta_0 = 1.156$, $p = .03$). Formalization of the structure is significant and positively related to the manufacturing SME's performance ($\beta_1 = .599$, $P = .001$). However, the relationships among centralization ($\beta_2 = -.028$, $P = .78$), work specialization ($\beta_3 = .100$, $P = .33$) and the manufacturing SME firm's performance were found to be statistically insignificant. (See table 4.4).

Table 4.4: The Combined Structural Dimensions: Regression Weights

Model	Unstandardized Coefficients		Standardized Coefficients	R ²	t	Sig.
	B	Std. Error	Beta	.217		
Constant	1.156	.511			2.264	.026
X ₁₁	.599	.179	.402		3.356	.001
X ₁₂	-.028	.099	-.027		-.279	.780
X ₁₃	.100	.101	.107		.988	.325

a. Dependent Variable: (Y) Performance

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361

Test of Hypotheses Two, Three and Four

The study findings in table 4.2 and table 4.4 were used to test the three alternatives hypotheses based on the structural dimensions (Osion *et al.*, 2005) of the manufacturing SME firm's structure in Kenya.

H₂. There is a significant positive relationship between formalization in the structure and performance of SME manufacturing firms in Kenya

H₃. There is a significant positive relationship between centralization in the structure and performance of SME manufacturing firms in Kenya

H₄. There is a significant positive relationship between work specialization and the performance of SME manufacturing firms in Kenya

The findings in tables 4.2 and 4.4 showed that formalization (X_{11}) has a positive and statistically significant relationship with the manufacturing SME firm's performance ($.456^{**}$, $P < .001$) This led to the rejection of the null hypothesis (H_{02}) hence the conclusion that there is a significant positive relationship between formalization in the manufacturing SME structure and performance of the manufacturing SME firms in Kenya. This implies that the leaders who maintain proper procedures, rules, policies and regulations in their firms help their organizations to achieve superior performance. The findings also revealed that specialization of works (X_{13}) showed mixed results where the bivariate correlation in table 4.2 showed that specialization on its own is positively and significantly related to SME firm's performance ($r = .350^{**}$, $P < .001$) while the multiple regression results in table 4.4 showed that specialization has an insignificant relationship with the firm's performance ($\beta_3 = .100$, $P = .33$). The univariate regression in table 4.5 showed a positive relationship between work specialization and firm's performance ($\beta_1 = .327$, $P < .001$).

Table 4.5: Work Specialization and Performance: Regression Weights

Model	Unstandardized Coefficients		Standardized Coefficients	R ²	t	Sig.
	B	Std. Error	Beta			
Constant	2.472	.325			7.606	.000
SPECIAL	.327	.082	.350	.123	3.974	.000

a. Dependent Variable: (Y) Performance

391

392 The univariate regression results in table 4.5 for specialization ($\beta_1 = .327$, $P < .001$) and the bivariate
393 correlation results for specialization ($r = .350^{**}$, $P < .001$) in table 4.2 showed a positive and significant
394 relationship between work specialization and manufacturing SME's performance. This led to the
395 rejection of the null hypothesis (H_{04}) and the conclusion that specialization of work is positively and
396 significantly related to the performance of the manufacturing SME firm in Thika Sub-County in Kenya.
397 The findings of the relationship between centralization (X_{12}) and manufacturing SME's performance in
398 both bivariate ($r = .159$, $P = .09$) in table 4.2 and regression analysis ($\beta_2 = -.028$, $P = .78$) in table 4.4
399 showed insignificant results. This study, therefore, failed to reject the null hypothesis (H_{03}) and
400 concluded that there is an insignificant negative relationship between centralization and the
401 performance of the manufacturing SME firm in Kenya.

402

403 **DISCUSSIONS OF FINDINGS**

404 Results from bivariate correlation ($r = .442^{**}$, $P < .001$), in table 3.0, univariate regression analysis ($\beta_1 =$
405 $.677$, $P < .001$) in table 4.1 revealed that the structural adaptations of the small and medium
406 manufacturing firms in Kenya is significant and positively related to the firm's performance. This
407 implies that SME manufacturing firms need to examine and re-adjust their structures in line with
408 changes in the environment and new strategies being implemented if superior performance is to be
409 achieved. According to the Dynamic Capability View of the firm, an organizational structure is a
410 dynamic capability and firms that are able to adjust their structures in line with changes taking place in
411 the environment experience superior performance. These findings concur with various conclusions

made by several researchers and scholars in management who have studied organizational structure. This study confirmed the work of Chandler (1962) who contended that an organization structure must follow her strategy for better performance, Burns and Stalker (1961) who observed that firms will adopt a structure in relation to the environment they are operating in, Sine *et al.*, (2006) who observed that structures increases performance of new ventures in the context of very dynamic sector, Oslon *et al.*, (2005) who concluded that performance of an organization is largely influenced by how well an organization's strategy is matched to its structure.

A further analysis on the specific structural dimensions practiced by manufacturing small and medium firms revealed that formalization ($r = .456^{**}$, $P < .001$) and work specialization ($r=.350^{**}$, $P<.001$) in table 4.2 are positively and significantly related with the performance of manufacturing SME firms. On the other hand, centralization ($r = .159$, $P = .09$) has a positive relationship which is insignificant. This is in line with the conclusions made by Oslon *et al.*, (2005) who identified the three structural dimensions along which organizations are structured which are formalization, centralization and specialization. The study further noted that the benefits of centralization are only realized in stable non-complex environments. This is not the case of the manufacturing SME's in Kenya since these firms operate in a complex and highly competitive environment. Leitaio (2011) found out that the economic performance of SMEs is positively affected by maintenance of efficient organizational structure while non-economic performance of SMEs is also affected by enthusiasm at work, incentives and maintenance of efficient organizational structure in a dynamic environment. The findings of this study also confirm the works of Meijaard *et al.*, (2005) in a study entitled "organizational structure of Dutch small firms". The study found out small firms is structured along many dimensions with various degree of departmentation. The study concluded that departmentation is strongly correlated with the size of the firm, centralization perform well in relatively small structures and decentralized structures perform well in firms engaged in business services and manufacturing, in combination with complex coordination mechanisms hierarchically structured and departmentalized firms with formalized tasks and specialized employees perform well in terms of growth especially in manufacturing and financial services and finally, deviating from the findings of this study, the centralized structure with strong specialized employees occur frequently in SMEs and performs well in terms of growth.

11. CONCLUSIONS

This study has revealed that a positive and significant relationship exist between structural adaptations of the manufacturing SME firm during strategy implementation and its performance. The findings are in agreement with Higgins 8-S framework where structure is one of the key important 8-S components in strategy implementation. The study further strengthens the Dynamic Capability View of the firm where organizational structure is seen as one of the key dynamic capabilities of the firm required to maintain superior performance. The CEOs and the owners of these firms who adjust their structures and match them to the requirements of the new strategy being implemented enables their organizations to achieve superior performance. They also need to ensure there is adequate level of formalization and specialization in the structures adopted. Oslon *et al.*, (2005) observed that the key important dimensions in an organizational structure are formalization, specialization and centralization. This study found out that when it comes to manufacturing SME firms, only formalization and specialization are important. Centralization does not improve the firm's performance significantly. This study, therefore, concluded that the structure of a manufacturing firm can be used as one of the key dynamic capabilities to achieve better performance and with time achieve a competitive edge among the rival firms in the industry.

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