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**Influence of Dynamic Capabilities on Performance of  
Large Manufacturing Firms in Kenya**

**Dr. Allan Samuel Njogu Kihara, Dr. Patrick Karanja Ngugi and  
Dr. Kennedy Ogollah**



## **Influence of Dynamic Capabilities on Performance of Large Manufacturing Firms in Kenya**

**\*<sup>1</sup> Dr. Allan Samuel Njogu Kihara, <sup>2</sup> Dr. Patrick Karanja Ngugi and <sup>3</sup> Dr. Kennedy Ogollah**

<sup>1</sup>Post graduate student, Jomo Kenyatta University of Agriculture and Technology, Kenya

<sup>2</sup>Lecturer, Jomo Kenyatta University of Agriculture and Technology, Kenya

<sup>3</sup>Lecturer, University of Nairobi, Kenya

### **Abstract**

**Purpose:** The purpose of this study was to determine the influence of dynamic capabilities on performance of large manufacturing firms in Kenya.

**Methodology:** The study adopted a cross-sectional research design and descriptive survey design and the research philosophy was positivism. The study population study was 499 large scale manufacturing firms where a sample size of 217 firms was selected.

**Results:** The study findings revealed that dynamic capabilities have a positive and significant influence on performance of large manufacturing firms in Kenya.

**Policy recommendation:** The study recommended that large manufacturing firms should also invest more in research and development, training, networking and innovation.

**Keywords:** *dynamic capabilities, performance, manufacturing firms*

## 1.0 INTRODUCTION

### 1.1 Background of the Study

The study sought to determine the influence of dynamic capabilities on performance of large manufacturing firms in Kenya. Manufacturing organizational factors flexibility towards performance due to contingencies has emerged as an important source of competitive advantage as firms seek to be responsive to changing customer demands while remaining competitive on the dimensions of cost and quality (Ward, McCrery & Anand, 2007; Hallgren, Olhager & Schroeder, 2011). Galan and Sanchez-Bueno (2009) as well as (Teece, Pisano & Shuen, 1997) argue that the dynamic capabilities view is especially applicable for the firms operating in dynamic and unpredictable environments requiring them to continually revise their routines

The dynamic capabilities view is especially applicable for firms operating in dynamic and unpredictable environments requiring them to continually revise their routines (Teece *et al.*, 1997). According to Bradley, Aldrich, Shepherd and Wiklund (2011); Wilson and Eilertsen (2010) in their study regarding contingent dynamic capabilities, they observed that there is a need by organizations to pay greater attention to positioning themselves against contingencies rather than relying on the strategies already in place. Further studies by Helfat and Winter (2011); Barretto (2010); Helfat (2007) in their study of dynamic capabilities informed that dynamic capabilities are contingent and are critical internal and external drivers of performance. Studies by Zott, (2003); Eisenhardt and Martin, (2000); Helfat and Peteraf, (2003); Teece, (2007); Zahra, Sapienza & Davidsson (2006) regarding contingency factors inform that dynamic capabilities have the ability in the contingency context to utilize resources that have critical effects on organizational performance. They assert that dynamic capability is a key aspect of contingency factors that indirectly influences firm's performance.

Adner and Helfat (2003) observed that new capabilities can be created through the addition of new knowledge to the firm's knowledge stock. Hitt (2011) also points out that creation of capabilities by aligning the needs of a firm and the changing environment can provide knowledge that can be used by the manufacturing firms aimed at building dynamic capabilities for high performance in a turbulent operating environment. Dynamic capabilities are classified into absorptive capacities and desorptive capacities (Grant & Baden-Fuller, 2004; Lichtenthaler & Lichtenthaler, 2009). They are both related to knowledge transfers between firms.

Absorptive capacity relates to exploring external knowledge while desorptive capacity relates to exploitation of external knowledge (Lichtenthaler & Lichtenthaler, 2009). According to Senge (1990) in the study of organizational learning as a component of contingent dynamic capability, a firm needs to master five disciplines namely personal mastery, mental models, shared vision, team learning, and system thinking all meant to position the employees towards the achievement of the goals of a firm.

The manufacturing sector is the third biggest industrial sector after agriculture and transport and communication (KPMG, 2014). It is the third leading sector contributing to GDP in Kenya. Although Kenya is the most industrially developed country in East Africa, the manufacturing sector constitutes merely 10 per cent of the industrial sector contribution to GDP (RoK, 2014). The growth in manufacturing industry has declined to 3.3 per cent in 2011

as compared to 4.4 per cent in the year 2010 mainly due to a challenging operating environment (KNBS, 2012). Furthermore, the manufacturing sector has high yet untapped potential to contribute to employment and GDP growth. As an important sector in the overall economic growth, manufacturing sector requires an in depth analysis at industry as well as firm level. According to a report by KPMG (2014), Kenya's manufacturing sector's share in output has continued to decline in recent years. This has exposed a gap in the country's ability to achieve a fully industrialized economy by 2030. The report argues that there is still a lot of room for expansion in Kenya's manufacturing sector but for this to happen, reforms to the operating environment need to be made to factor in the influence of contingencies in the sector (KPMG, 2014).

Statistics from World Bank show that Kenyan manufacturers have registered stagnation and declining profits for the last five years due to unpredictable operating environment (WB, 2014). Further statistics from Kenya Association of Manufacturers have shown that certain firms announced plans to shut down their plants and shift operations to Egypt as a result of reduced profits (KAM, 2014). It is for this reason that the study sought to determine the influence of dynamic capabilities on performance of large manufacturing firms in Kenya.

## 1.2 Problem statement

Kenya has been experiencing turbulent times with regard to its organizational practices and this has resulted in declining profits in the manufacturing sector of the economy (Mutindi, Namusonge & Obwogi, 2013). Statistics from World Bank show that large scale manufacturers operating in Kenya registered stagnation and declining profits for the last five years due to a turbulent operating environment (WB, 2014). It is estimated that large manufacturing firms have lost 70 per cent of their market share in East Africa largely attributed to contingencies (RoK, 2014a). Further statistics from Kenya Association of Manufacturers have shown that some firms announced plans to shut down their plants and shift operations to Egypt due to negative influences of contingencies (KAM, 2014). In 2014, manufacturing sector in Kenya contributed barely 10% to the GDP which represented 3.4 per cent growth to Sh.537.3 Billion indicating a decline from the previous year 2013 where it had reported a 5.6 per cent growth mainly due to a challenging operating environment and high operational costs (KNBS, 2014).

Many large Manufacturing firms have relocated or restructured their operations opting to serve the local market through importing from low-cost manufacturing areas such as Egypt therefore resulting in job losses (Nyabiage & Kapchanga, 2014) citing turbulent operating environment and high operating costs. This is an indication that many manufacturing firms in Kenya are experiencing performance challenges with many reporting profit warnings due to challenges in the operating environment (RoK, 2014). Previous studies have shown that strategic contingency factors are critical drivers to performance of organizations (Brewster & Mayrhofer, 2012). Organizations seek to fit their organizational factors to contingencies in order to achieve high performance and to avoid any losses resulting from the misfit when contingencies change (Donaldson, 2006). In addition, previous empirical findings show that strategic contingency factors measures have lacked precision and consistency by providing no clear direction on the influence of contingency factors on firm's performance (Walters & Bhuian, 2004; Lee & Runge 2001).

It is therefore inadequate to merely analyse firm's performance by financial performance especially under today's changing operating environment (Qi, 2010) using a different methodology from the previous studies. The manufacturing sector in Kenya has a huge

untapped potential contribution to employment and GDP if the challenges facing this sector are properly addressed (Wagana & Kabare, 2015). The study would eventually help in determining what is needed to stop manufacturing firms from failing, stagnating in performance or relocating from Kenya resulting to job losses and therefore continue in operation to the foreseeable future. The study therefore, seeks to understand the influence of dynamic capabilities on performance of large manufacturing firms in Kenya.

### 1.3 Research Objective

To determine the influence of dynamic capabilities on performance of large manufacturing firms in Kenya.

### 1.4 Study Hypotheses

**H<sub>01</sub>:** Dynamic capabilities do not influence performance of large manufacturing firms in Kenya.

## 2.0 LITERATURE REVIEW

### 2.1 Theoretical review

#### 2.1.1 Dynamic Capabilities Theory

Teece *et al.* (1997) define dynamic capabilities as „the ability to integrate, build and reconfigure internal and external competencies to address rapidly-changing environments“. The concept of dynamic capabilities arose from a key shortcoming of the resource-based view of the firm. The RBV has been criticized for ignoring factors surrounding resources instead assuming that they simply “exist”. Considerations such as how resources are developed, how they are integrated within the firm and how they are released have been under-explored in the literature. Dynamic capabilities approach attempt to bridge these gaps by adopting a process approach by acting as a buffer between firm resources and the changing business environment. Dynamic resources help a firm adjust its resource mix and thereby maintain the sustainability of the firm’s competitive advantage which otherwise might be quickly eroded.

While the RBV emphasizes resource choice or the selecting of appropriate resources, dynamic capabilities emphasize resource development and renewal. According to Wade and Hulland (2004), resources may take on many of the attributes of dynamic capabilities, and thus may be particularly useful to firms operating in rapidly changing environments.

However, reviewing key articles in this academic field, Zahra *et al.* (2006), Salvato (2003) as well as Schreyögg and Kliesch-Eberl (2007) uncover inconsistencies, overlapping definitions and contradictions in the differentiation of dynamic capabilities from other capabilities. Zahra and George (2002) regard dynamic capabilities neither as a firm’s abilities nor as processes but as capabilities to match customer demands and competitor strategies.

A central concern of a firm's overall strategy and management is to maintain a dynamic fit between what the firm has to offer and what the environment dictates (Miles & Snow, 1978). Achieving this fit again requires that the firm is able to change its processes. As such, a firm has to possess a dynamic capability which besides increasing firm’s opportunities to survive, often provide organizations with the potential for growth (Helfat *et al.*, 2007). The roots of dynamic capabilities are based in evolutionary economics (Nelson & Winter, 1982) and briefly the essence of dynamic capabilities approach is that competitive success arises from

the continuous development, alignment and reconfiguration of firm-specific assets (Teece *et al.*, 1997; Augier & Teece, 2006).

In other words, dynamic capabilities impact the resource base of the firm which in turn is the source of the firm's competitive advantage (Ambrosini & Bowman, 2009). However, dynamic capabilities are typically the outcome of experience and learning within the organizations. This theory instigates the hypothesis.

## **2.3 Empirical Review**

### **2.3.1 Dynamic Capabilities**

Jekel (2009) in a study on the quality aspect of dynamic capabilities based on successful practices of 61 German manufacturing firms in China understood dynamic capabilities as organizational processes which modify a firm's resource configuration to address environmental opportunities or threats. The study resulted in a comprehensive, generalized model summarizing the quality aspects of dynamic capabilities with the highest influence on firm performance. The study recommended that identification of those dynamic capabilities with highest impact on firm performance is an additional contribution to academia (Jekel, 2009).

Shelton (2001) conducted a study to analyze the impact of employee development programs and training on job satisfaction and performance with regard to business success. The study found out that training and development increases employee satisfaction and interest to remain in the organization. The results found out that there is significant positive relationship between training perception and effective commitment and significant negative relationship between effective commitments with employee turnover. It means that availability of training and development programs shows care from the organizations for their employees and this makes them to perform better thus improving the overall performance of the organization.

A survey on the effects of employee training and development (2005) by the Society for Human Resource Management and Catalyst revealed that employee training programs are of strategic importance to both organizations and employees. It further noted that organizations that offer employees opportunities to evolve increases the likelihood of retaining them and in turn, create a cadre of workers equipped to grow within the organizational structure.

This is echoed by (Lachnit, 2001) who argued that many firms train workers because they believe it strengthens the firm's performance and also serves as a retention tool. For instance, a study by Fagerberg *et al.*, (2004) revealed that innovative countries had higher productivity and income than the less-innovative ones. OECD reports pointed out that firms that developed innovations in a more decisive way and rapidly had also more qualified workers, paid higher salaries and provided more conclusive future plans for their employees. The effects of innovations on firm performance differ in a wide spectrum from sales, market share and profitability to productivity and efficiency (OECD Oslo Manual, 2005).

McAdam and Keogh (2004) investigated the relationship between firm's performance and its familiarity with innovation and research. They found out that firm's inclination to innovations was of vital importance in the competitive environment in order to obtain higher competitive advantage. Geroski (1995) examined the effects of the major innovations and patents to various corporate performance measures such as accounting profitability, stock market rates of return and corporate growth. The observed direct effects of innovations on firm performance are relatively small and the benefits from innovations are more likely

indirect. However, innovative firms seem to be less susceptible to cyclical sectorial and environmental pressures than non- innovative firms.

### 3.0 METHODOLOGY

The research philosophy for this study was positivism. The study adopted both cross-sectional research design and descriptive survey design. The 499 large scale manufacturing firms represented the total population for this study. A sample size of 217 manufacturing firms was used during the study. This study utilized a questionnaire to collect primary data. A pilot study was conducted among 22 manufacturing firms which constituted 10 per cent of the sample size. Data was analysed using SPSS software which generated both descriptive and inferential statistics.

### 4.0 RESULTS FINDINGS

#### 4.1 Response Rate

The results for response rate are as indicated in Table 1. The number of questionnaires that were administered was 217. A total of 157 questionnaires were filled and returned. This represented an overall successful response rate of 72.4%. They fit with the argument of Kothari (2004) that a response rate of 50% or more is adequate for a descriptive study.

**Table 1: Response Rate**

<b>Response</b>	<b>Frequency</b>	<b>Percent</b>
Returned	157	72.4%
Unreturned	79	27.6%
<b>Total</b>	<b>217</b>	<b>100%</b>

#### 4.2 Results of Pilot Test

The study conducted a pilot test to test for the instrument reliability. The participants in the pilot test were not included in the final study. The reliability of an instrument refers to its ability to produce consistent and stable measurements. Cronbach Alpha value is widely used to verify the reliability of the construct. The results are presented in Table.2. The findings in Table 2 indicate that dynamic characteristics had Cronbach's alpha of 0.796 which was above the set alpha coefficients cut off point of 0.7.

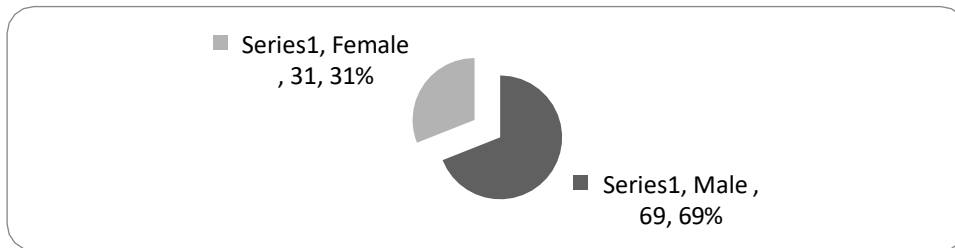
**Table 2 Alpha coefficient**

<b>Variable</b>	<b>Cronbach's Alpha</b>	<b>Comment</b>
Dynamic Capabilities	0.796	Accepted

### 4.3 Demographic Characteristics

#### 4.3.1 Gender Composition of Respondents

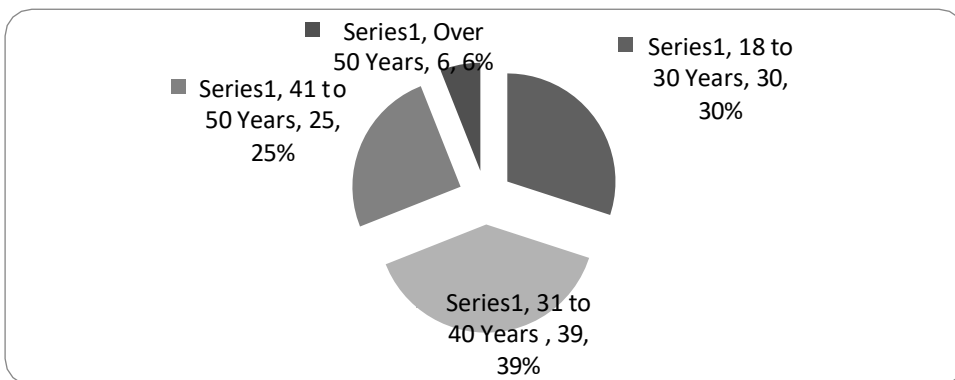
The respondents were asked to indicate their gender. Results in Figure 2 reveal that a majority of the respondents were male as supported by 69% while 31% were female. The manufacturing firms that are registered members of KAM are male dominated. In addition, the gender distribution was below the Constitutional of Kenya (2010) threshold of a third, however this did not affect the results of the study as women were under-represented in the management of manufacturing firms.



**Figure 2: Gender Composition of Respondents**

### 4.3.2 Age of Respondents

The respondents were also asked to indicate their age. The results are presented in Figure 3 reveal that 6% of the respondents were over 50 years, 30% were between 18 and 30 years while those who were between 40 to 50 years were 25%. Majority of the respondents, 39%, were between 30 to 40 years. This implies that majority of the workers at manufacturing firms that are registered members of KAM are between 30 to 40 years of age.

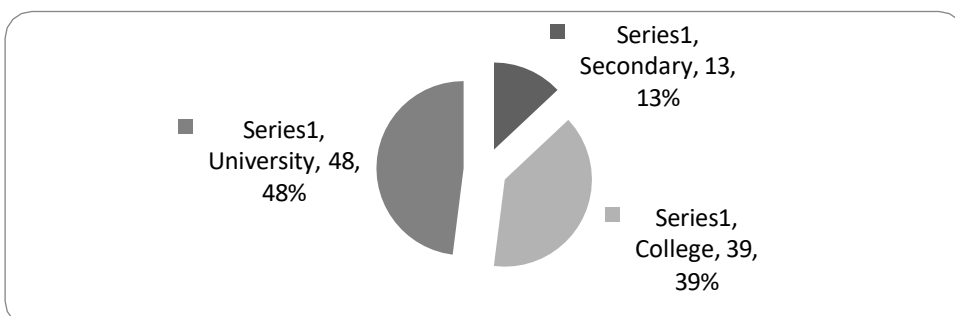


**Figure 3: Age of Respondents**

### 4.3.3 Level of Education

The respondents were asked to indicate their level of education. Results in Figure 4 reveal that 13% of the respondents had education up to the secondary school level, 39 % indicated that they had attained education up to tertiary level while 48% of the respondents indicated that they had attained education up to University level.

This implies that workers at manufacturing firms that are registered members of KAM are educated. It also implies that majority of the respondents (48%) had university qualification, and a few others had both tertiary and secondary education levels. This means that majority of the workers at manufacturing firms that are registered members of KAM are knowledgeable and could easily understand the contents of the questionnaire and the concept of contingency factors.

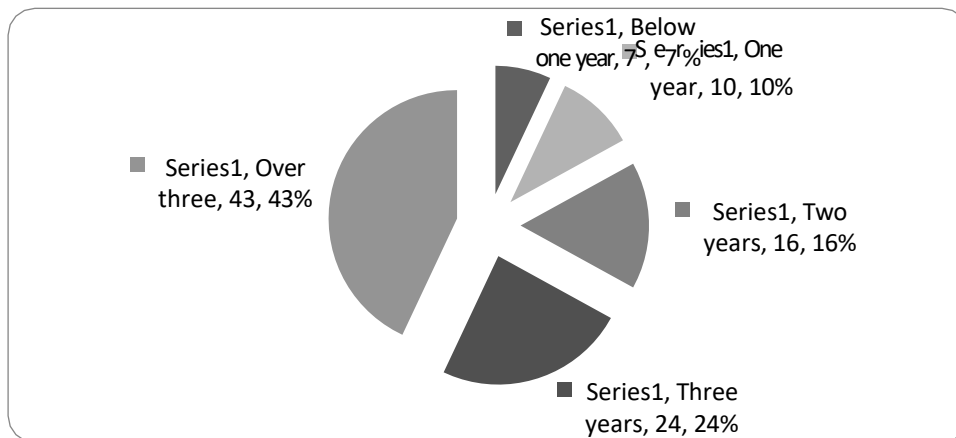




**Figure 4: Level of Education**

**4.3.4 Years of experience in the industry**

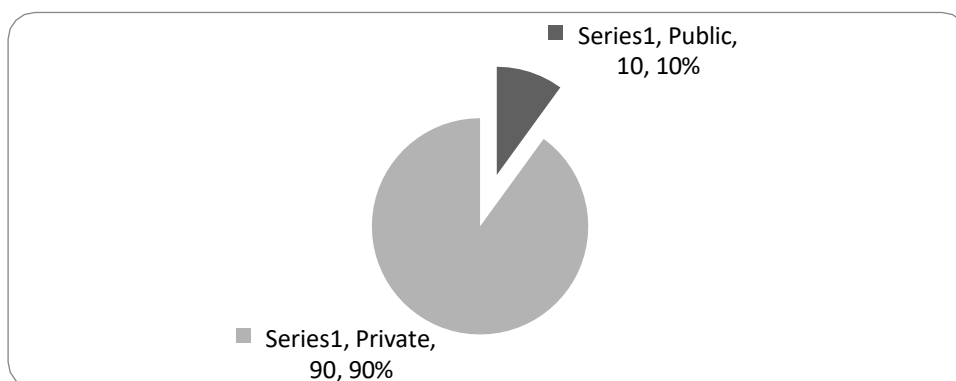
The respondents were asked to indicate their years of experience in the field. Results in Figure 5 reveal that 33% of the respondents had worked in the field for a period less than 2 years, 24% had worked in the field for a period of three years and those who had worked in the field for over three years were 43%. This implies that the rate of turnover in the sector is low.



**Figure 5: Years of Eexperience**

**4.3.5 Type of Organization**

The study sought to establish the type of manufacturing firms registered by KAM. The results presented in Figure 6 reveal that majority of the manufacturing firms that are registered members of KAM (90%) are private while 10% are public. These findings are consistent with those of Kenya association of manufacturers (KAM, 2014) which indicates that KAM is a private sector body.

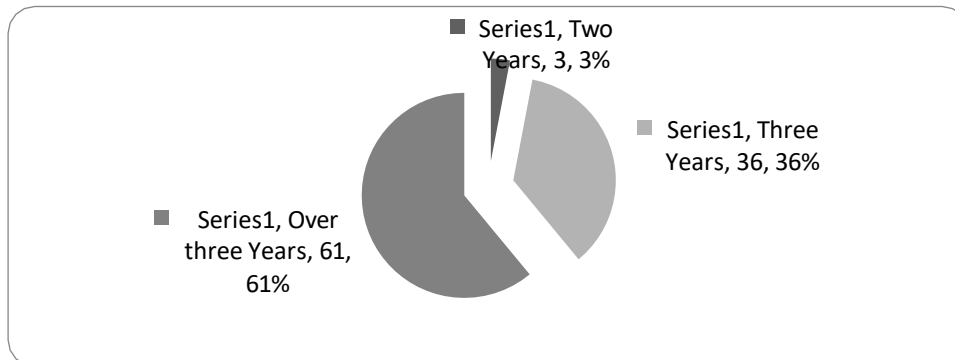


**Figure 6: Type of Organization**

**4.4.6 Age of Organization**

The respondents were asked to indicate the age of their organization. The findings show that majority of the organizations (61%) were over three years while 36% were three years old.

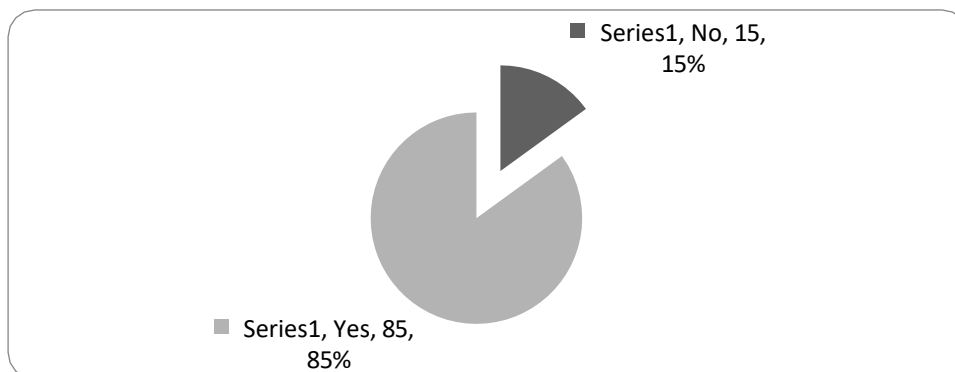
This implies that most of the manufacturing firms that are registered members of KAM are old enough given that they are over 3 years old.



**Figure 7: Age of Organization**

#### 4.4 Dynamic Capabilities

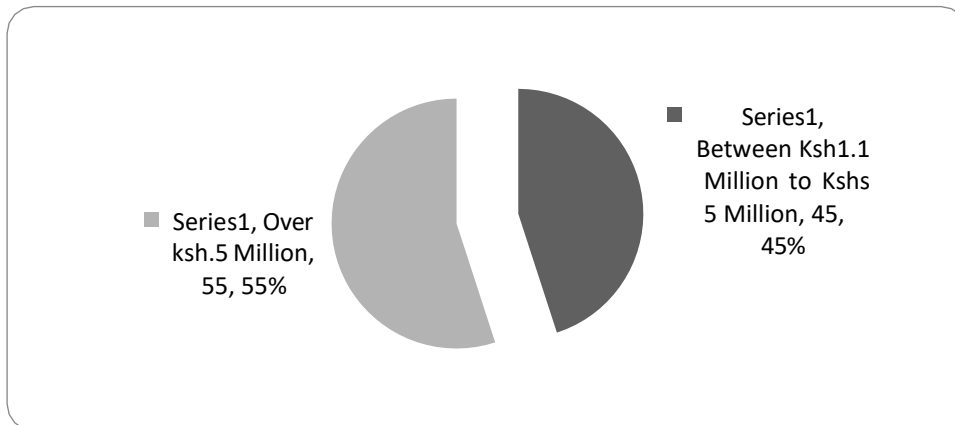
The study sought to establish the influence of dynamic capabilities on performance of large manufacturing firms in Kenya. The measures of dynamic capabilities were sensing capability (Research and development), learning capability (training), networking capability and innovation capability. The respondents were asked whether their company had posited dynamic capabilities to adjust to uncertain environment. The study findings indicated in Figure 8 reveal that majority, 85%, of the respondents agreed that their firm had posited dynamic capabilities to adjust to that kind of environment. Furthermore, 15% of the respondents indicated that their firm had not posited dynamic capabilities to adjust to that kind of environment.



**Figure 8: Dynamic Capabilities**

##### 4.4.1 Sensing Capability (Research and Development)

The respondents who indicated that their firms posited dynamic capabilities to adjust to uncertain environment were further asked to indicate the amount their company spent on research and development in 2014.

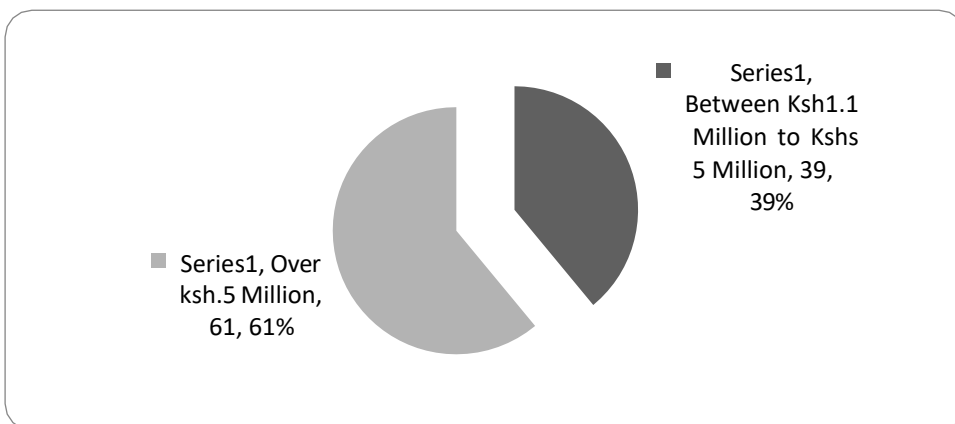


**Figure 9: Sensing Capability (Research and Development)**

The results indicated that majority, 55%, of the respondents stated that their firms spent between Ksh. 1.1 million to Ksh. 5 million on research and development while 45% indicated that their company spent over Ksh. 5million on research and development. These study findings imply that in uncertain environment, large manufacturing firms in Kenya spend on research and development to adjust to such environment.

#### 4.4.2 Learning Capability (Training)

The respondents who indicated that their firms posited dynamic capabilities to adjust to uncertain environment were also asked to indicate the amount the firm spent on training.

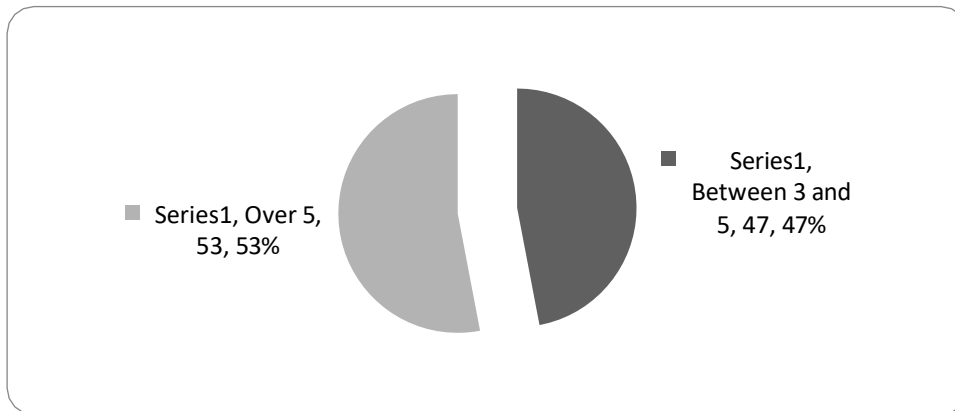


**Figure 10: Learning Capability (Training)**

The results indicate that majority of the respondents, 61%, agreed that their company spent over Ksh. 5 million on training. The study findings further indicate that 39% stated that their firm spent between Ksh. 1.1 million to Ksh. 5million on training. These study findings imply that in uncertain environment, large manufacturing firms in Kenya spend on training to adjust to such environment.

#### 4.4.3 Networking Capability

Furthermore, the respondents who indicated that their firms posited dynamic capabilities to adjust to uncertain environment were again asked to state how many networking memberships their company had subscribed to. The results are presented in Figure 11.

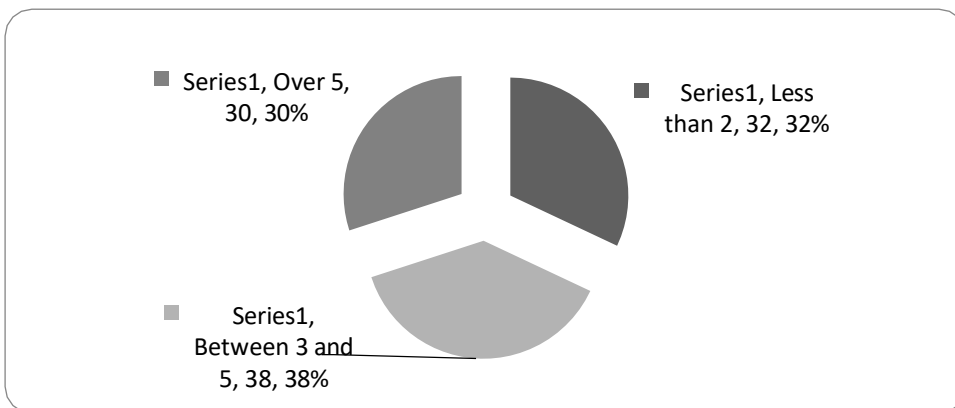


**Figure 11: Networking Capabilities**

The study results indicate that 53% of the respondents indicated that the firm had a subscription to over 5 networking memberships while 47% indicated that the firm had subscribed to between 3-5 such memberships.

#### 4.4.4 Innovation Capability

The respondents who indicated that their firms posited dynamic capabilities to adjust to uncertain environment were also asked to indicate how many new products their company had introduced into the market in 2014. The findings indicated that 32% of the respondents indicated that their firm had introduced less than 2 products, 38% indicated between 3-5 products while 30% stated that over 5 products were introduced in the market by their firms.



**Figure 12: Innovation Capability**

The study also sought to establish whether having dynamic capabilities improved performance of the firms. The results are as presented in Table3.

**Table 3 Dynamic Capabilities and performance**

	Indicator	Percent
Dynamic Capabilities and Performance	Improved performance by 0-5%	32.6
	Improved performance by 6-10%	39.3
	improved performance by more than 10%	28.1
Lack of Dynamic Capabilities and	Decreased Performance by 0-5%	0.0

Performance

Decreased performance by 6-10%	45.8
Decreased performance by more than 10%	54.2

The study sought to establish the relationship between dynamic capability and Return on Equity. Table 3 presents the results. The results in Table 4 indicate that 32.6% of the respondents indicated that having dynamic capabilities improved performance by 0-5%, 39.3% indicated that it improved performance by 6-10% while 28.1% believed that it improved performance by more than 10%.

A majority, 54.2% of those respondents whose company did not have dynamic capabilities stated that it decreased performance by more than 10%. Dynamic capabilities have an influence on performance.

#### 4.4.5 Relationship between Dynamic Capabilities and Return on Equity

Results in Table 4 reveal that research and development is positively and significantly related to ROE. The odds of observing a high ROE is 4.34 times higher for firms which spent over Ksh. 5million on research and development in 2014 compared to those which spent between Ksh 1.1 million to 5 million. This implies that spending over Ksh. 5million on research and development results to a high ROE. The results also reveal that training had a positive and significant relationship with ROE. The odds of observing a high ROE was 2.79 times higher for firms which spent over Ksh. 5million on training compared to those which spent between Ksh 1.1 million to 5 million. This implies that spending over Ksh. 5million on training results to a high ROE.

In addition, the results also show that innovation capability and ROE were positively and significantly related. The odds of observing a high ROE was 3.911 times higher for firms which had introduced over 5 new products into the market compared to those who had introduced between 3-5 products. The results also show that the odds of observing a high ROE was 4.34 times higher for those firms which had introduced over 5 new products compared to those which had introduced between 3-5 products. This implies that introducing 3-5 and over 5 new products in to the market results to high ROE. The findings of the study confirm the argument by Daniel and Wilson (2003) who stated that firms which possess dynamic capabilities of high quality outperform their competitors with dynamic capabilities of low quality in terms of performance.

**Table 4 Ratio Regression for Return on Equity**

	B	S.E.	Wald	df	Sig.	Exp(B)
Research and development	1.468	0.514	8.147	1	0.004	4.34
Training Capability	1.026	0.484	4.49	1	0.034	2.79
Networking membership	-0.101	0.502	0.04	1	0.841	0.904
Innovation Capability	1.364	0.559	5.956	1	0.015	3.911
Constant	-0.429	0.556	0.595	1	0.441	0.651

#### 4.4.6 Relationship between Dynamic Capabilities and Profit Before Tax

The relationship between dynamic capability and profit before tax was also established. Table 5 show the results of the odd ratio regression with regard to Profit before tax.

**Table 5 Odd Ratio Regression for Profit Before Tax**

	<b>B</b>	<b>S.E.</b>	<b>Wald</b>	<b>df</b>	<b>Sig.</b>	<b>Exp(B)</b>
Research development	1.177	0.562	4.390	1	0.036	3.244
Training Capability	0.565	0.521	1.176	1	0.278	1.76
Networking Capability	-0.167	0.552	0.091	1	0.763	0.846
Innovation Capability	0.716	0.598	1.436	1	0.231	2.047
Constant	0.75	0.597	1.574	1	0.21	2.116

The results reveal that research and development is positively and significantly related to PBT. The odds of observing a high ROA was 3.244 times higher for firms which spent more on research and development compared to those which spent less. Training capability, networking capability and innovation capability were found to be insignificantly related to profit before tax.

#### 4.4.5 Relationship between Dynamic Capabilities and Return on Assets

The study lastly established the relationship between dynamic capability and Return on Assets. Results in Table 6 show the odd ratio regression with regard to Return on Assets.

**Table 6 Odd Ratio Regression for Return On Assets**

	<b>B</b>	<b>S.E.</b>	<b>Wald</b>	<b>df</b>	<b>Sig.</b>	<b>Exp(B)</b>
Research development	1.382	0.463	8.926	1	0.003	3.982
Training Capability	1.185	0.447	7.019	1	0.008	3.271
Networking membership	0.582	0.455	1.636	1	0.201	1.79
Innovation Capability	0.936	0.496	3.57	1	0.059	2.551
Constant	-1.18	0.533	4.909	1	0.027	0.307

The results reveal that research and development was positively and significantly related to ROA. The odds of observing a high ROA was 3.982 times higher for firms which spent over Ksh. 5 million on research and development compared to those which spent between Ksh. 1.1 million and 5million. This implies that spending over Ksh. 5 million on research and development results to high ROA.

The results also show that training capability and ROA were positively and significantly related. The odds of observing a high ROE was 3.271 times higher for firms which spent over Ksh. 5million on training compared to those which spent between Ksh 1.1 million to 5 million. This implies that spending over Ksh. 5million on training results to a high ROA. The results further reveal that innovation capability and ROA had a positive and significant relationship.

#### 4.4.6 Hypothesis Testing

The hypothesis was tested by running an ordinary least square regression model. The acceptance/rejection criteria was that, if the p value is greater than 0.05, the Ho is not rejected but if it's less than 0.05, the Ho failed to be accepted.

The null hypothesis for the third objective was: Dynamic Capabilities have no a significant influence on performance of large manufacturing firms in Kenya. The alternative hypothesis for the third objective was: Dynamic Capabilities have a significant influence on performance large manufacturing firms in Kenya. The summary results of the regression model are presented in Table 7. The results reveal that dynamic capabilities explain 14.7% of the changes in the performance of large manufacturing firms in Kenya.

**Table 7 Dynamic Capabilities Model Summary**

<b>Model Summary</b>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.383a	0.147	0.14	0.32914

a Predictors: (Constant), Dynamic Capabilities

The study also established the model fitness by comparing the F- calculated and F-critical values. The results for F-calculated are in Table 8. The F-Critical,  $F_{0.05, 1, 155}$  was 3.84. Since F calculated, 22.869, was greater than F-Critical,  $F_{0.05, 1, 155}$ , 3.84, the study concluded that the model fits well. This is further supported by a p-value of 0.00 which is significant at 5% level of significance implying that the model fit well.

**Table 8 Capabilities Model Fitness**

<b>ANOVA</b>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.477	1	2.477	22.869	.000b
	Residual	14.408	155	0.108		
	Total	16.886	156			

a Dependent Variable: Performance  
 b Predictors: (Constant), Dynamic Capabilities

The regression coefficients are as presented in Table 9. The relationship between dynamic capabilities and performance as indicated in Table 9 was significant at 5% level of significance. The p-value was 0.000 which indicated that the null hypothesis failed to be accepted at 5% level of significance hence Dynamic Capabilities have a significant influence on performance of large manufacturing firms in Kenya.

The findings are consistent with an argument by Zahra *et al.* (2006) that dynamic capabilities have an influence on performance. Its impact on a firm's performance is a matter of the configuration of the dynamic capabilities it utilizes. The findings also agree with Daniel and Wilson (2003) who stated that firms which possess dynamic capabilities of high quality

outperform their competitors with dynamic capabilities of low quality in terms of performance.

**Table 9 Dynamic capabilities Model Coefficients**

		<b>B</b>	<b>Std. Error</b>	<b>t</b>	<b>Sig.</b>
1	(Constant)	-0.259	0.222	-1.166	0.246
	Dynamic Capabilities	0.44	0.092	4.782	0.000

a Dependent Variable: Performance

Optimal model;

$$\text{Performance of Large Manufacturing firms} = -0.259 + 0.44 \text{ Dynamic capability}$$

## 5.0 SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Summary of Findings

The objective of the study was to determine the influence of dynamic capabilities on performance of large manufacturing firms in Kenya. The findings of the study revealed that majority of the firms had posited dynamic capabilities to adjust to uncertain environment, spend more on sensing capability (Research and development), spend more on learning capability (training), majority had a strong networking capability because of subscription to over 5 networking memberships and majority had a strong innovation capability. The findings further revealed that having the dynamic capabilities to adjust to uncertain environment, spending on sensing capability (Research and development), spending on learning capability (training), having a strong networking capability and also a strong innovation capability improves performance.

The findings of the study further revealed that research and development is positively and significantly related to ROE. The odds of observing a high ROE was higher for firms which spent over Ksh. 5million on research and development in 2014 compared to those which spent between Ksh 1.1 million to 5 million. This implies that spending over Ksh. 5million on research and development results to a high ROE. The results also reveal that training had a positive and significant relationship with ROE. In addition, the results also show that innovation capability and ROE were positively and significantly related.

The odds of observing a high ROE was higher for firms who had introduced between 3-5 new products into the market compared to those who had introduced less than 2. The results also show that the odds of observing a high ROE was higher for those firms which had introduced over 5 new products compared to those which had introduced between 3-5 products. This implies that introducing 3-5 and over 5 new products in to the market results to high ROE.

On the relationship between dynamic capabilities and profit before tax, the findings of the study revealed that research and development is positively and significantly related to PBT. The odds of observing a high ROA was higher for firms which spent over Ksh. 5 million on research and development compared to those which spent between Ksh. 1.1 million and 5million. This implies that spending over Ksh. 5 million on research and development results to high PBT.

Further results indicated that research and development was positively and significantly related to ROA. The odds of observing a high ROA was higher for firms which spent over



Ksh. 5 million on research and development compared to those which spent between Ksh. 1.1 million and 5million. This implies that spending over Ksh. 5 million on research and development results to high ROA. The results also show that training capability and ROA were positively and significantly related. The odds of observing a high ROE was higher for firms which spent over Ksh. 5million on training compared to those which spent between Ksh 1.1 million to 5 million. The results further revealed that innovation capability and ROA had a positive and significant relationship. The odds of observing a high ROA was higher for those firms which had introduced over 5 new products compared to those which had introduced between 3-5 products. This implies that introducing over 5 new products in to the market results to high ROA.

The relationship between dynamic capabilities and performance was significant at 5% level of significance. The p-value was 0.000 which indicated that the null hypothesis failed to be accepted at 5% level of significance hence Dynamic Capabilities have a significant influence on performance of large manufacturing firms in Kenya.

## 5.2 Conclusion

The study also concluded that Dynamic Capabilities have a significant influence on performance of large manufacturing firms in Kenya. The sub-constructs of dynamic capabilities namely research and development, training, networking capability and innovation capability affect performance positively.

## 5.3 Recommendations of the Study

The study also recommended that large manufacturing firms should invest in research and development, training, networking capability and innovation since it affects performance positively. Dynamic capabilities being the ability to integrate, build, and reconfigure internal and external competencies to address rapidly-changing environments, can also take the form of various ways apart from the ones discussed in the current study and hence the future scholars can seek to explore other measures of this factor.

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