

## The Influence of Business Environmental Dynamism, Complexity and Munificence on Performance of Small and Medium Enterprises in Kenya

Dr. Washington O. Okeyo Ph.D<sup>1</sup>

---

### ARTICLE INFO

Available Online August 2014

#### Key words:

Business Environment;  
Dynamism;  
Complexity;  
Munificence;  
Small and Medium  
Enterprises;  
Financial and Non-Financial  
Performance.

### ABSTRACT

The main purpose of this article is to examine how business environment affects small and medium enterprises. The paper is motivated by the important contributions small and medium enterprises have in many countries, especially Kenya towards job creation, poverty reduction and economic development. Literature however argues that effectiveness of the contributions is conditioned by the state of business environmental factors such as politics, economy, socio-culture, technology, ecology and laws/regulations. Dynamism, complexity and munificence of these factors are therefore vital to achievement of organizational objectives and overall performance. Even so, a review of literature reveals contradictory views regarding the effect of these factors on performance of organizations. Furthermore, studies focusing on these factors in the Kenyan context, particularly with regard to their effect on performance of small and medium firms, are scarce. This article bridges this gap based on a study focusing on 800 manufacturing organizations in Nairobi – Kenya. A sample of 150 enterprises was selected through stratification by business sector followed by simple random sampling. The research design was cross sectional survey where data was collected using a structured questionnaire over a period of one month at the end of which 95 organizations responded giving a response rate of 64%. Reliability and validity of the instrument were determined through Cronbach's alpha tests and expert reviews. Statistical Package for Social Sciences was used to determine normality through descriptive statistics and study hypotheses tested using inferential statistics. The study established that business environment had an overall impact on organizational performance. Specifically, dynamism, complexity and munificence each had a direct influence on the enterprises in the study. Furthermore the combined effect on performance was found to be greater than that of dynamism and complexity but less than munificence. The study also established that there is a difference in the way business environment affects performance such that it impacts on financial performance more than on non-financial performance of these enterprises. These results imply that small and medium enterprises in the study are likely to perform better in business environments that are dynamic, complex and munificent.

---

## 1. Introduction

### 1.1 Background of the Study

The issue of whether environments in which organizations operate affect how they do business is still a subject of continuing debate. Academic literature demonstrates that there exist several empirical studies that have investigated the relationship between organizational performance and aspects of the environment but the results of these studies are somewhat mixed. Whereas some report a positive relationship (Huggins, 2000; Chittithaworn, Islam, Keawchana & Yusuf, 2010); a number (Shane & Spicer, 1983; Machuki & Aosa, 2011) found a negative correlation, yet others (Ullman, 1985) showed no correlation. This indicates that opinions on the effect of business environment on organizational performance are still diverse.

---

<sup>1</sup> Lecturer, Business Administration, University of Nairobi, Nairobi – Kenya, Email: washokeyo@gmail.com

Research suggests that business environmental changes may affect performance of small and medium enterprises (SMEs) more than their larger counterparts. According to Thurik and Caree (2010), large organizations possess economies of scale for accumulating the necessary capacity such as superior managerial and financial resources to leverage the impact of business environment on their performance (Stinchcombe, 1965; Li, 2001). SMEs, on the other hand, tend to possess relatively limited resources and hence are dependent to a large extent on the environment for information and resources (Pfeffer & Salancik, 1978; Eisenhardt & Schoonhoven, 1990) which may influence their performance. This is despite the important roles SMEs are said to play in many economies (Beck, Demirguc-Kunt & Levine, 2005).

SMEs have for a long time been regarded as engines of economic growth in many countries. For example Fatoki (2012) reports that in South Africa, the government dedicated the SME sector as a priority for creating jobs to reduce the rate of unemployment which stood at about 24% in 2012. The study further reports that SMEs also help reduce wealth inequalities in South Africa and contributed approximately 35% of the country's economic growth (Adeniran & Johnston, 2011). In Kenya, statistics from the 2004-2005 African Economic Outlook report show that in 2003, SMEs in the country employed some 2.3 million people and accounted for 18% of the national GDP. Similarly, the 2006 Government Economic Survey reported that the country recorded an increase in total employment from 8.3 million in 2005 to 8.7 million of which 89% came from informal and SME sector. A subsequent government economic survey in 2010 found that the informal sector constituted 81% of the total employment in the country (Government of Kenya, 2011). However, Atieno (2012) notes that the contribution of SMEs to the GDP in Kenya is relatively small due to a number of constraints in their operating environment. Some of these constraints include poor infrastructure, legal obstacles, insecurity, corruption and high cost of finance (Bowen, Morara & Mureithi, 2009). These constraints are a heavy burden to SMEs' ability to do business and contribute to economic growth. Furthermore, Yusuf & Dansu (2013:77) citing Suh (2010) reports that "SME sector is worst affected by the economic environment and is the first to be hit by any external shocks." This means that these enterprises are weak and least prepared in responding to changes in the business environment. This has a negative impact on their performance and exacerbates their ability to grow and make a meaningful contribution to their countries' economies.

### **1.2 Statement of the Problem**

Although many governments and small firm owners have invested significant efforts to realize economic development and growth through SMEs, most SMEs fail within a short period from start-up. Adeniran and Johnson (2011) observe that estimates indicate a high SME failure rate of between 70% and 80% in South Africa and doubts whether SMEs can be relied upon to achieve the much talked about objectives of job creation, poverty alleviation and economic development. Nyangori (2010:4) reports that 60% of SMEs are estimated to fail in Kenya every year. These high SME failure rates have been attributed to several factors, both internal and external to the enterprise. Research reports indicate that whereas some scholars (Rogerson, 2008; Fatoki, 2012) find non-availability of external finance as a major cause, others (Awang et al., 2010) added 'weaknesses in SME strategic framework' as another important failure factor. Rapid changes in today's competitive environment are also presented as another factor. Citing Bowen et al (2009), Fatoki (2012:121) stress that, "given this high failure rate, it is important to research into factors that affect SMEs' ability to survive and improve their performance."

Johnson and Scholes (2002) argue that all businesses, including SMEs, are regarded as open systems and as such are constrained by uncontrollable changes taking place in the environment around them. The changes are often sudden and severe hence dictate the industry direction, outstrip capacities of even the most resilient organizations and stretch the imagination of most managers (Meyer, Brooks & Goes, 1990; Machuki & Aosa, 2011). Business environment has been conceptualized differently in research. Whereas Thompson (1967) calls it task environment, Johnson and Scholes (2002) refers to it as macro-environment. According to these scholars, the business environment is characterized by several elements which exacerbate the severity of its effect on organizations. For example proponents of the task environment argue that it is made up of an organization's business and regulatory community (Davis & Powell, 1992) while macro-environment is argued to comprise political, economic, socio-cultural, technological, environmental or ecological, and legal factors (Johnson & Scholes, 2002). Other elements are organizations, individual's associations and many broad forces which combine into an organization's environment (Meyer et al., 1990) thus affecting its operations. As such, when these different aspects of the environment change, their impact on organizations may be catastrophic. Therefore, it is desirable to study changes in the business environment to understand their effect on organizations.

Literature however reveals that studies focusing on the effect of business environment, especially in the Kenyan context, have mainly been concerned with large firms. For example Aosa (1992) examined aspects of strategy formulation on Kenya based large manufacturing firms while Machuki and Aosa (2011) analyzed the effect of external business environment on publicly quoted firms in Kenya, which comprised large organizations. Furthermore, Awino's (2011) study focused on strategy formulation and implementation on large manufacturing firms. The findings of these studies were mixed. Machuki and Aosa (2011) found that only aspects of environmental conditions such as complexity and dynamism affected performance of the large firms. Similarly, Awino (2011) concluded that there is a combined effect of strategy formulation and implementation, which incorporates business environment issues, on corporate performance.

This demonstrates that relatively less attention has been focused on how business environment can affect SMEs. This view is supported by Sum, Jukow and Chen (2004) who report that empirical literature reveals little evidence towards investigation of business environment on SMEs, especially in the context of developing countries such as Kenya. Since the business environments surrounding large firms and SMEs are somewhat similar; and in view of findings in past studies which show significant effect of business environment on large firms, it is logical to assume that business environment may also affect performance of SMEs in Kenya. However, no known empirical study has established whether business environment affects SMEs in the country. Thus, this study investigated the effect of business environment on SMEs in Kenya as it sought to answer the research questions: Do the business environmental dimensions of dynamism, complexity and munificence individually or jointly have an effect on performance of SMEs in Kenya?

### **1.3 Objectives of the Study**

This study had five objectives which aimed to:

1. Determine whether environmental dynamism has an effect on performance of SMEs
2. Establish whether environmental complexity has a direct effect on performance of SMEs
3. Determine the relationship between environmental munificence and SME performance
4. Establish if the joint effect of environmental dynamism, complexity and munificence (business environment) on SME performance is greater than the effect of each individual variable
5. Establish whether the joint effect of environmental dynamism, complexity and munificence (business environment) affects non-financial measures of SME performance more than financial measures

## **2. Literature Review**

### **2.1 Business Environment and Organizational Performance**

The idea of performance management in organizations has become widely accepted and adopted throughout the world (Salem, 2003). As such, organizational performance has been a popular phenomenon in business research for several years now. Several studies in just about any area of management have treated organizational performance as the definitive dependent variable of concern (Wiklund & Shepherd, 2003; Walter, Auer & Ritter, 2006; Hughes & Morgan, 2007; Droge & Swinney, 2008). Organizational performance is about the work as well as results achieved. According to Salem (2003), performance is defined as the "outcomes about work because they provide the strongest linkage to the strategic goals of an organization, customer satisfaction and economic contributions" (p 2). It is therefore in the interest of organizations to determine, through performance measurement, how they are achieving their objectives.

Scholars (Lenz, 1980; Machuki & Aosa, 2011) however observe that measuring performance has been a controversial issue in organizations as well as management research. Chakravathy (1986) argues that given its multidimensionality, no single index can lead to an accurate understanding of the relationship between performance and the underlying constructs at interest thus it is necessary to examine multiple indicators. Studies focusing on organizational performance have used both financial and non-financial output indicators to measure the phenomenon. Machuki and Aosa (2011) argue that such a combination addresses concerns, raised in past studies such as Pearson and Robinson (2007), regarding inadequacy and in some cases inaccuracy reported when using financial indicators alone. This study adopted multiple indicator approach and used growth in profits, sales, return on assets (ROA) and revenue/profit ratio as financial indicators and customer satisfaction and employee satisfaction as non-financial measures.

Mitchel (2002) observes that organizations are driven by three main objectives comprising the “motivation to realize performance objectives, the influence and impact of external environment and capacity to realize the desired performance” (p 2). Motivation in this sense means how employees understand and integrate the company’s mission and link it to the culture, strategy and compensation. Organizational capacity on the other hand is its functional ability to deliver against its objectives while the influence and impact of the business environment consists of the opportunities and threats facing an organization.

Business environment broadly refers to the prevailing conditions in the vicinity of an object or business entity. Hornby (2005:490) has defined business environment as “the conditions in a place that affect the behaviour or development of somebody or something.” Early organization theorists viewed uncertainty, resource dependence, efficiency and ecology as the four main perspectives of business environment (Thompson, 1967; Pfeffer & Salancik, 1978; Williamson, 1979; Hamman & Freeman, 1981). Based on these perspectives, the impact of environment on organizational performance has been an issue of interest to many scholars (Bluedorn et al., 1994; Goll & Rasheed, 2004). When formulating the now famous resource dependence theory, Pfeffer and Salancik (1978) argued that the business environment acts as an important source of organizations’ resources like personnel, product and services, information, and funds. According to Bluedorn et al (1994), the fact that all enterprises depend on other organizations for their resources is an important source of uncertainty.

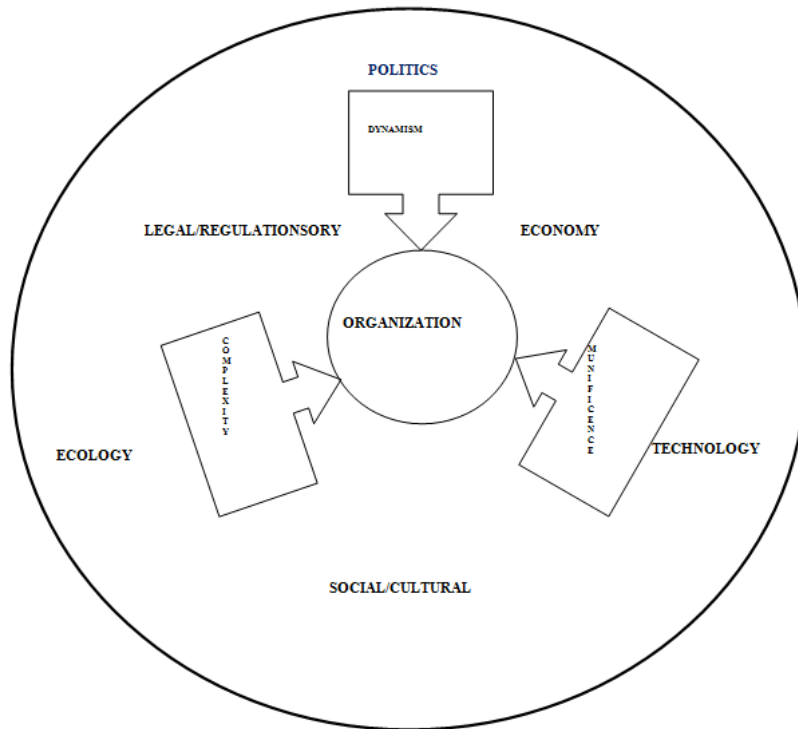
Business environment has been studied in different contexts in the past. For example Goll and Rasheed (2004) studied business environment as a moderating factor in the relationship between corporate social responsibility and organizational performance. Their central hypothesis was that, environmental munificence and dynamism exerted moderating influence on the relationship between discretionary social responsibility and firm performance. The study established that both dimensions of environment had moderating effect on the relationship. In another study, Kennerly and Neely (2003) examined measurement of performance in a changing business environment. Based on the study’s findings, they recommended that organizations should adopt measurement practices that take cognizance of dynamic and rapidly changing environments in which they operate. In addition, other scholars like Pasanen (2003) focused on factors affecting small and medium enterprises in Finland. The study established that environmental states like dynamism affected how the enterprises performed. In the contrary, Li (2001) examined the mediating role of environmental hostility on financial performance of ventures in China. She found that environmental hostility did not appear to have an intervening effect in the relationship.

## **2.2 Hypothesis Development**

Extant studies have used different approaches to determine the effect of environmental factors comprising political, economic, socio-cultural, technological, ecological and legal factors on organizations. For example, when studying contingency factors within the framework of contingency theory, Mintzberg (1979) identified stability, complexity, diversity and hostility as the main dimensions of the environment. On the other hand, Lawrence and Lorsch (1967) categorized the environment into market, scientific and technoeconomic sectors as the three sub-environments and suggested that a scale ranging from highly dynamic to extremely stable can be used to measure each of the sub-sectors (Matyusz, 2012). However, presenting the most widely used measure, Dess and Beard (1984) adopted Aldrich (1979) approach arguing that the six elements of a firm’s environment may be viewed in their three states of dynamism, complexity and munificence. Thereafter, scholars (Goll & Rasheed, 2004; Machuki & Aosa, 2011) used a similar approach in their studies. In this study, business environment was determined by the dynamism, complexity and munificence of its political, economic, socio-cultural, technological, ecological and legal factors as shown in the conceptual model in Figure 1 and hence formulation of the following five hypotheses:

- 1. There is no significant effect of environmental dynamism on performance of SMEs*
- 2. Environmental complexity has no significant positive effect on SME performance*
- 3. There is no significant relationship between environmental munificence and SME performance*
- 4. The joint effect of environmental dynamism, complexity and munificence on SME performance is not greater than the effect of each individual variable*
- 5. The combined effect of environmental dynamism, complexity and munificence (total business environment) on financial measures of SME performance is not greater than non-financial measure*

Figure 1: A Conceptual Model of the Effect of Environment on Organizations



Source: Author

### 3. Methods of the Study

This study adopted a positivist philosophical approach and used hypotheses to test the perceived relationships among the variables. The aim of the study was to observe a sample of SMEs at a specific point in time and thus cross sectional survey design was used in a similar manner to Olsen and George (2004) and Bhamani, Kaim and Khan (2013). The study targeted manufacturing SMEs operating in Nairobi – Kenya up to the year 2012. The study sample was computed according to Bertlett, Kotrlik and Higgins’ (2001) procedure followed by stratification based on subsectors and simple random technique to arrive at the final list of 150 SMEs. Managers and practitioners of the SMEs were the target respondents from whom data were collected through primary methods using structured questionnaires.

#### 3.1 Measuring the Study Variables

This study focused on the effect of business environment on performance of small and medium enterprises in Kenya. Business environment was operationalized along two main measures. First, through the composition of a firm’s environmental components, that is, factors and elements characterizing a firm’s surrounding; and second through the environmental state, which is also the nature and condition of the environment around the firm (Tung, 1979) in terms of dynamism, complexity and munificence. The state of each of the six elements of a firm’s surrounding was measured on a five point Likert type scale. Dynamism was measured by asking the respondents to rate the extent to which their respective organizations were able to predict political, economic, technological, socio-cultural, ecological and legal factors. The Likert type scale ranged from 1 – never to 5 – always. Complexity was also measured using a similar type of scale but instead the respondents were asked to state how frequently their respective organizations had to deal with the same six environmental factors. To determine munificence, the same type of scale was used except that the respondents were required to state the extent to which the developments in the six environmental factors had been favorable to their organizations. The final value for each environmental dimension was computed by aggregating responses to all the six respective elements. In each case, this value represented

the state of the business environment, that is, how dynamic, complex or munificent it was. A single index for their joint effect was also obtained by adding up the values of the three dimensions.

Concerning performance, the dependent variable, literature demonstrates a variety of measurement approaches. These consist of use of several combinations of indicators such as new products, product/service quality, profitability, sales revenue, market share, and return on assets (ROA), earnings per share (EPS), operating efficiency, and employee and customer satisfaction measures (Venkatraman & Ramujan, 1986; Bisbe & Oakley, 2004). Studies however posit that these broad measures may be split into two distinct components, that is, financial and non-financial measures. This study used growth in profits, sales, and ROA, and revenue/profit ratio as financial measures; and customer, and employee satisfaction as non-financial measures of performance. Each of these measures was determined by asking respondents to rate their firm performance on a five point Likert type scale ranging from 1 – up to 20% to 5 – 80% and above. The responses were then summarized first into financial and non-financial performance; and then totaled into one composite index representing overall organizational performance.

### 3.2 Data Analysis

Linear regressions approach, using Statistical Package for Social Sciences (SPSS) Version 17, was adopted as the main methods to analyze the collected data. However pilot and Cronbach's alpha tests were used to determine data validity and instrument reliability respectively prior to the study. The results for tests of reliability are presented in Table 1.

**Table 1: Summary of Cronbach's alpha test results**

Variable	Cronbach's Alpha	Cronbach's Alpha (Standardized)	Number of Items
Dynamism	0.759	0.771	6
Complexity	0.685	0.701	6
Munificence	0.688	0.692	6
Business Environment	0.839	0.840	18
Financial	0.912	0.913	4
Non-financial	0.888	0.897	2
SME performance	0.868	0.874	6

As Table 1 shows, alpha values for dynamism, complexity, business environment, and financial, non-financial and overall performance were all greater than 0.7 while the value for munificence lay on the borderline at 0.692. These values were considered satisfactory for the purposes of the study in line with Nunnally and Bernstein's (1994) recommended minimum alpha of 0.7. Heteroscedasticity tests for performance which were performed using the Q-Q plot of Z\*Pred and Z\*Presid returned straight line plot indicating absence of the problem.

## 4. Results of the Study

### 4.1 Analysis of the Respondents Characteristics

A total of 97 questionnaires were received at the end of a two month data collection period representing a response rate of 64%. After clean up, two incomplete questionnaires were dropped leaving a final total of 95 for data analysis. Demographic analysis shows that all the subsectors responded equitably according to the sampling stratification criteria used. Most (85%) participating organizations in these subsectors had just done their 20<sup>th</sup> year while the rest were beyond 30 years old. Lastly, it was confirmed that the participating firms were SMEs since they all employed less than 200 staff which by definition was the cut-off point.

#### 4.2 Descriptive Statistics

Means, standard deviations and standard errors for all the study variables were computed from SPSS. High mean values for each variable indicates that the respondent perceived the variable as important in the organization while low values imply the opposite. Similarly, large standard deviations indicate that opinions regarding perceived importance of the variables were diverse. Table 2 presents the descriptive statistics for all the variables.

**Table 2: Descriptive Statistics**

Variables	Mean	Standard Deviation
Dynamism	20.41	4.26
Complexity	20.53	3.44
Munificence	19.47	4.10
Combined business environment	61.19	8.42
Financial performance	19.57	3.72
Non-financial performance	6.54	2.21
Combined performance	16.09	5.09

As Table 2 shows, the means for individual variables ranged from 19.57 to 20.53 against a possible highest value of 30 in the case of independent variables. Likewise, dependent variables had means of 6.54 for non-financial measure and 19.57 for financial measure respectively. These mean values are higher than the respective median values in all the cases indicating that the respondents regarded the phenomena represented by the variables as important. The table further shows that the standard deviations and standard errors were all relatively low which means that there is consensus regarding the view of the respondents that the study variables are important in their organizations. In addition, skewness tests show that the data for all the variables had no serious symmetric biases thus satisfying normal distribution condition for linear regression analysis.

#### 4.3 Hypotheses Testing

In this study, multiple linear regression techniques were used to test all the hypothesis. In all there were five hypotheses which were tested at 90%, 95% and 99% confidence levels. All the hypotheses were mono-directional hence one-tail test was adopted to compute the statistical significance of all the stipulated relationships. The first three hypotheses were concerned with direct relationships with performance, the dependent variable. Hypothesis 1 which stipulated that, 'environmental dynamism has significant influence on performance', was modeled in the form:  $Performance = \alpha + \beta_1 * Dynamism + \epsilon$ ; while hypothesis 2 which predicted that, 'environmental complexity has a significant effect on organizational performance', was modeled as  $Performance = \alpha + \beta_2 * Complexity + \epsilon$ . Lastly, a model of the form:  $Performance = \alpha + \beta_3 * Munificence + \epsilon$  was used for hypothesis 3 which stated that, 'there is a significant effect of environmental munificence on organizational performance'. Table 3 contains results for tests of hypotheses 1, 2 and 3 respectively.

**Table 3: Extract of Regression Results for Independent Variables and Performance**

Statistical Tests	Model 1: Dynamism	Model 2: Complexity	Model 3: Munificence
Adjusted R <sup>2</sup>	0.032	0.031	0.098
$\beta$	0.206	0.204	0.328
t	2.021**	2.003**	3.332***
Significance	0.046	0.048	0.001
F	4.084	4.013	11.100
n	94	94	94

\*\*\*p≤0.01, \*\*p≤0.05

Dependent Variable = Performance

Regression results for model 1 in Table 3 show that dynamism had Adjusted R<sup>2</sup> of 0.032. This indicates that the model may explain 3.2% of the variance. Although analysis of variance (ANOVA) is relatively weak

( $F=4.084$ ), the regression coefficient is not zero ( $\beta=0.206$ ) and the variance is statistically significant ( $p\leq 0.05$ ). This demonstrates that environmental dynamism has a positive relationship with performance and therefore contributes to explanation of its variations. This indicates lack of support for hypothesis 1. The table also presents results for regression of complexity on performance in model 2. They indicate an  $R^2$  of 0.031 which suggests that the model may predict 3.1% of changes in performance. They also show a weak but statistically significant ANOVA ( $F=4.013$ ,  $p\leq 0.05$ ) and a positive regression coefficient ( $\beta=0.204$ ). This indicates that complexity has a moderate but positive effect in explaining performance. These results lead to rejection of hypothesis 2. Lastly, model 3 presents the regression results for the influence of munificence on organizational performance. They show an  $R^2$  of 0.098 which implies that the model may account for 9.8% of variations in performance. The model further shows a much stronger and highly statistically significant ANOVA ( $F=11.100$ ,  $p\leq 0.01$ ) and a much larger and positive beta coefficient ( $\beta=0.206$ ) which suggests a major positive contribution of munificence towards explanation of firm performance. This result is also supported by a rather strong and statistically significant t-value ( $t=3.332$ ). This indicates lack of support for hypothesis 3. Therefore, based on these results, the effect of munificence on performance is much stronger than that of dynamism and complexity respectively.

The fourth hypothesis argued that, the combined effect of business environmental factors is not greater than their individual effect on performance. The results are shown in Tables 4, 5 and 6.

**Table 4: Hierarchical Regression of Firm Performance on Dynamism and Combined Business Environment**

Variables (Coefficients)	Analyses					
	Individual			Combined Business Environment		
Independent	$\beta$	t	Significance	$\beta$	t	Significance
Dynamism	0.206**	2.032	0.045	-0.023	-0.177	0.860
Complexity				0.077	0.682	0.497
Munificence				0.308	2.346**	0.021
<b>Model</b>						
Adjusted R <sup>2</sup>		0.032			0.083	
R		0.206			0.335	
Significance		0.045			0.032	
F		4.128**			3.834***	
n		94			94	

\*\*\* $p\leq 0.01$ , \*\* $p\leq 0.05$

Dependent Variable = PERF

As shown in Table 4, the relationship between dynamism and performance was weak but positive ( $R=0.206$ ). This effect was however statistically significant ( $p\leq 0.05$ ). This indicates that environmental dynamism showed a positive and significant impact on organizational performance. The model results in the table further show that the combined impact of dynamism, complexity and munificence on performance is also positive, moderate and statistically significant ( $R=0.335$ ,  $p\leq 0.05$ ). Looking at individual variable contributions in the combined effect, munificence appears to be the only variable with a statistically significant contribution ( $R=0.236$ ,  $p\leq 0.05$ ). These results demonstrate that combined effect of all the predictor variables on performance is greater than that of dynamism which leads to rejection of hypothesis 1.



**Table 5: Hierarchical Regression of Firm Performance on Complexity and Combined Business Environment**

Variables (Coefficients)	Analyses					
	Individual			Combined Business Environment		
Independent	$\beta$	t	Significance	$\beta$	t	Significance
Dynamism				-0.023	-0.177	0.860
Complexity	0.204**	2.014	0.047	0.077	0.682	0.497
Munificence				0.308	2.346**	0.021
<b>Model</b>						
Adjusted R <sup>2</sup>		0.031			0.083	
R		0.204			0.335	
Significance		0.047			0.031	
F		4.056**			3.609***	
n		94			94	

\*\*\*p≤0.01, \*\*p≤0.05  
 Dependent Variable = PERF

The results for comparison of the combined effect of the independent variables on performance and complexity are shown in Table 5. They indicate that complexity had a weak but positive correlation with performance (R=0.204). This relationship is also statistically significant (p≤0.05). This means that environmental complexity had a significant influence on organizational performance. Previously, the results for the combined effect were presented which concurs with this table that the combined effect of dynamism, complexity and munificence on performance is positive and statistically significant (R=0.335, p≤0.05). Comparing the two scenarios, it is evident that the combined effect (R=0.335, p≤0.05) is greater than individual effect of complexity (R=0.204, p≤0.05). This shows lack of support for hypothesis four in the case of complexity.

**Table 6: Hierarchical Regression of Firm Performance on Munificence and Combined Business Environment**

Variables (Coefficients)	Analyses					
	Individual			Combined Business Environment		
Independent	$\beta$	t	Significance	$\beta$	t	Significance
Dynamism				-0.023	-0.177	0.860
Complexity				0.077	0.682	0.497
Munificence	0.328	3.350***	0.001	0.308	2.346**	0.021
<b>Model</b>						
Adjusted R <sup>2</sup>	0.098			0.083		
R	0.328			0.335		
Significance	0.047			0.793		
F	11.221**			3.834***		
n	94			94		

\*\*\*p≤0.01, \*\*p≤0.05  
 Dependent Variable = PERF

Lastly, Table 6 presents extracts of regression results for the combined effect on performance and munificence. As shown, munificence had a moderate, positive but highly statistically significant influence on

performance ( $R=0.328$ ,  $p\leq 0.01$ ). They also indicate, as presented earlier, that the combined effect of the independent variables on performance is positive ( $R=0.335$ ). However, the results for the combined effect are now not statistically significant ( $p>0.10$ ). Comparing the two cases, it is surprising that although the strengths of all the variables combined and that of munificence have remained the same respectively ( $R=0.335$ ,  $R=0.328$ ), their statistical significance have changed drastically such that the significance of munificence has strengthened from  $p\leq 0.05$  to  $p\leq 0.01$  while that of combined predictors has weakened from  $p\leq 0.05$  to  $p>0.10$  or not statistically significant. This demonstrates that the combined effect of the predictor variables is less than that of munificence. Thus there is support for hypothesis 4 in the case of munificence.

**Table 7: Extract of Regression Results of Performance Measures on Total Business Environment**

MODELS	TEST RESULTS				
Dependent Variables	R= $\beta$	Adj. R <sup>2</sup>	t	F	Significance
<b>Model 1:</b> Financial Performance	0.272	0.064	2.696***	7.271	0.008
<b>Model 2:</b> Non Financial Performance	0.271	0.019	1.669*	2.786	0.098

\*\*\* $p\leq 0.01$ , \* $p\leq 0.10$

As Table 7 model 1 shows, the effect of total business environment on financial performance was moderate but positive ( $R=0.272$ ). The results also show that the model is statistically significant ( $p\leq 0.01$ ) and may be used in explaining 6.4% of the variance ( $R^2=0.064$ ) which is relatively high ( $F=7.271$ ). This demonstrates that total business environment has a significant influence on financial performance. The results for effect on non-financial performance are also displayed in Table 7 model 2. They indicate that the correlation between total business environment and non-financial performance is also weak (0.271). The model may however be used to explain only 1.9% of the variance ( $R^2=0.019$ ). This variance is similarly low ( $F=2.786$ ,  $t=1.669$ ) and shows very weak statistical significance at 10% level ( $p=0.098$ ). This implies that although total business environment has a somewhat significant influence on non-financial performance, this influence is very weak. Therefore, the results suggest that the effect of total business environment on financial measures of performance is greater than on non-financial measures. This indicates lack of support for hypothesis 5.

## 5. Discussion

This study had a total of five objectives and hypotheses. The results show lack of support for hypothesis 1 which stated that, there is no significant effect of environmental dynamism on performance of SMEs. This confirms that performance of SMEs in the study depend on the dynamism of the business environment. The result is similar to findings in past studies like Priem, Rasheed and Kotulik (1995) who found that environmental dynamism has a moderating influence on firm performance. The result however differs with the findings of Machuki & Aosa (2011) who reported that environmental dynamism did not have any impact on organizational performance. This study concludes that dynamism of the six environmental conditions, that is; politics, economy, technology, socio-culture, ecology and legal/regulatory issues which were used in this study as measures of business environment have a significant impact on the performance of firms under focus SMEs. The results similarly failed to support hypothesis 2 which proposed that, complexity has no significant positive effect on SME performance. This indicates that complexity of the mentioned six environmental factors had a significant positive impact on the performance of SMEs studied. This finding concurs with Goll and Rasheed (2004) who established that complexity moderates between corporate social responsibility and performance thus having an influence on organizational performance. The results further agree with Claphan and Schwenk (1991) and Hopkins and Hopkins (1997) who contend that poor financial performance may be attributable to environmental complexity.

The results also fail to support hypothesis 3 which assumed that, there is no significant relationship between environmental munificence and SME performance. This result confirms that environmental munificence has a significant influence on performance of organizations in the study. This means that the higher the quantity of resources in the environment, the more likely it is that organizations could perform better. This result is similar to past findings for example Eisenhardt and Schoonhoven (1990) who found that simultaneous munificence and dynamism of environments may impact on organizational performance. Similarly, Tushman and Andersen (1986) argued that organizations operating in hostile or non-munificent

environments may be forced to pay more attention towards conserving the little resources available thus having an impact on their performance. Staw and Swajkowski (1975) had also found that it is more likely for firms in non-munificent environments to commit illegal acts which may be costly and impact negatively on their performance. Likewise, Hopkins and Hopkins (1997) citing Clapham and Schwenk (1991) observed that business executives usually attribute poor financial results to environmental complexity and other factors.

This study had also predicted in hypothesis 4 that the joint effect of business environment is not greater than the individual effect of each predictor variable. The results show lack of support for this view for dynamism and complexity but indicate support for munificence. This means that in the case of dynamism, the finding implies that interaction between the three predictor variables is better for performance than just dynamism alone. Given the results for individual effects discussed above, this seems normal to expect. This result is a pioneering revelation since in reviewed literature no extant study has investigated the effect of dynamism, complexity and munificence in a contingency configuration as in this study. The results similarly indicate no support for hypothesis 4 regarding complexity. This means that the combined effect of the three predictor variables is more than that of complexity alone. This result is also not surprising given this study's earlier findings and discussions regarding effect of complexity on performance.

Lastly, the results show support for hypothesis 4 concerning munificence. This suggests that the joint interaction among dynamism, complexity and munificence leads to less performance compared to munificence on its own. This result is surprising as it is illogical. A careful scrutiny of the beta coefficients of the three predictor variables however show that munificence makes the largest and most significant contribution in the joint model than any of the other variables. It may also be seen that dynamism makes a negative and not statistically significant contribution in the model. Thus it is suspected that when performance is being regressed against the combined model together with munificence in a hierarchical format, this has the effect of reducing the contribution of munificence. This weakens the model and makes its effect on performance less than that of munificence alone. This is a unique finding which goes against logic and therefore should be treated with caution.

Hypothesis 5, the final proposition in this study had indicated that, the effect of total business environment on financial performance is not greater than on non-financial performance. The results fail to support this hypothesis. The findings indicate that total business environment accounts for 6.4% of the changes in organizational financial performance ( $R^2=0.064$ ,  $p\leq 0.01$ ). These findings show proof for the role of total business environment in small and medium enterprises. In the contrary, the findings indicate that total business environment accounts for only 1.9% of variations in non-financial measures of performance ( $R^2=0.064$ ). This effect is however nearly statistically not significant ( $p=0.098$ ). This indicates proof for a weak role of total business environment on non-financial performance measures of the small and medium enterprises in the study which confirms that financial performance is affected more by business environment than non-financial performance.

## **6. Limitations of the Study and Areas for Further Research**

Business environment has been aggregated in this study as the sum total of the political, economic, socio-cultural, technological, ecological and legal factors. This assumes that each factor has the same level of effect on performance which may not always be the case. It may be more prudent to test how each of these factors individually relate to performance. This may be achieved through use of methods like principal component analysis. Likewise, although SMEs are found in many other sectors in Kenya's economy, this study's focus was on SMMEs in country. This means that the findings of this study are only valid in specific contexts. It is therefore recommended that future studies may consider analyzing the individual effect of the environmental factors and as well broaden the scope to other economic sectors.

## **7. Conclusion**

Study on SME performance is a worthwhile undertaking given the important role the enterprises play in most economies. Consistent with previous research, this study has positive findings regarding the effect of business environment on performance. Specifically, the results indicate that the state of each of the six

environmental factors is positively associated with performance. In addition, the elements collectively have an impact on performance although in varying combinations. This means that apart from planning for how to manage effects of individual factors, organizations should also develop measures to benefit from their interactive impact. Finally, the results indicate that the business environmental factors affect financial performance aspect of organizations more than their non-financial component. This finding is crucial and implies that management of the enterprises should put in place measures to adequately cater for their financial obligations to leverage the dynamism, complexity and munificence arising from these environmental factors. These results are consistent with empirical past studies that more dynamic, complex and munificent business environment can lead to superior performance of SMEs. More research however needs to be conducted regarding the combined effect of environmental factors on performance.

## References

- Adeniran T. V., and Johnston, K.A. (2011). Investigating the Levels of Internet Capabilities in South African Small and Medium Enterprises in Changing Environments. 13<sup>th</sup> Annual Conference on WWW Applications. Johannesburg 14-16 September 2011-ISBN 978-0-620-519182
- Aldrich, H. E. (1979). *Organizations and Environments*. Prentice-Hall, Englewood Cliffs, NJ.
- Aosa, E. (1992). *An Empirical Investigation of Aspects of Strategy Formulation and Implementation within Large Private Manufacturing Firms in Kenya*. (Unpublished Doctoral Dissertation) University of Strathclade, Scotland - Great Britain.
- Atieno, R. (2012). Gender, Institutions, Access to Finance and Development of Small and Medium Enterprises in Kenya. A Draft Paper submitted to the 2012 CSAE conference on economic development, Oxford, March 18-20.
- Awang, A., Ahmad, Z.A., Asghar, A.R.S., and Subari, K.A. (2010). Entrepreneurial orientation among Bumiputera Small and Medium Agro-Based Enterprises (BSMAEs) in West Malaysia: Policy implication in Malaysia. *International Journal of Business and Management*, 5(5): 13-143.
- Awino, B. Z. (2011). Strategic Management: An Empirical Investigation of Selected Strategy Variables on Firms Performance: A Study of Supply Chain Management in Large Private Manufacturing Firms In Kenya. *Prime Journals*. Vol. 1(1), pp. 09-18.
- Bartlett, J.E., Kotrlick, J.W., and Higgins, C.C. (2001). Organizational Research: Determining Appropriate Sample Size in Survey Research. *Information Technology, Learning, and Performance Journal*, Vol. 19(1)
- Beck, T., Demircuc-Kunt, A. and Levine, R. (2005). SMEs, Growth, and Poverty: Cross-Country Evidence. *Journal of Economic Growth*. 10, 199-229.
- Bisbe, J. and Oakley, D. (2004). The Effects of the Interactive use of Management Control Systems on Product Innovation. *Accounting, Organizations & Society Journal* 29, 709 -737.
- Bhamani, M. A., Kaim, M.S., and Khan, M. M. (2013). Depression in the Elderly in Karachi, Pakistan: A cross sectional study. *BMC Psychiatry*. Vol. 13 181.
- Bluedorn, A.C., Johnson, R.A., Cartwright, D.K., and Barringer, B.R. (1994). The Interface of Convergence of Strategic Management and Organizational Environment Domains. *Journal of Management*. Vol 20 (2) pp 201-262
- Bowen, M., Morara, M., & Mureithi, M. (2009). Management of business challenges among small and micro enterprises in Nairobi-Kenya. *KCA Journal of Business Management*, 2(1). Retrieved from <http://www.ajol.info/index.php/kjbm/article/viewFile/44408/27917> on 27<sup>th</sup> July 2014
- Clapham, S. and C. Schwenk. (1991). 'Self-serving attributions, managerial cognition, and Company performance', *Strategic Management Journal*, 12(3), pp. 219-229.

- Chakravarthy, B. S. (1986). "Measuring Strategic Performance". *Strategic Management Journal* 7(5): 437-458.
- Chittithaworn, C., Islam, A., Keawchana, T., and Yusuf, D.H. (2010). Factors affecting Business Success of Small and Medium Enterprises in Thailand. *Journal of Asian Social Science*, Vol. 7 (5) 180-190.
- Davis, G., F. and Powell, W.W. (1992). In Dunnette, M. D., and Hough, L.M (eds.), *Handbook of Industrial and Organizational Psychological* (2<sup>nd</sup> ed.) Vol. 3 Palo Alto CA: Consulting Psychologists Press.
- Eisenhardt, K. M., and Schoonhoven, C. B. (1996). Resource-based view of strategic alliance formation: strategic and social effects in entrepreneurial firms. *Organization Science*, 7(2), 136–150.
- Eisenhardt, K. M., and Schoonhoven, C. B. (1990). 'Organizational Growth: Linking Founding Team, Strategy, Environment, and Growth among U.S. Semiconductor Ventures, 1978-1988', *Administrative Science Quarterly* 35, 504–529.
- Fatoki, O. (2012). Entrepreneurial Orientation, Debt Finance and Performance of Small and Medium Enterprises in South Africa. *Journal of Social Science*. 32(2) 121-131.
- Dess, G. G., and D. W. Beard: 1984, 'Dimensions of Organizational Task Environments', *Administrative Science Quarterly* 29, 52–73.
- Goll, I., and Rasheed, A. A. (2004). The Moderating Effect of Business Environmental Munificence and Dynamism on the Relationship between Discretionary Social Responsibility and Firm Performance. *Journal of Business Ethics*. 49: 41-54.
- Goll, I., and A. Rasheed: 1997, 'Rational Decision- Making and Firm Performance: The Moderating Role of Environment', *Strategic Management Journal* 18 (7), 583–591.
- Government of Kenya (2011). Kenya Economic Survey 2011 Highlights. Kenya National Bureau of Statistics. Retrieved from <http://www.knbs.or.ke/> on September 2, 2012.
- Hannan, M. T. and Freeman, J. (1977). The Population Ecology of Organizations. *American Journal of Sociology*, 82(5): 929-964.
- Hopkins, E. E., and Hopkins, S.A (1997). Strategic Planning-Financial Performance Relationships in Banks: A Causal Examination. *Strategic Management Journal*, Vol. 18(8), 635-652.
- Hornby, A.S. (2005). *Oxford Advanced Learner's Dictionary of Current English. International Students*. 7<sup>th</sup> Edition. India: Oxford University Press.
- Huggins, R. (2000). The success and failure of policy-implemented inter-firm network initiatives: motivations, processes and structure. *Journal of Entrepreneurship and Regional Development*, 12(2), p.211-236.
- Johnson, G. and Scholes, K. (2002). *Exploring Corporate Strategy* – Sixth Edition. New Delhi: Prentice Hall of India Private Ltd.
- Kennerly, M. and Neely, A. (2003). Measuring Performance in a Changing Business Environment. *International Journal of Management and Production Management* Vol.23 (2) pp 213 -229.
- Kenya Association of Manufacturers (2012). *Kenya Manufacturers and Exporters Directory*. Nairobi: Kenya Association of Manufacturers.
- Lawrence, P., and Lorsch, J. (1967). *Organization and Business Environment*. Boston: MA.: Harvard Business Press.

- Lenz, T.R (1980). "Environment, Strategy, Organization Structure and Performance: Patterns in One Industry". *Strategic Management Journal*, 1(3): 209-226.
- Li, H. (2001). How does New Venture Strategy matter in the Environment –Performance Relationship? *Journal of High Technology Management Research* Vol. 12 (2001) 183-204.
- Machuki, V. N. (2011). External Business Environment Strategy Co Alignment, Firm Level Institutions and Performance of Publicly Quoted Companies in Kenya. (Unpublished Doctoral Dissertation) University of Nairobi, Kenya.
- Machuki, V.N. & Aosa, E. (2011). The Influence of the External Business Environment on the Performance of Publicly Quoted Companies in Kenya. *Prime Journals*, 7, pp 205-218.
- Matyusz, Z. (2012). The Effect of Contingency Factors on the use of Manufacturing Practices and Operations Performance. (Unpublished Doctoral Dissertation), Corvinus University of Budapest, Budapest.
- Mintzberg, H. (1979): *The structuring of organizations*. Prentice-Hall Inc., New Jersey, USA
- Nyangori, R. (2010). Factors Influencing Performance of Micro and Small Enterprises: A Case of Kisumu City Bus Park-Kenya. Retrieved from [www.academia.edu](http://www.academia.edu) on 27 June 2014.
- Nunnally, J.C. and Bernstein, I.H. 1994. *Psychometric Theory*, 3rd edition, McGraw-Hill, New York, New York.
- Olsen, C. and George, M. M. M. (2004). *Cross-Sectional Study Design and Data Analysis: The Young Epidemiology Scholars Program*, Walden University- Chicago, Illinois
- Pasanen, M. (2003). In Search of Factors Affecting SME Performance: The Case of Eastern Finland. (Unpublished Doctoral Dissertation). University of Kuopio, ISBN 951-781-980-3.
- Pearce, A. J. II and Robinson, B. R. (2007), *Strategic Management: Formulation, Implementation and Control*, 10th Edition, Boston: Irwin McGraw-Hill.
- Pfeffer, J. and Salancik, G. R. (1978). *The External Control of Organizations*. New York: Happer and Row.
- Priem, R. L., Rasheed, A., and Kotulic, A.G. (1995). 'Rationality in Strategic Decision Processes, Environmental Dynamism, and Firm Performance', *Journal of Management* 21, 913-929.
- Rogerson, C.M. (2008). Tracking SMME development in South Africa: Issues of finance, training and regulatory environment. *Urban Forum*, 19(1): 61-81.
- Salem, H. (2003). Organizational Performance Management and Measurement: The Lebanese Experience. Paper Presented to Economic and Social Commission for Western Asia at UNDESA Conference in Beirut, Lebanon in July 2003.
- Shane, P. B. and Spicer B. H. (1983). 'Market Response to Environmental Information Produced Outside the Firm', *Accounting Review* 58 (3), 521-536.23.
- Suh, J.D. (2010) Risks and Opportunities facing SMEs in the post-crisis Era. Poster presented at the APEC SMEs Training Workshop, Taipei, Korea May 24th – 28th, May.
- Sum, C., Jukow, L., and Chen, S. (2004). Taxonomy of operations strategies of high performing small and medium enterprises in Singapore. *International Journal of Operations and Production Management*, 24(3), 321-345.
- Staw, B. M. and Swajkowski, E. (1975). 'The Scarcity- Munificence Component of Organizational Environments and the Commission of Illegal Acts', *Administrative Science Quarterly* 20, 34-354.
- Stinchcombe, A.L. (1965). *Social structure and organizations*. In J. March (ed.), *Handbook of organizations*, 142-193. Chicago: Rand McNally.

- Thompson, J. D. (1967). *Organizations in Action*. New York: McGraw-Hill.
- Thurik, A.R. and Caree, M.A. (2010). *The Impact of Entrepreneurship on Economic Growth*. In Z.J. Acs and D.B. Audretsch (eds.), *Handbook in Entrepreneurship and Research International Handbook Series on Entrepreneurship 5*, DOI 10.1007/978-1-4419-1191-9\_20
- Tung, R. (1979). "Dimensions of organizational environments: An exploratory study of their impact in Organizational structure." *Academy of Management Journal*, 672-693.
- Tushman, M. L. and Anderson, P. (1986). Technological Discontinuities and Organizational Environments', *Administrative Science Quarterly* 31, 439-465.
- Ullman, A. A. (1985). 'Data in Search of a Theory: A Critical Examination of the Relationships among Social Performance, Social Disclosure, and Economic Performance of U.S. Firms', *Academy of Management Review* 10(3), 540-557.
- Venkatraman, N. and Ramanujam, V. (1986). "Measurement of Business Performance in Strategy Research: A Comparison of Approaches". *Academy of Management Review*. 1(4): 801-814.
- Walter, A., Auer, M., and Ritter, T. (2006). "The impact of network capabilities and Entrepreneurial Orientation on university spin-off performance." *Journal of Business Venturing* 21(4):541-567.
- Wiklund, J. and Shepherd, D. (2003). Knowledge-Based Resources, Entrepreneurial Orientation, and the Performance of Small and Medium-Sized Businesses. *Strategic Management Journal*. 24, 1307-1314.
- Williamson, O. E. (1979). Transaction Costs Economics: The Governance of Contractual Relations. *Journal of Law and Economics*. Vol. 22(2) pp. 233-261.
- Yusuf, T.O., and Dansu, F. S. (2013). SMEs, Business Risks and Sustainability in Nigeria. *European Journal of Business and Social Sciences*, Vol. 2 (9) pp76-94.