INFLUENCE OF DYNAMIC ENVIRONMENTAL SCAN PRACTICES ON PERFORMANCE OF COMMERCIAL BASED STATE PARASTATALS IN KENYA

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ABSTRACT

The purpose of the study was to establish the influence of dynamic environmental scan practices on performance of commercial based state parastatals in Kenya. The study adopted a cross section survey research design and the target population was the fifty five (55) commercial based state parastatals. A sample of forty eight (48) commercial based state parastatals was used for the study. These were identified through stratified random sampling. The respondents of the study constituted CEO’s, Finance Managers and HR Managers and finance managers of each of the sampled commercial based state parastatals. Collection of data was conducted with the aid of questionnaires and interviews. Collection of Secondary data was done from financial and audited statements. Questionnaires were hand delivered to the respondents in the respective institutions by the help of research assistants. The research assistants self-administered the questionnaires to the respondents of the sampled commercial based state parastatals under the supervision of the researcher. Data was analyzed using SPSS version 24 and Microsoft Excel. Regression models were fitted and hypothesis testing was carried using standard F and t tests. The study found that dynamic environmental scan practices were found to have significant positive influence on performance and therefore, this means that state corporations that respond to dynamic and hostile environment will have a competitive edge and hence better performance.

Key terms: Environmental Scan, Profitability, Change Management, Strategic Planning, Performance
INTRODUCTION

Environmental conditions in which organizations usually operate are dynamic, hence strategies have to be developed for businesses to gain competitive advantage over their competitors. For this reason, performance is of great concern today to all organizations including public, private, profit and those that are not for profit. For many years, both researchers and practitioners have tried to study why some organizations achieve higher levels of performance than their counterparts (Ogollah, Bolo & Ogutu, 2011).

The performance of a firm could be influenced through change practices which create immense contribution competencies in an organization that yield a great boost to further enhancing innovativeness. Business Organizations associate maximization of performance with existence of change practices (Horngren 2000; Anantharaman 2003). Due to intensive competition, product life cycles which are short term in nature, volatile environments for products and markets, organizations are constantly looking for latest sources of competitive advantage. One of the most important is change practices, which has great prospective to revolutionize and define the fate of an organization (Kelleher & Perrett, 2001).

The environment in which business organizations tend to operate has changed so much that it is not easily predictable apart from being highly turbulent and complex (Van Tonder, 2004). Survival in the market would be only possible for organizations that will be able to respond easily and effectively to the varying environmental conditions. (Burnes, 2004). Increased global competition coupled with different government and international regulations, economic restructuring and technological innovations are believed to be some of the major causes of environmental changes. Then considering the ecological dilemma with excessive attention on impact of environment on organizational practices there has been shifting patterns in stakeholder and customers’ expectations.

There have been many studies that focused on change practices of organizations given the contributions they make to the global economy (Huselid, 2005; Appelbaum, 2000; Wright, 2005; Schuler & Jackson, 2001). The goal for change management has been for long a crucial area in the field of strategic management (Armstrong, 2009). A potential new framework that has emerged for the analysis of sources of sustainability of change practices in the modern world, has been the configurationally theory. In the field of Change practices both internal and external fit are the two main research areas. Environmental characteristics and Organization characteristics, also significantly influence business performance. External environmental characteristics highly influence customer demands and nature of market competition and yet they are the main determinants of firm performance.

Chemengich (2013) claims that public sector organizations in the world are under intense pressure to improve efficiency while at the same time providing integrated and improved services. The public sector remains a key vehicle to deliver in both for developing and developed world, in a framework designed for realization of equality, effectiveness, justice, security and competitiveness. The main issue in various countries lies with the way public organizations are managed where emphasis is placed on effectiveness and efficiency. Melese et al. (2004) argue that public organizations continue being held more increasingly accountable for their performance hence they are expected to operate effectively and efficiently. The implication is that Public Organizations will be forced to look for ways of improving their activities. He further noted that in an
ever changing global economy, organizations should find ways of operating by designing new competences since old competencies gained are easily eroded resulting from changes on the environment.

**Research Hypothesis**

$H_0$: Dynamic environmental scan practices has no significant influence on performance of Commercial based State Parastatals in Kenya.

**RELATED LITERATURE**

**Theoretical Framework**

**Systems Theory**

Littlejohn a renowned biologist in 1983 developed system theory. He defined a system as a group of objects and entities that interrelate to get a whole. System theory mostly concerns itself with problems or interactions of structures, interdependence instead of fixed aspects of objects. The organization is viewed as a social setting that contains people cooperating in a given framework. Within the system resources like people, finances are drawn from their environment and in exchange the products and services they offer are taken back to the environment. Managers need to consider the role played by every part of the organization rather than looking at them as separate parts (Hannagan, 2002). This theory emphasizes the fact that the organization does not only exist in close connection with the environment but the larger system of the community which it serves.

Strategic change practices would be very critical in state parastatals in terms of steering the institutions to better performance. It is important that all stakeholders in the organizations understand the process and how their own contribution can help achieve the overall organizational goal. Commercial based state parastatals consists of a system with various groups of individuals including line managers, members of staff, customers and even the Government. The theory considers the interactions and interrelationships among the different stakeholders involved in the organization. The Commercial based state parastatals system hence should react to influences of the external environment during formulation of business objectives and goals. The organization structure also needs to conform with the dynamic environment for the whole system to operate. The theory therefore assists in knowing the role of stakeholders’ involvement in enhancing performance of the commercial based state parastatals.

**The Environment Dependency Theory**

The environment dependency theory postulations are grounded in the open systems theory. Open systems theory refers to the idea that the environmental forces of technology, economic, political and social to a great extent influences organizations (Burnes, 2009). Therefore the organization’s survival depends upon the relationship it has with the environment. External factors are outside the physical confines of an organization and firms do not have control over them. These factors cause turbulence and uncertainty and could have a significant impact on an organization.

The theory posits that it is crucial that the organizations should constantly scan, analyse and evaluate the environment they operate in. The underlying objective behind this purpose is to discover trends at initial stages to avoid future problems to these organization. This suggests that as Managers in commercial based parastatals develop strategic decisions, they will be subject to environmental influences and will need to continuously ensure that any decisions have to consider such influences. Businesses that are not
aware of their environment in which they operate are likely to be plunged into some crisis arising from environmental complexities. Hence the managers will take decisions accordingly.

**Conceptual Framework**

**DYNAMIC ENVIRONMENTAL SCAN PRACTICES**
- Dynamic environment
- Hostile environment
- Heterogeneity
- Competitive intensity

**PERFORMANCE OF COMMERCIAL BASED STATE PARASTATALS**
- Profitability
- Sales Growth
- No. of employees
- No of products
- No. of branches
- Market share

**BOARD COMPOSITION**
- Size
- Gender
- Diversity

**Dynamic Environmental Scan Practices and Performance**

Environment scan practices refers to the monitoring, evaluation, and distributing information from the external and internal environment to crucial individuals within the organization (Kazmi, 2008). The effects caused by business environment factors on firm performance have been discussed in several theoretical contributions and empirical studies. Yoengtaak et al. (2009) in his research of effects of environmental factors on firm performance identified that the performance of firms is positively influenced by dynamic environment, heterogeneity and competitive intensity. Dynamic environments would most possibly provide several aspects such as varying conditions that transfer bases for competitive advantage and provoke new explorations of sources of advantage.

Stable environments are only known for reinforcing the current sources of competitive advantage hence provide limited opportunities (Martin & Osberg, 2007). An organization may decide to change its products by intensively advertising and creating a marketing niche when faced with unfavourable environmental conditions in the market. In case the environment continues being hostile, organizations may opt to consider new business ideas to add to the existing ones through joint ventures, mergers and product diversification and extension hence better performances (Katz, 2010).

Organizations that do not devise new ways to survive amidst the intensive competition or enter the expanding markets late, compute opportunity costs hence seek for different strategies to remain or survive in the competition (Birkinshaw, Hood & Young, 2005). Two organizations may be in competition in the same industry with similar customer groups but their perception of the environment may be quite different. One organization may have the perception of a very simple and manageable environment, while the other as a composite and uncontrollable environment.

Adaptation to both internal and external environmental changes should be continuously be practiced by organizations given that evolution and change management of organizations are taking place. The organizations should thrive to achieve harmony between its external environment which constitutes; economic, political, technological, legal and internal comprising of structure, resources culture of the culture, leadership style and mode of exercising power (Bermig, 2010). Organizations need to identify factors that lead to its success since if goals of achieving these factors are left out then failure of the organization is inevitable. A crucial success factor is leaving out a critical performance area for achieving consistently increased productivity.
Organizations operate in environments that have become very complex, turbulent, and unclear and highly unpredictable (Van Tonder, 2004). It is envisaged that organizations that will be able to survive the turbulence will be those that are able to respond effectively and quite rapidly. (Burnes, 2004). Environmental changes are as a result of rising global competition, innovations in technology, restructuring of economies, changes in labour force, international regulations, shifting patterns of stakeholder and customer expectations and increased dilemma of dealing with environmental impact on organization. Organizations therefore are called forth to exercise change so that they may remain in equilibrium with the changing environment. It has been confirmed that whereas the future may unclear, organizational managers should be highly alert and responsive to the rapid changes or else their future in the society will be at stake (Harper, 2004).

Empirical Review

Babatunde and Adebisi (2012) in a study on Organizational Performance vis-à-vis Strategic Environmental Scanning within a Business Competitive Environment found a proportional relation between the performance of an organization and strategic environmental scanning, with a coefficient of determination ($R^2$) of 0.297. It indicates that a variation in effective performance or 30% of the change of an organization is due to a change in environmental scanning strategy. The study also established that the exterior environmental forces impacts positively on the performance of an organization. This is an indication that the utilization of strategic environmental scanning in assessing the exterior environmental factors (threats and opportunities) assists in taking advantage of available opportunities thus avoiding threats hence leading to an organization’s profitability. Given that the findings were positive, the study recommended that organizations should periodically, strategically, and on a continuous basis engage strategic environmental scanning while at the same time taking cognizance to opportunities and threats in the environment.

These findings were similar to those of Agbim, Oriarewo and Zever (2014) who sought to establish the behaviour of entrepreneurial performance on micropreneurs due to business environmental scanning actions. The study established that interest level and the frequency of scanning are related to an entrepreneur’s performance. The study recommended that even where micropreneurs get affected by resources and the capacity to conduct environmental scanning, they still require to maintain and develop keen interest in factors with the greatest uncertainty to their microenterprises within the business environment (the work environment – suppliers, customers, and competitors). This will ensure stability in the environment and in turn improve their performance and competitiveness.

Njuguna, Munyoki and Kibera (2014) conducted a research in Nairobi County, Kenya on how performance of community-based HIV and AIDS organizations are influenced by the external organizational environment. The research findings show that an organization’s efficiency, effectiveness, financial viability and relevance with relevance performance indicators being most affected and influenced by its external environment. The latter was thus evaluated from dimensions of, domain consensus, dynamism, capacity, uncertainty and heterogeneity. Their study revealed that all activities of an organization from planning to implementation are influenced if the external environment is properly scanned. Nevertheless, more emphasis was to be paid to the external environment. They emphasized the relevance of proper scanning of external environment by managers of community based organizations as it influenced all organization activities from program planning to implementation.
METHODOLOGY

The study adopted a cross sectional descriptive survey research design with both qualitative and quantitative approaches. Commercial based parastatals was the target population given that they played a critical role in enabling economic and social transformation in the economies they operate, improving public service delivery as well as employment opportunities in various jurisdictions and are useful conduit for international partnerships (RoK, 2013). There was a total number of 55 commercial based state parastatals in Kenya. A sample size of 48 commercial based state parastatals was drawn randomly using random number generator from 55 reclassified government owned entities that was traced for the study. Respondents for the study were selected from the following three management positions namely; CEO’s, Human resource and Finance managers from each of the respective commercial based state parastatals. The regression model for the study was as follows:

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 Z + \varepsilon_i \]

Where:

- \( Y_i \) = Dependent variable (Performance)
- \( X_1 \) = Dynamic Environmental Scan Practices
- \( \beta_j \) = Regression coefficient for the Independent variable
- \( \beta_0 \) = Constant or intercept (value of dependent variable when an independent variables are zero)
- \( \varepsilon \) = Error term
- \( X_2 Z \) = Product term/interaction term of Board members composition the independent variables (\( X_{2j} \)).

RESEARCH FINDINGS

Influence of Dynamic Environmental Scan Practices on Performance

To test on the influence of dynamic environmental scan practices on organizational performance, the respondents were asked to indicate their level of agreement with different statements on technology adoption practices. The respondents were required to use a scale of 1 to 5 where 1 is strongly disagree, 2 disagree, 3 neither agree or disagree, 4 agree and 5 strongly agree. The purpose of this data was to determine whether the respondents felt that dynamic environmental scan practices in place was sufficient to improve on the performance of the organizations. The findings of the study were as presented in Table 1.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamic environment affects commercial based parastatal performance</td>
<td>0%</td>
<td>5.5%</td>
<td>7.1%</td>
<td>40.2%</td>
<td>47.2%</td>
<td>4.29</td>
<td>0.827</td>
</tr>
<tr>
<td>In the dynamic environment prices of products and changes in taxes</td>
<td>1.6%</td>
<td>2.4%</td>
<td>1.6%</td>
<td>44.1%</td>
<td>50.4%</td>
<td>4.39</td>
<td>0.778</td>
</tr>
<tr>
<td>Hostile environment affects commercial based</td>
<td>0.8%</td>
<td>1.6%</td>
<td>15%</td>
<td>39.4%</td>
<td>43.3%</td>
<td>4.23</td>
<td>0.818</td>
</tr>
</tbody>
</table>
It was clear from the results that dynamic environmental practices positively influence performance of commercial based state parastatals in Kenya. This was indicated by the findings which showed that 47.2% strongly agreed to the statement. Moreover 50.4% strongly agreed to the statement that in the dynamic environment prices of products and changes in taxes affects performance of commercial based state parastatals. 52.8% also agreed that commercial based state parastatals takes into consideration dynamic environment when undertaking strategic planning for enhancing performance. Further, 43.3 % strongly agreed that hostile environment affects commercial based state parastatal performance. Additionally 49.6% agreed that as a result of hostile environment where combination of market strategies, market niche and new methods of packaging were used greatly influences performance of commercial based state parastatal.

On heterogeneity affecting commercial based state parastatal performance 54.3% agreed to this statement. On whether in the environment which was heterogeneous commercial based parastatals can take greater risks as a result their performance are greatly influenced. 44.1% agreed to this statement. Also a further 46.5% agreed that commercial based state parastatal takes into consideration of heterogeneity and competitive intensity for improving performance. 48.8% agreed that competitive intensity affects commercial based state parastatal performance. The respondents who were interviewed indicated that since they operate in a dynamic environment, environmental scanning practices become key activities in their daily operations.

**Organizational Performance**

To test the indicators for organization performance, the respondents were asked to indicate their level of agreement with different statements on the organization performance. The purpose of this data was to determine whether the respondents understood the procedures and processes that impacted on organization performance. The findings of the study are as presented in Table 2.

**Table 2: Organizational Performance**

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>As a result of hostile environment where combination of market strategies affects commercial based state parastatal performance</td>
<td>0.8%</td>
<td>3.9%</td>
<td>11.8%</td>
<td>49.6%</td>
<td>33.9%</td>
<td>4.12</td>
<td>.822</td>
</tr>
<tr>
<td>Heterogeneity affects commercial based state parastatal performance</td>
<td>0.8%</td>
<td>4.7%</td>
<td>10.2%</td>
<td>54.3%</td>
<td>29.9%</td>
<td>4.08</td>
<td>0.813</td>
</tr>
<tr>
<td>In the environment which is heterogeneous commercial based parastatals can take</td>
<td>3.1%</td>
<td>2.4%</td>
<td>21.3%</td>
<td>44.1%</td>
<td>29.1%</td>
<td>3.94</td>
<td>.941</td>
</tr>
<tr>
<td>Competitive intensity affects commercial based state parastatal performance</td>
<td>0.0%</td>
<td>2.4%</td>
<td>12.6%</td>
<td>48.8%</td>
<td>36.2%</td>
<td>4.19</td>
<td>0.742</td>
</tr>
<tr>
<td>The commercial based state parastatals takes into consideration dynamic environment</td>
<td>0.8%</td>
<td>0.8%</td>
<td>9.4%</td>
<td>52.8%</td>
<td>36.2%</td>
<td>4.12</td>
<td>.715</td>
</tr>
<tr>
<td>The commercial based state parastatal takes into consideration of heterogeneity</td>
<td>2.4%</td>
<td>1.6%</td>
<td>12.6%</td>
<td>46.5%</td>
<td>37%</td>
<td>4.14</td>
<td>0.87</td>
</tr>
</tbody>
</table>

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Table 2 represented the findings of indicators on performance of commercial based parastatals in Kenya. On organization profitability had increased over the last five years, 28.3% agreed to the statement. A total of 28.3% of the respondents agreed to the statement that the number of employees in the organization has increased over the last five years. On whether their organization has experienced an increase in number of branches over the last 5 years, 30.7% strongly disagreed to this statement while 28.3% disagreed. In regard to the organization experiencing increased sales growth over the last 5 years, 40.9% of the respondents agreed to this statement. 41.7% agreed to the statement that their organization has increased number of products over the last 5 years. 37.8% of the respondents agreed that their organization has experienced increased annual running expenditure over the last five years. 37.8% agreed that over the last five years your organization has been able to achieve its goals in relation to performance.

A large number of the informants in the interviews indicated that they were satisfied with the organizations performance though a few expressed their dissatisfaction with the performance of their organizations. These informants cited that better performance would have been realized if they were allowed to go fully commercial. Majority of those interviewed came up with the following ways of enhancing organizations performance; intensifying employee training programmes, motivation among the staff in terms of improved working conditions and
remuneration. Also engaging in aggressive advertisement to boost revenue and enhance survival in the competitive market conditions in addition to engaging in research and innovation of products geared towards consumer satisfaction.

Table 3: Dynamic environmental scan practices Rotated Component Matrix Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Component 1</th>
<th>Component 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamic environment affects commercial based parastatal performance</td>
<td>.821</td>
<td></td>
</tr>
<tr>
<td>In the dynamic environment prices of products and changes in taxes affects commercial based state parastatals</td>
<td>.819</td>
<td></td>
</tr>
<tr>
<td>Hostile environment affects commercial based state parastatal performance as a result of hostile environment where combination of market strategies, market niche and new methods of packing.</td>
<td>.550</td>
<td></td>
</tr>
<tr>
<td>Heterogeneity affects commercial based state parastatal performance</td>
<td>.621</td>
<td></td>
</tr>
<tr>
<td>In the environment which is heterogeneous commercial based parastatals can take greater risks as a result their performance are greatly influenced</td>
<td>.801</td>
<td></td>
</tr>
<tr>
<td>Competitive intensity affects commercial based state parastatal performance</td>
<td>.774</td>
<td></td>
</tr>
<tr>
<td>The commercial based state parastatals takes into consideration dynamic environment when undertaking strategic planning for enhancing development</td>
<td>.744</td>
<td></td>
</tr>
<tr>
<td>The commercial based state parastatal takes into consideration of heterogeneity and competitive intensity for improving performance</td>
<td>.859</td>
<td></td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization
a. Rotation converged in 3 iterations.

Descriptive Results of retained sub variables of dynamic environmental scan practices

Dynamic environment practices were assessed by two measures namely heterogeneity and dynamic environment. Descriptive data was given by Table 4 on a scale of 1 to 5 (where 5 = Strongly Agree and 1 = Strongly Disagree).

Table 4: Descriptive Results of retained sub variables of dynamic environmental scan practices

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Cronbach's Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heterogeneity</td>
<td>4.1155</td>
<td>.6206</td>
<td>.850</td>
</tr>
<tr>
<td>Dynamic environment</td>
<td>4.3045</td>
<td>.6101</td>
<td>.722</td>
</tr>
</tbody>
</table>

Table 4 showed that respondents on average agreed that heterogeneity affect dynamic environment scan practices with a mean of 4.1155. Respondents also agreed that dynamic environment affects dynamic environment scan practices with a mean of 4.3045. Cronbach’s alpha was used to test the reliability of the selected variables. Heterogeneity had a coefficient of .850. On the other hand dynamic environment had a coefficient of .722. Since the Cronbach’s coefficient is more than 0.7 then the data is reliable.

Descriptive Results of Performance
Descriptive data shown on Table 5 presented the relevant results on a scale of 1 to 5 (where 5 = Strongly Agree and 1 = Strongly Disagree).

Table 5: Descriptive Results of Performance

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Cronbach's Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance</td>
<td>3.2756</td>
<td>.8681</td>
<td>.848</td>
</tr>
</tbody>
</table>

Cronbach’s alpha was used to test the reliability of the proposed constructs (Ali et al., 2016). The performance variable had a Cronbach’s alpha value of 0.848 which is more than the proposed threshold of 0.7 hence the tools were reliable.

Table 6: Dynamic environmental scan practices and Performance Correlations Results

<table>
<thead>
<tr>
<th></th>
<th>performance</th>
<th>dynamic_envt</th>
<th>Heterogeneity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>127</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.444**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>127</td>
<td>127</td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.549**</td>
<td>.235**</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.008</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>127</td>
<td>127</td>
<td>127</td>
</tr>
</tbody>
</table>

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

Results showed a strong positive relationship between heterogeneity and performance, dynamic environment and performance with a correlation coefficient of 0.549 and 0.444 respectively and p-values of 0.000. This implies that Dynamic environmental scan practices influence performance of state parastatals.

Dynamic environmental scan practices Data Normality Test Results

One of the assumptions of linear regression is that the sample data must have come from a population that follows normal distribution. Several normality tests exist in the literature. However in this research the Kolmogorov Smirnov (K-S) one sample test was used. In Kolmogorov Smirnov test the null hypothesis is that the data came from a normal distribution and the alternative is that the data didn’t come from a normal distribution. The rule is to reject the null hypothesis when the p value is less than 0.05 (the proposed level of significance). Table 7 presented the results of the K-S test.

Table 7: Dynamic environmental scan practices One-Sample Kolmogorov-Smirnov Test

<table>
<thead>
<tr>
<th></th>
<th>Heterogeneity</th>
<th>Dynamic_envt</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>127</td>
<td>127</td>
</tr>
<tr>
<td>Normal Parameters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>4.1155</td>
<td>4.3045</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>.62060</td>
<td>.61006</td>
</tr>
<tr>
<td>Absolute</td>
<td>.120</td>
<td>.172</td>
</tr>
<tr>
<td>Positive</td>
<td>.097</td>
<td>.127</td>
</tr>
</tbody>
</table>
Kolmogorov–Smirnov Z
Asymp. Sig. (2-tailed)

<table>
<thead>
<tr>
<th></th>
<th>Negative</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-.120</td>
<td>.1352</td>
<td>1.22</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.058</td>
<td>.102</td>
</tr>
</tbody>
</table>

a. Test distribution is Normal.
b. Calculated from data.

Since the p value was more than 0.05 for the two cases we failed to reject the null hypothesis and concluded that the two data sets are normal.

**Durbin-Watson Test Results**

Another assumption of linear regression is that there should be no auto correlation. One of the tests used for auto correlation is Durbin Watson test which checks for serial correlation (Yupitun, 2008).

**Table 8: Durbin-Watson (Autocorrelation) Results**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.637*</td>
<td>.406</td>
<td>.397</td>
<td>.5773</td>
<td>2.001</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), heterogeneity, Dynamic environment
b. Dependent Variable: Performance

durbin Watson test takes values of between 0 to 4. A value of 2 shows that errors are not correlated. However, values from 1.75 to 2.25 are considered acceptable. Other scholars argue that value between 1.5 and 2.5 may be considered to indicate no presence of collinearity (Makori & Jagongo, 2013). Durbin-Watson value of 2.001 indicates that there is no autocorrelation.

**Table 9: Dynamic environmental scan practices and performance ANOVA Results**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>38.587</td>
<td>2</td>
<td>19.293</td>
<td>42.447</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>56.361</td>
<td>124</td>
<td>.455</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>94.948</td>
<td>126</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Regression</td>
<td>40.252</td>
<td>4</td>
<td>10.063</td>
<td>22.445</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>54.696</td>
<td>122</td>
<td>.448</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>94.948</td>
<td>126</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: performance
b. Predictors: (Constant), heterogeneity, dynamic environment
c. Predictors: (Constant), heterogeneity & board composition, dynamic environment & board composition
When moderating variable (board composition) was introduced, the F value reduced ($F = 22.445$ with a p value of 0.000) as indicated in Model 2. However the model still showed a significant relationship between the measures of Dynamic environmental scan practices measures and performance.

**Dynamic environmental scan practices Goodness-of-fit Model Results**

Table 10 showed that measures of dynamic environmental practices (dynamic environment and heterogeneity) explains 40.6% of the variation in Performance of State parastatals. Other factors explain 59.4% of the changes on performance. This implied that the measures have a predictive power on the performance.

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.637$^a$</td>
<td>.406</td>
<td>.397</td>
<td>.5773</td>
</tr>
<tr>
<td>2</td>
<td>.651$^b$</td>
<td>.424</td>
<td>.405</td>
<td>.5695</td>
</tr>
</tbody>
</table>

The introduction of the moderating variable Board composition increases the coefficient of determination by 1.8% to 42.4%. This implies the moderating variable influence is not very significant.

**Regression Results of Dynamic environmental scan practices and Performance**

To determine the influence of Dynamic environmental scan practices measures (heterogeneity and dynamic environment) the following hypotheses were stated:

**Hypothesis two**

$H_{01}$: There is no statistically significant influence of Dynamic environmental scan practices on the performance of commercial based state parastatals in Kenya.

$H_{0A}$: There is statistically significant influence of Dynamic environmental scan practices on the performance of commercial based parastatals in Kenya.

Regression analysis was conducted to determine the probable form of the relationship between heterogeneity, dynamic environment and performance. The regression model shows whether the measures have significant influence on performance. The results were given by Table 11.

**Table 11: Coefficients for Regression Results of Dynamic environmental scan practices and Performance**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>-.678</td>
<td>.463</td>
<td></td>
<td>-1.466</td>
</tr>
<tr>
<td>1 Dynamic environment</td>
<td>.495</td>
<td>.105</td>
<td>.334</td>
<td>4.693</td>
</tr>
<tr>
<td>Heterogeneity</td>
<td>.673</td>
<td>.102</td>
<td>.470</td>
<td>6.605</td>
</tr>
</tbody>
</table>

Table 11 showed the regression coefficients results of the Dynamic environmental scan practices measures (dynamic environment and heterogeneity). Both measures were found to be significant at 5% level of significance.
significance with coefficients of 0.495 and 0.673 respectively and p-values of 0.000. The resultant regression model is given by equation 1 as
\[ Y = 0.495X_1 + 0.673X_2 \] 
(1)

When the two sub variables were combined into one variable, dynamic environmental scan practices, the resultant regression results are given by Table 12.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>-.799</td>
<td>.450</td>
<td>-1.777</td>
</tr>
<tr>
<td></td>
<td>Dynamic environment</td>
<td>1.173</td>
<td>.128</td>
<td>9.142</td>
</tr>
</tbody>
</table>

a. Dependent Variable: performance

This implied that the null hypothesis was rejected and the alternative hypothesis was accepted. i.e. \( H_{0a} \) was accepted since \( \beta \neq 0 \) and p-value<0.05. The regression model was summarized by equation 2
\[ Y = 1.173X_1 \] 
(2)
Where, \( X_1 \) – dynamic environmental scan practices.

It was concluded that there was statistically significant relationship between dynamic environmental scan practices and performance of State Parastatals in Kenya. These results were in agreement with Yoengtaak et al. (2009) in his research of effects of environmental factors on firm performance identified that the performance of firms is positively influenced by dynamic environment, heterogeneity and competitive intensity. Babatunde and Adebisi (2012) as well established a proportional relation between the performance of an organization and strategic environmental scanning.

To determine the moderation effect of Board composition on dynamic environmental scan practices and performance of commercial state parastatals, the following hypotheses were tested:

**Hypothesis Five**

\( H_{01} \): There is no statistically significant moderating effect of board composition on the dynamic environmental scan practices and performance of commercial based state parastatals in Kenya.

\( H_{1A} \): There is statistically significant moderating effect of board composition on the dynamic environmental scan practices and performance of commercial based state parastatals in Kenya

Moderated regression was done to determine if dynamic environmental scan practices measures moderated with board composition has any significant influence on the performance of commercial state parastatals in Kenya. Table 13 gave the results.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>-.678</td>
<td>.463</td>
<td>-1.466</td>
</tr>
<tr>
<td></td>
<td>dynamic_envt</td>
<td>.495</td>
<td>.105</td>
<td>4.693</td>
</tr>
<tr>
<td></td>
<td>Hetero</td>
<td>.673</td>
<td>.102</td>
<td>6.605</td>
</tr>
<tr>
<td>2</td>
<td>(Constant)</td>
<td>-.435</td>
<td>.477</td>
<td>-.913</td>
</tr>
</tbody>
</table>
Results in Table 13 showed that the interaction variables had a p value of more than 0.05. This implied that the null hypothesis was not rejected. It can be concluded that there is no moderation effect of board composition on the dynamic environmental scan practices measures (heterogeneity and dynamic environment) and performance of commercial based state parastatals in Kenya.

Conclusions
Dynamic environment scan practices has a significant influence on firm. For the purposes of sustaining their position in business, there is need for organizations to keep in balance with environmental changes. Increased global competition coupled with different government and international regulations, economic restructuring and technological innovations are believed to be some of the major causes of environmental changes. Then considering the ecological dilemma with excessive attention on impact of environment on organizational practices there has been shifting patterns in stakeholder and customers’ expectations. The present research provided evidence that it is helpful to consider the influence of dynamic environmental scan practices as a strategic change practice for organizations to be able to survive in business. Heterogeneity and dynamic environment were established to be very crucial in environment scan practices. Based on the findings of this study, it can, therefore, be concluded that majority of the commercial based parastatals in Kenya sampled in this study lay more emphasis on being alert on preference and taste of consumers which keep on changing prices of products and also taxes. Due to heterogeneity where there is competitive aggressiveness and investing in new ventures greatly influences commercial based state parastatal’s performance hence these organizations can take greater risks to sustain and improve their performance.

Recommendations
The correlation results established a significant relationship between dynamic environmental practices and performance. The study further found that dynamic environment and heterogeneity are the most important factors that determine performance. So that commercial based state parastatals enhances their performance, they require to Consider dynamic and hostile environment aspects when undertaking strategic planning and make use of heterogeneity and competitive intensity for better performance.

The study found that strategic change practices improves performance among commercial based state parastatals in Kenya. Therefore, commercial based state parastatals need to come up with policy guidelines that will lead to adoption of strategic change practices in order to cope with environmental uncertainties in the business organizations. Appropriate strategies should be designed to cope with changes and thus the organizations would be ensured improvement in their performance. The Government need to relook Boards appointments in order to have individuals who will add value and devote more time in the affairs of the organizations. The Government should also consider having more inside directors than outside who will be more keen in the activities of commercial based parastatals. This will definitely improve their role in these parastatals.
Areas for Further Research
There is need of identifying a suitable combination of strategic change practices to enhance further performance. Hence there is need for a study to be carried out to explore other strategic change practices which would form a rich base for research results to determine if it will result in some different influence on organizational performance. Future studies could also shift the emphasis to single strategic change practices to derive more specific evidence regarding the influence of Strategic change practices on organizational performance.

REFERENCES


