STRATEGIC PLANNING AND PERFORMANCE OF STATE CORPORATIONS IN KENYA: THE MODERATING EFFECTS OF FIRM CHARACTERISTICS

Martin Ogutu, PhD

ABSTRACT
Performance of any organization is in actual sense a function of many other factors. A review of literature relating to corporate performance show that strategic planning is an important factor in performance of organizations, however, it is not strategic planning alone that influence the performance of a corporation, firm characteristics, also come into play. The broad objectives of the study was to establish the influence of firm characteristics on the relationship between strategic planning and performance. The study was oriented by the positivist view which uses surveys to verify hypotheses and statistics, especially quantitative statistics for analysis. The population of interest was all state corporations in Kenya. The study employed a descriptive cross-sectional survey design. Data was collected from the top managers using questionnaires. Hierarchical regression analysis, specifically interaction analysis was conducted on the collected data. The study found that firm characteristics have moderating effects on the relationship between strategic planning and performance of state corporations in Kenya. The study has made important theoretical contributions by highlighting the factors that moderate the relationship between strategic planning and performance of state corporations in Kenya. The study has further provided important insight to policy makers, strategic management practitioners and to academicians.

Key Words: Strategic Planning, Organizational Performance, Moderating Effect, Firm Characteristics, Kenya

1 Associate professor, School of Business, University of Nairobi. ogutum@uonbi.ac.ke
1. BACKGROUND

The concept of strategy has been defined in diverse ways by many strategy scholars (Chandler, 1962; Andrews, 1971; Chaffee, 1985&Mintzberg, 1987). Mintzberg (1987) reasoned that we cannot afford to depend on a single definition of strategy despite our tendency of wanting to do so; he therefore proposed five definitions of strategy, in which strategy could be seen as a plan, a ploy, a pattern, a position and a perspective. As a plan, strategy specifies intended course of action of an organization. According to David (2005), strategic management can be seen as a combination of strategy formulation, implementation, and evaluation. This study is focusing on strategic planning, more so on its relationship with corporate performance while considering selected moderating factors. More specifically, the study seeks to establish how the effect of strategic planning on firm performance is influenced by firm characteristics.

In response to a myriad of definitions of strategic planning expressed in literature, Grant (2003) provides an extensive review of strategic planning history from “long range planning” to some of the recent debates between “strategic management” and “strategic thinking”. From Grants summary, a very inclusive definition of strategic planning is that it is an attempt to systematize the processes that enable an organization to attain its goals and objectives. According to Crittenden and Crittenden (2000), there are five general steps in the strategic planning process: goal setting, situation analysis, alternative consideration, implementation and evaluation.

At the core of the research debate in the question as to whether strategic planning should be practiced is the argument about the appropriateness in formalizing the activities involved in strategy making. Mintzberg (1994) is of the view that formalized strategic procedures limits the ability of managers to think strategically. Stonehouse and Pembertone (2002) however holds a different opinion from those of Mintzberg (1994) arguing that the association of strategic planning with the “highly prescriptive approach of strategic management” is unfortunate given that the concepts are not necessarily opposite each other but can co-exist at different levels of strategy formulation. This explains the growing number of publications expressing the need to tailor management control systems to support the development and implementation of corporate strategy (Kald et al., 2000). This means that strategic planning therefore has its secure placement in the management of today’s corporations and should be confidently pursued.

Firm characteristics have to do with the demographic and managerial variables that contribute to the makeup of a firm. Every firm has its own characteristics which makes it successful or unsuccessful in a competitive environment. It has been argued that firm characteristics contribute to industry variance in profitability (McGaham, 1999). The elements that have been used to define firm characteristics vary among researchers. Firm size is probably the most influential variable in organizational characteristics studies (Chen &Hambrick, 1995). Firm size determines the extent to which an organization will adopt formal control and coordination mechanism as part of its strategy (Scott, 1998). The age of the firm is another important aspect of firm characteristics. It has been argued that as organizations grow in age, they refine their routines and
strategies and their returns become more certain (Halliday and Powell, 1993). The age of the firm also influences the extent to which it understands the competitive environment as well as ability to compete and at least survive for a period of time based on knowledge and experiences accumulated over time.

Diversification has also been mentioned to be an important firm characteristic (Hoskisson & Hitt, 1990). It has been observed that some firms are more diversified than others. In some quarters, diversification has been found to positively influence organizational performance (Ogutu and Samuel, 2012), this makes it a subject of interest in this study as far as firm characteristics are concerned. Another important firm characteristic is innovation. Innovation is the generation, acceptance and implementation of new products (Thompson, 1965). Product innovation involves the generation of new products or services introduced to meet external user or market needs, while process innovations are new elements introduced into an organization’s productions or service operations to improve efficiency. A firm’s characteristics could also include ownership structure (Keng & Jiuan, 1986). Board size and composition, especially with regards to competence has also been identified as a critical firm characteristic (Jackson & Holland, 1998).

Organizational performance is about efficiencies and effectiveness in the utilization of organizational resources as well as the achievement of its goals (Steers, 1982). Laitinen (2002) view performance as the ability of the object to produce results in a dimension determined a priori, in relation to target. The most objective and most commonly cited indicators of performance are the financial data. Scholars have expressed dissatisfaction with the exclusive use of financial dimension arguing that it encourages “short-termliness” and “local optimization” (Kaplan & Norton, 1992). Researchers in such circumstances recommend multiple measures of firm performance which include both financial as well as non-financial measures (Westhead & Howorth, 2006). Among the tools mostly used in firm performance measurement is the balanced scorecard (Kaplan & Norton, 1992). The paper therefore explores the moderating effects of firm characteristics on the relationship between strategic planning and organizational performance - this takes centre stage in every argument in this paper.

2. LITERATURE REVIEW

According to Stonehouse and Pembertone (2002), strategic planning is about devising and formulating organizational level plans which set the broad and flexible objectives, strategies and policies of a business that drive the organization towards its vision of the future. The quality of a strategic plan revolves round two broad issues: strategy content and strategy process. Strategy content can be defined as the patterns of service provision that are selected and implemented (Andrews, Boyne and Walker, 2003). Strategy content comprises two dimensions: strategic stance (the extent to which an organization is a prospector, defender or reactor) and strategic actions, the relative emphasis on changes in market, services, revenues, external relationships and internal characteristics (Andrews, Boyne and Walker, 2003). Strategic stance is the broad way in which
an organization seeks to maintain or improve its performance. Strategic actions are the specific steps that an organization takes to operationalize its stance. Strategic actions are more likely to change in the short-term (Fox-Wolfram & Boal and Hunt, 1998). Stance and actions together constitute an organization's strategy content.

At a conceptual level, Miles and Snow’s (1978) dimension of classification appear to cover the major possible organizational responses to new circumstances: innovate (prospector), consolidate (defender) or wait for instructions (reactor). Prospectors are organizations which “almost continually search for market opportunities, and they regularly experiment with potential responses to emerging environmental trends”. A defender would not be striving to be a leader in the field, but would instead be a late adopter of innovations, taking a conservative view of new service development and focusing upon a narrow segment of the market to retain its existing core business activities. As Miles and Snow (1978) argue, a defender will “devote primary attention to improving the efficiency of their existing operations”. A reactor would have no consistent substantive stance because it “seldom makes adjustment of any sort until forced to do so by environmental pressures”. It is, therefore, likely to have its formal stance imposed by external agencies such as regulators. Even if it is instructed to behave like a prospector, for example, it may lack the culture and expertise to adopt this strategy successfully.

Strategic planning process refers to the various stages of strategic planning approaches adopted by various organizations. Many traditional strategy scholars (such as Choo, 1992; Bryson, 1995) divide the strategy process into different phases: environmental analysis, formulation of vision and strategy, implementation and control. The varying approaches have given rise to a bewildering array of competing or overlapping conceptual models, resulting in model proliferation. Elbanna and Child (2007) developed an integrative strategic planning process model which took into account the following three recommendations: first, to encompass different perspectives in order to develop a more complete model of the strategic decision-making. Second, to investigate the strategic decision-making process dimensions in relation to the synoptic and incremental-political debate (Elbanna, 2006; Grant, 2003); third, to conduct research in a non-American or non-British setting, in the case of Elbanna and Child, it was in Egypt.

Elbanna and Child’s model posits that the strategic decision-making process has a direct influence on strategic decision effectiveness, and that this relationship is moderated by: decision-specific characteristics; environmental factors; and firm characteristics. The variables included in the model are those associated with the different perspectives mentioned and have been the subject of theoretical interest and empirical support. The fact that they have been of interest to many researchers increases the scope for comparing the findings with those of previous investigations.

Corporate performance is about effectiveness and efficiency of an
organization. Organizational effectiveness is the measure of how successful organizations achieve their missions through their core strategies; it focuses on the unique capabilities that organizations develop to realize the desired success (McCann, 2004). A corporate can be said to be efficient if it is using the most appropriate method of production which consumes the least quantity of inputs (Richard & Tomassi, 2001). It has been argued that appropriate strategy execution promotes efficiency, which in turn leads to better organizational performance (Duque-Zuluaga & Scheider, 2008).

The relationship between firm strategic planning efforts and firm performance received considerable attention during the 1970s, 1980s and 1990s when scholars and management practitioners wanted to know the relationship between strategic planning and organizational performance. Pearce et al (1987) admits that the relationship between formal strategic planning and organizations economic performance is a controversial, problematic and unresolved issue. Falshaw, Glaister and Tatoglu (2006) also share the same view that research on the relationship between formal strategic planning and organizational performance has proved inconclusive.

According to Falshaw, Glaister and Tatoglu (2006), early studies (Herold, 1972; Thune and House, 1970) suggest that formal strategic planning enhanced performance and later studies (e.g. Shrader et al., 1984; Scott et al., 1981) concluded that there were no clear systematic relationship between formal strategic planning and firm performance. In their study, Eastlack and McDonald (1970) found that performance was better in those firms where managers were heavily involved in strategic planning process. Majority of the studies (Schwenk and Shrader, 1993; Miller and Cardinal, 1994) have indicated that strategic planning results in superior financial performance. Miller and Cardinal (1994) undertook a synthesis of more than two decades of research on relationship between strategic planning and firm performance and came to conclusion that strategic planning positively influences firm performance. The fact that these studies accounted for factors responsible for past research contradictions (e.g., methodological flaws, non-robust statistical methods) provides additional support for their conclusions. Falshaw, Glaister and Tatoglu (2006) did not observe any relationship between formal strategic planning process and subjective company performance.

The centrality of performance in the life of a corporation warrants close focus in its conceptualization and measurements. Measuring firm performance has been a major challenge for management’s scholars and business executives (Simerly & Mingfang, 2000) because performance is a multidimensional construct which cannot be measured by any single index. The traditional view of performance measurement relies heavily on financial and accounting datasuch as earnings per share (EPS), return on assets (ROA) and return on equity (ROE). The effects of traditional performance measurements on shareholder (market) value, has been discussed for some time (Stewart 1991; Stern 1993). Carton and Hofer (2006) observes that the most common measure used to present organizational performance is profitability, a measure that is limiting in many aspects.
Traditional performance measures have been criticized for encouraging short termism, lacking in strategic focus, and not being externally focused (Lynch and Cross, 1991). In an attempt to overcome these criticisms, Performance Management frameworks have been developed to encourage more balanced performance measurements. Kaplan and Norton (1993) developed a balanced scorecard (BSC) that is intended to provide a comprehensive view of the business. The BSC is a performance measurement system as well as a strategic management tool that addresses shortcomings of traditional performance measurement systems.

The BSC measures across four hierarchical perspectives. The first is the financial perspective. The financial perspective is considered the highest-level perspective. Companies improve shareholder value through a revenue strategy and a productivity strategy. The outcome measurements are return of investment and profit. We use profitability of the State Corporations in this study. The second is the internal business process perspective which encompasses the entire internal value, which includes innovation, customer management, operational, and regulatory (Kaplan and Norton, 2001). The third is the customer perspective, which focuses organizations on the external environment and allows firms to emphasize customer needs, which includes customer satisfaction and market share. The fourth and the last is the learning and growth perspective. Outcome measures of the learning and growth perspective become indicators of the outcomes of each of the three perspectives above it in the hierarchy.

Employees with higher skills and knowledge are compensated with higher salaries and employee benefits (Milkovich and Newman, 2002). The employee skills could increase internal business process perspective (Bryant et al., 2004). Common outcome measures include employee satisfaction, employee retention, employee productivity and turnover (Kaplan and Norton, 2004). According to Carton and Hofer (2006), organizational growth, which encompasses all aspects of growth including employee and sales are distinct and good measure of performance. For this reason, Carton and Hofer (2006) explain that sales growth and employee growth have been frequently used in many empirical studies as a measure of organizational performance.

Firm characteristics are human devised firm specific attributes in the firm’s internal environment which defines the context in which decisions are made and implemented. Performance differences among firms can be explained to a good extent by the various characteristics of firms. Every organization has its own characteristics which makes it successful or unsuccessful in a competitive environment. Some of the most common characteristics associated with a firm are firm size, age, diversification, ownership structure, board size and qualification.

According to Hulland and Rouse (2007), the most important elements that define firm characteristics are the firm size and age. The description of a firm size has been approached in a number of ways. Some scholars have measured it in terms of number of employees (Holzmuller and Kasper, 1991; Yang, Leone and Alden, 1992). Others have approached it in terms
Larger firms are more likely to have more layers of management, greater number of departments, increased specialization of skills and functions, greater formalization of activities which includes strategic planning, greater centralization, and greater bureaucracy than smaller firms (Daft, 1995). Firm size has also been shown to be related to industry-sunk costs, concentration, vertical integration, and overall industry profitability (Dean et al., 1998). According to Glaister, Dincer, Tatoglu, Demirbag and Zaim (2008), strategic planning is often seen as a more useful management tool for relatively larger firms, although small and medium sized firms also use it. Miller and Cardinal (1994) argue that larger firms are more complex and require more control and integration, therefore strategic planning may affect their performance relatively more. Powel (1994) conducted a study and found that the correlation between strategic planning and performance was greater among large firms than among small firms.

Studies indicate that the age of the firm affects a firm in many ways (Cooper and Kleinschmidt, 1985; Czinkota & Ursic, 1991). It has been observed that as organizations grow in age, they refine their routines and strategies and returns become more certain (Halliday and Powell, 1993). Age may also mean an understanding of the competitive environment as well as an ability to compete and at least survive in the market. Learning can occur as a by-product of day-to-day activities or because firms invest in research and development, hire human capital, or train their employees; learning by doing effects can also spill over within the organization or from other firms in the same or in other industries (Bahk and Gort, 1993). Another consistent topic in the organizational literature is that age increases organizational inertia, causing firms to experience difficulty in implementing changes to their evolutionary trajectories (Gresov, Haveman, and Oliva, 1993). As organizations grow, they become more complex since they must deal with a growing number of interdependencies, and they develop specialized subunits and routines to resolve them. According to Agarwal and Gort (2002), old age may make knowledge, abilities, and skills obsolete and induce organizational decay. It has also been argued that how an organization argues and performs is a function of its own history (Katz, 1982).

Diversification has also been viewed as an important firm characteristic (Hoskisson and Hitt, 1990). Firms divest businesses or portions thereof for many reasons. One of the most common reasons why firms divest is poor performance (Hoskisson et al., 1994). Many researchers have studied the relationship between firm diversification and performance. Datta et al., (1991), Hoskisson and Hitt (1990), and Ramanujam and Varadarajan (1989) provide excellent surveys, analyses, and critiques of previous research findings on diversification and performance within an organization. An important observation in diversification research is that there does not seem to be any consistent or conclusive findings between firm diversifications and performance. Stimpert and Duhaime (1997) argue that the inconsistencies are due to the fact that diversification impacts other variables, which in turn determines firm

of annual sales volume (Holden, 1986; Christensen, de Rocha and Gertner, 1987). Larger firms are more likely to have more layers of management, greater number of departments, increased specialization of skills and functions, greater formalization of activities which includes strategic planning, greater centralization, and greater bureaucracy than smaller firms (Daft, 1995). Firm size has also been shown to be related to industry-sunk costs, concentration, vertical integration, and overall industry profitability (Dean et al., 1998). According to Glaister, Dincer, Tatoglu, Demirbag and Zaim (2008), strategic planning is often seen as a more useful management tool for relatively larger firms, although small and medium sized firms also use it. Miller and Cardinal (1994) argue that larger firms are more complex and require more control and integration, therefore strategic planning may affect their performance relatively more. Powel (1994) conducted a study and found that the correlation between strategic planning and performance was greater among large firms than among small firms.

Studies indicate that the age of the firm affects a firm in many ways (Cooper and Kleinschmidt, 1985; Czinkota & Ursic, 1991). It has been observed that as organizations grow in age, they refine their routines and strategies and returns become more certain (Halliday and Powell, 1993). Age may also mean an understanding of the competitive environment as well as an ability to compete and at least survive in the market. Learning can occur as a by-product of day-to-day activities or because firms invest in research and development, hire human capital, or train their employees; learning by doing effects can also spill over within the organization or from other firms in the same or in other industries (Bahk and Gort, 1993). Another consistent topic in the organizational literature is that age increase organizational inertia, causing firms to experience difficulty in implementing changes to their evolutionary trajectories (Gresov, Haveman, and Oliva, 1993). As organizations grow, they become more complex since they must deal with a growing number of interdependencies, and they develop specialized subunits and routines to resolve them. According to Agarwal and Gort (2002), old age may make knowledge, abilities, and skills obsolete and induce organizational decay. It has also been argued that how an organization argues and performs is a function of its own history (Katz, 1982).

Diversification has also been viewed as an important firm characteristic (Hoskisson and Hitt, 1990). Firms divest businesses or portions thereof for many reasons. One of the most common reasons why firms divest is poor performance (Hoskisson et al., 1994). Many researchers have studied the relationship between firm diversification and performance. Datta et al., (1991), Hoskisson and Hitt (1990), and Ramanujam and Varadarajan (1989) provide excellent surveys, analyses, and critiques of previous research findings on diversification and performance within an organization. An important observation in diversification research is that there does not seem to be any consistent or conclusive findings between firm diversifications and performance. Stimpert and Duhaime (1997) argue that the inconsistencies are due to the fact that diversification impacts other variables, which in turn determines firm
performance. For example, they suggest that diversification may influence performance indirectly by increasing administrative complexity and bureaucratic costs.

Firm diversification is measured as a categorical variable (less versus more diversified) based on the median Herfindahl index of the sample firms. The Herfindahl index is the sum of the ratio of the squared fraction of sales of each business segment to the firm’s total sales. The value of this index ranges between 0 and 1. A low value of index indicates a more diversified firm, whereas a high value indicates a less diversified firm (Palepu, 1985). The Herfindahl index is computed from data on sales by segment and product line.

It has been suggested that organizational innovation plays a key role in firm performance and competitiveness (Farley et al. 2008; Jimenez-Jimenez and Sanz-Valle, 2011). Innovation has also been linked to organizational performance in some studies (Martins & Terblanche, 2003). According to Kelly and Kumar (2009), innovation and firm performance are critical characteristics which can contribute to a developing economy’s growth and competitiveness. This is because innovativeness shows the extent to which the firm is geared to supporting new ideas, novelty, and creative processes resulting in new and innovative products, technology, process, and structure and this includes their generation, acceptance, adoption or implementation (Damanpour, 1991).

Firm ownership is another important characteristic of a firm. As pointed out by Keng and J.uan (1986), the ownership structure of a firm affects its characteristics in many ways. Board size and competence is another important firm characteristic. Narrative reviews show that board composition performance studies have yielded mixed results (Finkelstein & Hambrick, 1996; Johnson, Daily, & Ellstrand, 1996; Zahra & Pearce, 1989). The perspective that larger boards are associated with higher levels of firm performance has its foundation on the dependence theory (Alexander, Fennell, & Halpern, 1993; Goodstein, Gautam, & Boeker, 1994; Pfeffer & Salancik, 1978). Dependence theory holds the view that board size may be a measure of an organization’s ability to form environmental links to secure critical resources (Goodstein et al, 1994). According to Pfeffer and Salancik (1978), the greater the need for effective external linkage, the larger the board should be.

Some scholars are of the view that board size has negative correlation with performance measures (Yermack, 1996; Brown and Maloney, 1999). According to Hermalin and Weisbach (1991), large boards creates free-riding of some board members which results in low monitoring effects. Jensen (1993) and Lipton and Cain (2009) argue that as board size increases, it becomes difficult for an additional director to increase value. Goodstein et al. (1994) is of the view that largeness of an organization can significantly inhibit a board's ability to initiate strategic actions, this view is consistent with those of Judge and Zeithaml (1992) who are of the idea that larger boards may be less participative, less cohesive, and less able to reach consensus. According to Goodstein et al. (1994), larger boards are
less likely to become involved in strategic decision making; which means that board size inhibited strategic change through reorganization.

Yermac (2006) found out that board smallness was associated with higher market performance such as return on assets and return on sales. Smaller boards are said to have the ability to adopt and exercise a controlling role (Chaganti et al., 1985). Evidence has been tabled to the effects that director ownership in a firm correlates with better performance (Hermalin and Weisbach, 1991). Jackson and Holland (1998) identified six competencies of effective boards as contextual understanding, educational background, interpersonal relations, analytical skills, political maneuvers, and strategic capabilities. Some scholars have based board competence measurements on education background, management experience, industry experience and financial experience (Hau and Thum, 2010).

Boards are also usually comprised of people of different background and characteristics. Variation in characteristics may take the form of demographic aspects such as age, education, experience, tenure of service among others. Individual board members contributes to the overall board characteristics, these characteristics influence board members decisions hence strategic choices, and inclination to strategic change. The insufficient breadth of expertise in smaller boards has several implications on the strategic direction of an organization, which may include: an inadequate recognition of need to initiate or support strategic change, a lack of clear understanding of alternatives, and a lack of confidence in recommending strategic change. All these factors imply a lower inclination for strategic change for relatively small boards (Kariuki, Awino and Ogutu, 2012).

The foregoing literature review suggest the following conceptual framework (modeled in figure 1)

![Conceptual Model](http://journals.uonbi.ac.ke/damr)

**Figure 1: Conceptual Model**
3. METHODS AND RESULTS

The target population in this study was state corporations in Kenya (both purely commercial and those with strategic functions). Out of the 55 state corporations, 34 are purely commercial and 21 are corporations with strategic functions according to the definition of the 2013 Presidential Task Force on Parastatal Reforms in Kenya. Out of the 55 state corporations, two are outside Kenya (Simlaw Seeds Tanzania and Simlaw Seeds Uganda); the two were therefore left out of the study because they present a contextual environment which is outside Kenya.

A census survey was carried out on all the remaining 53 state corporations because of the relatively small number of the population. State corporations have been considered worth the study because they promote economic growth and development; are critical to building the capability and technical capacity of the state in facilitating and/or promoting national development which are important instruments in improving the delivery of public services including meeting the basic needs of citizens and have been variously applied to the creation of good and widespread employment opportunities in various jurisdictions and are useful for building of international partnerships (Government of Kenya, 2013).

This study relied on primary data. Primary data was collected using questionnaires. The questionnaire contained open ended and structured questions and was divided into six sections. The questionnaire targeted either Chief Executive officers and Strategic planning managers or the finance officers of the state corporations in Kenya because of the important role they play in strategic planning and performance management. Hambrick (1981) explains that Chief Executive Officers are more likely to provide accurate information about their organizations strategies. But because they are always busy, strategic planning and finance managers are better placed to provide the same information. The questionnaires were administered by the help of research assistants. The questionnaire contained structured, semi-structured and open ended questions so as to be able to collect qualitative and quantitative data. The following hypothesis was tested

Hypothesis: Firm characteristics have no significant moderating effects on the relationship between strategic planning and performance of state corporations.

In order to test the hypothesis, a test was done to determine the interaction effects of firm characteristics on the relationship between strategic planning and organizational performance, specifically, an interaction analysis was conducted. An interaction analysis is an interdisciplinary method for the empirical investigation of the interaction of different objects in the environment (Jordan and Henderson, 1994). An interaction effect may be modeled by including the product term $X_1 \times X_2$ as an additional variable in the regression, known as a two-way interaction term. If there are $k$ predictor variables in the multiple regression, there are $k!/2!(k-2)!$ potential two-way interactions, and analogously for three-way and higher-order interactions. Figure 2 is a model illustrating the relationship among the independent, moderator and dependent variable. Strategic planning is the predictor variable ($X$), firm
characteristics is the moderator variable (M), and firm performance is the dependent variable (Y).

**Figure 2: A model of independent, mediator and dependent variable**

Analyses were made following the steps suggested by Baron and Kenny (1986) in conducting moderation test. In testing the interaction effects of firm characteristics on the relationship between strategic planning and firm performance, the problem of multicollinearity had to be dealt with.

### 3.1 Multicollinearity Test

Multicollinearity which is multi-correlations with sufficient magnitude and has the potential to adversely affect regression estimates (Fox, 1992). According to Aiken and West (1991), multicollinearity can inflate the value of R² (the proportional variation in the dependent variable which can be explained by independent variable) even when none of the beta weights are statistically significant. Multicollinearity can also produce bizarre beta weight estimates, and may lead to enormous changes in the model whenever a predictor variable is added or removed. According to Fox (1992), multicollinearity is better measured using tolerance and Variance Inflation Factor (VIF). Tolerance is the percentage of variance in the independent variable that is not accounted for by other independent variables, while Variance Inflation Factor is the reciprocal of tolerance. Fox (1992) points out that VIF of 3 or greater are often cited as indicative of problematic collinearity and have the potential to adversely affect regression estimates. A test for multicollinearity revealed that competitive environment (VIF of 1.392) and strategy implementation (VIF of 1.392) have low level of multicollinearity with firm characteristics.
Table 1: Multicollinearity with firm characteristics

<table>
<thead>
<tr>
<th>Coefficients&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Tolerance</td>
</tr>
<tr>
<td>1</td>
<td>IVxMod2_Ctr</td>
</tr>
<tr>
<td>IVxMod3_Ctr</td>
<td>.719</td>
</tr>
</tbody>
</table>

a. Dependent Variable: IVxMod1_Ctr

To avoid any problem associated with multicollinearity with interaction term, strategic planning and firm characteristics variables were subtracted from their averages (centered) before a regression analysis was run. While analyzing the transformed scores, the effects of other variables were considered to be null. According to Baron and Kenny (1986), even if the basic effect in the 1<sup>st</sup> and 2<sup>nd</sup> steps is found to be insignificant, but the interaction variable is found to be significant, it is sufficient for assessment of moderation effect.

Table 2(a): Means of the variables

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic Planning</td>
<td>35</td>
<td>4.0349</td>
<td>.40514</td>
<td>.164</td>
</tr>
<tr>
<td>Firm Characteristics</td>
<td>35</td>
<td>2.8643</td>
<td>.75328</td>
<td>.567</td>
</tr>
<tr>
<td>CompetitiveEnvironment</td>
<td>35</td>
<td>2.9560</td>
<td>.49017</td>
<td>.240</td>
</tr>
<tr>
<td>Strategy Implementation</td>
<td>35</td>
<td>3.6179</td>
<td>.77290</td>
<td>.597</td>
</tr>
<tr>
<td>Firm Performance</td>
<td>35</td>
<td>3.3398</td>
<td>.72943</td>
<td>.532</td>
</tr>
</tbody>
</table>

Valid N (listwise) 35

The SPSS syntax was used to determine the means, center the variables and to generate an interaction term. From table 4.4(a), strategic planning had the highest mean of 4.0349, followed by strategy implementation at a mean of 3.6179. Firm characteristics had the least mean of 2.8643. Moderation analysis was undertaken using regression because both the independent variable and moderating variable had a scale level data (Faraway, 2002).
Table 2(b): Model Summary of Strategic Planning, Firm Characteristics, & Firm Performance

<table>
<thead>
<tr>
<th>Mode</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Change Statistics</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.443a</td>
<td>.196</td>
<td>.172</td>
<td>.66393</td>
<td>8.040</td>
</tr>
<tr>
<td>2</td>
<td>.476b</td>
<td>.227</td>
<td>.178</td>
<td>.66118</td>
<td>1.275</td>
</tr>
<tr>
<td>3</td>
<td>.479c</td>
<td>.229</td>
<td>.155</td>
<td>.67067</td>
<td>1.101</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), IV_Ctr
b. Predictors: (Constant), IV_Ctr, Mod1_Ctr
c. Predictors: (Constant), IV_Ctr, Mod1_Ctr, IVxMod1_Ctr
d. Dependent Variable: Firm Performance

From Table 2(b), ∆R² = 0.003, ∆F(3,31)=0.101, p = 0.042. Because p<0.05, the interaction term is significant, therefore firm characteristics has a moderation effects on the relationship that exists between strategic planning and firm performance. Hypothesis one, which states that firm characteristics has no significant effect on the relationships between strategic planning and the performance of state corporations is therefore not supported, and thus rejected.

Table 2(c): ANOVA of Strategic Planning, Firm Characteristics, and Firm Performance

<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>Regression</td>
<td>3.544</td>
<td>1</td>
<td>3.544</td>
<td>8.040</td>
<td>.008b</td>
</tr>
<tr>
<td>Residual</td>
<td>14.547</td>
<td>33</td>
<td>.441</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>18.091</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regression</td>
<td>4.101</td>
<td>2</td>
<td>2.051</td>
<td>4.691</td>
<td>.016c</td>
</tr>
<tr>
<td>Residual</td>
<td>13.989</td>
<td>32</td>
<td>.437</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>18.091</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regression</td>
<td>4.147</td>
<td>3</td>
<td>1.382</td>
<td>3.073</td>
<td>.042d</td>
</tr>
<tr>
<td>Residual</td>
<td>13.944</td>
<td>31</td>
<td>.450</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>18.091</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: FirmPerformance
b. Predictors: (Constant), IV_Ctr
c. Predictors: (Constant), IV_Ctr, Mod1_Ctr
d. Predictors: (Constant), IV_Ctr, Mod1_Ctr, IVxMod1_Ctr
ANOVA was used to determine significance of the models, and to establish if the amount of variance accounted for in model 3 (with interaction term) is significantly more than model 2 and model 1 (without the interaction). From the ANOVA table, model 1 (without interaction term) is $F(1,33) = 8.040, p<.05$, and is significant. Model 2 (without interaction term) is $F(2,32) = 4.691, p<.05$, and is significant. Model 3 (with interaction term) is $F(3,31) = 3.073, p<.05$, and is also significant.

### Table 2(d): Coefficient of Strategic Planning, Firm Characteristics, and Firm Performance

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t Sig.</th>
<th>95.0% Confidence Interval for B</th>
<th>Correlations</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B Std. Error Beta Lower Bound</td>
<td>Upper Bound Zero- order Partial Part Tolerance VIF</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>3.340 .112</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV_Ctr</td>
<td>.797 .281</td>
<td>.443</td>
<td>2.835 .008</td>
<td>.225</td>
<td>1.369</td>
<td>.443</td>
</tr>
<tr>
<td>IV_Ctr</td>
<td>.756 .282</td>
<td>.420</td>
<td>2.677 .012</td>
<td>.181</td>
<td>1.330</td>
<td>.443</td>
</tr>
<tr>
<td>Mod1_Ctr</td>
<td>.171 .152</td>
<td>.177</td>
<td>1.129</td>
<td>.267</td>
<td>-.138</td>
<td>.481</td>
</tr>
<tr>
<td>IV_Ctr</td>
<td>.759 .287</td>
<td>.422</td>
<td>2.650</td>
<td>.013</td>
<td>.175</td>
<td>1.344</td>
</tr>
<tr>
<td>Mod1_Ctr</td>
<td>.168 .154</td>
<td>.173</td>
<td>1.088</td>
<td>.285</td>
<td>-.147</td>
<td>.483</td>
</tr>
<tr>
<td>IVxMod1_Ctr</td>
<td>.107 .335</td>
<td>.050</td>
<td>.318</td>
<td>.753</td>
<td>-.578</td>
<td>.791</td>
</tr>
</tbody>
</table>

a. Dependent Variable: FirmPerformance

As can be depicted from Table 2(d), the first step of regression, strategic planning was entered. The obtained beta (0.797) is like a Pearson Correlation. The positive relationship tells that firms which reported higher level of strategic planning also reported higher level of performance. The second step shows that the main effects of firm characteristics with a beta of (.171) did not significantly explain the new variance in the dependent variable, i.e., did not significantly yield a significant p-value. The third step indicates that the interaction term with a beta of (.107) did not significantly add a new variance. t test and sig show the outcomes of each independent variable.

Concluding on the beta value of an interaction term of (.107) requires graphing in a ModGraph. The nine cell means required for graphing the interaction was generated. Both strategic planning and corporate performance values were trichotomized as high, medium, and low in the ModGraph. The ModGraph in figure 3 was then used to enhance presentation of the effects of firm
characteristics on the relationship between strategic planning and firm performance.

Table 2(e): Excluded variables

<table>
<thead>
<tr>
<th>Model</th>
<th>Excluded Variablesa</th>
<th>Beta</th>
<th>t</th>
<th>Sig.</th>
<th>Partial Correlation</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Mod1_Ctr</td>
<td>.177</td>
<td>1.129</td>
<td>.267</td>
<td>.196</td>
<td>.983</td>
</tr>
<tr>
<td>IVxMod1_Ctr</td>
<td></td>
<td>.063</td>
<td>.396</td>
<td>.695</td>
<td>.070</td>
<td>.999</td>
</tr>
<tr>
<td>2</td>
<td>IVxMod1_Ctr</td>
<td>.050</td>
<td>.318</td>
<td>.753</td>
<td>.057</td>
<td>.994</td>
</tr>
</tbody>
</table>

a. Dependent Variable: FirmPerformance
b. Predictors in the Model: (Constant), IV_Ctr
c. Predictors in the Model: (Constant), IV_Ctr, Mod1_Ctr

Table 2(f): Collinearity of Strategic Planning, Firm Characteristics, and Firm Performance

<table>
<thead>
<tr>
<th>Model</th>
<th>Dimension</th>
<th>Eigenvalue</th>
<th>Condition Index</th>
<th>(Constant)</th>
<th>Variance Proportions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>IV_Ctr</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1.000</td>
<td>1.000</td>
<td>.50</td>
<td>.50</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>1.000</td>
<td>1.000</td>
<td>.50</td>
<td>.50</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1.130</td>
<td>1.000</td>
<td>.00</td>
<td>.44</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>1.000</td>
<td>1.063</td>
<td>1.00</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>.870</td>
<td>1.139</td>
<td>.00</td>
<td>.56</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1.144</td>
<td>1.000</td>
<td>.12</td>
<td>.18</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>1.109</td>
<td>1.016</td>
<td>.27</td>
<td>.27</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>.924</td>
<td>1.113</td>
<td>.47</td>
<td>.22</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>.823</td>
<td>1.180</td>
<td>.14</td>
<td>.33</td>
</tr>
</tbody>
</table>

a. Dependent Variable: FirmPerformance

Table 2(g): Residuals of Strategic Planning, Firm Characteristics, and Firm Performance

<table>
<thead>
<tr>
<th>Residuals Statisticsa</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predicted Value</td>
<td>2.6079</td>
<td>4.0448</td>
<td>3.3398</td>
<td>.34924</td>
<td>35</td>
</tr>
<tr>
<td>Residual</td>
<td>-1.55879</td>
<td>1.08667</td>
<td>.00000</td>
<td>.64040</td>
<td>35</td>
</tr>
<tr>
<td>Std. Predicted Value</td>
<td>-2.096</td>
<td>2.018</td>
<td>.0000</td>
<td>1.00</td>
<td>35</td>
</tr>
<tr>
<td>Std. Residual</td>
<td>-2.324</td>
<td>1.620</td>
<td>.0000</td>
<td>.955</td>
<td>35</td>
</tr>
</tbody>
</table>

a. Dependent Variable: FirmPerformance
3.2 ModGraph
After hierarchical regression analyses were made in the analysis of moderation effect, ModGraph was used to enhance the presentation of moderating effects. According to Jose (2008), Modgraph is a moderation tool that helps us visualize the moderating relationship of the third variable on two variables. Modgraph allows one to enter statistical information obtained from multiple regression output in order to compute the equations that yield cell means necessary for the graphical display of statistical interactions. Data gathered from the regression analysis were inserted into Jose’s ModGraph programme. +SD (Standard Deviation) and -1 SD (Standard Deviation) values of averages of predictor and continuous moderator variables were calculated in the Jose’s programme. These values were classified as high, medium and low groups and were used in programme analysis. The figures created are useful for interpreting the theoretical meaning of the obtained statistical interaction.

Input information was taken from the regression analysis output. In particular, unstandardized regression coefficient (B), the mean, and the standard deviation of both strategic planning (the main effect) and firm characteristics (the moderating variable) were entered into Paul Jose’s ModGraph tool, a programme used to compute cell means for the graphical display of moderational analyses. In addition, the menu page requires the B for the interaction term and the constant. All of the Bs were obtained from the multiple regression output generated by Paul Jose’s ModGraph tool. The means and standard deviations were computed in a simple descriptive statistics run on the same data as shown in table 4.4(a). Obtaining all B values (unstandardized slopes) from the full regression model gave the following:

Main effect:
\[ B = 0.759, \text{ mean } = 0 \text{ (centred)}, \text{ SD } = 0.40514 \]
Moderating:
\[ B = 0.168, \text{ mean } = 0 \text{ (centred)}, \text{ SD } = 0.75328 \]
Interaction term and constant:
\[ B = 0.107 \]
Constant: 3.336

\[ Y = a + b_1cX_1 + b_2cM + b_3cXcM + e \]
\[ Y = 3.336 + 0.759cX_1 + 0.168cM + 0.107cXcM + e \]
Where:
- \( Y \) is the firm Performance
- \( a \) is the constant
- \( b_1cX_1 \) is the main effects
- \( b_2cM \) is the moderator
- \( b_3cXcM \) is the interaction term and
- \( e \) is the error term
The slope of independent variable regression (strategic planning) differs for various levels of the moderating variable (firm characteristics). The graph shows an enhancing effects such that when strategic planning increase on horizontal axis in all the three straight lines, firm performance level in the vertical axis increase. As illustrated on the graph, these three lines represent firm characteristics in three different categories. "High" is typically defined as one standard deviation above the mean, "medium" is the mean, and "low" is one standard deviation below the mean. The figure indicates that the higher the category of moderating variable, the higher the level of firm performance.

**3.3 Results of Hypothesis testing**

To test the hypothesis that firm characteristics moderates the relationship between strategic planning and firm performance, a hierarchical multiple regression analysis was conducted. In the first step, two variables were included: strategic planning and firm characteristics. These variables accounted for a significant amount of variance in firm performance, $R^2 = 0.196$, $F(1,33) = 8.080$, $p<0.05$. To avoid any potential problem with multicollinearity with the interaction term, the variables were centered and an interaction term between strategic planning and firm characteristics was created and added into the regression model (Aiken and West, 1991). The interaction term between strategic planning and firm characteristics added to the regression model accounted for a small proportion of the variance in firm performance, $\Delta R^2 = 0.003$, $\Delta F(3,31)=0.101$, $p = 0.042$. Because $p<0.05$, the interaction term was significant, hence firm characteristics have a moderating effects on the relationship between strategic planning and firm performance.
performance. The hypothesis was accepted and hence the null hypothesis is rejected.

4. CONCLUSION

The objective of the study was to determine the moderating effects of firm characteristics on the relationship between strategic planning and performance of state corporations in Kenya. The study hypothesized that firm characteristics have no significant moderating effects on the relationship between strategic planning and performance of state corporations. To test the hypothesis that firm characteristics moderate the relationship between strategic planning and firm performance, a hierarchical multiple regression analysis was conducted. In the first step, two variables were included: strategic planning and firm characteristics. These variables accounted for a significant amount of variance in firm performance, $R^2 = 0.196$, $F(1,33) = 8.080$, $p<0.05$. To avoid any potential problem of multicollinearity with the interaction term, the variables were centered and an interaction term between strategic planning and firm characteristics was created and added into the regression model (Aiken and West, 1991). The interaction term between strategic planning and firm characteristics was added to the regression model, and it accounted for a small proportion of the variance in firm performance, $\Delta R^2 = 0.003$, $\Delta F(3,31)=0.101$, $p=0.042$. Because $p<0.05$, the interaction term was found to be significant, thus confirming that firm characteristics have a moderating effect on the relationship between strategic planning and corporate performance. The null hypothesis was therefore rejected.

5. IMPLICATION OF STUDY

The findings of this study form an important basis of making some important recommendations. The recommendations are made in terms of theoretical contributions, methodological contribution, policy contribution and benefits the study avails to the scholars and practitioners of strategic management.

5.1 Theoretical contributions

With very few theories in existence in the academic world (Wacker, 1998), it is expected that scholarly research should contribute to and extend the current literature and theories by filling in the existing gaps (Varadarajan, 2003). The study findings that firm characteristics has a moderating effect on the relationship between strategic planning and performance of Kenya’s state corporations is noteworthy contribution to existing knowledge and literature. The study findings make important theoretical contributions to the ongoing research in this field of study.

5.2 Methodological Contributions

With regard to methodology, it is important to note that social science research is replete with controversies and disagreements over social and political phenomena. This has resulted in endless fundamental philosophical debates on how to study the social world. There is therefore no doubt that methodological choices have direct implications on every study and this study is no exception. This study was guided by positivist paradigm which is rooted in atomism, quantification and operationalization. Findings therefore support positivist ability to produce proven results of an empirical study. The study
employed cross-sectional survey design, which is based on prevalence rather than incidental cases. Cross sectional survey reveal the presence or absence of a relationship between variables and prevalent (existing cases). This secures the place of cross-sectional study design despite the facts that it may result in prevalence bias (Nayman’s bias). The successful application of hierarchical regression analysis, particularly interaction analysis as a statistical approach confirms the role of regression in research.

5.3 Policy contributions
This study makes important contribution to policy makers at national level. For instance, the policy makers at the Kenyan ministry of devolution, which houses the Kenyan Government Investment Corporation (KGIC), a body established to oversee and supervise all government investment activities, will gain important insight on strategic management, a key component of performance contracting meant to drive Results Based Management (RBM) on GOES since 2003. The insight on factors moderating the relationship between strategic planning and corporate performance will enable KGIC issue policy directives and guidelines that are informed by prevailing factors that characterize the corporations. The strategic management policy directives and guidelines may also find their applicability beyond ministry of devolution and the nation of Kenya. The neighboring East African Community (EAC) countries which have a lot in common with Kenya when it comes to operations of corporations may equally find the study useful.

5.4 Contribution to other stakeholders
Findings of the study are also expected to be of important insight to strategic planning managers, strategic management consultants and strategic management trainers across the sectors, both public and private. The study findings indicate that while conducting strategic planning, an exercise which usually involve all top level management of corporations, firm characteristics should be given keen attention if the resulting strategic plan has to have significant impact on the performance of the corporation. The insight obtained is expected to shape the definition of corporate characteristics by this category of stakeholders.

REFERENCES


Cadogan, J. W., Diamantopoulos, A. & Siguaw, J. A. (2002). Export market-


Subramanian, A. & S. Nilakanta,(1996). Organizational Innovativeness: Exploring the Relationship Between Organizational Determinants of Innovation, Types of


