The Influence of Enterprise Risk Management on the Performance of Kenyan State-Owned Corporations

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Abstract: This journal highlights a critical review on the influence of enterprise risk management on the performance of Kenyan state-owned corporations. A cross-sectional descriptive survey was used and data collected from 92 State Corporations using a semi-structured questionnaire. Data was analysed using descriptive and inferential statistics. Hypotheses were tested using both simple and multivariate regression analysis while Baron and Kenny model was used to test for moderating effects. The findings indicated that top management demographics had a statistically significant influence on the relationship between Enterprise risk management and organizational performance. The results supported Contingency theory of Enterprise risk management and Stakeholders theory.

Keywords: Enterprise risk management, performance, state-owned corporations

1. Introduction
Risk management issues have grown in importance within the context of both non-financial and financial organizations undoubtedly with the reason that the business environment is rapidly changing and constantly hardening (Kosmala, 2014; Verlag, 2014). According to Culp (2002), the discussion of risk management is still considered odd by several organizations especially in the non-financial sector. Enterprise risk management (ERM) enhances organizations’ effective management and assessment of risks, in a timely and efficient manner, which in turn enables top management to re-evaluate and improve overall performance of the organization in the dynamic operating environment (Lundqvist, 2014). There is an increase in literature tending to link performance and risk management in organizations globally (Rizzi et al., 2011). However, in as much as organizations acknowledge the importance of ERM on performance, it is similarly important to understand whether this linkage applies across all organizations and how other factors may influence this relationship (Brustbauer, 2014).

Kenyan state-owned corporations (SCs) are created to facilitate government in fulfilling its core responsibility of achieving sustained socio-economic development (Kobia & Mohamed, 2006). These state agencies are therefore expected to participate in policy implementation and revamping service delivery across the public sectors including; energy, transport, infrastructure, health, communications, tourism, agriculture and education to ultimately attain the aspirations of the country’s Vision 2030 (KIPPRA, 2009). Despite the vital role of SCs in delivering of government’s core objectives, SCs are experiencing unprecedented risks emanating from the macro-environment and impacting on their performance (PWC, 2012). This has brought to question the performance of SCs when compared to their heavy running budgets that burdens the citizens (Kobia & Mohamed, 2006). Accordingly, the government of Kenya under its public sector reforms programme, institutionalized ERM in SCs under the aegis of government performance contracting (PWC, 2012). However, the scant research on the relationship between ERM and the performance of SCs has offered mixed findings (McShane et al., 2011). Additionally, the adoption of this growing practice is seemingly slow (PWC, 2015). It is for this reason that a review of the influence of Enterprise risk management on the performance of State Corporations, ought to be undertaken, thus the impetus for this study.

2. Literature Review
This study reviewed the theories pertinent to ERM and performance. These include; Contingency theory of ERM (Kaplan & Mike, 2014) and Stakeholder theory (Freeman, 1984) supported by Upper Echelon theory, (Hambrick & Mason, 1984) and Open systems theory (Ansoff & McDonnell, 1990). Kaplan and Mike (2014) advanced Contingency theory of ERM, which posits that strategic risk management practice may be more effective through matching ERM with the inherent nature of the organizational types of risks experienced. The essence of a contingency theory of ERM would be, to
find a ‘fit’ between contingent factors and firms’ ERM practices and establish propositions of fit that will result in desired outcomes (Hammond et al., 2006). The theory concludes that to effectively manage risks, it depends on contingent of organizations’ circumstances and context (Kaplan & Mike, 2014). Stakeholder theory advances that organizational performance is a function of how well an organization meets its goals to satisfy stakeholders. It further states that the interconnected networks of stakeholders affect the decision making process and in essence effectiveness and outcome of the firm (Freeman, 1984). Shareholders are an important constituent of stakeholders and profits are a critical output but not necessarily the main one, further whereas the actions of managers may serve the interest of shareholders, there are other important players whose interest must be taken care of too (Child, 1972). Organizational performance according to stakeholder’s theory is viewed as the extent to which the organization satisfies the interest of its stakeholders (Radner & Shepp, 1996). This theory has caused the evolution of performance measurement from the traditional focus on profits which are returns on assets to include other non-financial and intangible measures such as customer-centric perspective and other internal processes (Kaplan and Norton, 1996). Measurement of performance has evolved over time from focusing on financial measures despite its continuing relevance to include Sustainable Balanced Score Card approach (Pfennigstorg, 1977) including contemporary, intangible and externally oriented measure (Kinuu, 2014). This study operationalized organizational performance along the result-based performance management approach, anchored on the Balanced Score Card approach. Contingency theory of ERM that guided the conceptualization of ERM, is one of the key strategic management practices, adopted by the organizations to influence performance of Kenyan State-Owned Corporations. Contingency theory of ERM has however been criticized on the basis that it ignores the endogeneity factors of organizations (McShane et al, 2011) as the theory assumes a constant positive association between ERM and performance even in cases where the influence may not be singly attributed to ERM (Beasley et al, 2006). Seemingly, the theory still requires empirical data especially in different context of ERM such as State Owned corporations. Additionally, the combination of ERM with other variables was necessary to strengthen this theory. This study therefore proposed that:

- Enterprise Risk Management has a significant effect on performance in Kenyan State Owned Corporations

3. Methodology

The unit of analysis was government owned state corporations in Kenya. These corporations were classified into: development or promotional; regulatory; revenue collection; cultural and social services; commercial; educational and professional; and research institutions. According to GoK (2013) there are 187 state corporations spread across the twenty ministries. The target respondents were the chief executive officer (CEOs) or authorized chief risk, chief officer human resource or chief officer, corporate planning officer, depending on the structure of the particular Parastatals (GoK, 2013). The study adopted cross-sectional survey design and applied probability-sampling design with the application of Proportionate Stratified random sampling approach. The estimated total sample size was arrived at using Yamane (1967:886) formulae. Simple random sampling was thereafter applied to select samples within the strata. Primary data was collected through use of structured questionnaire. The study tested for the assumption of the relationship between the dependent and independent variables using regression analysis.

4. Results

A total of 127 questionnaires were administered and ninety-two (92) questionnaires were returned properly filled representing the response rate of 72.4%. According to Babbie (2004), a return rate above 50% is acceptable to analyze and publish, 60% is good, 70% is very good and above 80% is excellent. The response rate is further supported by Fowler (1984) cited in Njeru, (2013) suggest that a response rate of 60% is representative of the population of the study. On the basis of this assertions, 72.4% response rate for this study was considered very good. The study used KMO and Bartlett’s tests shown in Table 1, total variance explained, scree plot and rotated variance matrix to reduce the statements explaining variable enterprise risk management into fewer and meaningful factors. The findings in Table 1 indicated that Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.927>0.5, thus there were sufficient items for each factor. P-value=0.000<0.05 hence the statements on enterprise risk management were homogenous, variables were correlated highly enough to provide a reasonable basis for factor analysis.

Eigen values refer to the variance accounted for by each factor. A factor is useful if its Eigen value > 1. As shown in Table 2, statements measuring enterprise risk management were reduced into three factors (Eigen value >1). The three factors accounted for 74.367% of the variance in the 27 statements. Considering that 74.367%>70% the three factors exhaustive explain the variance in the 27 statements.

The study used orthogonal rotation (Varimax method) as shown in Table 3 and adopted a factor loading of a value > 0.5, arising from this, three factors were arrived at as follows; Context setting, Risk assessment & communication. Majority of the organizations at 36% had more than 1000 employees, followed by 24.7% with 51-100 employees, 16.9% with 251-500 employees, 10.1% with 501-1000 employees, 9% with 101-500 employees and only 3.4% with below 51 employees.

Enterprise risk management variable was analyzed on the subsections namely; context setting, risk assessment, risk evaluation and communication. The study sought the respondents rating on statements relating to enterprise risk management on a five-point Likert scale ranging from 1 = Not at all; 2 = Small extent 3 = Moderate extent 4 = Great extent 5 = Very great extent. The results were as shown in Table 4. The subscale context setting to a large extent; ‘organization has clearly written roles’, ‘structure and responsibilities for its functions’ (mean =4.76 and std dev = 0.603), ‘organization possess a formal strategy to pursue its mission and vision’ (mean =4.70 and std dev = 0.808), ‘performance goals are set periodically to assess whether the organization is achieving its objectives’ (mean =4.62 and std dev = 0.603), and ‘authority and responsibilities for the entire top management are formally defined’ (mean =4.45 and std dev = 0.856). The
Statement ‘The existing risk policy provides for the identification of strategic, operational and compliance risks’ had the highest CV of 25.307. This means that the statement had the highest variation in response. The statement ‘Organization has clearly written roles, structure and responsibilities for its functions’ had the lowest CV of 12.668. This means that the statement reported the lowest variation in response from the respondents.

In the subscale risk assessment, the key statements were; ‘the organization identifies corruption risks and their likelihood to affect the ability of achieving set organizational objectives’ (mean = 4.46 and std dev = 0.818), ‘the organization identifies quality management system and their likelihood to affect the ability of achieving set organizational objectives’ (mean = 4.41 and std dev = 0.854), the organization identifies strategic risks and their likelihood to affect the ability of achieving set organizational objectives’ (mean = 4.32 and std dev = 0.983) and ‘the organization identifies operational risks and their likelihood to affect the ability of achieving set organizational objectives’ (mean = 4.27 and std dev = 1.03). The statement ‘the organization has an approved risk appetite statement’ had the highest CV of 29.757. This means that the statement had the highest variation in response. The statement ‘The organization identifies corruption risks and their likelihood to affect the ability of achieving set organizational objectives’ had the lowest CV of 18.341. This means that the statement reported the lowest variation in response from the respondents.

In the subscale risk evaluation, the key statements were; ‘formal reports are submitted to the board periodically on the state of risks and risk mitigation’ (mean = 4.28 and std dev = 1.031), ‘the organization assesses impacts of risks on key performance indicators’ (mean = 4.13 and std dev = 1.056), ‘the risk management function evaluates the on-going organizational risks’ (mean = 4.13 and std dev = 1.087) and ‘the organization undertakes frequent and structured updates of risk-related information’ (mean = 4.08 and std dev = 1.118). The statement ‘The organization has an automated system to track risk-related information’ had the highest CV of 32.889. This means that the statement had the highest variation in response. The statement ‘Formal reports are submitted to the Board periodically on the state of risks and risk mitigation’ had the lowest CV of 24.089. This means that the statement reported the lowest variation in response from the respondents.

In the subscale communication, the key statements were; ‘identified risks are shared with the relevant organizational stakeholders as appropriate’ (mean = 4.16 and std dev = 1.207), ‘risk management strategies are shared with all the lines of management’ (mean = 4.08 and std dev = 1.088) and ‘the organization holds formal risk management meetings to evaluate the status of enterprise risk management implementation’ (mean = 4.04 and std dev = 1.118). The statement ‘All employees are aware of the organization’s risk appetite levels’ had the highest CV of 32.094. This means that the statement had the highest variation in response. The statement ‘Risk management strategies are shared with all the lines of management’ had the lowest CV of 26.667. This means that the statement reported the lowest variation in response amongst the respondents. In general context setting had the highest rating (mean = 4.47, std dev = 0.8923) followed by risk assessment (mean = 4.30, std dev = 0.9927), risk evaluation (mean = 4.11, std dev = 1.118) and communication (mean = 4.00, std dev = 1.1625).

5. Discussions and Conclusion

This study aimed at establishing the influence between Enterprise risk management on the performance of Kenyan state-owned corporations. The objective was achieved by setting the hypothesis that, Enterprise risk management has a significant effect on the performance of Kenyan state corporations. The Enterprise risk management components were then composited to test the effect of financial, non-financial and overall organizational performance. ERM explained 10.2% of the variation in financial performance, 7.2% in non-financial performance and 11% variation in organizational performance. The findings revealed that on the overall, Enterprise risk management had a positive influence on financial, non-financial and overall organizational performance. The study therefore supported the hypothesis that, Enterprise risk management has a significant effect on the performance of Kenyan owned state corporations.

This study focused on Enterprise risk management and its influence on organizational performance and was conducted among Kenyan owned state corporations. This was against a backdrop of mixed findings by other strategic management researchers including Machuki (2011), Mkalama (2014) and Odundo (2012), who conceptualized different variables applied to this study and showed varying explanatory models. Scholars have recommended the need to research on more variables that may impact on performance in a significant way. Additionally, conceptual literature regarding enterprise risk management as a strategic management practice has received limited attention even in empirical studies. This study, despite reporting varying degrees of relationships amongst the variables analyzed, showed evidence that established statistical significance for the overall model.

6. Implications of the Study

The study operationalized Enterprise risk management along four constructs of context setting, risk assessment, risk evaluation and communication. Proponents of Contingency theory of Enterprise risk management (Kaplan & Mike 2014) posits that there ought to be a ‘fit’ between the organizational risk type, enterprise risk management strategy and the organizational desired outcomes, therefore only firms with effective combination of these factors will experience enhanced performance and therefore survive. It was established that on the overall, Enterprise risk management had a statistically significant influence on the overall organizational performance. The theory therefore received a boost from the findings of this study as established in the Kenyan state owned corporations context. Policy-wise, the established positive and significant influence of ERM and organization performance support the enactment of enterprise risk management guidelines to make it a statutory law, with the oversight responsibility for enterprise risk management being clearly designated to the top management team as individual risk owners of their respective functions and resources.
dedicated to enforce the implementation, monitoring and mandatory reporting. Regarding practice, organizational decision-making process ought to be anchored on and supported by organizational wide strategic risk management framework that focuses on managing the organization with regard to risks in order to reduce on uncertainties and enhance the realization of performance goals.

The study recommended that Kenyan owned state corporations needed to integrate Enterprise Risk Management when pursuing the achievement of their overall objectives. This would enhance the achievement of organizational performance and meet the diverse stakeholder expectations.

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Appendix

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | 0.927 |
|-----------------------------------------------|-------|
| Bartlett’s Test of Sphericity                 |       |
| Approx. Chi-Square                            | 2436.997 |
| Df                                            | 351   |
| Sig.                                          | 0.000 |

Table 1: KMO and Bartlett’s Test
| Component | Initial Eigenvalues | Extraction Sums of Squared Loadings |
|-----------|---------------------|-----------------------------------|
|           | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1         | 16.213 | 60.047 | 60.047 | 16.213 | 60.047 | 60.047 |
| 2         | 2.809 | 10.405 | 70.451 | 2.809 | 10.405 | 70.451 |
| 3         | 1.057 | 3.916 | 74.367 | 1.057 | 3.916 | 74.367 |
| 4         | 0.898 | 3.327 | 77.694 |         |        |          |
| 5         | 0.744 | 2.754 | 80.448 |         |        |          |
| 6         | 0.639 | 2.367 | 82.815 |         |        |          |
| 7         | 0.535 | 1.982 | 84.797 |         |        |          |
| 8         | 0.484 | 1.793 | 86.591 |         |        |          |
| 9         | 0.42  | 1.556 | 88.147 |         |        |          |
| 10        | 0.373 | 1.382 | 89.529 |         |        |          |
| 11        | 0.361 | 1.335 | 90.864 |         |        |          |
| 12        | 0.345 | 1.276 | 92.14  |         |        |          |
| 13        | 0.276 | 1.021 | 93.161 |         |        |          |
| 14        | 0.263 | 0.974 | 94.134 |         |        |          |
| 15        | 0.235 | 0.869 | 95.004 |         |        |          |
| 16        | 0.191 | 0.706 | 95.709 |         |        |          |
| 17        | 0.177 | 0.657 | 96.366 |         |        |          |
| 18        | 0.154 | 0.569 | 96.935 |         |        |          |
| 19        | 0.145 | 0.536 | 97.471 |         |        |          |
| 20        | 0.139 | 0.513 | 97.984 |         |        |          |
| 21        | 0.113 | 0.419 | 98.403 |         |        |          |
| 22        | 0.097 | 0.358 | 98.761 |         |        |          |
| 23        | 0.091 | 0.338 | 99.099 |         |        |          |
| 24        | 0.086 | 0.32  | 99.418 |         |        |          |
| 25        | 0.064 | 0.239 | 99.657 |         |        |          |
| 26        | 0.051 | 0.189 | 99.846 |         |        |          |
| 27        | 0.042 | 0.154 | 100    |         |        |          |

Extraction Method: Principal Component Analysis.

**Table 2: Total Variance Explained**

| ERM Items                                                                 | Component |
|---------------------------------------------------------------------------|-----------|
| Organization possess a formal strategy to pursue its mission and vision    | 0.864     |
| Organization has clearly written roles, structure and responsibilities for  | 0.885     |
| its functions                                                             | 0.859     |
| Performance goals are set periodically to assess whether the organization  | 0.71      |
| is achieving its objectives                                               | 0.854     |
| All staff signs individual performance contracts in my organization        | 0.525     |
| Authority and responsibilities for the entire top management are           | 0.621     |
| formally defined                                                          |           |
| The organization has an approved risk management policy                    |           |
| The existing risk policy provides for the identification of strategic,     | 0.702     |
| operational and compliance risks                                           |           |
| There exists a Board level committee with responsibility for risk          |           |
| management                                                                |           |
| The organization has a risk management function headed by a senior manager | 0.763     |
### ERM Items

| ERM Items                                                                 | Component |
|--------------------------------------------------------------------------|-----------|
| The organization identifies strategic risks and their likelihood to affect the ability of achieving set organizational objectives | 0.581     |
| The organization identifies operational risks and their likelihood to affect the ability of achieving set organizational objectives | 0.56      |
| The organization identifies compliance risks and their likelihood to affect the ability of achieving set organizational objectives | 0.548     |
| The organization identifies quality management system and their likelihood to affect the ability of achieving set organizational objectives | 0.667     |
| The organization identifies corruption risks and their likelihood to affect the ability of achieving set organizational objectives | 0.672     |
| The organization has an approved risk appetite statement                  | 0.757     |
| The risk management function evaluates the ongoing organizational risks   | 0.723     |
| The organization assesses impacts of risks on key performance indicators  | 0.686     |
| Formal reports are submitted to the Board periodically on the state of risks and risk mitigation | 0.639     |
| The organization has an automated system to track risk-related information | 0.814     |
| Alternative risk response plan is established for all the significant risks identified by the organization | 0.79      |
| The organization undertakes frequent and structured updates of risk-related information | 0.636     |
| The organization holds formal risk management meetings to evaluate the status of enterprise risk management implementation | 0.728     |
| All employees have been sensitized on the content of enterprise risk management policy | 0.811     |
| All employees are aware of the organization’s risk appetite levels        | 0.888     |
| Risk management strategies are shared with all the lines of management    | 0.748     |
| Employees in the organization are aware about identified risks and mitigation measures | 0.786     |
| Identified risks are shared with the relevant organizational stakeholders as appropriate | 0.737     |

**Table 3: Rotated Component Matrix**

*Extraction Method: Principal Component Analysis.*

*Rotation Method: Varimax with Kaiser Normalization*

*a. Rotation converged in 5 iterations*

| Statements                                                                 | Mean  | Std. Deviation | Cv (%) |
|---------------------------------------------------------------------------|-------|----------------|--------|
| Context Setting                                                           |       |                |        |
| Organization possess a formal strategy to pursue its mission and vision   | 4.7   | 0.808          | 17.191 |
| Organization has clearly written roles, structure and responsibilities for its functions | 4.76  | 0.603          | 12.668 |
| Performance goals are set periodically to assess whether the organization is achieving its objectives | 4.62  | 0.875          | 18.939 |
| All staff signs individual performance contracts in my organization       | 4.38  | 0.892          | 20.365 |
| Authority and responsibilities for the entire top management are formally defined | 4.45  | 0.856          | 19.236 |
| The organization has an approved risk management policy                   | 4.39  | 0.96           | 21.868 |
| The existing risk policy provides for the identification of strategic, operational and compliance risks | 4.24  | 1.073          | 25.307 |
| There exists a Board level committee with responsibility for risk management headed by a senior manager | 4.4   | 0.915          | 20.795 |
| Statements                                                                 | Mean  | Std. Deviation | Cv (%) |
|---------------------------------------------------------------------------|-------|----------------|--------|
| The organization has a risk management function headed by a senior manager | 4.33  | 1.049          | 24.226 |
| Overall                                                                   | 4.47  | 0.8923         | 19.962 |
| Risk Assessment                                                            |       |                |        |
| The organization identifies strategic risks and their likelihood to affect the ability of achieving set organizational objectives | 4.32  | 0.983          | 22.755 |
| The organization identifies operational risks and their likelihood to affect the ability of achieving set organizational objectives | 4.27  | 1.039          | 24.333 |
| The organization identifies compliance risks and their likelihood to affect the ability of achieving set organizational objectives | 4.22  | 1.036          | 24.550 |
| The organization identifies quality management system and their likelihood to affect the ability of achieving set organizational objectives | 4.41  | 0.854          | 19.365 |
| The organization identifies corruption risks and their likelihood to affect the ability of achieving set organizational objectives | 4.46  | 0.818          | 18.341 |
| The organization has an approved risk appetite statement                   | 4.12  | 1.226          | 29.757 |
| Overall                                                                   | 4.3   | 0.9927         | 23.086 |
| Risk evaluation                                                            |       |                |        |
| The risk management function evaluates the on-going organizational risks    | 4.13  | 1.087          | 26.320 |
| The organization assesses impacts of risks on key performance indicators   | 4.13  | 1.056          | 25.569 |
| Formal reports are submitted to the Board periodically on the state of risks and risk mitigation | 4.28  | 1.031          | 24.089 |
| The organization has an automated system to track risk-related information | 3.98  | 1.309          | 32.889 |
| Alternative risk response plan is established for all the significant risks identified by the organization | 4.07  | 1.107          | 27.199 |
| The organization undertakes frequent and structured updates of risk-related information | 4.08  | 1.118          | 27.402 |
| Overall                                                                   | 4.11  | 1.118          | 27.202 |
| Communication                                                              |       |                |        |
| The organization holds formal risk management meetings to evaluate the status of enterprise risk management implementation | 4.04  | 1.118          | 27.673 |
| All employees have been sensitized on the content of enterprise risk management policy | 3.89  | 1.169          | 30.051 |
| All employees are aware of the organization’s risk appetite levels          | 3.82  | 1.226          | 32.094 |
| Risk management strategies are shared with all the lines of management     | 4.08  | 1.088          | 26.667 |
| Employees in the organization are aware about identified risks and mitigation measures | 4.02  | 1.167          | 29.030 |
| Identified risks are shared with the relevant organizational stakeholders as appropriate | 4.16  | 1.207          | 29.014 |
| Overall                                                                   | 4.00  | 1.1625         | 29.063 |

Table 4: Descriptive Statistics for Enterprise Risk Management