

THE INTERNATIONAL JOURNAL OF BUSINESS & MANAGEMENT

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

Emma Otieno

Doctoral Candidate, School of Business, University of Nairobi, Kenya

Martin Ogutu

Professor, School of Business, University of Nairobi, Kenya

Bitange Ndemo

Professor, School of Business, University of Nairobi, Kenya

Ganesh Pokhariyal

Professor, School of Mathematics, University of Nairobi, Kenya

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 (KIPPR, 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 (Pfeffer, 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 test as 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 = .000 < .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 exhaustively 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 and Risk evaluation & 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 owned 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.

7. References

- i. Aaker, D., & Jacobson, R. (1987). The role of risk in explaining difference in profitability. *Academy of Management Journal*, 30(2): 227-296.
- ii. Abdel-Azim, M.H., & Abdelmoniem, Z. (2015). Risk Management and Disclosure and their impact on firm value: The case of Egypt. *International Journal of Business, Accounting and Finance*, 9(1).
- iii. Adams, W.G., & Campbell, M. (2005). Where are you on the journey to ERM?. *Risk Management Journal*, 52(9): 16-19.
- iv. Ansoff, H.I., & McDonnell, E.J. (1990). *Implanting Strategic Management*(2nd ed.). NY: Prentice Hall.
- v. Babbie, E. R. (2004). The practice of social research. Belmont, CA: Thomson/Wadsworth.
- vi. Brustbauer, J. (2014). Enterprise risk management in SMEs: Towards a structural model. *International Small Business Journal*, 1-16
- vii. Burnes, B. (2004). *Managing Change: A Strategic approach to firm's dynamics*. 4th Edition London: Prentice Hall.
- viii. Carpenter, M.A., Geletkanycz, M.A., & Sanders, W.G. (2004). Upper echelons research revisited: antecedents, elements and consequences of top management team composition. *Journal of Management*, 30(6): 749-778.
- ix. Child, J. (1972). Organizational structure, environment, and performance: the role of strategic choice. *Sociology*, 6 (1), 1-22.
- x. Committee of Sponsoring Organization of the Treadway Commission (COSO). (2004). *Enterprise Risk Management Framework*. New York, American Institute of Certified Public Accountants.
- xi. Cooper, D. and Schindler, P. (2011) *Business Research Methods*. (11th Ed). McGraw Hill, Boston.
- xii. Culp, C. (2002). The revolution in corporate risk management: a decade of innovations in process and product. *Journal of Applied Corporate Finance*, 14 (4): 8-26.
- xiii. Dabari, I.J., & Saidin, S.Z. (2014). A theoretical framework on the level of risk management implementation in the Nigerian banking sector: The moderating effect of top management support. *Procedia Social and Behavioral Science*, 164:627-634.
- xiv. Freeman, R.E. (1984). *Strategic Management: A stakeholder approach*, Boston, MA: Pitman.
- xv. Government of Kenya (2003). *Economic Recovery Strategy for Wealth and Employment Creation*, Government Press.
- xvi. Government of Kenya (2009). *National Treasury Circular No.3/2009*. Government Press.
- xvii. Government of Kenya (2012). State Corporations Act chapter 446. Revised Edition 2012. Retrieved from www.kenyalaw.org
- xviii. Government of Kenya (2013). Report of the presidential taskforce on parastatal reforms. Retrieved at www.apsea.or.ke/.../76-report-of-presidential-taskforce-on-parastatal-reforms
- xix. Hambrick, D.C. & Mason, P.A. (1984). "Upper Echelons": The organization as a reflection of its top managers'. *Academy of Management Review*. 9: 195-206.
- xx. Hambrick, D.C. (2007). Upper Echelons Theory: An Update. *Academy of Management Review*. 32(2), 334-343.
- xxi. Irungu, S.M., (2007). The effect of top management teams on the performance of publicly quoted companies in Kenya. (*Unpublished doctoral dissertation*), University of Nairobi.
- xxii. Kaplan, S.K., & Mikes A. (2014). Towards a contingency theory of enterprise risk management. *Harvard Business School*.
- xxiii. Kaplan, R. S., & Norton, D.P. (1996). *The Balanced Scorecard: Translating Strategy into Action*, Boston, HBS Press.
- xxiv. Kinuu, D. (2014). Top management team psychological characteristics, institutional environment, team processes and performance of companies listed on the Nairobi securities exchange. *Unpublished PhD thesis, University of Nairobi*.
- xxv. Kenya Institute of Public Policy Research Analysis (2009). *Kenya Economic Report. Building a Global Competitive Economy*. Nairobi: KIPPRA Publication.
- xxvi. Lenz, T.R. (1980). Environment, strategy, organization structure and performance: patterns in one industry. *Strategic Management Journal*, 1(3): 209-226.
- xxvii. Lundqvist, S.A. (2014). An exploratory study of enterprise risk management: Pillars or ERM. *Journal of Accounting, Auditing & Finance*, 29(3): 393-429
- xxviii. Machuki, V.N., & Aosa, E. (2011). The influence of external environment on the performance of publicly quoted companies in Kenya. *Business Administration and Management Journal*, 1(7), 205-218.
- xxix. Mahapatro, B. B. (2010). *Human Resource Management*. New Age International Publishers.
- xxx. Marimuthu, M., & Kolandaisamy, I. (2009). Can demographics diversity in top management team contribute for greater financial performance? An empirical discussion. *The Journal of International Social Research*, (2), 274-286.
- xxxi. Miller, C.C., Linda, M.B., & William, H.G. (1998). Cognitive diversity among upper-echelon executive: implications for strategic decision processes. *Academy of Management Journal*, 19, 39-58.

- xxxii. Mkalama, R.N. (2014). Top management demographics, strategic decision making, macro-environment and performance of Kenyan state corporations. (*Unpublished doctoral dissertation*), University of Nairobi.
- xxxiii. Mugenda, O.M., & Mugenda, A.G. (2003). *Research Methods: Quantitative and Qualitative Approaches*. Nairobi: ACTS Press.
- xxxiv. Nachmias & Nachmias. (2004). Research methods in social sciences. *Administrative Science Quarterly*, 20:546-558.
- xxxv. Nielsen, B.B., & Nielsen, S. (2013). Top management team nationality diversity and firm performance: A multilevel study. *Strategic Management Journal*, (34), 373-382.
- xxxvi. Njoroge, J., Gakure, R., Waititu, A., & Katuse, P. (2013). Effects of strategic risk management on the growth of microfinance sector in Kenya. *Prime Journals of Social Science*, 2(7), 402-406.
- xxxvii. Nunnally, J.C. (1978). *Psychometric Theory.2nd Edition*. New York: McGraw-Hill.
- xxxviii. Obong'o, S.O. (2009). *Implementation of Performance Contracting in Kenya*, *Public Management Review*, 10(2):66-84.
- xxxix. Odundo, E.O. (2012). Environmental context, implementation of strategic plans and performance of state corporations in Kenya. (*Unpublished doctoral dissertation*), University of Nairobi.
- xl. Patton, M.O. (2002). *Qualitative Research & Evaluation Methods*. 3rd Edition. USA: Sage Publications
- xli. Pearce, J. A., & Robinson, R.B. (2003). *Strategic Management: Formulation, Implementation and Control(8th ed.)*. New York: McGraw-Hill/Irwin.
- xlii. Pfennigstorg, W. (1977). Governmental risk management in public policy and legislation: problems and options. *Wiley, American Bar Foundation*, 2(2):255-317.
- xliii. Porter, M.E. (1980). *Competitive Strategy: Techniques for analyzing Industries and Competitors*. New York: The Free Press.
- xliv. Price Water House Coopers (PWC), (2015). *Enterprise Risk Management in Public Sector*. USA: PWC Publication.
- xlv. Price Water House Coopers (PWC), (2012). *Rising to the Next Flow. A Kenya perspective on 2012 state of the Internal Audit Profession Study*. Nairobi: PWC Publication.
- xlvi. Ravitch, S.M., & Riggan, M. (2012). *Reason & rigor: how conceptual frameworks guide research*. Thousand Oaks: Sage Publications.
- xlvii. Rizzi, J., Simkins B.J., & Schoening-Thiessen, K. (2011). Enterprise risk management: A review of prevalent practices. Ottawa: *Conference Board of Canada*.
- xlviii. Stroh, P.J. (2005). Enterprise risk management at united health group. *Strategic Finance. IMA Publication, USA*, pp.26-35, retrieved from: <http://www.strategicfinancemag.com>
- xlix. Sunjka, B.P., & Emwanu, B.J. (2015). Risk management in manufacturing SMEs in South Africa: *International Association for Management of Technology*.
- l. Venkatraman N., & Ramanujam V. (1986). Measurement of business performance in strategy research: a comparison of approaches. *The Academy of Management Review*, 11(4): 801-814.
- li. Verlag, R.H. (2014). Risk management practices from risk maturity models perspective. *Journal of East European Management Studies*, 19(2):133-159.
- lii. Walker, P.L., Shenkir, W.G., & Barton, T.L. (2003). ERM in practice. *Internal Auditor*, 60(4): 51-55.
- liii. Waweru, N., & Kisaka, E. (2013). The effect of Enterprise Risk Management implementation on the value of companies listed on the Nairobi Stock Exchange: *Journal of Applied Finance & Banking*, 3(3):81-105.
- liv. Wernerfelt, B. (1984). A Resource Based View of the Firm. *Strategic Management Journal* 5(2), 171-180.
- lv. Wiersema, M.F., & Bantel, K.A. (1992). Top management team demography and corporate strategic change. *The Academy of Management Journal*. 35(1):91-121.
- lvi. Williams, C.A., & Heins, R.M. (1989). *Risk Management and Insurance*. New York, St Louis, San Francisco: McGraw-Hill.
- lvii. Yamane, Taro. (1967). *Statistics, An Introductory Analysis*, 2nd Ed., New York: Harper and Row.
- lviii. Yegon, C.K. (2015). Effect of Enterprise Risk Management Determinants on Financial Performance of Listed Firms in Kenya. (*Unpublished Doctoral Thesis*), Jomo Kenyatta University of Agriculture and Technology.
- lix. Zenger, T.D., & Lawrence, B.S. (1989). Organizational demography: The differential effect of age and tenure distributions on technical communication. *Academy of Management Journal*, 23(2): 355-376.
- lx. Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2013). *Business research methods*. Cengage Learning.

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		
	1	2	3
Organization possess a formal strategy to pursue its mission and vision		0.864	
Organization has clearly written roles, structure and responsibilities for its functions		0.885	
Performance goals are set periodically to assess whether the organization is achieving its objectives		0.859	
All staff signs individual performance contracts in my organization		0.71	
Authority and responsibilities for the entire top management are formally defined		0.854	
The organization has an approved risk management policy	0.525		
The existing risk policy provides for the identification of strategic, operational and compliance risks			0.621
There exists a Board level committee with responsibility for risk management			0.702
The organization has a risk management function headed by a senior manager			0.763

ERM Items	Component		
	1	2	3
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 on-going 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	C _v (%)
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