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## SUPPLY CHAIN RISK MANAGEMENT AND PERFORMANCE OF STATE CORPORATIONS IN KENYA

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## ABSTRACT

State corporations are government-owned entities that operate in various sectors of the economy. They are established to provide goods or services that are considered essential or to fulfill specific public policy objectives. State corporations in Kenya face a myriad of challenges that significantly impact their efficiency and effectiveness. The general objective of this study was to establish the influence of supply chain risk management and performance of state corporations in Kenya. Specifically, the sought to determine the effect of risk assessment on performance of state corporations in Kenya and to assess the effect of risk monitoring on performance of state corporations in Kenya. This study was anchored by: Resource-Based View (RBV) and Systems Theory. . The study employed a descriptive research design. The study targeted a total of 276 respondents comprising of 46 top managers, 92 middle level managers and 138 lower level managers. The sample for this study was arrived at using the Slovin's sample size. This study used simple random sampling to select 163 respondents. This study also used questionnaire to collect data relevant to this study. Quantitative data collected was analyzed using descriptive statistical techniques which are frequencies, mean, standard deviation. Inferential statistics which include Pearson correlation and the Regression Analysis Model were used to test the relationship between study variables. The significance of the model was tested at 5% level of significance. Data was analyzed using Statistical Package for Social Sciences (SPSS) software. The study results were presented through use of tables and figures. The study concludes that risk assessment has a positive and significant effect on performance of state corporations in Kenya. The study also concludes that risk monitoring has a positive and significant effect on performance of state corporations in Kenya. Based on the findings, the study recommends that the management of state corporations in Kenya should institutionalize continuous risk monitoring mechanisms as part of their governance and operational frameworks. Ongoing monitoring enables early detection of changes in risk levels, ensures compliance with risk management policies, and facilitates timely interventions before issues escalate.

**Key Words:** Supply Chain Risk Management, Risk Assessment, Risk Monitoring, Performance of State Corporations

## Background of the Study

State corporations are government-owned entities that operate in various sectors of the economy. They are established to provide goods or services that are considered essential or to fulfill specific public policy objectives. These corporations may engage in commercial activities and operate with some degree of independence from the government, but they typically remain accountable to government authorities. State corporations play a vital role in the economy and governance of a country (Rogers, *et al*, 2023). One of their primary functions is to provide essential services that may not be sufficiently offered by the private sector. This includes industries such as transportation, energy, and healthcare, where the government seeks to ensure universal access and affordability. By operating in these areas, state corporations can address market failures and contribute to social welfare, ensuring that even marginalized communities have access to basic services. State corporations drive economic development (Shahbaz, *et al*, 2020). They often invest in infrastructure projects that are crucial for national growth, such as roads, railways, and telecommunications. By engaging in these large-scale projects, state corporations can stimulate job creation, enhance productivity, and attract private investment. Furthermore, they can help to stabilize the economy during times of crisis by maintaining employment levels and supporting critical industries (Connor, 2024).

State corporations also serve as instruments of public policy implementation. They are often tasked with carrying out government initiatives aimed at social and economic reform. For example, a state corporation might be involved in environmental conservation efforts or in the promotion of renewable energy sources. By aligning their operations with governmental objectives, these corporations can effectively facilitate the achievement of broader national goals, such as sustainable development or poverty reduction. State corporations can play a role in generating revenue for the government (Hayat, *et al*, 2023). Through their operations, they can contribute significantly to national income, which can then be reinvested in public services and infrastructure. This revenue generation can help reduce dependency on external borrowing and aid, making a country more self-sufficient and resilient. However, the effectiveness of state corporations in these roles often hinges on sound management, transparency, and accountability to ensure that they serve the public interest rather than becoming centers of inefficiency or corruption (Chileshe & Phiri, 2022).

Supply chain risk management (SCRM) involves a systematic approach to identifying, assessing, and mitigating risks that can disrupt the flow of goods and services in a supply chain. Identification, entails recognizing potential risks that could impact operations, such as supplier failures, geopolitical issues, natural disasters, or market fluctuations. Risk assessment evaluates the likelihood and potential impact of these risks, allowing organizations to prioritize them based on their severity and probability of occurrence (Mvudu & Naude, 2020). This analytical phase helps businesses understand where vulnerabilities lie within their supply chain and aids in strategic decision-making. Organizations can implement risk mitigation strategies to minimize their impact. These strategies may include diversifying suppliers, increasing inventory levels, or investing in technology to enhance visibility and responsiveness in the supply chain. Risk monitoring is essential to continuously track the identified risks and the effectiveness of the mitigation strategies. This involves establishing key performance indicators and utilizing data analytics to detect emerging risks and trends, allowing organizations to adapt their strategies in real time (Mutekwe, Mafini & Chinomona, 2020). This study therefore sought to establish the influence of supply chain risk management and performance of state corporations in Kenya.

In South Africa, Mvudu and Naude (2020) found that t a significant proportion of the respondent 3PL providers had adopted risk identification strategies, which can assist them in anticipating future uncertain events to be proactively managed when they occur. This corresponds with the existing literature that states that risk identification is a significant step in

the process of identifying all possible risks and documenting them. In considering risk assessment techniques, the findings confirm that the responses on the adoption of risk assessment techniques were generally positive, indicating that the majority of the 3PL providers had adopted such techniques.

Kemei and Machoka (2022) found that bullwhip effect has a positive and significant influence on supply chain performance in manufacturing firms in Kenya. Findings revealed that demand forecasting, demand volatility and ordering methods on supply chain performance in manufacturing firms in Kenya In addition, the study concludes that order fulfillment has a positive and significant influence on supply chain performance in manufacturing firms in Kenya. Findings revealed that e-order processing, order tracking systems and timely deliveries on supply chain performance in manufacturing firms in Kenya.

**Statement of the Problem**

State corporations in Kenya face a myriad of challenges that significantly impact their efficiency and effectiveness. One of the most pressing issues is financial mismanagement and corruption. According to the Auditor-General's reports, about 30% of state corporations in Kenya have been flagged for various financial irregularities, including unaccounted funds and procurement discrepancies. This not only drains public resources but also undermines public trust in these institutions. The lack of stringent accountability measures has led to a culture of impunity, further exacerbating the financial challenges faced by these corporations (Kemei & Machoka, 2022). Another major challenge is inefficiency and lack of innovation. Many state corporations operate within outdated frameworks, leading to sluggish decision-making processes and a resistance to change. For instance, the Kenya Railways Corporation has struggled to modernize its services, resulting in a significant decline in passenger numbers—down from 700,000 annually a decade ago to about 200,000 today. This stagnation can be attributed to bureaucratic red tape and a failure to adapt to market demands. Moreover, many state corporations face stiff competition from private entities, which often offer more innovative and efficient services. This competition highlights the urgent need for reform and a shift towards more agile operational models to enhance service delivery and customer satisfaction (Owuor, Oginda & Obura, 2020).

State corporations in Kenya are often hampered by political interference. The intertwining of politics and corporate governance can lead to decisions that prioritize political agendas over operational efficiency. Reports indicate that over 50% of state corporations have faced political appointments in leadership roles, which can compromise the professionalism and accountability needed for effective governance. This political meddling not only undermines the strategic objectives of these corporations but also discourages skilled professionals from seeking positions within them, further entrenching the cycle of inefficiency (Nyaga & Moronge, 2023).

Supply chain risk management (SCRM) plays a pivotal role in influencing organizational performance by enhancing resilience and operational efficiency. By systematically identifying and assessing potential risks within the supply chain, organizations can proactively address vulnerabilities before they escalate into significant disruptions (Barboiben & Odari, 2022). Various studies have been conducted in different parts of the world on supply chain risk management and organization performance. For instance, Nyaga and Moronge (2023) assessed on the role of supply chain risk management techniques on the performance of manufacturing firms. Barboiben and Odari (2022) investigated on the role of supply chain risk management on procurement performance in county governments and Manyuko (2021) researched on the effects of supply chain risk management on organization performance. However, none of these studies focused on risk assessment and risk monitoring on performance of state corporations in Kenya. To fill the highlighted gaps, the current study sought to determine the influence of

supply chain risk management (risk assessment and risk monitoring) on performance of state corporations in Kenya.

**Objectives of the Study**

**General Objective**

The general objective of this study was to establish the influence of supply chain risk management on performance of state corporations in Kenya.

**Specific Objectives**

i. To determine the effect of risk assessment on performance of state corporations in Kenya
ii. To assess the effect of risk monitoring on performance of state corporations in Kenya

**Theoretical Review**

**Resource-Based View (RBV)**

The Resource-Based View (RBV) theory founded by Barney (1991) is a strategic management framework that focuses on the internal resources and capabilities of a firm as sources of competitive advantage. At its core, RBV posits that a firm's unique bundle of resources and capabilities can enable it to achieve sustainable competitive advantage and superior performance in the marketplace (Nayu *et al*, 2021). Unlike traditional strategic management approaches that primarily focus on external factors such as market dynamics and industry structure, RBV emphasizes the importance of internal factors in determining a firm's success. RBV theory entails identifying and leveraging a firm's distinctive resources and capabilities to create value and achieve strategic objectives. Resources can include tangible assets such as physical infrastructure, financial capital, and technology, as well as intangible assets such as human capital, intellectual property, organizational culture, and reputation. These resources are considered valuable if they enable the firm to exploit opportunities or neutralize threats in the external environment. Capabilities, on the other hand, refer to the firm's ability to effectively deploy and utilize its resources to perform specific activities and achieve desired outcomes (Ayimpoya *et al*, 2020). This theory was relevant in determining the effect of risk assessment on performance of state corporations in Kenya.

**Systems Theory**

Systems Theory developed by Ludwig von Bertalanffy in the 1940s is an interdisciplinary framework that examines the relationships and interactions among the components of complex systems, emphasizing how these parts function together as a whole. Originating from various fields, including biology, engineering, and sociology, Systems Theory seeks to understand not just individual elements but also the dynamics that arise from their interconnections. It posits that systems can be found in various contexts—ranging from ecological and social systems to organizational and technological frameworks—and that these systems operate under specific principles that govern their behavior and evolution (Chandra,Vijayshri & Vineet, 2022). One of the core tenets of Systems Theory is the concept of holism, which asserts that the properties of a system cannot be fully understood by merely analyzing its individual components. Instead, it is crucial to consider the interactions and relationships that bind these elements together. This perspective is particularly relevant in complex systems where emergent properties—characteristics that arise from the collective functioning of the system—cannot be predicted by studying the components in isolation (Nakitende, 2020).

Another important aspect of Systems Theory is the focus on feedback loops, which are the processes through which outputs of a system can influence its inputs. Feedback can be either

positive, reinforcing growth or change, or negative, stabilizing the system by counteracting deviations from a desired state. Understanding these feedback mechanisms is essential for analyzing how systems adapt to changes, respond to disturbances, and maintain equilibrium. For instance, in organizational settings, feedback loops can help managers assess the impact of their decisions and adjust strategies to align with evolving goals (Osiemo, 2021). Systems Theory also emphasizes the importance of boundaries, which define the limits of a system and distinguish it from its environment. These boundaries can be physical, conceptual, or operational, and they play a crucial role in determining how a system interacts with external influences. Identifying and understanding these boundaries helps in analyzing how systems are influenced by external factors, such as regulatory changes, technological advancements, or societal shifts. This perspective is particularly useful in fields like public health, where understanding the interactions between healthcare systems and social determinants is essential for improving health outcomes (Kiarie, Ngugi & Ogolla, 2020). This theory was relevant in assessing the effect of risk monitoring on performance of state corporations in Kenya.

**Conceptual Framework**

The conceptual framework is a diagrammatic representation of the relationship between the study variables. The conceptual framework presents a visual overview of the study's independent variable(s) and the dependent variable and thus helps to provide a quick glimpse of the study's key variables (Mugenda & Mugenda, 2019). The conceptual framework in relation to the present study was as illustrated in Figure 2.1.

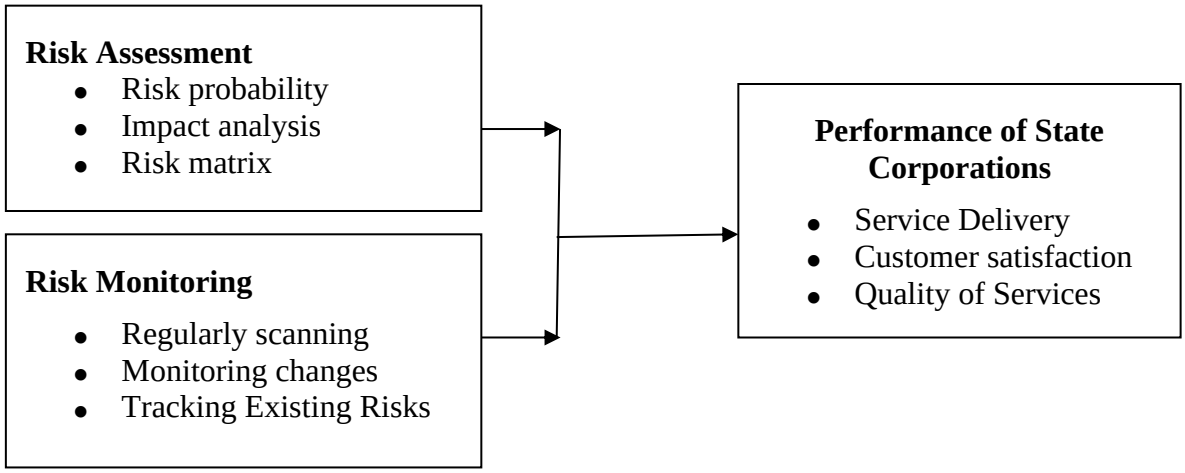


**Figure 1: Conceptual Framework**

**Risk Assessment**

Risk assessment is the systematic process of evaluating identified risks to determine their potential impact and likelihood of occurrence (Nayu *et al*, 2021). This step involves analyzing the severity of risks, prioritizing them based on their significance, and understanding how they could affect the organization's objectives. Risk probability refers to the likelihood that a specific risk will occur within a given timeframe. It is a critical component of risk assessment, as understanding the probability helps organizations prioritize their risk management efforts (Mutua & Kirui, 2020). Probabilities can be quantified using statistical data, historical analysis, or expert judgment, often expressed as a percentage or on a scale (e.g., low, medium, high).

Impact analysis involves assessing the potential consequences of identified risks on an organization's objectives, operations, and overall performance. This process seeks to

understand how a risk event could affect various aspects of the organization, including financial health, reputation, operational efficiency, and compliance with regulations (Mutuku, 2021). By evaluating the severity of potential impacts, organizations can prioritize risks based on their significance and develop tailored mitigation strategies. A risk matrix is a visual tool used to evaluate and prioritize risks based on their probability and impact (Mutuku, 2021). Typically, it is presented as a grid where one axis represents the likelihood of a risk occurring and the other axis represents the severity of its impact. Each identified risk is plotted on the matrix, allowing organizations to categorize risks into different levels of concern—such as low, medium, or high priority. This visual representation helps decision-makers quickly identify which risks require immediate attention and which can be monitored over time (Nayu *et al*, 2021).

**Risk Monitoring**

Risk monitoring is the continuous process of tracking identified risks, evaluating the effectiveness of risk mitigation strategies, and identifying new risks as they arise (Chandra, Vijayshri & Vineet, 2022). This ongoing activity ensures that organizations remain aware of their risk landscape and can respond promptly to any changes. Effective risk monitoring involves regular reviews and assessments, often through key performance indicators (KPIs) and risk indicators that signal potential issues. Regularly scanning involves the systematic review and assessment of the internal and external environments to identify potential risks and emerging threats (Osiemo, 2021). This proactive approach helps organizations stay ahead of changes that could impact operations, strategy, or compliance. Scanning can include analyzing market trends, competitor activities, regulatory updates, and technological advancements. By consistently monitoring these factors, organizations can identify new risks early, adapt their strategies accordingly, and make informed decisions (Kiarie, Ngugi & Ogolla, 2020).

Monitoring changes refers to the continuous observation of both internal and external factors that could influence an organization's risk landscape (Chiggai, 2020). This includes tracking shifts in market conditions, regulatory environments, technological developments, and stakeholder expectations. By staying attuned to these changes, organizations can quickly recognize how they might affect existing risks or introduce new ones. Tracking existing risks involves the ongoing assessment and management of risks that have already been identified (Kiarie, Ngugi & Ogolla, 2020). This process includes monitoring the effectiveness of mitigation strategies, evaluating any changes in the risk's likelihood or impact, and documenting any incidents or near-misses. By maintaining a comprehensive record of existing risks, organizations can identify patterns, learn from past experiences, and refine their risk management approaches.

**Empirical Review**

**Risk Assessment and Organization Performance**

Nayu *et al* (2021) investigated on adult mortality attributable to preventable risk factors for non-communicable diseases and injuries in Japan: A comparative risk assessment. The study obtained data on risk factor exposures from the National Health and Nutrition Survey and epidemiological studies, data on the number of cause-specific deaths from vital records adjusted for ill-defined codes, and data on relative risks from epidemiological studies and meta-analyses. We applied a comparative risk assessment framework to estimate effects of excess risks on deaths and life expectancy at age 40 years. The results suggest that the threat of tobacco smoking for mortality is enormous in men and has been increasing over time through the accumulation of exposure to this risk in the older population Tobacco smoking and high blood pressure are the two major risk factors for adult mortality from non-communicable diseases and injuries in Japan. There is a large potential population health gain if multiple risk factors are jointly controlled.

Ayimpoya *et al* (2020) investigated the effects of risk assessment, control environment and control activities on performance of listed Banks in Ghana. The study conducts a field survey of listed banks using questionnaire as collection instruments. The study adopts a method of quantitative assessment: descriptive and regression analysis to arrive at the study findings. Purposive sampling techniques were adopted to sample twelve (12) banks that are listed on Ghana Stock Exchange. The study result showed internal control systems such as ethical values, fraud detectors, effective accounting and financial systems contribute to financial performance of listed banks in Ghana. The study concluded that there is a significant effect of control environment as an internal control system on financial performance of listed banks in Ghana's stock Exchange market.

Mutua and Kirui (2020) examined the effects of project risk assessment on the Performance of Core Banking Systems in Commercial Banks of Kenya. The study examined the extent to which project risk identification influences core banking system projects performance in selected commercial banks, in Kenya. A descriptive research design was utilized. The accessible population was 80 respondents comprising of 10 project managers from each bank. A census of 80 respondents was done to form the study sample size. Questionnaires were utilized to collect data. The study found that risk identification, risk analysis, risk response and risk monitoring had a positive significance on project performance. The study concluded that identifying risk enables full risk analysis to be done and risk to be addressed and the project managers qualify risk based on likelihood and impact.

Wanjohi (2020) investigated the effect of financial risk management on the financial performance of commercial banks in Kenya. To assess the financial risk management practices, a self-administered survey questionnaire was used across the banks. The study used multiple regression analysis in the analysis of data and the findings were presented in the form of tables and regression equations. The study found out that majority of the Kenyan banks were practicing good financial risk management and as a result the financial risk management practices mentioned herein have a positive correlation to the financial performance of commercial banks in Kenya. The study also concluded that the risk measurement practice had the biggest impact on financial performance followed by risk mitigation practice.

**Risk Monitoring and Organization Performance**

Chandra,Vijayshri and Vineet (2022) investigated on whether crowdsourcing services moderate effect on supply risk management performance in COVID-19 An internet-based survey using a semi-structured snowball sampling technique has been conducted and a total of 167 responses were received from Indian MSME sector (Micro, Small & Medium Enterprises) i.e., retail and wholesale business. A research framework has been developed considering supplier dependency, customer orientation, and systematic purchasing to measure the retail supply chain risk management (SCRM) performance and understand the moderating role of crowdsourcing on process to provide solutions that concurrently take lesser time while maintaining social distancing. The results revealed that in the pandemic situation, crowdsourcing services moderate the effect on supply risk management performance. Thus, the crowdsourcing strategy can lead to maintain social distancing in the pandemic. The findings concluded that while establishing an efficient purchasing and supply chain management process, MSME-based retailers and wholesalers should place a greater emphasis on risk management strategies.

Nakitende (2020) investigated the effect of internal controls on organizational performance in manufacturing firms in Uganda case study roofing Uganda limited. The researcher employed a case study design. The study employed both qualitative and quantitative techniques that helped in the data collection process. Questionnaire was used on the basis that the variables under study cannot be observed for instance the views, opinions, perceptions 34 and feelings

of the respondents. The study revealed that there was statistically significant and positive correlation between internal control and organizational performance of Rolfings. This shows that for organizational performance to blossom in the organization then internal controls should be maintained. The study concluded that there is a strong and positive relationship between the independent variable and dependent variable; where an indication that an increase or a decrease in internal controls performance directly affects organizational performance.

Osiemo (2021) researched on the effects of risk management practices on financial performance of non-life insurance firms operating in Kisii County, Kenya. Descriptive survey research design was used to collect data. Target population was 237 respondents comprising of 116 directors and 121 senior managers involved in risk management of ten selected insurance firms. Sample size was forty eight respondents from target population where stratified random sampling method was used to get the sample. Findings on the extent to xvii which effects of risk identification practice affect financial performance of non-life insurance firms were beneficial to management since managers knew premiums should be set commensurate to their getting high profits once they have identified frequency and severity of a given risk. Based on findings on the extent to which effects of risk identification practice affect financial performance, the study concludes that increased number of people understand importance of insurance; based on findings on the extent to which effects of risk mitigation practice affect financial performance, the study concludes that risk can never be eliminated completely.

## RESEARCH METHODOLOGY

### Research Design

The study employed a descriptive research design. This design is pertinent in "developing the profile of a situation and a community of people by getting complete and accurate information through an interaction between the researcher and the respondent via data collection tools" (Kothari & Garg, 2019).

### Target Population

To gather the information required, the target population comprised of 46 commercial state corporations (SCAC, 2019). The unit of analysis was therefore the 46 commercial state corporations while the unit of observation was the management employees working in the commercial state corporations. The study targeted a total of 276 respondents comprising of 46 top managers, 92 middle level managers and 138 lower level managers.

**Table 1: Target Population**

| Category | Target Population |
|---|---|
| Top Managers | 46 |
| Middle Level Managers | 92 |
| Lower Level Managers | 138 |
| **Total** | **276** |

The sampling frame for this study was all 46 commercial state corporations in Kenya.

### Sample Size and Sampling Procedure

A sample is a representative of certain known percentage, frequency distributions of elements' characteristics similar to the corresponding distributions within the whole population (Kasomo, 2019). The sample for this study was arrived at using the Slovin's sample size determination formula for categorical data.

$$n = \frac{N}{1 + N\partial^2}$$

Where: N represents target population;

n represents sample size;

$\partial$ represents significance level (0.05), at 95% confidence level;

Therefore, N=141

Then $n = \frac{276}{1+(276*0.05^2)}$ **= 163.31**

n=163

According to Burns and Grove (2018), sampling is the process of selecting a group of people, events, or behaviors to examine. Sampling is used when it is not possible to include the whole population in a study (Cooper & Schindler, 2020). This study used simple random sampling to select 163 respondents

**Data Collection Instrument**

This study collected primary and secondary data. Primary data was collected using semi-structured questionnaires. According to Kothari (2019), a questionnaire is a cost-effective means of gathering information, especially from a large group of respondents, and it permits anonymity. Questionnaires are made up of a series of particular, concise questions that the interviewer asks verbally or that the respondents answer independently (Bryman, 2019). The data for this study was collected through a combination of closed-ended and open-ended questions. Closed-ended questions were used to gather quantitative data, providing structured response options that can be analyzed statistically. This approach allows for the measurement of specific variables and enables numerical analysis and comparisons. On the other hand, open-ended questions were utilized to collect qualitative data, allowing participants to provide detailed and descriptive responses. This qualitative data provided deeper insights, capturing individual perspectives, experiences, and narratives. The combination of closed-ended and open-ended questions provided a comprehensive understanding of the research topic by integrating quantitative and qualitative data.

**Pilot study**

MCneill (2019) defines pilot testing as a trial or run done in preparation for a major study. Pilot study was conducted to determine if there were flaws, limitations, or other weaknesses within the data collection instrument to make the necessary revisions prior to the implementation of the study. Population of the pilot was 16 individuals which represents 10% of the study sample size. The pilot group was selected randomly from study target population and excluded in the final study.

**Data Analysis and Presentation**

Data preparation was done on the completed questionnaire by editing, coding, entering and cleaning the data. The study generated both qualitative and quantitative data. Qualitative data from open-ended questions were analyzed using content analysis and presented in prose form.

Quantitative data was coded and entered into statistical packages for social scientists (SPSS version 26) which was analyzed using descriptive statistics. Descriptive statistics such as frequency distribution, mean (measure of dispersion), standard deviation, and percentages will be used. Descriptive statistics enables researchers to present the data in a more meaningful way, which allows simpler and easier interpretation (Singpurwalla, 2019). Further, quantitative data was analyzed using inferential analysis which included correlation and regression analysis.

The study adopted correlation analysis at 5% level of significance to study strength, direction of the relationship between the independent and dependent variable. To quantify the strength, and direction of the relationship between the variables, the study utilized Karl Pearson's coefficient of correlation. The Pearson product-moment correlation coefficient can measure the

strength of a linear association between two variables and is denoted by Gupta (2019). The Pearson correlation coefficient, can take a range of values from +1 to -1. A value of 0 indicates that there is no association between the two variables. A value greater than 0 indicates a positive association, that is, as the value of one variable increases so does of other variable. Value less than 0 indicate a negative association, that is, as the value of one variable increases the value of the other variable decreases Schindler (2019). The correlation was significant at the 0.05 level for 2-tailed.

Multiple regression analysis was used to determine the influence of multiple independent variables on the dependent variable (Simpson, 2019). This analysis technique identified which supply chain risk management have the greatest impact on performance of state corporations in Kenya, as well as the relative importance of other factors that may also influence performance of state corporations in Kenya. Regression analysis provides more precise information about the relationship between variables, which is useful when trying to identify the specific factors that influence performance of state corporations in Kenya (Flynn & Uttley, 2021).

Multiple regression models were used to examine the relationship between supply chain risk management and performance of state corporations in Kenya. The multiple regression models that aided the analysis of the variable relationship was as follows: $Y=\beta_0+\beta_1X_1+\beta_2X_2+ \varepsilon$

Where;

Y = performance of commercial state corporations

$\beta_0$ = Constant (Coefficient of intercept);

$X_1$ is risk assessment,

$X_2$ is risk monitoring

$\varepsilon$ = Error term for the Model

$\beta_1 \ldots \beta_2$= Regression coefficient of four variables.

## DATA ANALYSIS AND FINDINGS

### Descriptive statistics

### Risk Assessment and Performance of State Corporations

The first specific objective of the study was to determine the effect of risk assessment on performance of state corporations in Kenya. The respondents were requested to indicate their level of agreement on the statements relating to risk assessment and performance of state corporations in Kenya. The results were as shown in Table 2.

From the results, the respondents agreed that they assess the likelihood of various risks occurring in their supply chain (M=3.964, SD= 0.997). In addition, the respondents agreed that their organization utilizes historical data to evaluate risk probabilities (M=3.917, SD= 0.831). Further, the respondents agreed that they conduct thorough impact analyses for each identified risk in their supply chain (M=3.858, SD=0.563).

From the results, the respondents agreed that their organization considers both short-term and long-term impacts during risk assessments (M= 3.831, SD= 0.851). In addition, the respondents agreed that they regularly review and update their risk matrix to ensure it remains relevant (M=3.751, SD= 0.935). Further, the respondents agreed that the risk matrix is used as a key tool in their decision-making process (M=3.742, SD=0.692).

**Table 2**: **Risk Assessment and Performance of State Corporations**

| | Mean | Std. Deviation |
|---|---|---|
| We assess the likelihood of various risks occurring in our supply chain. | 3.964 | 0.997 |
| Our organization utilizes historical data to evaluate risk probabilities. | 3.917 | 0.831 |
| We conduct thorough impact analyses for each identified risk in our supply chain. | 3.858 | 0.563 |
| Our organization considers both short-term and long-term impacts during risk assessments. | 3.831 | 0.851 |
| We regularly review and update our risk matrix to ensure it remains relevant. | 3.751 | 0.935 |
| The risk matrix is used as a key tool in our decision-making process. | 3.742 | 0.692 |
| **Aggregate** | **3.844** | **0.812** |

**Risk Monitoring and Performance of State Corporations**

The second specific objective of the study was to determine to assess the effect of risk monitoring on performance of state corporations in Kenya. The respondents were requested to indicate their level of agreement on various statements relating to risk monitoring and performance of state corporations in Kenya. The results were as presented in Table 3.

From the results, the respondents agreed that their organization conducts regular scans of the external environment to identify potential risks (M=3.943, SD= 0.981). In addition, the respondents agreed that they establish a routine for reviewing emerging risks in their supply chain (M=3.866, SD= 0.850). Further, the respondents agreed that their organization stays informed about shifts in market conditions that may introduce new risks (M=3.731, SD= 0.914). The respondents also agreed that they track changes in supplier performance and their potential impact on their operations (M=3.696, SD= 0.947). In addition, the respondents agreed that they maintain a centralized database for tracking existing risks in their supply chain (M=3.689, SD= 0.856). Further the respondents agreed that their organization reviews and updates the status of existing risks on a regular basis (M=3.671, SD=0.621).

**Table 3: Risk Monitoring and Performance of State Corporations**

| | Mean | Std.Deviation |
|---|---|---|
| Our organization conducts regular scans of the external environment to identify potential risks. | 3.943 | 0.981 |
| We establish a routine for reviewing emerging risks in our supply chain. | 3.866 | 0.850 |
| Our organization stays informed about shifts in market conditions that may introduce new risks. | 3.731 | 0.914 |
| We track changes in supplier performance and their potential impact on our operations. | 3.696 | 0.947 |
| We maintain a centralized database for tracking existing risks in our supply chain. | 3.689 | 0.856 |
| Our organization reviews and updates the status of existing risks on a regular basis. | 3.671 | 0.621 |
| **Aggregate** | **3.766** | **0.862** |

**Inferential Statistics**

Inferential statistics in the current study focused on correlation and regression analysis. Correlation analysis was used to determine the strength of the relationship while regression

analysis was used to determine the relationship between dependent variable (performance of state corporations in Kenya) and independent variables (risk assessment and risk monitoring).

**Correlation Analysis**

The present study used Pearson correlation analysis to determine the strength of association between independent variables (risk assessment and risk monitoring) and the dependent variable (performance of state corporations in Kenya). Pearson correlation coefficient range between zero and one, where by the strength of association increase with increase in the value of the correlation coefficients.

**Table 4: Correlation Coefficients**

| | | Performance of State Corporations | Risk Assessment | Risk Monitoring |
|---|---|---|---|---|
| Performance of State Corporations | Pearson Correlation | 1 | | |
| | Sig. (2-tailed) | | | |
| | N | 141 | | |
| Risk Assessment | Pearson Correlation | .842** | 1 | |
| | Sig. (2-tailed) | .002 | | |
| | N | 141 | 141 | |
| Risk Monitoring | Pearson Correlation | .910** | .179 | 1 |
| | Sig. (2-tailed) | .000 | .081 | |
| | N | 141 | 141 | 141 |

From the results, there was a very strong relationship between risk assessment and performance of state corporations in Kenya (r = 0.842, p value =0.002). The relationship was significant since the p value 0.002 was less than 0.05 (significant level). The findings conform to the findings of Adaileh (2020) that there is a very strong relationship between risk assessment and performance of state corporations.

The results also revealed that there was a very strong relationship between risk monitoring and performance of state corporations in Kenya (r = 0.910, p value =0.000). The relationship was significant since the p value 0.000 was less than 0.05 (significant level). The findings are in line with the results of Nakitende (2020) who revealed that there is a very strong relationship between risk monitoring and performance of state corporations.

**Regression Analysis**

Multivariate regression analysis was used to assess the relationship between independent variables (risk assessment and risk monitoring) and the dependent variable (performance of state corporations in Kenya)

**Table 5: Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .870 | .757 | .758 | .10120 |

a. Predictors: (Constant), risk assessment and risk monitoring

The model summary was used to explain the variation in the dependent variable that could be explained by the independent variables. The r-squared for the relationship between the independent variables and the dependent variable was 0.757. This implied that 75.7% of the

variation in the dependent variable (performance of state corporations in Kenya) could be explained by independent variables (risk assessment and risk monitoring).

**Table 6: Analysis of Variance**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 8.035 | 2 | 4.018 | 83.708 | .000[b] |
| | Residual | 6.568 | 138 | .048 | | |
| | Total | 14.603 | 140 | | | |

a. Dependent Variable: performance of state corporations in Kenya
b. Predictors: (Constant), risk assessment and risk monitoring

The ANOVA was used to determine whether the model was a good fit for the data. F calculated was 83.708 while the F critical was 3.062. The p value was 0.000. Since the F-calculated was greater than the F-critical and the p value 0.000 was less than 0.05, the model was considered as a good fit for the data. Therefore, the model can be used to predict the influence of risk assessment and risk monitoring on performance of state corporations in Kenya.

**Table 7: Regression Coefficients**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| **1** | **(Constant)** | 0.205 | 0.053 | | 3.867 | 0.000 |
| | Risk Assessment | 0.486 | 0.123 | 0.487 | 3.951 | 0.000 |
| | Risk Monitoring | 0.430 | 0.113 | 0.431 | 3.805 | 0.001 |

a Dependent Variable: performance of state corporations in Kenya

The regression model was as follows:

$$\mathbf{Y = 0.205 + 0.486X_1 + 0.430X_2 + \varepsilon}$$

According to the results, risk assessment has significant effect on performance of state corporations in Kenya (β1=0.486, p value= 0.000). The relationship was considered significant since the p value 0.000 was less than the significant level of 0.05. The findings conform to the findings of Mutua and Kirui (2020) that there is a very strong relationship between risk assessment and performance of state corporations.

In addition, the results revealed that risk monitoring has significant effect on performance of state corporations in Kenya (β1=0.430, p value= 0.001). The relationship was considered significant since the p value 0.001 was less than the significant level of 0.05. The findings are in line with the results of Osiemo (2021) who revealed that there is a very strong relationship between risk monitoring and performance of state corporations.

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

The study concludes that risk assessment has a positive and significant effect on performance of state corporations in Kenya. Findings revealed that risk probability, impact analysis and risk matrix influences performance of state corporations in Kenya.

The study also concludes that risk monitoring has a positive and significant effect on performance of state corporations in Kenya. Findings revealed that regularly scanning, monitoring changes and tracking existing risks influence performance of state corporations in Kenya.

**Recommendations**

The study recommends that the management of state corporations in Kenya should embed structured and continuous risk assessment practices into their operational and strategic planning processes. By thoroughly evaluating the likelihood and potential impact of identified risks, organizations can prioritize resources, make informed decisions, and implement appropriate controls to mitigate adverse outcomes.

The study also recommends that the management of state corporations in Kenya should institutionalize continuous risk monitoring mechanisms as part of their governance and operational frameworks. Ongoing monitoring enables early detection of changes in risk levels, ensures compliance with risk management policies, and facilitates timely interventions before issues escalate.

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