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INFLUENCE OF TRANSPORT AND FLEET RATIONALIZATION ON PERFORMANCE OF STATE CORPORATIONS IN KENYA

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Abstract

Purpose: The purpose of the study was to assess the influence of transport and fleet rationalization on performance of state corporations Kenya.

Methodology: Descriptive research design was adopted because it allowed an in-depth study of the subject. The target population was all the 187 state corporations in Kenya. Questionnaires were administered to collect qualitative and quantitative data from a sample of 127 heads of transport and logistics department among state corporations operating in Kenya, who were selected using simple random sampling, from the four strata. Questionnaires were used to collect data. The questionnaires were tested for validity and reliability using 10% of the total sample respondents. Data was analyzed through descriptive statistical methods such as means, standard deviation, frequencies and percentage. Inferential analyses were used in relation to correlation analysis and regression analysis to test the relationship between the four explanatory variables and the explained variable. Multiple regression models were used to show the relationship between the predicted variable and the predictor variables. The data generated was keyed in and analyzed by use of Statistical Package of Social Sciences (SPSS) version 21 to generate information which was presented using charts, frequencies and percentages.

Results and conclusion: The response rate of the study was 76%. R square value of 0.715 means that 71.5% of the corresponding variation in performance of state corporations in Kenya can be explained or predicted by (logistics information management, consignment management, distributor base management, transit management) which indicated that the model fitted the study data. The results of regression analysis revealed that there was a significant positive relationship between dependent variable and independent variable at ($\beta = 0.715$), p=0.000 <0.05). The findings of the study concluded that logistics information management, consignment management, distributor base management and transit management have a positive relationship with performance of state corporations in Kenya.

Policy recommendation: The study recommended that state corporations should embrace transport and fleet rationalization aspects so as to improve performance and further researches should to be carried out in other firms to find out if the same results can be obtained.

1.1 Introduction

The competitive transportation sector environment is one that is rapidly changing as globalization and technology force organizations to constantly seek ongoing improvement in all areas in terms of their knowledge, flexibility and performance (Lau & Zhang, 2016). Logistics, for example, is receiving growing attention as an area in which efficiency and productivity increases can be made in order to improve customer service and to lower costs (Sahay & Mohan, 2016).In order to compete successfully in the dynamic transportation sector environment, organizations are increasingly choosing to focus on their own area of competence and expertise (Kersten, Bemeleit & Blecker, 2016). Supply chains have grown more global and interconnected; as a result, they have increased their exposure to shocks and increased the frequency of disruptions. Supply chain speed only exacerbates the problem. Even minor missteps and miscalculations can have major consequences as their impacts spread throughout complex supply chain networks (Woods, 2014). As compliance mandates, suppliers and information flows multiply, supply chains are becoming more complex, costly and vulnerable. Organizations are finding it increasingly difficult to respond to these challenges, especially with conventional supply chain strategies and designs.

Transportation sector being a multimillion industry, the capital is quite an intensive investment, with a very complex supply chain which has grown more global and interconnected; as a result, they have increased their exposure to shocks and increased the frequency of disruptions. Supply chain speed only exacerbates the problem. Even minor missteps and miscalculations can have major consequences as their impacts spread like viruses throughout complex supply chain networks (Togar, Alan & Wright, 2017).An organization will always face challenges in responding to challenges, especially with conventional supply chain strategies and designs, since most of the organization have viewed themselves as entities that exist independently from others and indeed need to compete in order to survive, there is almost tendency to operate exclusive in driving much of corporate strategy, However, such philosophy can be self-defeating if it leads to unwilling to cooperate in order to complete, behind this seemingly paradoxical concept is the idea of supply chain integration and management (Sunil & Meindl, 2014).According to Rajendra (2018) in a study done focusing on the transportation sector, the inventory handling systems were not up to date and could not be classified as 70% reliable thus impacting negatively on the distribution to the final consumer. Unreliability in the supply chain management system used by manufactures was found to be literally expensive and impacted poorly on the company bottom line result and its competitiveness in the long run.

In a supply-chain, an organization will link to its suppliers upstream and to its distributors downstream in order to serve its customers. Usually, materials, information, capital, labor, technology, financial assets and other resources flow through the supply-chain. Since the goal of the firm is to maximize profits, the firm must maximize benefits and minimize costs along the supply-chain. The firm must weigh the benefits versus the cost of each decision it makes along its supply-chain (Mathew & Mee, 2018).

1.2 Statement of the Problem

Changes in the business environment have forced 80% of large-scale enterprises to realign their transportation activities, and also to flatten their hierarchies, a short-term strategy, in order to speed up information flows (CCG, 2017). Moreover, in order to cut costs, state corporations use transport and fleet rationalization to streamline operations, this is a long-term strategy (KNBS, 2017). Currently, companies outsource 90% of their logistics processes (OECD, 2019). All these strategies have been necessitated by big losses, impropriety, and gross logistics mismanagement which are hampering improved and sustained performance of state corporations.

Most state corporations Kenya operate at a technical efficiency of about 39% compared to their counterparts in South Africa at 70% and Malaysia at about 74% hence transport and fleet rationalization may help to close this gap. According to a report by Deloitte (2019) on state corporations Kenya, transport and fleet rationalization saved various firms over Kshs.70 billion in the financial year (FY) 2018/2019. According to another survey by KAM of 2018, 2019 and 2020 on the life span of state corporations, the firms were winding up at notable percentage indices, fluctuating between 49%, 54% and 58% respectively; poor transport and fleet management was cited as the main reason.

The transportation sector has always accounted for 30% of the country's Gross Domestic Product (GDP), provided employment to about 2.6 million people in the formal and informal sectors of the economy, however they have been experiencing problems in the performance of their operations management (USAID, 2019). In view of the foregoing, it is relevant to investigate how Kenyan organizations could have transport and fleet management in the most efficient manner with regard to customer service and cost (ISO, 2017).

In Kenya, studies have reported mixed findings with regard to transport and fleet management, for instance, a study by Mathenge and Dihel (2018) on the role of clearing and forwarding agents in reforming East Africa community transport and fleet management found that firms in Kenya are faced with challenges of measuring the performance of their logistics models because they are not able to anticipate the requirements for clearing and removing the cargo from the port. A study by Ngonela, Mwaniki and Namusonge (2014), on drivers of transport and fleet management on tea processing firms in Bomet County found out that optimal transport and fleet management turnaround time, reduce risks and gain competitive advantage.

While much research has focused on the problems facing transport and fleet management generally in organizations in Kenya, not much research has been done to study transport and fleet rationalization and its influence on performance of state corporations Kenya. It is against this backdrop; the present study sets out to investigate the influence of transport and fleet rationalization on performance of state corporations in Kenya.

1.3 Objectives of the Study

i.   To find out the influence of logistics information management on performance of state corporations in Kenya.

ii.   To establish the influence of consignment management on performance of state corporations in Kenya.

iii.   To determine the influence of distributor base management on performance of state corporations in Kenya.

iv.   To explore the influence of transit management on performance of state corporations in Kenya

2.0 LITERATURE REVIEW

2.1 .1 The Principal Agency Theory

The 1976 article "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure" by Jensen and Meckling helped establish Agency Theory as the dominant theoretical framework of the supply chain literature, and position shareholders as the main stakeholder. The adoption of the agency logic increased during the 1980's as companies started replacing the hitherto corporate logic of managerial capitalism with the perception of managers as agents of the shareholders ((Bourlakis & Bourlakis, 2015).

This theory is based on the separation of ownership and control of economic activities between the agent and the principal. Various agent and principal problems may arise including conflicting objectives; differences in risk aversion, outcome uncertainty, and behavior based on self-interest, and bounded rationality. This may for example entail an agent having a different concept of database design and inventory systems that do not concur with the principles needs.

The contract between the principal and the agent governs the relationship between the two parties, and the aim of the theory is to design a contract that can mitigate potential agency problems (Atos, 2019). The "most efficient contract" includes the right mix of behavioral and outcome-based incentives to motivate the agent to act in the interests of the principal. Creating contracts with supply chain partners that balance rewards and penalties, misalignment can be mitigated.

Balancing the need of the shipper and the capability of the logistics provider is a well-known managerial issue that explicitly implies the risk of agency problems (Armistead & Mapes, 2016). The logistics information management by an agent for the principle should ensure there is no misalignment between the two and a balance of rewards should be reached. The theory suggests an "inter-firm contracting perspective" on logistics, focusing on the design of an efficient contract between the buyer and seller of logistics services, such as logistics information management (Aldin, Brehmer & Johansson, 2014).

2.2 Transport and Fleet Rationalization

2.1.1   Logistics Information Management

In achieving performance, logistics information management comes in handy. According to Chang, Chiang and Pai (2019) logistics information management was defined as the flow of data in different directions with variable contents between various data base (department) within a company. Before, the logistics information management within the logistics had become vital since it enabled chains to respond on real time and accurate data (Bumstead & Cannons, 2019).

Firms then, looked at logistics information management as an asset, since it was not possible to have efficient and reliable materials flow without it. Samson (2019) concurred that, the flow of accurate and real time information in logistics was considered very important to the flow of materials. This logistics information management explosion had enabled logistics to become an important weapon in the firm's arsenal to add value to the bottom line (Bowersox, Close & Cooper, 2017). Information sharing was a key to success of logistics performance

2.1.2 Consignment Management

Consignment management is the most important economic activity among the components of business logistics systems. Consignment management makes goods and products movable and provides timely and regional efficacy to promote value-added under the least cost principle. Kenyon and Meixell (2018) opine that consignment management involves the activities involved in shipping any goods or finished products from suppliers to a facility or to warehouses and sales locations.
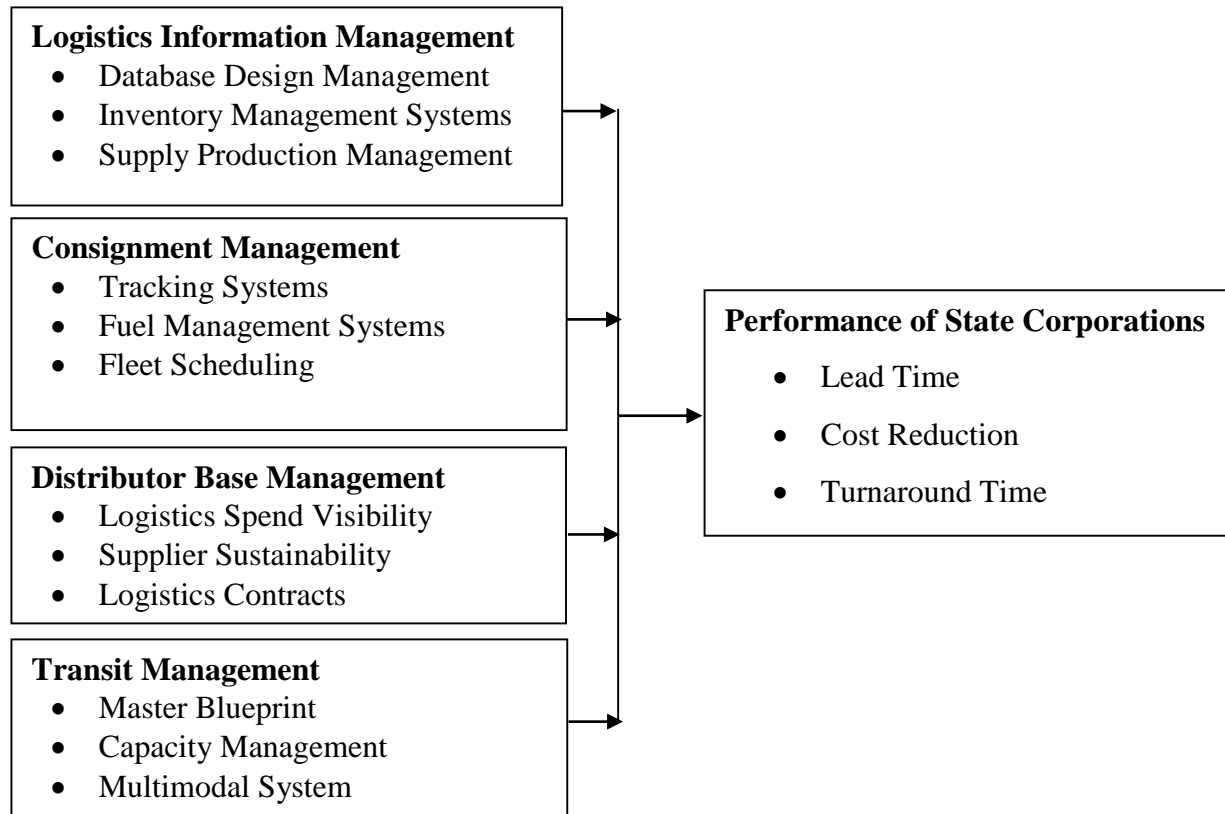
2.1.3 Distributor Base Management

Distributor base management is a conscientious effort to determine the right number of distributors to do business with (Gabbard, 2014). The beginning point of the process is determining the optimal number of suppliers that a firm should maintain and then focusing on identifying which incumbent firms should remain in the supply base in a given commodity team or division (Amayi, 2018). The idea is to reduce purchases from marginal or poor performing distributors while increasing and concentrating purchases among their more desirable top-performing distributors (Kotabe, 2018)..

2.1.4 Transit Management

The transportation is infrastructure that means roads, seaports, airports, rail, and canal. All these exist along nodes and links of transportation network. The transportation and infrastructure focus on operational and policy issues within transportation and infrastructure areas that affect logistics operation (Reitner & Wolfgang, 2019). Transport system is the most important economic activity among the component of business logistic system. Transportation plays a connective role among the several steps that result in the conversation of resources into useful goods in the name of them ultimate consumer. It is the planning of all their functions and sub-functions into a system of goods movement in order to minimize cost maximize service to the customers that constitutes the concept of business logistics.

The role that transportation plays in logistics system is more complex than carrying goods for the proprietors. Its complexity can take effect only through highly quality management. By means of well-handled transport system, goods could be sent to the right place at right time in order to satisfy customers' demands. It brings efficacy, and also it builds a bridge between producers and consumers. Therefore, transportation is the base of efficiency and economy in business logistics and expands other function of logistics system. In addition, a good transport system performing in logistics activities brings benefits not only to service quality but also to company competitiveness (Lalwani, Disney & Naim, 2006).

Logistics Information Management
- Database Design Management
- Inventory Management Systems
- Supply Production Management

Consignment Management
- Tracking Systems
- Fuel Management Systems
- Fleet Scheduling

Distributor Base Management
- Logistics Spend Visibility
- Supplier Sustainability
- Logistics Contracts

Transit Management
- Master Blueprint
- Capacity Management
- Multimodal System

Performance of State Corporations
- Lead Time
- Cost Reduction
- Turnaround Time

Figure 1: Conceptual framework

3.0 METHODOLOGY

The study reviewed both theoretical and empirical literature and then propose the research methodology that addressed the gaps identified in literature as well as to validate the research questions. Descriptive research design was adopted. The study preferred this method because it allowed an in-depth study of the subject. The target population was all the 187 state corporations in Kenya. Questionnaires were administered to collect qualitative and quantitative data from a sample of 127 heads of transport and logistics department among state corporations operating in Kenya, who were selected using simple random sampling, from the four strata. Questionnaires were used to collect data. The questionnaires were tested for validity and reliability using 10% of the total sample respondents. Data was analyzed through descriptive statistical methods such as means, standard deviation, frequencies and percentage. Inferential analyses were used in relation to correlation analysis and regression analysis to test the relationship between the four explanatory variables and the explained variable. Multiple regression models were used to show the relationship between the predicted variable and the predictor variables. The data generated was keyed in and analyzed by use of Statistical Package of Social Sciences (SPSS) version 21 to generate information which was presented using charts, frequencies and percentages.

The research used a multiple regression model.

$$Y=\alpha+\beta_1 X_1+\beta_2 X_2+\beta_3 X_3+\beta_4 X_4+\varepsilon$$

Where:

Y = Performance of State Corporations

β_1–β_4 =the coefficients of the independent variables;

X_1 = Logistics Information Management

X_2= Consignment Management

X_3 = Distributor Base Management

X_4 = Transit Management

ε is the error term

4. 0 RESULTS FINDINGS

4 .1 Introduction

4.2 Response Rate

A sample of 127 respondents were interviewed using questionnaires that allowed the researcher to drop the questionnaire to the respondents and then collect them at a later date when they had filled the questionnaires. A total of 127 questionnares were distributed to heads of transport and logistics department. Out of the population covered, 96 were responsive respresenting a response rate of 76%. This was above the 50% which is considered adequate in descriptive statistics according to (Dunn, 2017).

Table 1: Response Rate of Respondents

Response	Frequency	Percentage
Actual Response	96	76
Non-Response	31	24
Total	**127**	**100%**

4.3 Pilot Study

The cronbach's alpha was computed in terms of the average inter-correlations of the items measuring the concepts. The rule of thumb for cronbach's alpha is that the closer the alpha is to 1 the higher the reliability (Kothari, 2019). A value of at least 0.7 is recommended. Cronbach's alpha is the most commonly used coefficient of internal consistency and stability. Consistency indicated how well the items measuring the concepts hang together as a set. Cronbach's alpha was used to measure realibilty. This was done on the four objectives of the study. The higher the coefficient, the more reliable is the test.

Table 2: Reliability Results

Variable	No. of Items	Respondents	α=Alpha	Comment
Logistics Information Management	9	10	0.893	Reliable
Consignment Management	9	10	0.987	Reliable
Distributor Base Management	9	10	0.974	Reliable
Transit Management	9	10	0.976	Reliable

4.4 Demographic Information

4.4.1 Distribution of Respondents by Age

The study also determined the age of the respondents. The results are submitted in table 3 where the majority 40.6% were 31-40 years. Respondents aged between 41-50 years were 35.4%. Residents above 50 years accounted years accounted for 24%. The percentages may raise the issue of gender equity in state corporations in this country, but that is outside the scope of this study. A study on UK companies found that women and men do not differ in their ability to perform operational tasks, but rather bring a different perspective to strategic decision making in procurement (Eadie *et al.,* 2017).

Table 3: Distribution of Respondents by Age

Age	Frequency	Percent
31-40 Years	39	41
41-50 Years	34	35
Above 50 Years	23	24
Total	**96**	**100**

4.4.2 Distribution of Respondents by Level of Education

The respondents were asked to state their highest level of education and the results were as captured in Table 4. which revealed that majority of the respondent (64.6%) indicated that their academic qualification was up to bachelor's level. The result further revealed that (35.4%) of the respondent indicated that their academic qualification was up to postgraduate level.

With majority responsdents having degree and above, it is expected that their level of understanding of performance of state corporations is good. This is an indication that the results obtained from respondents interviewed in the present study can be relied upon. These findings concur those of George *et al.,* (2016) who established that majority of who run transport and logistics department are highly educated and that there is evidence linking education and performance of state corporations.

Table 4: Distribution of Respondents by Level of Education

Education Level	Frequency	Percent
Undergraduate	62	64.6
Post-Graduate	34	35.4
Total	**96**	**100.0**

4.4.3 Distribution of Respondents by Work Duration

The study determined the number of years the respondents had worked in state corporations in Kenya. The respondents were asked to indicate their work duration. The result revealed that majority of the respondents (38.5%) indicated that their work duration was 3-5 years. The result also showed that (31.3%) of the respondent indicated that their work duration was 6-8 years.

The result further revealed that (30.2 %) of the respondent indicated that their work duration was above 9 years. The findings of the study are in tandem with literature review by Khalil (2015) who indicated that a duration and experience of employee helps him or her to have better knowledge and skills which contribute to performance.

Table 5: Distribution of Respondents by Length of Service

Length of Service	Frequency	Percent
3-5 Years	37	38.5
6-8 Years	30	31.3
9 Years and above	29	30.2
Total	**96**	**100.0**

4.5 Descriptive Statistics

4.5.1 Logistics Information Management

The first objective of the study was to assess the influence of logistics information management on performance of state corporations in Kenya. The respondents were asked to indicate to what extent did logistics information management influence performance of state corporations in Kenya. Results indicated that majority of the respondents 25% agreed that it was to a very great extent, 27% said that it was to a great extent, 35% said it was moderate, while little extent and not all were at 5% and 8% respectively.

Logistics Information Management

not at all
8%

Little extent
5%

Very Great Extent
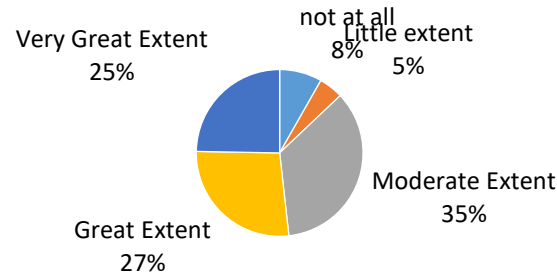25%

Moderate Extent
35%

Great Extent
27%

Figure 2: Logistics Information Management

The respondents were also asked to comment on statements regarding logistics information management influence on performance of state corporations in Kenya. The responses were rated on a likert scale and the results presented in Table 4.6 below. It was rated on a 5-point Likert scale ranging from; 1 = strongly disagree to 5 = strongly agree. The scores of 'strongly disagree' and 'disagree' have been taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of 'neutral' has been taken to represent a statement agreed upon, equivalent to a mean score of 2.6 to 3.4. The score of 'agree' and 'strongly agree' have been taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5. The respondents were asked to indicate their descriptive responses for logistics information management. The result revealed that majority of the respondent with a mean of (4.3) agreed with the statement that database design management greatly reduces delivery time. The measure of dispersion around the mean of the statements was 1 indicating the responses were varied. The result revealed that majority of the respondent with a mean of (3.6) agreed with the statement that inventory management systems greatly reduce delivery time. The measure of dispersion around the mean of the statements was 1.4 indicating the responses were varied. The result revealed that majority of the respondent with a mean of (3.8) agreed with the statement that supply production management greatly reduces delivery time. The measure of dispersion around the mean of the statements was 1.3 indicating the responses were varied.

The result revealed that majority of the respondent with a mean of (3.0) agreed with the statement that database design management greatly influences cost reduction. The measure of dispersion around the mean of the statements was 1.4 indicating the responses were varied. The result in table 4.5.1 revealed that majority of the respondent with a mean of (4.2) agreed with the statement that inventory management systems greatly influence cost reduction. The measure of dispersion around the mean of the statements was 1 indicating the responses were varied. The result revealed that majority of the respondent with a mean of (3.7) agreed with the statement that supply production management greatly influences cost reduction. The measure of dispersion around the mean of the statements was 1 indicating the responses were varied. The result revealed that majority of the respondent with a mean of (3.4) agreed with the statement that database design management greatly reduces turnaround time. The measure of dispersion around the mean of the statements was 1.3 indicating the responses were varied. The result revealed that majority of the respondent with a mean of (3.8) agreed with the statement that inventory management systems greatly reduce

turnaround time. The measure of dispersion around the mean of the statements was 1.2 indicating the responses were varied. The result revealed that majority of the respondent with a mean of (3.8) agreed with the statement that supply production management greatly reduces turnaround time. The measure of dispersion around the mean of the statements was 1.2 indicating the responses were varied. However, the variations in the responses were varied as shown by an average standard deviation of 1.5 and an average mean of 3.8. The findings agree with Knudsen (2015) that using logistics information management when optimizing logistics is a smart move and can reduce expenses significantly.

Table 6: Logistics Information Management

Statements	N	Mean	Std. Deviation
Database design management greatly reduces delivery time	96	4.3	1.0
Inventory management systems greatly reduce delivery time	96	3.6	1.4
Supply production management greatly reduces delivery time	96	3.8	1.3
Database design management greatly influences cost reduction	96	3.0	1.4
Inventory management systems greatly influence cost reduction	96	4.2	1.0
Supply production management greatly influences cost reduction	96	3.7	0.5
Database design management greatly reduces turnaround time	96	3.4	1.3
Inventory management systems greatly reduces turnaround time	96	4.1	4.3
Supply production management greatly reduces turnaround time	96	3.8	1.2
Average	**96**	**3.8**	**1.5**

4.5.2 Consignment Management

The second objective of the study was to investigate the influence of consignment management on performance of state corporations in Kenya. The respondents were asked to indicate to what extent did consignment management influence performance of state corporations in Kenya. Results indicated that majority of the respondents 31% agreed that it was to a very great extent, 36% said that it was to a great extent, 23% said it was moderate, while little extent and not all tied at 5%.
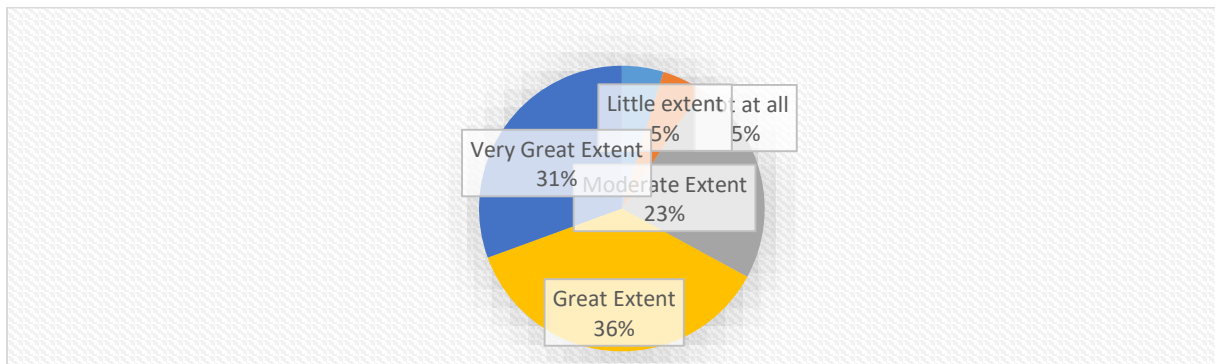
Figure 3: Consignment Management

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The respondents were also asked to comment on statements regarding consignment management influence on performance of state corporations in Kenya. The respondents were asked to indicate descriptive responses for consignment management. The result revealed that majority of the respondents as indicated by a mean of (3.8) indicated that they agreed with the statement that tracking systems greatly reduces delivery time. The responses were varied as measured by standard deviation of 1.1. The result revealed that majority of the respondents as indicated by a mean of (3.6) indicated that they agreed with the statement that fuel management systems greatly reduce delivery time. The responses were varied as measured by standard deviation of 1.1. The result revealed that majority of the respondents as indicated by a mean of (3.7) indicated that they agreed with the statement that fleet scheduling reduces delivery time. The responses were varied as measured by standard deviation of 1.1. The result revealed that majority of the respondents as indicated by a mean of (3.6) indicated that they agreed with the statement that tracking systems greatly influences cost reduction. The responses were varied as measured by standard deviation of 1.2. The result revealed that majority of the respondents as indicated by a mean of (3.6) indicated that they agreed with the statement that fuel management systems greatly influence cost reduction. The responses were varied as measured by standard deviation of 1.2. The result revealed that majority of the respondents as indicated by a mean of (3.5) indicated that they agreed with the statement that fleet scheduling greatly influences cost reduction. The responses were varied as measured by standard deviation of 1.4. The result revealed that majority of the respondents as indicated by a mean of (3.5) indicated that they agreed with the statement that tracking systems greatly reduces turnaround time. The responses were varied as measured by standard deviation of 1.4. The result revealed that majority of the respondents as indicated by a mean of (3.3) indicated that they agreed with the statement that fuel management systems greatly reduce turnaround time. The responses were varied as measured by standard deviation of 1.5. The result revealed that majority of the respondents as indicated by a mean of (3.6) indicated that they agreed with the statement that fleet scheduling greatly reduces turnaround time. The responses were varied as measured by standard deviation of 0.5.

However, the variations in the responses were varied as shown by an average standard deviation of 1.2 and an average mean of 3.6. These findings imply that consignment management was at the heart of the organization. They agree with Lysons (2016) that organizations must look toward their fleet management improvements. The opportunities for cost savings and operational improvements can be enormous as the impact on profitability is considerable.

Table 2: Consignment Management

Statements	N	Mean	Std. Deviation
Tracking systems greatly reduces delivery time	96	3.8	1.1
Fuel management systems greatly reduces delivery time	96	3.6	1.1
Fleet scheduling reduces delivery time	96	3.7	1.1
Tracking systems greatly influences cost reduction	96	3.5	1.2
Fuel management systems greatly influences cost reduction	96	3.8	1.2
Fleet scheduling greatly influences cost reduction	96	3.5	1.4
Tracking systems greatly reduces turnaround time	96	3.5	1.4
Fuel management systems greatly reduces turnaround time	96	3.3	1.5

Fleet scheduling greatly reduces turnaround time	96	3.6	0.5
Average	**96**	**3.6**	**1.2**

4.5.3 Distributor Base Management

There was also need to establish how distributor base management influenced performance of state corporations in Kenya as the third objective. The respondents were asked to comment on extent to which distributor base management influences performance of state corporations. Results indicated that majority of the respondents 21% agreed that it was to a very great extent, 22% said that it was to a great extent, 21% said it was moderate; little extent was 28% and not all at 8%.
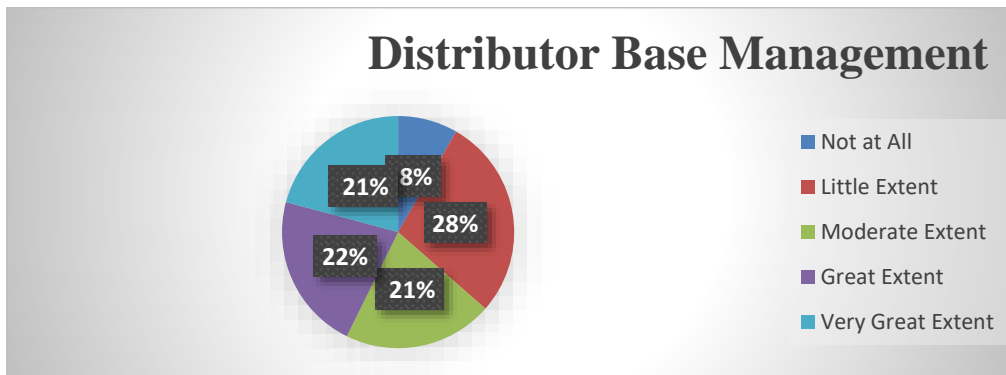

Figure 4: Distributor Base Management

The respondents were asked to indicate their levels of agreement on statements regarding distributor base management. The results revealed that majority of the respondent (3.9) agreed with the statement that their logistics spend visibility greatly reduces delivery time. The responses were varied as shown by the standard deviation of 1.2. The results revealed that majority of the respondent (3.2) agreed with the statement that sustainability greatly reduce delivery time. The responses were varied as shown by the standard deviation of 1.3. The results revealed that majority of the respondent (4.0) agreed with the statement that logistics contracts reduce delivery time. The responses were varied as shown by the standard deviation of .8. The results revealed that majority of the respondent (4.2) agreed with the statement that logistics spend visibility greatly influences cost reduction. The responses were varied as shown by the standard deviation of .9. The results revealed that majority of the respondent (3.7) agreed with the statement that sustainability greatly influence cost reduction. The responses were varied as shown by the standard deviation of .5. The results revealed that majority of the respondent (2.4) agreed with the statement that logistics contracts greatly influence cost reduction. The responses were varied as shown by the standard deviation of 1.3. The results revealed that majority of the respondent (3.1) agreed with the statement that Logistics spend visibility greatly reduces turnaround time. The responses were varied as shown by the standard deviation of 1.2. The results revealed that majority of the respondent (3.2) agreed with the statement that sustainability greatly reduce costs. The responses were varied as shown by the standard deviation of 1.3. The results revealed that majority of the respondent (3.5) agreed with the statement that logistics contracts greatly reduce costs. The responses were varied as shown by the standard deviation of 1.3.

The average mean of all the statements was 3.7 indicating that majority of the respondents agreed on distributor base management influence on performance of state corporations in Kenya.

However, the variations in the responses were varied as shown by a standard deviation of 1.1. These findings imply that through distributor base management, companies can improve competitive positioning, gain entry to new dynamic and technology driven markets (Maina, 2018).

Table 3: Distributor Base Management

Statements	N	Mean	Std. Deviation
Logistics spend visibility greatly reduces delivery time	96	3.9	1.2
Sustainability greatly reduces delivery time	96	3.2	1.3
Logistics contracts reduces delivery time	96	4.0	0.8
Logistics spend visibility greatly influences cost reduction	96	4.2	0.9
Sustainability greatly influences cost reduction	96	3.7	0.5
Logistics contracts greatly influences cost reduction	96	2.4	1.3
Logistics spend visibility greatly reduces turnaround time	96	3.1	1.2
Sustainability greatly reduces turnaround time	96	3.2	1.3
Logistics contracts greatly reduces turnaround time	96	3.5	1.3
Average	**96**	**3.7**	**1.1**

4.5.4 Transit Management

There was also need to establish how transit management influences performance of state corporations. The respondents were also asked to comment on statements regarding the extent to which transit management influenced performance of state corporations. Results showed that 3% of respondents indicated to very great extent, great extent was at 12%, moderate extent was 37%, while little extent was at 27% and not at all was at 21%.

Pie chart: Transit Management — Very Great Extent, 3%; Great Extent, 12%; Moderate Extent, 37%; Little extent, 27%; not at all, 21%.
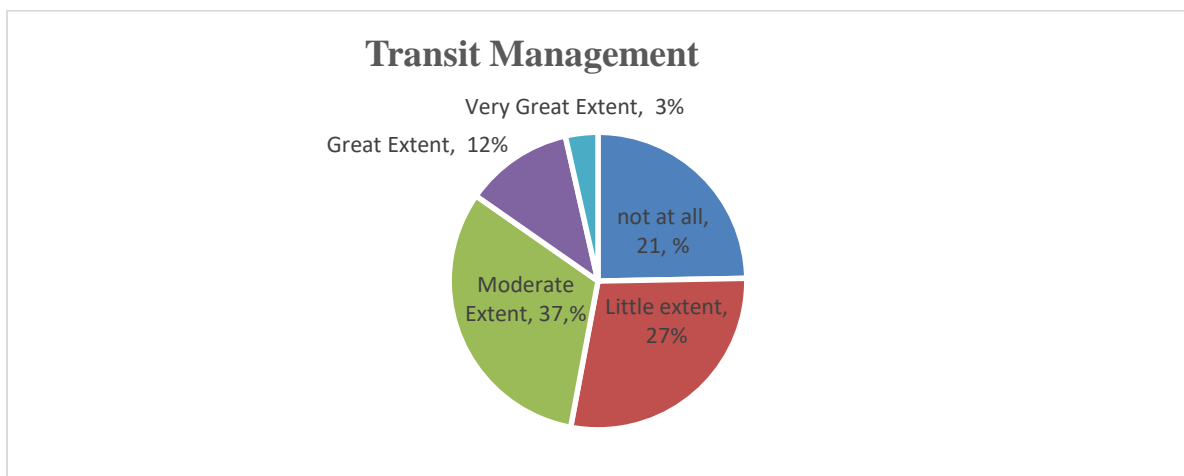
Figure 5: Transit Management

The respondents were asked to indicate the descriptive responses for transit management. The result revealed that majority of the respondent (3.2) agreed with the statement that master blueprint greatly reduces delivery time. The responses were varied as shown by a standard deviation of 1.3. The result revealed that majority of the respondent (3.2) agreed with the statement that capacity management greatly reduce delivery time. The responses were varied as shown by a standard

deviation of 1. The result revealed that majority of the respondent (4.3) agreed with the statement that multimodal system reduces delivery time. The responses were varied as shown by a standard deviation of 1.The result revealed that majority of the respondent (4.2) agreed with the statement that master blueprint greatly influences cost reduction. The responses were varied as shown by a standard deviation of 0.8. The result revealed that majority of the respondent (4.1) agreed with the statement that capacity management greatly influences cost reduction. The responses were varied as shown by a standard deviation of 1. The result revealed that majority of the respondent (4.2) agreed with the statement that multimodal system greatly influences cost reduction. The responses were varied as shown by a standard deviation of 0.8

The result revealed that majority of the respondent (4.4) agreed with the statement that master blueprint greatly reduce costs. The responses were varied as shown by a standard deviation of 0.6. The result revealed that majority of the respondent (4.4) agreed with the statement that capacity management points greatly reduce costs. The responses were varied as shown by a standard deviation of 0.6.

The result revealed that majority of the respondent (4.4) agreed with the statement that multimodal system greatly reduces turnaround time. The responses were varied as shown by a standard deviation of 0.7. The average mean response for the statements on transit management was 4.4 indicating there was agreement on transit management, the variations in the responses was 0.9. The results imply that an organization benefits greatly when transit management is embraced to reduce costs (Bird, 2019).

Table 4: Transit Management

Statements	N	Mean	Std. Deviation
Master blueprint greatly reduces delivery time	96	3.2	1.3
Capacity management greatly reduces delivery time	96	2.9	1.0
Multimodal system reduces delivery time	96	4.3	0.9
Master blueprint greatly influences cost reduction	96	4.3	0.9
Capacity management greatly influences cost reduction	96	4.1	1.0
Multimodal system greatly influences cost reduction	96	4.2	0.8
Master blueprint greatly reduces turnaround time	96	4.4	0.6
Capacity management points greatly reduces turnaround time	96	4.4	0.7
Multimodal system greatly reduces turnaround time	96	4.4	0.6
Average	**96**	**4.4**	**0.9**

4.6 Correlation Analysis

Correlation analysis was used to determine both the significance and degree of association of the variables and also predict the level of variation in the dependent variable caused by the independent variables in table 5:

Table 5: Summary of Pearson's Correlations

Correlations		Logistics Information Management	Consignment Management	Distributor Base Management	Transit Management	Performance of State Corporations
Logistics Information Management	Pearson Correlation	1				
	Sig. (2-Tailed)					
Consignment Management	Pearson Correlation	.372**	1			
	Sig. (2-Tailed)	0				
Distributor Base Management	Pearson Correlation	.353**	.449**	1		
	Sig. (2-Tailed)	0	0			
Transit Management	Pearson Correlation	.363**	.771**	.547**	1	
	Sig. (2-Tailed)	0	0	0		
Performance of State Corporations	Pearson Correlation	.556**	.662**	.703**	.691**	1
	Sig. (2-Tailed)	0	0	0	0	

** Correlation is Significant at the 0.05 Level (2-Tailed).

The correlation summary shown in Table 4.10 indicated that the associations between each of the independent variables and the dependent variable were all significant at the 95% confidence level. The correlation analysis to determine the relationship between logistics information management and performance of state corporations in Kenya, Pearson correlation coefficient computed and tested at 5% significance level. The results indicate that there was a positive relationship (r=0.556) between logistics information management and performance of state corporations in Kenya. In addition, the researcher found the relationship to be statistically significant at 5% level (p=0.000, <0.05). The correlation analysis to determine the relationship between consignment management and performance of state corporations in Kenya, Pearson correlation coefficient computed and

tested at 5% significance level. The results indicated that there was a positive relationship (r=0.662) between consignment management and performance of state corporations in Kenya. In addition, the researcher found the relationship to be statistically significant at 5% level (p=0.000, <0.05).

The correlation analysis to determine the relationship between online payment and performance of state corporations in Kenya, Pearson correlation coefficient computed and tested at 5% significance level. The results indicate that there was a positive relationship (r=0.703) between distributor base management and performance of state corporations in Kenya. In addition, the researcher found the relationship to be statistically significant at 5% level (p=0.000, <0.05).

The correlation analysis to determine the relationship between transit management and performance of state corporations in Kenya, Pearson correlation coefficient computed and tested at 5% significance level. The results indicate that there was a positive relationship (r=.691) between transit management and performance of state corporations in Kenya. In addition, the researcher found the relationship to be statistically significant at 5% level (p=0.000, <0.05). Hence, it was evident that all the independent variables could explain the changes in the performance of state corporations in Kenya, on the basis of the correlation analysis.

4.7 Regression Analysis

In this study multivariate regression analysis was used to determine the significance of the relationship between the dependent variable and all the independent variables pooled together. Regression analysis was conducted to find the proportion in the dependent variable (performance of state corporations in Kenya.) which can be predicted from the independent variables (logistics information management, consignment management, distributor base management, transit management).

Table 6 presented the regression coefficient of independent variables against dependent variable. The results of regression analysis revealed there was a significant positive relationship between dependent variable and the independent variable. The independent variables reported R value of 0.846 indicating that there was perfect relationship between dependent variable and independent variables.

R square value of 0.715 means that 71.5% of the corresponding variation in performance of state corporations in Kenya can be explained or predicted by (logistics information management, consignment management, distributor base management, transit management) which indicated that the model fitted the study data. The results of regression analysis revealed that there was a significant positive relationship between dependent variable and independent variable at (β = 0.715), p=0.000 <0.05).

Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.846[a]	.715	.703	.14869

a) Predictors: (Constant), Logistics Information Management, Consignment Management, Distributor Base Management and Transit Management

b) Dependent Variable: Performance of State Corporations

Table 7: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.002	4	1.251	56.562	.000[b]
	Residual	1.99	91	0.022		
	Total	6.992	95			

a) Predictors: (Constant), Logistics Information Management, Consignment Management, Distributor Base Management and Transit Management

b) Dependent Variable: Performance of State Corporations

The significance value is 0.000 which is less than 0.05 thus the model is statistically significance in predicting how logistics information management, consignment management, distributor base management and transit management influence performance of state corporations in Kenya. The F critical at 5% level of significance was 28.61. Since F calculated which can be noted from the ANOVA table above is 56.562 which is greater than the F critical (value= 28.61), this shows that the overall model was significant.

The study therefore establishes that; logistics information management, consignment management, distributor base management and transit management were all important transport and fleet rationalization aspects influencing performance of state corporations. These results agree with Odhiambo and Kamau (2016) results which indicated a positive and significant influence of transport and fleet rationalization on performance of state corporations.

Table 8: Coefficients of Determination

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.07	0.193		10.725	0.000
	Logistics Information Management	0.166	0.041	0.255	4.048	0.000
	Consignment Management	0.138	0.053	0.235	2.603	0.010
	Distributor Base Management	0.119	0.021	0.398	5.667	0.000
	Transit Management	0.090	0.043	0.201	2.093	0.037

a) Predictors: (Constant), Logistics Information Management, Consignment Management, Distributor Base Management and Transit Management

b) Dependent Variable: Performance of State Corporations

The research used a multiple regression model

$$Y= \beta_0+ \beta_1 X_1+\beta_2 X_2+\beta_3 X_3 +\beta_4 X_4 +\varepsilon$$

The regression equation will be;

$$Y=2.07 + 0.166 X_1 + 0.138 X_2 + 0.119 X_3 + 0.09 X_4$$

The regression equation above has established that taking all factors into account (logistics information management, consignment management, distributor base management, transit management) constant at zero, performance of state corporations in Kenya will be an index of 2.07. The findings presented also shows that taking all other independent variables at zero, a unit increase in logistics information management will lead to a 0.166 increase in performance of state corporations. The P-value was 0.000 which is less 0.05 and thus the relationship was significant.

The study also found that a unit increase in consignment management will lead to a 0.138 increase in performance of state corporations in Kenya. The P-value was 0.010 and thus the relationship was significant. In addition, the study also found that a unit increase in distributor base management will lead to a 0.119 increase in performance of state corporations in Kenya. The P-value was 0.000 and thus the relationship was significant.

Lastly, the study found that a unit increase in transit management will lead to a 0.090 increase in the performance of state corporations in Kenya. The P-value was 0.030 and hence the relationship was significant since the p-value was lower than 0.05. The findings of the study show that, logistics information management contributed most to the performance of state corporations in Kenya.

5. 0 Summary, Conclusion and Recommendations

5.1 Summary of Findings

The study sought to examine the influence of transport and fleet rationalization on performance of state corporations in Kenya. The study targeted staff of state corporations, specifically heads of transport and logistics department. A total of 96 respondents participated.

The study endeared to determine influence of transport and fleet rationalization on performance of state corporations in Kenya. The regression results revealed that transport and fleet rationalization aspects identified in the study, that is, logistics information management, consignment management, distributor base management and transit management combined could explain approximately 71.5% of the variations in the performance of state corporations. The other 28.5% may be attributed to other aspects not explained by the model or the variables.

From inferential statistics, a positive correlation is seen between each predictor variable and performance of state corporations. The strongest correlation was established between logistics information management and performance of state corporations. All the independent variables were found to have a statistically significant association with the dependent variable at ninety-five percent level of confidence.

5.2 Conclusions of the Findings of the Study

Based on the study findings, the study concludes that performance of state corporations can be improved by logistics information management, consignment management, distributor base management and transit management. Drawing on this research, lack of logistics information management, consignment management, distributor base management and transit management in performance of state corporations is leading to poor performance of state corporations. Though the performance of state corporations is striving hard to improve their performance of state corporations there are still issues of poor-quality products, long lead time and high cost of products. It was articulated that the current phenomenon of poor performance of state corporations can be reversed if the partakers and other stakeholders ensure logistics information management, consignment management, distributor base management and transit management are embraced in the logistics function. Thus, it is evident that all the independent variables identified in this study were all important transport and fleet rationalization aspects that influenced performance of state corporations.

5.3 Recommendations and Further Research

Finally, the study recommended that state corporations should embrace transport and fleet rationalization aspects so as to improve performance and further researches should to be carried out in other firms to find out if the same results can be obtained.

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