Int Journal of Social Sciences Management and Entrepreneurship 7(1): 348-360, 2023

ISSN 2411-7323

www.sagepublishers.com

GREEN SUPPLY CHAIN MANAGEMENT PRACTICES AND PERFORMANCE OF STATE CORPORATIONS IN THE ENERGY SECTOR IN KENYA

[1] Dido Sora Galgalo, [2] Dr. Shale Noor,

[1]Masters Student, Jomo Kenyatta University of Agriculture and Technology

[2,]Lecturer, Jomo Kenyatta University of Agriculture and Technology

ABSTRACT

Green supply chain management (GSCM) has gain traction, increasingly, in the recent past. GSCM, which is a critical component in green supply chain performance (GSCP) has is understood to mean components of product design and manufacturing, packaging, customers and purchase, transport and storage, which are collectively endeared to achieving greater efficiencies. While the scale and scope of interventions differ from country to country on a comparative scale, it is plausible that modalities on how this is done also differs. Multi-national companies are environmentally alert about their actions. The general objective was to examine the influence of green supply chain management practices on the performance of state corporations in the energy sector in Kenya. Specifically the study ought to: determine the influence of green material sourcing practice on the performance of state corporations in the energy sector in Kenya and to examine the influence of green marketing practice on the performance of state corporations in the energy sector in Kenya. Descriptive survey research methodology was employed in this study. The population of the public energy sector in Kenya as per the KNBS data in 2019 were 14 in number. The study hence, sampled 14 state corporations, and three (3) respondents per each state corporations equating to a total of 42 respondents. Primary data was gotten using questionnaires which was self-administered to the respondents. The researcher sought a permit from the National Commission of Science, Technology, and Innovation after the research proposal is approved (NACOSTI). The study established that green material sourcing practice has a positive and significant influence on the performance of state corporations in the energy sector in Kenya. In addition, the study deduced that green marketing procurement practices has a positive and significant influence on the State Corporation's performance in Kenya's energy industry. The study recommends actions that include lowering energy use, recycling, reusing, and using biodegradable and environmentally friendly materials, as well as reducing or eliminating trash.

Key Words: Green Supply Chain Management Practices, Green Material Sourcing Practice, Green Marketing Practice and Performance of State Corporations

Background of the study

Green supply chain management (GSCM) has gain traction, increasingly, in the recent past. GSCM, which is a critical component in green supply chain performance (GSCP) has is understood to mean components of product design and manufacturing, packaging, customers and purchase, transport and storage, which are collectively endeared to achieving greater efficiencies. As debate for environmental preservation continues due to pollution, GSCM has emerged as a dominant concept that accounts for efficient exploitation and use, disposal and re-use of resources (Chepkoech, Chenuos & Kosgei, 2015; De-Jesus, 2018). Greening these aspects, alongside distribution and waste management and reverse logistics are not without spillover benefits to environmental preservation, while creating wealth (John, 2018). Built on a blended theoretical framework of the resource-based view, ecological modernization, and social network, stakeholder corporate environmental responsibility, John (2018) posits that GSCM plans have propensity to deepen GSCP when by leveraging on resource and material efficiency in the whole aura of supply chain management (SCM).

For certainty, corporations are ingraining GSCM in planning. While the scale and scope of interventions differ from country to country on a comparative scale, it is plausible that modalities on how this is done also differs. Using a systematic approach in Asia, Irum *et al.*, (2018) conducted a review of GSCM practices. Their work concentrated on 22 thematic works between 2008 to 2017. During this period, they established that GSCM had increasingly grown and that that growth would provide impetus into the future. In this study they predict that thematic areas of interest would encompass economic, environmental, operational and social realms of development.

In Ghana manufacturing entities are adopting GSCM models. This development, Famiyeh, Kwarteng, Asante-Darko and Dadzie (2018) have observed has attendant positive ripple effects to the overall economy, which is mainly attributable to environmental management systems (EMSs) and green purchasing (GP) practices. Combined, as Famiyeh *et al.* (2018) have argued, this gives entities a competitive edge as far as cost, quality and flexibility are concerned. In widening the discourse around e-procurement, Omusebe, (2018) focused into understanding the plausible impact of accounting for EMSs into supply chain management. Particularly, the study was motivated by an empirical gap in terms of how GSCM has impacted performance of state corporations in Kenya. After rigorous content analysis, the study the recommended the centrality of the government in developing and shaping green supply chain policy and guidelines for greater adoptability by targeted state corporations. This recommendation absconds the centrality of public participation as espoused in the supreme law.

Activities of GSCM are enormous. Importantly, however, its material sourcing and production that is integral. Greening espouses elements of EMSs in the entire process. Among others is the need to source raw materials in using eco-centric approaches that account for resource deficiency, albeit, their rejuvenation to enable a cycle of exploitation and provision of goods into the future. When residual value is recyclable, products (or products in their obsolete nature) can be used as inputs to churn new marketable products. Colling *et al.* (2016) who have advocated for this model have argued for recycling energy use potential in the Brazilian. This model, they further argue reduces Green House Gases emissivity.

Kitsao (2017) in contributing to the greening debate observes that the inter-stages of the supply chain performance crosses sectoral corporations, limitlessly. This is because no single corporation is a true sufficient entity and thus common that essential materials, components and sub-assemblies or even final products encompass a range of channels enroute to the consumer. This ensures

provision of the right material at the right time and at the right location. It has particularly been observed that inbound transportation accounts for about 10% of the entire material cost. Low production cost and high product quality are associated with both inbound and outbound efficiencies; so is the delivery of quality products as expected alongside its relevant information (Prajogo, Oke & Olhager, 2016).

Statement of the problem

Green House Gases (GHGs) concentration is rapidly increasing as a result if emissivity that emanates from energy use in exploitation, manufacturing, packaging, and transportation of products to the consumers. GHGs, especially carbon dioxide gas has noxious environmental impacts yet they have a longevity in the atmosphere. GSCM, which accounts for efficiency is instrumental in preserving the environment. Schilling (2015) has observed that in Kenya, production and supply of products without environmental consideration has led to adverse outcomes.

The Bruntland Commission Report of 1987 recognized sustainability, which has since been understood to mean sustainable development. The report defines sustainability as "meeting the needs of the present without compromising the ability of future generations to meet their own needs". Taking into consideration of ecology into marketing strategies, especially in channels of distribution is an imperative way of accounting for the needs of the environmentally concerned consumers who are worried about the role of public corporations in preserving and conserving the environment mainly in the global energy sector (Borowy, 2013).

Generally, the energy sector in Kenya encompasses the production and use of coal, oil products, biofuels and waste and electricity in disaggregated proportions. In endearing itself to a middle-income country by 2030, the country aspires to realize 75% electricity connectivity (Selvakkumaran & Silveira, 2019), particularly in the rural areas. Without proper calibration of the role green material sourcing on the performance of public energy sector in the country, gains made can be neutralized by the adverse effects of climate change. In Eastern Kenya, K'orowe-Maurice (2020) observed that oil pipeline leak resulted to hazardous hydrocarbon contamination with soil and ground water. Doubtlessly, building a greener future will encompass a range of interventions, but advocacies around policies that seek to protect access and use, distribution, re-use and re-distribution of energy, mainly in the public sector will be imperative in attenuating the adverse effects of global warming.

While building a greener, resilient and sustainable future is an achievable desire, green marketing require an ample space in this development at a time when green distribution and storage logistics on the performance of public energy sector are not fully understood. GSCM across corporations in the energy sector is imperative in not only caring for mother nature, despite the range of supply chain activities but in reducing cost that could have otherwise been incurred had it not been accounted for.

Specific objective

i. To determine the influence of green material sourcing practice on the performance of state corporations in the energy sector in Kenya.
ii. To examine the influence of green marketing practice on the performance of state corporations in the energy sector in Kenya.

LITERATURE REVIEW

Theoretical framework

Theory of constraints

The theory of constraints (TOC) has had an ample implication in supply chain and the whole aura of logistics. Anchored on a maxim that "a chain is no stronger than its weakest link", TOC has been considered as a management philosophy, which seeks to ignite and consequently implement novel innovations over a constraint that prevents a system from achieving superior levels of performance. The TOC, therefore, presupposes that there is an impediment that obscures managers from attaining their objectives; delineates necessary conditions subject to which a desired solution cannot be obtained, with an aim of having one.

The theory encapsulates the aspects of logistics, performance and logical thinking (Dörnhöfer, Schröder & Günthner, 2016; Stabler, 1996). In logistics, TOC includes drum-buffer-rope pull system technique, buffer management, and the evaluation of VAT (Darlington, Francis, Found & Thomas, 2015; Panizzolo, 2016). Measurement has to do with the determination of a system profiteering or inducing losses while performance has to do with operating measures (Maka & O'Donovan, 2021). Proponents such as Ikeziri, Souza, Gupta and de Camargo Fiorini (2019) have argued that the TOC is the much-needed tool in untangling the measurement nightmare. They have posited that the theory while it still undergoes evolution that it is imperative that consistent and continuous inquiry is done to strengthen it.

In more recent explorations, Zhu *et al.* (2020) have associated energy and environmental preservation in China. Paying particular attention to the transportation sector, they assess the underlying drivers of environmental degradation as a result of energy use. In advancing the TOC, they observe that China's economic boom has not been without adverse environmental outcomes, an aspect, they posit, is proliferating not only energy blackouts but environmental deterioration. In their assessment they employ the equilibrium efficient frontier data envelopment analysis (EEFDEA) technique, which accounts for both minimum and maximum adjustment strategies.

Contingency theory

Circular economy, according to Liu, Feng, Zhu and Sarkis (2018) can be best explained by the contingency theory, which presupposes that there is no singular way of influencing a particular course of action. Decisions needed, it's observed in the theory are influenced or dependent upon a set of both internal and external conditions. Shafique *et al.* (2018) have investigated the dual effect of Effect of internet of things (IoT) functionalities and energy use trends in on GSCM and integration of both primary and secondary data in deepening green supply chain performance (GSCP). Their arguments support the idea that incorporation of IoT in in energy use promotes logistical efficiency.

Understanding contingency within GSCM and GSCP is imperative (Cousins, Lawson, Petersen, & Fugate, 2019). Cousins *et al.* (2019) hypothesize that "supply chain ecocentricity and traceability, as moderating constructs, are likely to play a contingent role on the relationship between GSCM practices and a firm's cost and environmental performance". The findings reveal that GSCM practices lead to better cost and environmental performance and premise the role of managers in monitoring, coordinating and collaboration in accounting green production processes.

Empirical literature

Green material sourcing and Firm performance

GSCM may have divergent angles but Ghobakhloo, Tang, Zulkifli and Ariffin (2013) in determining a fully-fledged framework for purposes of actioning, have argued it is the

incorporation of environmental consideration and planning into supply-chain management, beyond product design, material sourcing and selection, manufacturing, distribution and product delivery to consumers while taking cognizance of its end-of-life management that constitutes GSCM. Ghobakhloo *et al.* (2013) in their much-detailed study contribute to literature by fronting a an integrated GSCM framework, which upon implementation will enable scholars, academicians, researchers and practitioners in amplifying their appreciation of GSCM from a holistic perspective through application of qualitative techniques to build a robust GSCM for implementation.

In providing insights into lean and green paradigm in the realm of supply chain performance management (SCPM), Carvalho, Azevedo and Cruz-Machado (2010) advance the idea that supply chain management (SCM) is important in augmenting organizational performance in terms of effectiveness, that way, deepening competitiveness, customer focus orientation and returns. They note that as much as the double philosophies of lean and green have found their way in SCM and implemented, implementation in disparate than joint. It thus follows that understanding a range of practicalities as pertains lean and green philosophies in imperative in realizing a GSCM and their ultimate role on operative, economic and ecofriendly supply chain processes.

Çankaya and Sezen (2019) sought to establish the influence of GSCM practices on sustainability performance in Turkey. Their approach embraces the association between the facts of GSCM and sustainability effectiveness, which are tested by using a plant-level survey. They further employed a cross-sectional face-to-face and e-mail survey data across key manufacturing companies. They assess eight facets of "green purchasing, green manufacturing, green distribution, green packaging, green marketing, environmental education, internal environmental management and investment recovery" GSCM and their implications on economic, environmental and social performance and organizational sustainability. While their arguments as do with green marketing are accounted for in the next subsection, they provide incisive insights into the need to use environmentally alert interventions, which reduce energy consumption and material utilization. This leads to cost reduction while ensuring product quality for consumers.

Green marketing and Firm performance

Marketing and reverse logistics is integral to GSCM (Çankaya & Sezen, 2019). It has to do with the fulfillment of human and or consumer's needs with minimal adverse effects on his common home. It is further understood as synergies that are aimed at enhancing quality of the product, pricing mechanisms, distribution channels that are ecofriendly. Market flexibility and diffusion also characterize green marketing alongside supportive social reputation for deepened product acceptance and improved social approval.

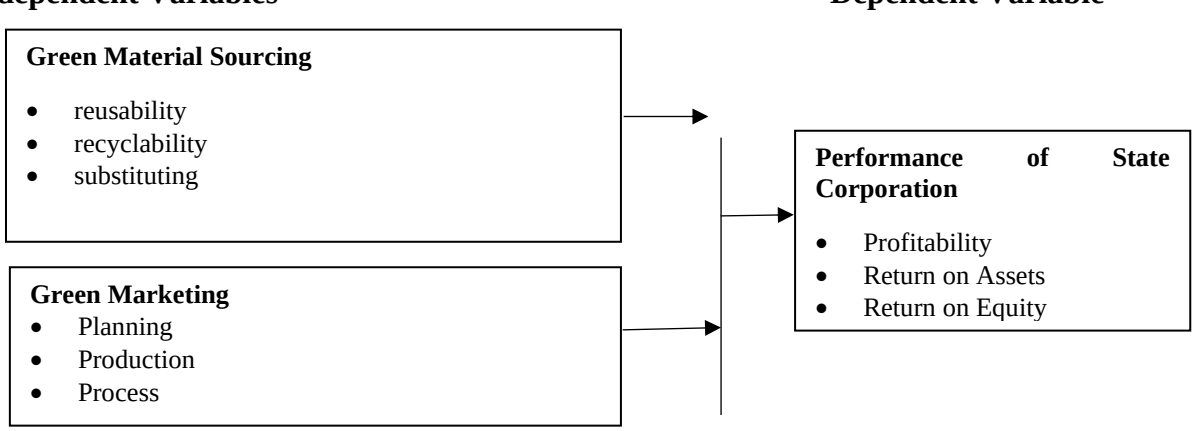
It has been observed that green marketing becomes an indispensable instrument for sustainable corporate strategy, organizations opting for the adoption of green marketing interventions impressive results. Papadas, Avlonitis and Carrigan (2017) in explain the greening orientation argue that there is a dearth of empirical indicators pointing to full operationalization of corporate dimensions as critical to green supply, concludes that this is an outright omission of measurement theory. The study introduces the concept of green marketing adoption along the facets of: strategic green marketing, tactical green marketing, and internal green marketing. Further analysis reveals that green marking is depend on organizational "internal consistency, reliability, construct validity and nomological validity".

Like it is for much of Asia, GSCM and GSCP are gaining dominance in South Korea. Upadhyay and Seong (2020) have explored how small-and-medium-sized enterprises (SMEs) exploit GSCM. They leverage on qualitative approaches to determine applicability of GSCM for a localized study. In advancing their study, the duo has used in-depth interviews and content analysis approaches.

Their work delineates key shortcomings in SMEs appreciation of GSCM. Importantly so, their works establish that tactical and structural shift can lead to environmental preservation in SMEs. This structural and tactical shift encompasses a range of factors that are not limited to innovation and creativity competences, efficiency and production reduction, which gives entities a competitive edge.

Conceptual Framework

A conceptual framework is a research tool that helps a researcher build and convey knowledge and understanding of the situation under investigation. In research, a conceptual framework is used to offer a preferred approach to an idea or thought, or to outline alternative courses of action.



Green Material Sourcing

Growing concerns about the depletion of forests and other natural resources, as well as environmental degradation caused by mining and fossil fuel extraction, suggest that companies may need to reconsider their raw material and procurement methods, according to Hart (1994). Significant segments of the corporate community, particularly huge firms in the lumber and energy industries, continue to object to such attitudes, claiming that resources are abundant.

Green Marketing

Green marketing strategy involves sponsorship initiatives related to the environment, ecological branding, and updating the organization website with new information about environmental issues, among other things, to use the least amount of paper possible in advertisements. Additionally, the environment-focused packaging and environment-protection-ensuring conveyance are generally operations that might increase the firm's and its production network's natural output. Negotiations between participants and the use of ecological principles to enhance the company's natural output make up a sizable portion of these operations (Nderitu & Lambaino, 2021).

RESEARCH METHODOLOGY

Research design

Descriptive survey research methodology was employed in this study. When determining if there were at one point in time any meaningful connections between variables, descriptive designs are acceptable. In this approach, both qualitative and quantitative data was gathered in order to describe and explain the behavioral trends that was discovered about the influence of green supply chain practices is linked to performance of public energy sector in Kenya.

Target population

Target population is well-defined as the entire group of persons, units or elements to which the researchers is concerned in generalizing the inferences (Etikan, Musa & Alkassim, 2020). The population of the public energy sector in Kenya as per the KNBS data in 2019 are 14 in number.

The unit of analysis was the individual public energy sector companies while the unit of observation which defines the independent elements in a population will be the employees in procurement department composed of senior managers, middle level managers and support.

Sample and Sampling techniques

A sample is a precise representation of the entire population to be researched (Rea & Parker, 2014). Sampling, on the other hand, is the act of picking a pre-determined number of individuals from a target population in order to produce knowledge about the entire population using statistical inferences from those individuals (Black & William, 2004). As a result, a good sample should be representative of the complete population; minimize sampling error; and be practicable, cost-effective, and efficient, with results that can be extended to the target population with a reasonable level of confidence (Kothari, 2014).

Both census and purposive sampling strategies was used in this study. In the first stage, census was used to group the state corporations that make up the unit of analysis. The procurement managers, middle level managers, and finance managers of the sampled projects were the respondents.

Sampling Size

The researcher uses this number of observations to determine the size of the study population (Smith, 2009). The Cochran Formula (1977) was applied to this study to determine the sample size. When the population is known, the Cochran formula is appropriate, claim Catherine, Douglas, and were (2019).

n = 14 state corporations' respondents with the following distribution: the procurement managers, middle level managers, and finance managers of the sampled projects will be the respondents. The study hence, sampled 14 state corporations, and three (3) respondents per each state corporations equating to a total of 42 respondents.

Research Instrument

Primary data was gotten using questionnaires which was self-administered to the respondents. The questionnaire was made up of both open ended and closed ended questions. The open ended questions was used to encourage the respondent to give an in-depth response without feeling held back in enlightening of any information and the closed ended questions will allow respondent to respond from restricted options that was be stated. As per Ravitch and Carl (2020), the open- ended questions gave sincere answer of respondents. They are also easier to analyze as there were many close ended questions. The study used questionnaires so as to conserve time and money and also facilitate an easier analysis as they are in immediate usable form.

The research instrument used a likert scale from Very large extent to very small extent. The questionnaire was divided into three sections. The first entailed the background information of the respondents. The second section comprised of questions on the independent variables including green material sourcing, green marketing, green distribution and green transportation. The last section was mainly on the dependent variable which is performance of State Corporation in the energy sector in Kenya.

Pilot Testing

A dependent variable is measured between subjects in a pilot study. Its main goal is to make sure that all responders comprehend the same meaning and that the instrument's elements are described clearly. Sending the questionnaire to respondents who make up 10% of the sample size was used for the pilot survey. The researcher was also informed of the areas for development by the comments from the chosen respondents, making the instrument more effective (Deng, Benckendorff & Gannaway, 2020).

Data collection procedures

The researcher sought a permit from the National Commission of Science, Technology, and Innovation after the research proposal is approved (NACOSTI). In order to obtain the essential information from the respondents, the researcher also requested an introduction letter from the university, which was given to each respondent. Research assistants who were used to distribute questionnaires underwent training in interpersonal skills like building rapport, persuading respondents to submit relevant data, and requesting explanations as needed. They were expected to schedule an appointment with the respondent two days before going to see them to administer the surveys.

After getting approvals, the researcher provided the respondents with the study tools and adequate time to provide their responses. The drop-and-pick technique was utilized to distribute the questionnaire since it allowed responders enough time to provide thoughtful responses. The questionnaire was given to the chosen respondents for a maximum of three days, after which it was collected for analysis. The data was subsequently be coded and saved in a password-protected computer file.

Data analysis and techniques

Data analysis is the process of analyzing data using analytical and statistical methods in an attempt to find relevant information that supports decision-making. Data coding, data entry, and the application of analytical techniques like data mining and data visualization are all involved (Naeem, Jamal, Diaz-Martinez, Butt, Montesano, Tariq & De-La-Hoz-Valdiris, 2022). In order to meet its goals, this study used both primary and secondary data. The results of related research written by academics throughout the world was used to get secondary data, while a survey questionnaire was used to collect primary data.

Statistical Package for Social Sciences (SPSS Version 25.0) was used to analyze both the qualitative and quantitative data that was obtained for this study. Descriptive statistics including frequencies, percentages, mean scores, and standard deviation was estimated for all the quantitative variables and information shown in tables after data cleaning, which comprises verifying for entry errors. Thematic content analysis was used to analyze the qualitative data from the open-ended questions, and the results was presented in narrative form.

Multiple regression analysis was used to analyze inferential data. In order to determine the relationships between the independent and dependent variables, multiple regression analysis will be employed.

DATA ANALYSIS

Descriptive Statistics

Green Material Sourcing Practice

The first objective of the study was to determine how green material sourcing practice affected the performance of State Corporation in the energy sector in Kenya. The respondents were asked by

the researcher to describe how green material sourcing practice affect performance of State Corporation in the energy sector. The findings are presented in Table 4.6.

Table 1: Green Material Sourcing Practice on Performance of State Corporations in the Energy Sector

Variables	**Mean**	**Std. Dev.**
When considering items to procure, items made of green raw materials are rated higher	4.347	0.675
Green raw materials in procured items is an important part of tender evaluation criteria	4.763	0.619
Purchasing materials that contain green attributes	3.449	0.719
Procure products that are made using recycled packages	3.546	0.514

The results show that the respondents stated that green raw materials in procured items is an important part of tender evaluation criteria as expressed by a mean score of 4.763 influence performance of state corporations in the energy sector in Kenya toa very large extent. Further, when considering items to procure, items made of green raw materials are rated higher as expressed by a mean score of 4.347 and procuring products that are made using recycled packages as expressed by a mean score of 3.546 influence performance of public energy sector to a large extent. Additionally, the respondents pointed out that purchasing materials that contain green attributes as expressed by a mean score of 3.449 influence performance of state corporations in the energy sector in Kenya to a moderate extent.

The result agree with the findings of Çankaya and Sezen (2019) who observe and provide incisive insights into the need to use environmentally alert interventions, which reduce energy consumption and material utilization. This leads to cost reduction while ensuring product quality for consumers. Carvalho, Azevedo and Cruz-Machado (2010) also affirmed the idea that supply chain management (SCM) is important in augmenting organizational performance in terms of effectiveness, that way, deepening competitiveness, customer focus orientation and returns.

Green Marketing Practice

The study's second objective was to ascertain how green marketing procurement practices affected State Corporation's performance in Kenya's energy industry. The researcher asked the respondents to explain how green marketing practices impact State Corporation's performance in the energy sector. The results are shown in Table 2.

Table 2: **Green Marketing Practice on Performance of State Corporations in the Energy Sector**

Variables	**Mean**	**Std. Dev.**
The use of green marketing technology in procured items is very important to us	3.667	0.823
We carry out adequate pre-factory inspections to understand manufacturing process of procured items	4.400	0.547
We have a comprehensive environmental policy that guides our operations	4.603	0.980
Encourage materials reuse of products and recycled	4.774	0.786

Supported by the findings, the respondents agreed that encouraging material reuse of products an d recycled as shown by a mean of 4.774 and having a comprehensive environmental policy that

guides our operations as shown by a mean of 4.603 influenced performance of state corporations in the energy sector in Kenya to a very large extent. Furthermore, the respondents stated that carrying out adequate pre-factory inspections to understand manufacturing process of procured items as shown by a mean of 4.400 and use of green marketing technology in procured items as shown by a mean of 3.667 influenced performance of state corporations in the energy sector in Kenya in to a large extent.

The result agree with the findings of Çankaya and Sezen (2019) stating that market flexibility and diffusion also characterize green marketing alongside supportive social reputation for deepened product acceptance and improved social approval thus leading to better performance of organization sector. In addition Papadas, Avlonitis and Carrigan (2017) observed that green marketing becomes an indispensable instrument for sustainable corporate strategy, organizations opting for the adoption of green marketing interventions impressive results.

Multiple Regression Analysis

Multiple regression analysis was used to test the data and determine the correlation between the independent and dependent variables. For the study, the statistical package for social sciences (SPSS) version 22.0 was used to code, enter, and calculate the measures of the multiple regressions. Both the independent and dependent variables (Financial organizational performance).

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.875	0.783	0.720	0.980

An evaluation of the model's fit to the data is provided in Table 4.10. The adjusted R^2, which was used to determine the study model's predictive power, was found to be 0.72, meaning that changes in the green material sourcing, green marketing, green distribution and green transportation account for 72% of the variations in the performance of State Corporations in the energy sector.

Table 4: ANOVA Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.228	2	10.614	121.44	1.66E-21
	Residual	6.031	69	0.0874		
	Total	**27.260**	**71**			

The probability value of 1.66E-21 shows that the regression relationship was highly significant in predicting how the performance of State Corporations in the energy sector was influenced by the green material sourcing, green marketing, green distribution and green transportation. At a 5% level of significance, the F was calculated to be 121.44. This demonstrates that the whole model was important because F calculated is more than the F-critical (value = 2.5087).

Table 5: Regression Coefficient Table

Model		UnstandardizedCoefficients		StandardizedCoefficients	Z	Sig.
		B	Std. Error	Beta		
1	(Constant)	.532	1.010		6.160	.000
	Green Material Sourcing	.694	.152	3.562	2.501	.002
	Green Marketing	.712	.116	5.035	2.241	.003

a. Organizational Performance

According to the results, the performance of State Corporations in the energy sector will be .532 if all independent variables are maintained at zero. A unit change in the green material sourcing results in a 0.694 rise in the performance of State Corporations in the energy sector, according to the coefficient for green material sourcing, which is 0.632 and was significant since p=0.002 is less than 0.05.

The research also revealed that the performance of State Corporations in the energy sector will change by 0.712 for every unit change in the green marketing. A unit increase in the green marketing will result in an increase of 0.712 in the performance of State Corporations in the energy sector, according to the findings given, assuming all other independent variables are set to zero. Since the variable's p-value was 0.003 less than 0.5, it was significant.

Conclusion

The study established that green material sourcing practice has a positive and significant influence on the performance of state corporations in the energy sector in Kenya. The study concluded that green raw materials in procured items is an important part of tender evaluation and is positive significant influence on the performance of state corporations in the energy sector in Kenya. Additional, considering items to procure, items made of green raw materials are rated higher. More so, procuring products that are made using recycled packages has a positive and significant influence performance of state corporations in the energy sector in Kenya.

Secondly, the study deduced that green marketing procurement practices has a positive and significant influence on the State Corporation's performance in Kenya's energy industry. Also, the study established that encouraging material reuse of products and recycled and having a comprehensive environmental policy that guides our operations influenced performance of state corporations in the energy sector in Kenya. Furthermore, carrying out adequate pre-factory inspections to understand manufacturing process of procured items and use of green marketing technology in procured items has a significant influence in the performance of state corporations in the energy sector in Kenya.

Recommendations

The research implies that in industrialized countries, organizations may use "green" by a variety of means to reduce energy and resource consumption, with reuse and recycling being particularly crucial. The study recommends actions that include lowering energy use, recycling, reusing, and using biodegradable and environmentally friendly materials, as well as reducing or eliminating trash.

Employing energy and raw material efficient production techniques with little negative environmental impact is known as "green marketing." A company can save money by purchasing goods and services at lower prices from suppliers who use green manufacturing technologies because of their reduced cost of production.

Areas for Further Research

This study primarily focuses on Kenya's state corporation energy organizations. A comparable study should be conducted in other economic sectors, particularly the private sector, which is a significant contributor to the Kenyan economy. Additionally, a more thorough research is required to see whether non-governmental, not-for-profit groups may report similar results.

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