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Green Packaging, Institutional Pressure And Performance Of Cement Manufacturing Firms In Kenya.

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Abstract
Manufacturing firms facing pressure to adopt sustainable practices contribute significantly to environmental issues. Thus, Green packaging, driven by institutional pressures, can positively impact organizational performance by enhancing efficiency, market appeal, and sustainability, leading to long-term profitability and growth. However, the impact of institutional pressures on the relationship between green packaging and organizational performance may be limited or context-dependent. Therefore this study focused on the moderating role of Institutional pressures on the relationship between green packaging and performance of cement manufacturing firms. The resource-based view (RBV). guided this study with a positivist philosophy and descriptive research design. This study targeted 202 top and middle level management staff of 8 cement manufacturing companies in Kenya. Taro Yamane's formular was used to calculate a sample size of 168 respondents after considering a non-response rate of 20%, to fulfill the requirements of the element of representation. The study collected quantitative data using a structured questionnaire. Piloting was done using 20 questionnaires in quarry manufacturing companies in Uasin Gishu County for purposes of ensuring reliability and validity of the instrument. Factor analysis was used to investigate construct validity. The instrument's reliability was established using Cronbach's alpha coefficient to demonstrate internal consistency whose threshold is 0.7 and above. Data was analyzed using descriptive statistics such as frequencies, mean, standard deviation skewness and kurtosis and inferential statistics through use of Pearson's correlation, ANOVA and regression analysis using statistical package for social sciences (SPSS) version 25. From the findings, a unit increase in green packaging would lead to increase in performance of cement manufacturing firms by a factor of 0.234 (β_1= 0.234). Besides, green packaging has a statistically significant effect on performance of cement manufacturing firms in Kenya ($t = 3.553$; p-value = 0.000 which is less than $\alpha = 0.05$). This implies that green packaging results in increased performance of cement manufacturing firms in Kenya. that institutional pressure has a statistically significant moderating role on the relationship between green packaging and performance of cement manufacturing firms in Kenya by a factor of .045 (β_5=.045 ρ< .05, $R^2\Delta$ of .032). Besides interaction between institutional pressure and green packaging has a statistically significant effect on performance of cement manufacturing firms in Kenya. This implies that cement manufacturing firms should operate within regulatory frameworks, industry standards, and societal expectations related to environmental sustainability potentiated by engaging with eccentric suppliers. These findings are based on stakeholders theory and institutional theory. Therefore, cement manufacturing firms should strategically comply with the institutional pressure as a differentiation strategy to not only synergize their Green packaging strategies for a unique market position but also heightened performance.

Keywords: *Green packaging, institutional pressure, and performance cement manufacturing*

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I. Background Of The Study

Manufacturing firms facing pressure to adopt sustainable practices contribute significantly to environmental issues (Nazir, Zhaolei, Mehmood, & Nazir, 2024). In this regard manufacturing firms respond to institutional pressures by integrating GSCM practices as green packaging to reduce ecological harm. By aligning environmental goals with business strategies, green packaging can simultaneously enhance profitability and sustainability. This is affirmed by Yildiz and Sezen (2019) that green initiative is with a goal of increasing profits and sales while reducing environmental impact. Furthermore, businesses today consider GSCM a strategy for achieving economic, operational, social, and environmental goals (Park, Kim, & Lee, 2022). However, Institutional theory suggests that the relationship between GSCM practices and environmental performance may be influenced by institutional pressures (Choudhary & Sangwan, 2022). Thus, Green packaging, driven by institutional pressures, can positively impact organizational performance by enhancing efficiency, market appeal, and sustainability, leading to long-term profitability and growth.

Green packaging refers to any change made by a product manufacturer or service provider to lessen the environmental-impact of the materials or processes involved in packaging the products and services while their deployment to the end-user (Gikonyo, Ngugi & Paul, 2022). Implementing methods for green packaging include practices such as the use of biodegradable or recycled material, reducing the amount of material used for packing a product or using refillable or reusable packaging containers (Grönberg, 2023). Packaging itself accounts for more than one third of plastics production and becomes essential in the majority of businesses. However, according to statistics provided by World Economic Forum and Ellen MacArthur Foundation (2018), less than 15% of used packaging is recycled, from which plastic waste problem has been worsened. Therefore, the environmental concerns of this issue need to be addressed urgently, in which businesses and logistics parties are expected to play a key role and opt for more eco-friendly options. Alvarenga, et al, (2023) confirms that green packaging significantly affects organizational performance. However, green packaging offers environmental benefits and potential market advantages, organizations often hesitate to adopt these practices (Cosper, 2022). Thus, governments had put an excessive pressure on companies to improve greenness within their logistics activities through laws and legislations to yield optimal energy efficiency with minimum effects on environment. In this regard manufacturers are increasingly turning to measures that involve reusing, recycling and recovery of packaging materials discarded by consumers (Karima, Claudia, Claudia & Jacques, 2021).

The greatest motivation to the pursuit of green packaging which is sustaible packaging (SP) seems to be the economic gains, which co-generate environmental gains (Gustavo, Pereira, Bond, Viegas, & Borchardt, 2018). However, the associated SP decision-making process is also complex because it involves multiple stakeholders with various and sometimes conflicting requirements. This imposes potential challenges to managers and requires performing complex multi-criteria analyses (Afif, Rebolledo, & Roy, 2020). In this regard there is a need for achieving an optimal balance between logistics, marketing and environmental packaging decision criteria amidst institutional pressures. Institutional pressures play a crucial role in the adoption of green packaging by organizations (DiMaggio & Powell, 2020). These pressures come from various sources and influence companies to integrate sustainable practices, including green packaging, into their operations. Additionally, institutional pressures positively affect green practices, which in turn enhance organizational performance (Shahzad, Du, Khan, & Wang, 2022; Chu, Yang, Lee, & Park, 2017). This underscores, the pivotal role of institutional pressures in moderating the relationship between green packaging adoption and organizational performance. Conversely, other studies suggest that the impact of institutional pressures may be limited or context-dependent (Alvarenga, Rodriguez, Peña-Montoya, Sartori, & Oliveira, 2023).Besides there are limited studies conducted in the Kenyan manufacturing sector on the role of institutional pressure in moderating the relationship between green packaging and performance of cement manufacturing companies which provided a gap for the study.

Objective of the study

To investigate the moderating role of institutional pressure on the relationship between green packaging and organizational performance of cement manufacturing companies in Kenya

II. Review Of Literature

Green Packaging, Institutional Pressure, Organizational Performance

Jekey and Bazia (2024) investigated the relationship between green packaging and performance of food manufacturing firms in Port Harcourt.The design of the study was cross-sectional survey. Questionnaires were distributed to the respondents of the firms under study; eight nine (89) copies were usable for analysis. The Pearson Moment Product correlation coefficient with the aid of statistical package for social science was used to test postulated hypotheses. The study finds that, there is a relationship between green packaging and sales growth of food manufacturing firms in Port Harcourt. Accordingly Ahmed, Najmi and Khan (2020) investigated the impact of green supply chain (GSC) management practices and institutional pressures on economic and environmental performances of organizations in an unstable developing economy. Data were collected from the supply chain specialists working in manufacturing firms through a questionnaire. Valid data of 101 respondents were used for analyzing the relationship among the constructs with the help of structural equation modeling. From the findings internal GSC practices and institutional pressure have a negative insignificant impact on economic performance, whereas all the constructs are the significant contributors toward improving environmental performance.

Besides, Saeed, Jun, Nubuor, Priyankara and Jayasuriya (2018) examined whether internal and external green supply chain management (GSCM) practices have the same or different kinds of regulatory, market, or competitive pressures in Pakistan. A total of 207 responses were used for data analysis by employing the partial least squares structural equation modeling (PLS-SEM) method. Normative pressures were found to be the most significant in both internal and external GSCM practices, while coercive and mimetic pressures positively affected internal and external GSCM practices, respectively. Internal GSCM practices proved to be more significant in

improving environmental performance, and also had a substantial impact on external GSCM practices. In contrast, External GSCM practices had a significant positive effect on economic performance, while environmental performance also contributed to improving economic performance. However the study didn't focus on the moderating role of institutionl pressures on the relationship between green packaging and and organizational performance but internal and external green supply chain management (GSCM) practices and institutional pressures on performance of organizational performance.

Alvarenga, et al, (2023) Investigated the relationship between institutional pressures, green logistics activities and impacts on logistics performance. A survey of 56 logistics service providers was conducted. In relation to the data acquired, the return of 138 questionnaires answered by the middle/tactical managers of the 56 logistics service providers in Brazil was received. Institutional pressures were the antecedents capable of explaining the corresponding variation in the green logistics construct (green packaging) in R^2=0.3750, green logistics (green transport) in R^2=0.3909 and green logistics (green warehousing and buildings) in R^2=0.0389. Similarly, all green logistics constructs were able to explain the variation corresponding to a value observed in R^2=0.5442 referring to efficiency performance (costs). The results demonstrate the influence of institutional pressures on green logistics activities as well as the impact of green logistics on efficiency performance (costs). However the study was not conducted in the Kenyan context limiting the generalization of the findings.

Gikonyo, Ngugi and Paul (2022) investigated Influence of Green Packaging on Performance of Building and Construction Manufacturing Firms in Kenya. Through cross-sectional research design, the study surveyed 270 respondents drawn from the 54 building and construction manufacturing firms in Kenya. Primary data was collected using a questionnaire. Qualitative data was analyzed through content analysis whereas quantitative data was analyzed through descriptive statistics (mean, standard deviation, frequency and percentages) and inferential statistics (ANOVA, P-value, t-test). The results revealed that green packaging had a significant influence on the performance of the building and construction manufacturing firms in Kenya. However the study was not conducted amongst the cement manufacturing companies. The influence of green supply chain management practices on the environmental performance of manufacturing firms, with a specific focus on understanding how institutional pressure moderated this relationship was investigated by (Nazir, Mehmood & Nazir, 2024). The research design encompassed a holistic approach, incorporating an in-depth examination of the current literature and data collection via a well-structured questionnaire. Random sampling was utilized to gather data from manufacturing companies in Pakistan, and the data analysis employed PLS-SEM. The findings revealed a significant relationship between GSCM practices and the environmental performance of manufacturing firms. Moreover, the study identified that institutional pressure played a moderating role, influencing the strength of this relationship. Notably, the impact of GSCM practices on environmental performance varied under different levels of institutional pressure.

Correspondingly, Jermsittiparsert, Namdej and Somjai (2019) examined and empirically investigated the green supply chain practices and sustainable performance of the electronic industry of Thailand. Results showed that there is a statistically significant positive relationship between green purchasing and sustainable performance. Green logistics significantly affects sustainable performance, and legislation for the adoption of greening supply chains and sustainable performance was significant. TQM practices and sustainable performance were also significant. TQM practices do not moderate significantly the relationship between green purchasing and sustainable performance. However, the study was conducted in the context of Thailand's electronic industry and didn't look at the moderating role of institutional pressure which provided a gap for this study.

Accordingly, Likholo and Senelwa (2022) focused on the effect of green procurement practices on performance in the manufacturing sector in Kenya with a bias on Del Monte Company Limited. The specific objectives were; to determine the effect of Supplier Assessment, eco-design practices, Reverse logistics practices, and e-procurement practices on performance in the manufacturing sector in Kenya. The findings of the study revealed a statistically significant effect of the specific variables on the dependent variable. The study employed the F-test in predicting the dependent variable where the significance level indicated that the model significantly predicted how the independent variables affected the dependent variable (Performance of the manufacturing sector in Kenya). However, the study had a low sample size and used quantitative methods without triangulating with qualitative methods.

Additionally, Lee, Fu, Zhou, Nie and Song (2022); Bag, Pretorius, Gupta & Dwivedi (2021)note that although institutional pressures have huge strategic implications for organizational activities, this certainly does not mean that organizations under institutional pressures can improve environmental performance automatically. Institutional pressures are critical but not sufficient to affect environmental performance directly. Besides, there are limited studies conducted in the cement manufacturing industry which faces immense pressure to adopt green supply chain management strategies for their sustainable performance (von Buchwald & Zuberer, 2020). This is because, for a green economy, the green supply chain management strategy is not a choice but quintessential for sustainability. However, according to Ahmad, et al (2022) Green Packaging is found to have a weak impact on operational performance. This in contrary with findings of Maziriri, (2020) assessed the impact of green

packaging and green advertising on competitive advantage and business performance of manufacturing Small and Medium-sized Enterprises (SMEs) in the Gauteng province of South Africa. These altogether provided a gap for the study.

Conceptual Framework

A conceptual framework is a structured representation that outlines the relationships between key variables, concepts, or factors involved in a study or research project (Salawu, Shamsuddin, & Bolatitio, 2023). It provides a clear depiction of the theoretical foundation and guides the research by illustrating how the different components are connected. The study conceptualize the moderating role of institutional pressure on the relationship between green packaging and organizational performance as presented in fig 2.1 below.

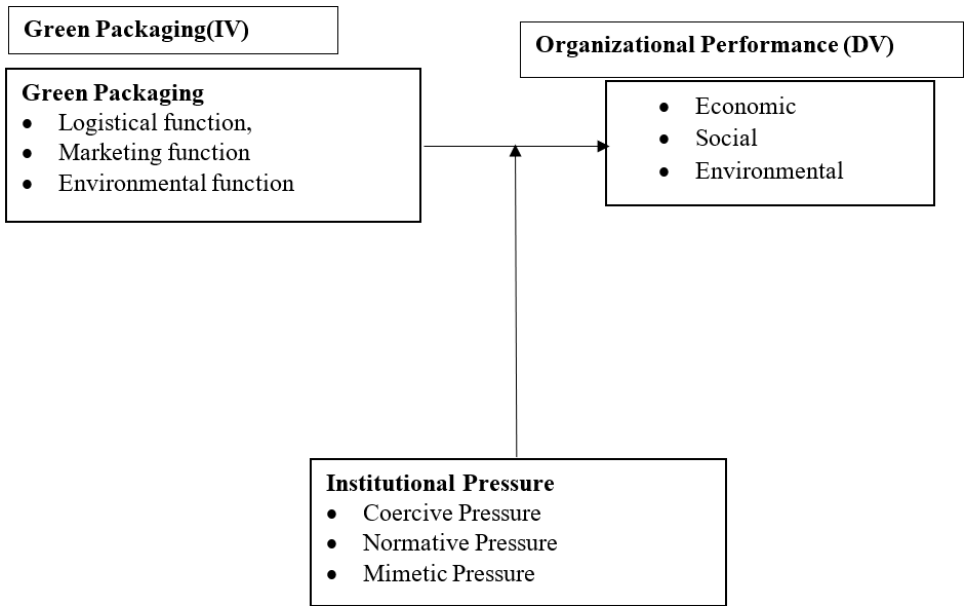

Figure 2.1 Conceptual Framework
Source: Author (2024)

III. Research Methodology

Research design: Study adopted an explanatory research design. Explanatory research design aims at systematically obtain information to describe causes and effects of whatever phenomenon, situation, or population being studied (Efron & Ravid, 2019). The data collected in explanatory research provides a base for further research as it helps obtain a comprehensive understanding of the research question so that it can be answered appropriately.

Target Population: According to the Kenyan Association of Manufacturers, there are 8 cement manufacturing companies in Kenya (KNBS., 2019). The target population of the study was 202 top and middle level management staff in the production, procurement and logistics departments in these manufacturing companies since they are involvement in strategic decision making of the organizations.

Sample and Sampling Design: a sample size of 134 was calculated from a target population of 202 top and middle level management staff in the procurement, production and logistics of the cement manufacturing companies to fulfill the requirements of the element of representation. The study used the Taro Yamane's formular to calculate the sample size (Hutchinson & Sutherland, 2019). Besides, non-response increases the variance of estimates because the effective sample size is reduced. According to this sample size, a non-response rate was considered using the following formula adopted from (Nilima, 2017). The final sample size = Effective sample size /(1- non response rate anticipated). The study anticipates a non-response rate of 20%, thus the final sample size has been calculated as follows; 134/1-0.20= 168

In this study the cement manufacturing companies and their departments were sampled using stratified random sampling. In addition, simple random sampling was used to select the sample from the strata.

Data Collection: Data collection was done using a questionnaire. Piloting was done using 17 participants participated in quarray manufacturing companies in Uasin Gishu County for purposes of validity and reliability. Purposive sampling technique was used to settle on the two highly performing quarrays which include Dittman

Company and Sirikwa limited because cement manufacturing rely on quarrying for raw materials. In this study, the five-point Likert scale was adopted so as to give the respondents a wider range of answers on which to provide their view about a statement or question. the scale was verified using Cronbach's alpha coefficient derived from SPSS Version 25. An item is considered reliable when its Cronbach's alpha score greater than 0.7 (Raharjanti, et al., 2022).

Data analysis: Quantitative data was analyzed using descriptive statistics such as frequencies, mean, standard deviation skewness and kurtosis and inferential statistics through use of Pearson's correlation, ANOVA and regression analysis. Regression analysis was used to predict or explain the variation in the dependent variable based on the independent variable. The statistical tool for the analysis was the statistical package for the social sciences (SPSS) version 25 which was used to generate the results of the regression model.

IV. Research Findings And Discussion

Green Packaging

According to the study findings presented in Table 4.1, the researcher sought to know the status of green packaging in cement manufacturing firms in Kenya.

Table 4.1

Green Packaging

Statement	N	MIN	MAX	SKEW	KURT	M	SD
There are minimum returns of damaged goods from customers in our company	128	3	5	-.984	.047	4.61	.550
Distortion of the company's products through the whole supply chain is prevented by the packaging	128	3	5	-.703	-.547	4.54	.560
The packaging material used by the company eliminates unnecessary waste that increase the profitability of our distribution process	128	3	5	.313	-.145	4.23	.510
The packaging of our products enhances their brand awareness	128	1	5	-.991	-1.014	4.52	.699
The packaging of our products enhances our consumers safety and health	128	1	5	-.952	-2.150	4.45	.638
Consumers are influenced by the package to buy our product and build loyal relations with the brand	128	2	5	-.999	2.070	3.99	.693
Our company packages their products in recyclable materials	128	3	5	-.197	-.573	4.22	.627
Organization recovers non-biodegradable packaging materials	128	3	5	.074	-.763	3.94	.673
Products of the organization are packed in a way that minimizes environmental pollution	128	4	5	.629	-1.630	4.35	.479
The package used by the company influences the consumer to adopt more environmental-friendly consumption habits	128	2	5	-.782	.537	4.24	.729

***Source*:** Research study 2024

Key: N = Number, MIN = Minimum, MAX = Maximum, SKEW = Skewness, KURT = Kurtosis, M = Mean, SD= Standard Deviation

Green packaging is a critical component of sustainable manufacturing practices. By adopting green packaging strategies, manufacturing organizations can significantly reduce their environmental impact, achieve cost savings, and enhance their market position (Wandosell, Parra-Meroño, Alcayde, & Baños, 2021). From the findings of the study in table 4.42 majority of the respondents agree to a great extent that there are minimum returns of damaged goods from customers in our company with a mean of 4.61 and SD .550. The responses were normally distributed with a Kurtosis= .035 and Skewness= -1.022 with a min of 3 and max of 5. The implication is that with green packaging minimum returns of damaged goods is guaranteed. This is because green packaging materials and designs are often engineered to provide better protection for products during transit (Maziriri, 2020). This reduces the likelihood of damage and ensures that goods reach customers in optimal condition. Additionally, Majority of the respondents agreed to a very greater extent with a mean of 4.54 and SD of .560 that distortion of the company's products through the whole supply chain is prevented by the packaging with a min of 3 and max of 5. Majority of respondents also agreed to a very great extent with a mean of 4.23 and SD of .510 that the packaging material used by the company eliminates unnecessary waste that increase the profitability of our distribution process with a min of 3 and max of 5. This implies that through green packaging the manufacturing companies stand to minimize unnecessary wastage, minimizing the incidence of damaged goods which reduces the inconvenience for customers of having to return products and wait for replacements. Lower return rates also

minimize waste associated with unusable returned products and packaging materials. All these translates to customer loyalty and profitability to the company. Majority of the respondents agreed to a very greater extent with a mean of 4.52 and SD of .699 that distortion of the packaging of our products enhances their brand awareness with a min of 1 and max of 5.

Additionally, majority of the respondents agree to a great extent that the packaging of their products enhances their consumers safety and health with a mean of 4.45 and SD .638. The responses were normally distributed with a Kurtosis= -.952 and Skewness = -2.150 with a min of 1 and max of 5. This implies that effective packaging not only preserves the quality of the product but also protects consumers from potential hazards. Therefore, cement manufacturers and designers should prioritize green packaging to enhance the safety and health benefits of their products. Besides majority of the respondents agree to a great extent that consumers are influenced by the package to buy their product and build loyal relations with the brand with a mean of 3.99 and SD .693. The responses were normally distributed with a Kurtosis= 2.070 and Skewness = -.999 with a min of 2 and max of 5. This implies that the cement manufacturing firms uses packaging of their products as a powerful marketing tool that influences their consumers behavior and helps build brand loyalty. Packaging is a critical element in influencing consumer purchasing decisions and building brand loyalty (Wei, Kim, Miao, Behnke, & Almanza, 2018). It serves as a powerful medium for visual appeal, brand storytelling, consumer trust, convenience, and emotional connection.

Majority of the respondents agreed to a very greater extent with a mean of 4.22 and SD of .627 that their company packages their products in recyclable materials with a min of 3 and max of 5. Additionally, majority of the respondents agreed to a very greater extent with a mean of 3.94 and SD of .673 that their organization recovers non-biodegradable packaging materials with a min of 3 and max of 5. In fine, recovering non-biodegradable materials reduces the amount of waste sent to landfills, mitigating land pollution and the associated environmental hazards. According to Nikola (2022) the recovery of non-biodegradable packaging materials has far-reaching implications, offering environmental, economic, and social benefits while presenting challenges that require strategic planning and investment. Organizations that proactively address these challenges not only contribute to environmental conservation but also enhance their sustainability profile, drive innovation, and build stronger relationships with consumers and stakeholders. In connection, majority of the respondents agreed to a very greater extent with a mean of 4.35 and SD of .479 that products of the organization are packed in a way that minimizes environmental pollution with a min of 4 and max of 5. Additionally, majority of the respondents agreed to a very great extent with a mean of 4.24 and SD of .729 that the package used by the company influences the consumer to adopt more environmental-friendly consumption habits with a min of 2 and max of 5.

Institutional Pressure

Institutional pressures in the manufacturing sector can have significant implications for companies operating within the manufacturing industry (Baah et al., 2021). These pressures can arise from regulatory bodies, industry standards, societal expectations, and market demands. The study focused on the state of institutional pressures in the cement manufacturing firms in Kenya and the responses were as presented in Table 4.2.

Table 4.2

Institutional Pressure

Statement	N	Min	Max	Skew	Kurt	M	SD
There are frequent government inspections or audits on our company's purchasing practices to ensure we comply with laws and regulations	128	3	4	-.959	.050	4.04	.341
Government regulation impacts our purchasing decision-making	128	3	4	-.454	-1.259	3.90	.436
There are a large number of regulations and restrictions imposed on my company's industry that also impact our supply chain	128	3	5	-.324	-.765	3.99	.457
Our company's major customers will withhold their contracts if our firm does not meet their requests to adopt certain practices or initiatives in our purchasing procedures	128	3	5	-.839	.479	4.10	.326
Our firm tries to reduce the threat from the environmental regulations by implementing green supply chain management	128	3	5	-.169	.635	4.11	.304
Products have been designed for environmental sustainability	128	3	5	-.195	.423	4.17	.316
Our customers are provided with appropriate advice on handling, use, and disposal of our products	128	3	5	-.927	.733	4.23	.303
Reduction in reworks and scrap is done by the company	128	3	5	-.529	1.948	4.10	.260
The company uses energy saving products	128	4	5	-1.055	.686	4.25	.275

Being environmentally responsible and disclosure of environmental information is a basic requirement for our firm to be part of this industry	128	3	5	-.243	-.609	4.25	.627
Our choice to implement purchasing procedures is influenced by what we see and hear at trade shows and vendor exhibitions	128	2	5	-.573	-.659	3.54	.904
Our purchasing employees prefer to use procedures and tools they learned during their education	128	2	5	-.331	-.177	3.84	.778
Our company has implemented purchasing procedures in response to what competitors and peers do and are doing	128	3	5	-.276	-.790	4.21	.672
We pay attention to the purchasing practices and tools that appear to benefit our competitors and peers	128	3	4	-1.218	-.525	3.76	.430
There is a need to imitate purchasing practices of key competitors that serve the same major clients	128	2	5	-.457	.135	3.88	.759
The leading companies in our industry have obtained competitive advantages by implementing green supply chain management practices	128	2	5	-.909	1.821	3.88	.652

***Source*:** Research study 2024

Key: N = Number, MIN = Minimum, MAX = Maximum, SKEW = Skewness, KURT = Kurtosis, M = Mean, SD= Standard Deviation

From the findings of the study in table 4.2 majority of the respondents agree to a great extent that there are frequent government inspections or audits on their company's purchasing practices to ensure they comply with laws and regulations with a mean of 4.04 and SD .341. The responses were normally distributed with a Kurtosis= -.959 and Skewness= .050 with a min of 3 and max of 4. The implication is that, while frequent government inspections or audits impose regulatory burdens and operational challenges on cement manufacturing firms, they also provide opportunities for enhancing compliance, improving operational efficiency, and safeguarding reputation and market position. Embracing a proactive approach to regulatory compliance can mitigate risks and promote sustainable business growth in the long term. Majority of the respondents agree to a great extent that the government regulation impacts their purchasing decision making with a mean of 3.90 and SD .436. The responses were normally distributed with a Kurtosis= -.454 and Skewness= -1.259 with a min of 3 and max of 4. Additionally, majority of the respondents agreed to a great extent that there are a large number of regulations and restrictions imposed on their company that also impact on their supply chain with a mean of 3.99 and SD .457. The responses were normally distributed with a Kurtosis= -.324 and Skewness= -.765 with a min of 3 and max of 5. Majority of the respondents agreed to a great extent that their company's major customers withhold their contracts if their firm does not meet their requests to adopt certain practices or initiatives in their purchasing procedures with a mean of 4.10 and SD .326. The responses were normally distributed with a Kurtosis= -.839 and Skewness= .479 with a min of 3 and max of 5. Majority of the respondents agreed to a great extent that their firm tries to reduce the threat from the environmental regulations by implementing green supply chain management with a mean of 4.11 and SD .304. The responses were normally distributed with a Kurtosis= -.169 and Skewness= .635 with a min of 3 and max of 5.

Participants were in agreement to a great extent that products have been designed for environmental sustainability on a five-point Likert scale ranging from 1 (Very Small Extent) to 5 (Very Great Extent). The responses had a minimum score of 3 and a maximum score of 5, with a mean of 4.17 (SD = 0.316). The distribution of the scores was slightly negatively skewed (skewness = -0.195) and had a kurtosis of -0.423. Additionally, majority of the respondents agree to a great extent that their customers are provided with appropriate advice on handling, use and disposal of their products with a mean of 4.23 and SD .303. The responses were normally distributed with a Kurtosis= -.733 and Skewness= -.927 with a min of 3 and max of 5. Majority of the respondents agreed to a great extent that the reduction in reworks and scrap is done by the company with a mean of 4.10 and SD .260. The responses were normally distributed with a Kurtosis= -1.948 and Skewness= -.529 with a min of 3 and max of 5. Majority of the respondents agree to a great extent that their companies use energy saving products with a mean of 4.25 and SD .275. The responses were normally distributed with a Kurtosis= -.686 and Skewness= -1.055 with a min of 4 and max of 5. Besides, majority of the respondents were in agreement to a great extent that being environmentally responsible and disclosure of environmental information is a basic requirement for their firm to be part of this industry with a mean of 4.25 (SD = 0.627). Besides, the majority of the respondents were in agreement to a great extent that their choice to implement purchasing procedures is influenced by what they see and hear at trade shows and vendor exhibitions with a mean of 3.54 (SD = 0.904).

Accordingly, majority of the respondents agreed to a great extent that the cement manufacturing firms purchasing employees prefer to use procedures and tools they learned during their education with a mean of 3.84 (SD = 0.778). Besides, majority of the respondents were in agreement to a great extent that their company has implemented purchasing procedures in response to what competitors and peers do and are doing with a mean of 4.21 (SD = 0.672). In addition, majority of the respondents were in agreement to a great extent that they pay

attention to the purchasing practices and tools that appear to benefit their competitors and peers with a mean of 3.76 (SD = 0.430). Additionally, majority of the respondents agreed to a great extent that there is a need to imitate purchasing practices of key competitors that serve the same major clients with a mean of 3.88 and SD .759. The responses were normally distributed with a Kurtosis= -.135 and Skewness= -.457 with a min of 2 and max of 5. Majority of the respondents agreed to a great extent that the leading companies in their industry have obtained competitive advantages by implementing green supply chain management practices with a mean of 3.88 and SD .652. The responses were normally distributed with a Kurtosis= -1.821 and Skewness=-.909 with a min of 2 and max of 5.

Performance of Cement Manufacturing Firms

The performance of cement manufacturing firms is evaluated across various dimensions, including financial, operational, environmental, and social aspects. Companies that excel in these areas are typically those that balance profitability with sustainability, innovation, and social responsibility. The performance of manufacturing firms was investigated and descriptively presented as in Table 4.3.

Table 4.3
Performance of Cement manufacturing firms

Statement	N	MIN	MAX	SKEW	KURT	M	SD
The company treats customers as a major stakeholder	128	3	5	-.514	.533	4.25	.348
Our products effectively meet the needs of our customers	128	3	5	-.706	.588	4.03	.475
The sales volume of our products has improved over time	128	3	5	-.685	1.933	4.29	.402
Employee relations have improved in our organization	128	3	5	-.960	1.630	4.21	.358
Our organization supports Human rights initiatives	128	3	5	-.472	.126	4.17	.292
Our organizations is involved in supporting community initiatives	128	1	5	.987	2.216	4.11	.786
Our scrap rate has reduced over time	128	2	5	-.903	2.298	4.08	.554
The processes of the organization are environmentally friendly	128	3	5	-.595	1.535	4.32	.384
There has been reduced waste emission by the organization	128	2	5	-.957	2.607	.397	.460

***Source*:** Research study 2024

Key: N = Number, MIN = Minimum, MAX = Maximum, SKEW = Skewness, KURT = Kurtosis, M = Mean, SD= Standard Deviation

Majority of the respondents agreed to a great extent that the company treats customers as a major stakeholder with a mean of 4.25 (SD = 0.348). Treating customers as a major stakeholder and incorporating their perspectives as an index of organizational performance is a growing trend in management and business practices. This approach recognizes that customers' satisfaction, loyalty, and engagement are critical drivers of a company's success. Besides, majority of the respondents were in agreement to a great extent that their products effectively meet the needs of their customers with a mean of 4.03 (SD = 0.475). This implies that the cement manufacturing firms have adopted a customer-centric approach in their operation which is fundamental strategy for remaining competitive and highly performance. Organizations that prioritize customer satisfaction often see improved financial performance, as satisfied customers are more likely to repurchase, recommend, and remain loyal (Rane, Achari, & Choudhary, 2023). By understanding and responding to customer needs more effectively than competitors, organizations can differentiate themselves in the market. In addition, majority of the respondents were in agreement to a great extent that the sales volume of their products has improved over time with a mean of 4.29 (SD = 0.402). Additionally, majority of the respondents agree to a great extent that employee relations have improved in their organizations with a mean of 4.21 and SD .358. The responses were normally distributed with a Kurtosis= 1.630 and Skewness= -.960 with a min of 3 and max of 5. This implies that the cement manufacturing firms have paid high premiums in making their employees feel respected and valued so that they contribute innovative ideas and solutions key to their output and overall organizational performance. A collaborative work environment which is fomented by a good employee relations encourages creative problem-solving. Additionally, there is a strong link between employee satisfaction and customer satisfaction (Kurdi, Alshurideh, & Alnaser, 2020). Employees who are happy and engaged are more likely to provide excellent customer service, leading to higher customer retention and positive business outcomes. In consonance, majority of the respondents agree to a great extent that their organization supports Human rights initiatives with a mean of

4.17 and SD .292. The responses were normally distributed with a Kurtosis= .126 and Skewness= -.472 with a min of 3 and max of 5.

Participants were in agreement to a great extent that their organizations are involved in supporting community initiatives on a five-point Likert scale ranging from 1 (Very Small Extent) to 5 (Very Great Extent). The responses had a minimum score of 1 and a maximum score of 5, with a mean of 4.11 (SD = 0.786). The distribution of the scores was slightly negatively skewed (skewness = -.987) and had a kurtosis of 2.216. Organizations that actively support community initiatives often exhibit high performance for several reasons. Engaging in community support not only fulfills corporate social responsibility (CSR) obligations but also brings tangible benefits to the organization, contributing to its overall success. Organizations that support community initiatives are viewed positively by the public, enhancing their reputation (Kumari, Abbas, & Rashid, 2021). A strong reputation can lead to increased customer loyalty and attract new customers. Community involvement sets companies apart from competitors, making them more appealing to socially conscious consumers who prefer to support businesses that give back. Additionally, majority of the respondents agree to a great extent that their scrap rate has reduced over time with a mean of 4.08 and SD .554. The responses were normally distributed with a Kurtosis= 2.298 and Skewness= -.903 with a min of 2 and max of 5. Majority of the respondents agree to a great extent that the processes of the organization are environmentally friendly with a mean of 4.32 and SD .384. The responses were normally distributed with a Kurtosis= 1.535 and Skewness= -.595 with a min of 3 and max of 5. Majority of the respondents agree to a great extent that there has been reduced waste emission by the organization with a mean of 3.97 and SD .460. The responses were normally distributed with a Kurtosis= 2.607 and Skewness= -.957 with a min of 2 and max of 5. In fine the cement manufacturing company has proven a potent for performance in all fronts in terms of Economic, Social and Environmental realms. According to Khan, Yu, and Belhadi (2020) a company that excels in economic, social, and environmental performance embodies the principles of the Triple Bottom Line (TBL) approach, which emphasizes the importance of balancing profit (economic), people (social), and planet (environmental) considerations. This holistic approach to business fosters long-term sustainability and resilience.

Hypothesis Testing

Hierarchical method was used to test the moderating effect of institutional pressure on the relationship between green packaging and performance of cement manufacturing firms.

Table 4.4

Hierarchical regression results for Moderating role of Institutional pressures on the relationship between green packaging and performance of cement manufacturing firms

	Model 1	**Model 2**	**Model 3**
	B(s.e)	**B(s.e)**	**B(s.e)**
(Constant)	***3.155***(2.81) **	3.919(0.209) **	4.033(0.206) **
Zscore(Green Pack)	.234(0.66)**	.049(0.267)	.030(0.48)
Zscore(Inst Pr)		.173(0.015)**	.158(0.016)**
Zscore(Inst P*Green Pack)			.045(0.14)**
Model Summary			
R	.302[a]	.744[b]	.765[c]
R Square	.091	.553	.585
Adjusted R Square	.084	.546	.575
Std. Error of the Estimate	.231	.163	.157
Change Statistics			
R Square Change	.091	.462	.032
F Change	12.627	77.289	58.348
df1	1	2	3
df2	126	125	124
Sig. F Change	.000	.000	.000
**p<.01, *p.05			
Dependent Variable: *Performance of Cement Manufacturing Firms in Kenya*			
Key **GPC**= Green Packaging **INS** or **INSTP**= Institutional Pressure			

Source: Research Data, (2024)

H_{01}: ***There is no statistically significant effect of green*** **packaging** ***on performance of cement manufacturing firms in Kenya***

The third hypothesis stated that there is no statistically significant effect of green packaging on performance of cement manufacturing firms in Kenya. From the findings, a unit increase in green packaging would lead to increase in performance of cement manufacturing firms by a factor of 0.234 (β_1= 0.234). Besides, green packaging has a statistically significant effect on performance of cement manufacturing firms in Kenya (t

= 3.553; p-value = 0.000 which is less than α = 0.05). Thus, the null hypothesis is rejected. In this regard there is a statistically significant effect of green packaging on performance of cement manufacturing firms in Kenya. This implies that green packaging results in increased performance of cement manufacturing firms in Kenya. This was supported by Seifollahi (2023); Ahmed (2022) Maziriri, (2020) and Purnama (2019) who also found a statistically significant relationship between green packaging and the performance of cement manufacturing firms in Kenya. These findings are premised on the resource-based view and institutional theory. Green packaging can be viewed as a valuable resource that enhances a company's reputation, reduces costs through resource efficiency and waste reduction, and mitigates risks associated with environmental regulations and consumer preferences. Additionally, with growing societal concern for environmental sustainability, organizations face pressures from stakeholders, including customers, regulators and advocacy groups, to adopt environmentally responsible practices such as green packaging. This implies that the cement manufacturing company should strengthen its green packaging strategy as a means of enhancing its performance. By integrating green packaging practices into their operations, cement manufacturing firms can achieve synergies across logistical, marketing, and environmental functions, driving value creation, competitiveness and sustainability across the supply chain (Yildiz & Sezen, 2019). Therefore, cement manufacturing firms should promote recycling by using materials that are recyclable, biodegradable, or compostable. Minimize packaging waste and promote responsible disposal practices. Cement manufacturing firms should use packaging that highlights eco-friendly attributes, such as recyclability or use of renewable materials, which communicates the company's commitment to sustainability and appeals to environmentally conscious consumers. Cement manufacturing firms should use well-designed packaging to streamline warehouse operations, optimize storage space and enhance inventory tracking. This leads to improved logistical efficiency and reduced operational costs.

H_{02}: ***Institutional pressure has no statistically significant moderating role on the relationship between green*** **packaging** ***and performance of cement manufacturing firms in Kenya***

While regulatory compliance may be a primary driver for adopting green packaging practices, leading manufacturing companies often go beyond mere compliance to gain a competitive advantage and enhance brand value through proactive sustainability initiatives (Naidoo & Gasparatos, 2018).The study findings showed that institutional pressure has a statistically significant moderating role on the relationship between green packaging and performance of cement manufacturing firms in Kenya by a factor of .045 (β_5=.045 ρ< .05, $R^2\Delta$ of .032). Besides interaction between institutional pressure and green packaging has a statistically significant effect on performance of cement manufacturing firms in Kenya. So, the null hypothesis was rejected. In this regard, there is a statistically significant moderating role of institutional pressure on the relationship between green packaging and performance of cement manufacturing firms in Kenya as depicted in Model 5. Thus, the rejection of the null hypothesis. Nazir, Mehmood and Nazir, (2024); El-Garaihy et al, (2022) also found that institutional pressure has a statistically significant moderating role on the relationship between green packaging and organizational performance. This implies that cement manufacturing firms should collaborate with suppliers and logistics partners to ensure the availability of sustainable materials and optimize their green packaging initiatives. Cement manufacturing firms should remain innovative in their green packaging efforts to stay ahead of evolving regulatory requirements and consumer preferences. These findings are premised on the institutional theory and resource-based view. Institutional theory and the resource-based view provide complementary perspectives for understanding how the adoption of green packaging by cement manufacturing firms is influenced by institutional pressures and how it impacts performance. Green packaging represents a tangible resource for cement manufacturing firms, encompassing materials, technologies, and processes that reduce environmental impact and enhance sustainability. By investing in green packaging, firms can differentiate their products, reduce operational costs and comply with regulatory requirements, thereby improving performance and competitiveness. Cement companies that embrace green packaging demonstrate environmental leadership and commitment to sustainability, which can strengthen their legitimacy and social license to operate. This ultimately contributes to long-term performance and resilience. Cement manufacturing firms face coercive pressures from various institutional actors such as governments, regulatory bodies and environmental advocacy groups, to adopt environmentally sustainable practices, including the use of green packaging. Additionally, companies may face mimetic pressures to adopt green packaging practices due to competitive benchmarking and the desire to mimic the actions of industry leaders or peers. Companies may adopt green packaging practices based on internalized norms of environmental stewardship, corporate social responsibility (CSR) and sustainability, aligning with broader societal expectations and industry norms.

V. Conclusion

Green packaging is significantly and positively related to the performance of cement manufacturing firms in Kenya. Implying that green packaging results in increased performance of cement manufacturing firms in Kenya. These findings are premised on the resource-based view and institutional theory. Green packaging can

be viewed as a valuable resource that enhances a company's reputation which mitigates risks associated with environmental regulations and consumer preferences. This implies that the cement manufacturing company should strengthen their green packaging strategy as a means of enhancing their performance.

Institutional pressures have a statistically significant moderating role on the relationship between green packaging and performance of cement manufacturing firms in Kenya. This implies that cement manufacturing firms should collaborate with suppliers and logistics partners to ensure the availability of sustainable materials, optimize their green packaging initiatives. These findings are premised on the institutional theory and resource-based view. Institutional pressures have a statistically significant moderating role on the relationship between green supplier selection and performance of cement manufacturing firms in Kenya. This implies that cement manufacturing firms should operate within regulatory frameworks, industry standards, and societal expectations related to environmental sustainability potentiated by engaging with eccentric suppliers. These findings are based on stakeholders theory and institutional theory.

VI. Recommendations

Cement manufacturing firms should promote recycling by use of materials that are recyclable, biodegradable, or compostable. Minimize packaging waste and promote responsible disposal practices. The cement manufacturing firms should use packaging that highlights eco-friendly attributes, such as recyclability or use of renewable materials, which communicates the company's commitment to sustainability and appeals to environmentally conscious consumers. Cement manufacturing firms should use well-designed packaging to streamline warehouse operations, optimize storage space, and enhance inventory tracking, leading to improved logistical efficiency and reduced operational costs. Institutional pressures are a vital force for the manufacturing sector to adopt and improve its internal green practices for increased performance. Therefore, cement manufacturing firms should strategically comply with the institutional pressure as a differentiation strategy to not only synergize their Green packaging strategies for a unique market position but also heightened performance.

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