# Influence of Green Product Selection Practice on Organizational Performance of Manufacturing Firms in Nairobi County

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**Abstract**

Manufacturing firms in Nairobi County would operate with a strong organizational performance achieving high productivity, efficiency, profitability, and quality standards through green product selection practices. A strong organizational culture supports these practices, fostering employee engagement, innovation, and environmental sustainability. However, the sector faces challenges such as limited technical efficiency, declining GDP contribution, and reduced market share. Despite contributing 17.30% of total tax revenue, the sector's technical efficiency is lower. Therefore, the main objective of this study was to establish the influence of green product selection practice on organizational performance of manufacturing firms in Nairobi County. This study was guided by Ecological Modernization theory. This study utilized an explanatory research design. The study targeted 554 procurement managers of all manufacturing companies in Nairobi County. The researcher obtained sample size of 232 respondents using Yamane formulae. The study used stratified random sampling technique to select respondents from manufacturing companies. These research study used structured questionnaires to collect data. Pre-testing of research instruments was achieved through pilot study in manufacturing companies in Nakuru County which have similar characteristics as manufacturing companies in Nairobi County. This assisted in testing for reliability and validity of the research instruments. Collected data was analysed using both descriptive and inferential statistics with the aid of Statistical Package for Social Science (SPSS) version 25. Descriptive statistics included frequency, means, minimum, maximum and standard deviation. Inferential statistics included correlation and regressions models. The study findings revealed that green product selection practice ($\beta_1$=0.165, p=0.002) had a positive and significant effect on organizational performance of manufacturing firms in Nairobi County. The study concluded that integrating green product selection, enhances manufacturing firms' performance, cost-effectiveness, and market competitiveness while advancing their environmental and social responsibilities. The study recommends that firms develop a strong

sustainability-focused culture, integrate green product, engage with environmental policies and certifications to maximize sustainability performance.

**Keywords:** Green Product Selection, Organizational Performance, Manufacturing Firms, Nairobi County

## Introduction

Organizational performance is the capacity of the company to fulfil its financial obligations and other expenditure relevant to the company and also to make profit. Barauskaite and Streimikiene (2021) indicated that manufacturing organizations can run successfully without the need for aid or donations. Organizational performance means that the manufacturing organizations can operate and help the poor as per its goals without the need for aid from donors.

Green production selection practices in the United States involve integrating environmental, social, and governance (ESG) criteria into procurement processes to enhance sustainability and mitigate negative environmental and societal impacts (Neri, 2021). As companies face increasing pressure from stakeholders to adopt these strategies, green production selection sourcing eco-friendly products, promoting resource efficiency, and minimizing waste (Lee & Kim, 2021). Additionally, it encompasses social criteria, including labor practices, human rights, and community well-being (Anderhofstadt & Spinler, 2019).

In China, the organizational performance of manufacturing firms is influenced by various factors including financial performance, market performance, and operational efficiency. Green product selection practices have been identified as key enhancer of performance. Specifically, sustainable procurement practices that focus on environmental considerations positively impact organizational performance, with evidence of a positive relationship between these practices and both social and environmental performance (Ilmudeen et al., 2019; Gupta & Gupta, 2020; Agyabeng-Mensah et al., 2020). In Brazil, sustainable green product selection practices involve the integration of environmental, social, and governance (ESG) criteria into procurement processes to promote sustainability and mitigate negative impacts. These practices are increasingly important due to pressure from various stakeholders, and they focus on sourcing eco-friendly products and minimizing waste (Pinheiro, 2023; Singh & Chan, 2022).

In Nigeria, the adoption of green product selection practices has been hindered by economic constraints and a lack of awareness. However, companies that have embraced these practices report improvements in operational efficiency and market performance (Ogunsanya et al., 2022; Tortorella et al., 2019). In South Africa, government initiatives have promoted green product selection, leading to greater adoption of eco-friendly practices among manufacturing firms (Shai et al., 2019; Ambe, 2019). In Ghana, there has been a rise in green product selection initiatives within the manufacturing sector, driven by efforts to enhance environmental sustainability and social responsibility. Companies are increasingly integrating ESG criteria into their procurement processes, supported by government policies and incentives, which has led to improved operational efficiency and market positioning (Fiati, 2019; Marchetti, 2023; Suleman et al., 2022).

In Zambia, implementing green product selection practices can yield cost savings and operational efficiency improvements. These practices help organizations reduce energy costs and compliance expenses while enhancing sustainability performance. They also drive innovation and improve brand reputation, which can lead to financial benefits and market differentiation (Chileshe & Phiri, 2022; Patel, 2023). In Tanzania, organizational performance is a crucial indicator of success, measured through both financial and non-financial indicators. While financial analysis has traditionally been used to assess performance, it is important to also consider the efficiency of resource use in business operations, as stakeholders value more than just financial outcomes (Ye & Tekka, 2020; Herciu, 2017).

Locally, in Kenya, as per the study done by Mose (2021), successful firms represent a key ingredient for developing nations. Many economists consider them similar to an engine in determining their economic, social, and political development. To survive in a competitive business environment, every firm should operate in conditions of performance. Nowadays, organizational performance has become a relevant concept in strategic management research and is frequently used as a dependent variable. Although it is a very common notion in the academic literature, there is hardly a consensus about its definition and measurement (Haraguchi, Martorano & Sanfilippo, 2019). Manufacturing organization faces challenges in achieving optimal performance. Factors such as low sales, infrastructural decay, erratic power supply, and government policy inconsistencies have contributed to the underperformance of manufacturing firms in various regions, including Nairobi County (Ongaro, 2019). These challenges underscore the importance of enhancing organizational performance through effective management practices.

In the context of manufacturing firms in Nairobi County, the ability to improve organizational culture is directly linked to staying competitive, recruiting top talent, enhancing job satisfaction, and positively impacting the bottom line (Chepkole & Deya, 2019). The challenges faced by manufacturing enterprises, such as attracting skilled workers, adapting to digital transformation, and addressing outdated systems, underscore the critical need for a healthy and adaptive organizational culture (Syakur, Susilo, Wike & Ahmadi, 2020). The pivotal role of green product selection is driving productivity, employee satisfaction, and overall company performance (Paais & Pattiruhu, 2020). Understanding green product selection in the manufacturing sector is essential for developing strategies to enhance culture, attract talent, and improve profitability in manufacturing companies in Nairobi County.

**Objective of the Study**
To establish influence of green product selection practice on organizational performance of manufacturing firms in Nairobi County.

*Statement of the Problem*
In ideal situation, manufacturing firms in Nairobi County would operate with a strong organizational performance. This translates to high levels of productivity, efficiency, profitability, and adherence to quality standards. These firms would leverage sustainable green procurement practices throughout their supply chain. This means they would source raw materials, energy, and other resources with minimal environmental impact while considering social responsibility factors (Srisathan, Ketkaew & Naruetharadhol, 2020).

However, the real situation reveals challenges such as limited technical efficiency, declining contribution to Gross Domestic Product (GDP), and reduced market share. There is declining contribution of the sector to the GDP, which has decreased from 9.3% in 2016 to 7.2% in 2021 (Kenya National Bureau of Statistics (KNBS), 2022). Despite this, manufacturing contributes about 17.30% of total tax revenue, implying that tax revenue from the sector can triple if 20% GDP contribution is achieved by 2030. According to Kenya Association of Manufacturers report (2023) the technical efficiency of manufacturing firms in Kenya is around 59%, lower than counterparts in other countries like Malaysia, which average about 74% (Onsomu, Munga, Nyabaro & Munene, 2022). To address these challenges and improve the organizational performance of manufacturing firms in Nairobi County, a study focusing a study focusing on the influence of green product selection practice on organizational performance of manufacturing firms is proposed. By examining the interplay between green product selection and organizational performance, the research intends to provide insights into how firms can leverage their culture to optimize the benefits of sustainable practices. This study sought to establish the influence of green product selection practice on organizational performance of manufacturing firms in Nairobi County.

## Theoretical Review

### Ecological Modernization Theory

Ecological Modernization Theory explains how pressures exerted by external institutions force manufacturing firms to adopt green manufacturing (Nazir et al., 2024). The theory encompasses the evolving politics of pollution that refer to dynamism of regulations and their impact on environmental innovations. The theory also posits that manufacturers can gain organizational performance improvements through innovations and enhancing their competitive advantage (Tu & Wu, 2021). Furthermore, manufacturers are adopting production systems that minimize the negative impacts of operations on the environment and natural resources (Wang, 2019).

Manufacturers are also striving to comply with regulations and policies set by governments and environmental institutions on carbon emission limits through the use of 6R strategy which involves redesign, reduce, remanufacture, recycle, reuse, and recover (Kannan et al., 2022). The formulation of international environmental regulations such as RoHS, WEEE, and ISO 14000 series coupled with increased environmental awareness of consumers have a significant impact on manufacturing firms and global trade (Witczak, 2019).

This theory links to the current study in the sense that Ecological Modernization Theory emphasizes how external pressures, such as regulatory requirements and environmental concerns, drive manufacturing firms to adopt sustainable practices (Huang & Huang, 2022). This theory links directly to the variables of green procurement practices and organizational performance. According to the theory, when firms implement green product selection, they not only comply with environmental regulations but also enhance their organizational performance. By integrating these green procurement practices, firms can improve their efficiency, reduce waste, and innovate their processes, leading to better performance outcomes such as increased profitability and market competitiveness.

One of the major critiques of the Ecological Modernization Theory (EMT) is that it places too much emphasis on the importance of institutional and market-based instruments in

delivering environmental change. The good form of the theory presupposes that economic development and environmental safety are reconciled with technology innovation and pressure to regulation, yet the critics of the theory state that such view underlies the contradictions between capitalism and environmental sustainability. It does not examine how the goal of making profits can act as a barrier to the intensity of the cures to the environment regarding the ability of the green practices to jeopardize the short-term financial standing. In addition, EMT has a tendency of taking corporations as rational actors that even accept environmental innovations without thinking of resistance, greenwashing, and political economic inequalities that determine the application and enforcement of regulations and adherence to them in various regions and industries.

The third criticism is that the theory is overly optimistic of the potentials of technological innovation in resolving environmental degradation. Focusing on the technical solutions like 6R strategy or compliance with international history like ISO 14000, EMT can mean failing to pursue more radical changes in the systems that are required to deal with the climate crisis and disintegration of the biosphere. It threatens to spread a topical kind of environmentalism which has as much to do with institutional justification than a true sort of sustainability. Moreover, the theory fails to capture grassroots movements, local knowledge, and the presence of the civil society in advocating environmental justice, and thus, is in some ways, top-down and technocratic to some extent. Because of this, EMT might not effectively reflect the multidimensional socio-political processes and sub processes of meaningful environmental change.

*Empirical Review*
According to El-Kassar and Singh (2019), the adoption of green product selection practices has a significant impact on the organizational performance of manufacturing firms. They argue that by integrating environmental considerations into product design and development processes, firms can enhance their competitiveness and sustainability. Through practices such as life cycle assessment (LCA) and eco-design principles, companies can minimize resource consumption, reduce waste generation, and improve operational efficiency. This not only leads to cost savings but also enhances the firm's reputation and brand image as environmentally responsible. While their study focus on the integration of environmental considerations is well-supported, but the discussion could benefit from specific examples or empirical evidence demonstrating how these practices have been implemented successfully in various industries.

Rawashdeh (2018) conducted a study on the influence of green product selection practices on organizational performance and found a strong positive correlation between the two variables. Their research suggests that manufacturing firms that prioritize sustainability in product selection experience improved financial performance, innovation, and market competitiveness. By investing in eco-friendly materials, technologies, and processes, these firms are able to meet the growing demand for sustainable products and gain a competitive edge in the market. While the study by Rawashdeh highlights a positive correlation, it would be useful to discuss any potential limitations or confounding variables that might affect the observed relationship between green product selection and organizational performance. Goswami (2018) emphasizes the strategic importance of green product selection practices for manufacturing firms in today's business environment. They argue that sustainable practices

not only contribute to environmental conservation but also drive business growth and profitability. Through collaboration with suppliers, customers, and other stakeholders, firms can develop innovative green products that meet consumer demand while minimizing environmental impact. This, in turn, enhances the firm's reputation, builds customer loyalty, and creates long-term value for shareholders.

Abbas (2020), supports the notion that green product selection practices positively impact the organizational performance of manufacturing firms. Their study indicated that firms that prioritize green product selection experience benefits across multiple dimensions of organizational performance. Specifically, they found that these firms not only achieve cost savings through improved resource efficiency and waste reduction but also enhance their brand reputation and market positioning as environmentally responsible entities (Yildiz Çankaya et al., 2019). Additionally, the study highlights the role of green product selection practices in fostering innovation and driving product differentiation, which are crucial factors for long-term success in today's competitive marketplace.

The study by Ardito and Dangelico (2018) delves into the relationship between green product selection practices and organizational performance from a supply chain perspective. Their findings suggest that the adoption of green product selection practices leads to greater collaboration and integration within the supply chain, resulting in improved overall performance for manufacturing firms (Li & Sarkis, 2022). Through working closely with suppliers and other partners to identify and implement environmentally sustainable solutions, firms can enhance supply chain efficiency, reduce risks, and achieve better alignment with customer expectations for environmentally friendly products.

Abdallah and Al-Ghwayeen (2020) explored the connection between green supply chain practices and operational performance in manufacturing firms. Their findings highlighted the transformative impact of green practices on various facets of operations, including efficiency gains, cost reduction, and risk mitigation (Habib et al., 2020). Embracing sustainable supply chain practices, firms can streamline their operations, optimize resource utilization, and build resilience against environmental and regulatory risks, thereby enhancing overall organizational performance.

Within Nairobi County's manufacturing sector, the integration of eco-friendly criteria into product selection processes can serve as a strategic lever for enhancing competitiveness and mitigating risks associated with resource scarcity and regulatory compliance (Wanjohi, 2020). Investing in green technologies and practices, firms can not only achieve cost savings through improved resource efficiency but also differentiate them in the market by offering sustainable products that appeal to environmentally conscious consumers (Ochieng, 2019).

The adoption of green product selection practices can catalyze innovation and foster collaboration along the supply chain (Naidoo & Gasparatos, 2018). Engaging suppliers and partners in sustainable practices, firms can build resilient networks that are better equipped to address emerging environmental challenges and regulatory requirements (Singh, 2023). Additionally, by aligning their operations with sustainability goals, firms can attract top talent and enhance their reputation as responsible corporate citizens, thereby strengthening their social license to operate and fostering long-term stakeholder relationships.

Despite the potential benefits, the successful implementation of green product selection practices in Nairobi County may hinge upon overcoming various barriers, including limited access to green technology and financing, inadequate infrastructure, and a lack of awareness and capacity among stakeholders (De Jesus & Aguiar Borges, 2024). Thus, while the literature underscores the transformative potential of green product selection practices, there is a need for tailored strategies and interventions to address the unique challenges and opportunities within the manufacturing landscape of Nairobi County (Ogah & Asiegbu, 2022).

**Conceptual Framework**
**Independent Variable**                                    **Dependent Variable**

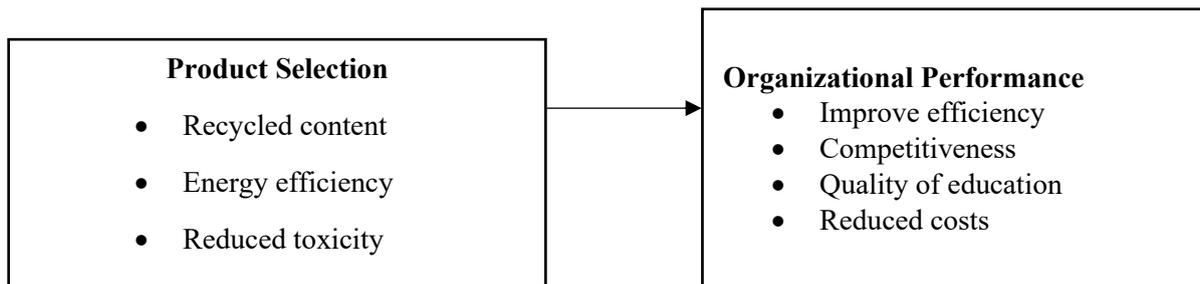| Product Selection | Organizational Performance |
|---|---|
| • Recycled content<br>• Energy efficiency<br>• Reduced toxicity | • Improve efficiency<br>• Competitiveness<br>• Quality of education<br>• Reduced costs |

Figure 1 Conceptual Framework

**Methodology**
This study utilized an explanatory cross section research design. Explanatory research design is designed to explain and explore a phenomenon in-depth by investigating the underlying reasons, causes and relationships behind it (Makri & Neely, 2021).

According to the Kenya Association of Manufacturers (KAM, 2023) directory, there are 554 manufacturing firms operating in Nairobi. The unit of analysis for this study was the manufacturing companies from the 14 sectors while the unit of observation was procurement managers. Therefore, the study targeted 554 procurement managers of all manufacturing companies in Nairobi County.  The sample size was 232.

The study used stratified random sampling technique to select respondents from manufacturing companies. The study categorized manufacturing firms into 14 stratus. From each strata the study used proportionate sampling to distribute the respondents.

This research study used structured questionnaires to collect data.
The researcher first obtained clearance from University Eldoret. This allowed the researcher to apply for a research permit from the National Council of Science, Technology, and Innovation (NACOSTI) before going to the field. Once permits are obtained the researcher proceeded to manufacturing companies in Nairobi County to ask for permission for data collection in their firms. Once the permission is granted, the researcher arranged to visit the respondents within the firms for familiarization purposes and book intended date for data collection within their departments. The researcher administered questionnaire personally.
Data processing involved cleaning, sorting, coding of relevant data from the participants. Statistical Package for Social Science (SPSS) version 25 was used for data analysis which

generated information from the data into an observable pattern of the occurrence. Collected data was analysed using both descriptive and inferential statistics.

## Research Findings and Discussions

### Response Rate

A response rate is an important metric in survey research, representing the percentage of individuals who complete a survey compared to the total number who did not take part in the survey. The questionnaires were distributed to the procurement managers of all manufacturing companies in Nairobi County. The response rate is presented in Table 4.1.

Table 4.1
*Response Rate*

| Responses | Frequency | Percentages |
|---|---|---|
| **Questionnaires Responded** | 194 | 83.60 |
| **Questionnaires Not responded** | 38 | 16.40 |
| **Total** | **232** | **100** |

Source: Research Data (2025)

The response rate results in Table 4.1 revealed that out of 232 questionnaires administered to procurement managers, 194 were correctly and fully filled translating to a response rate of 83.6%. According to Mugenda and Mugenda (1999) response rate above 70% is considered appropriate.

### Descriptive Statistics for Green Product Selection Practice

The study sought establish influence of green product selection practice on organizational performance of manufacturing firms in Nairobi County. Analysis of the response mean scores was conducted on the continuous scale <1.5 represents strongly disagree; with 1.5-2.4 disagree; while 2.5-3.4 neutral; with 3.5- 4.5 being agree and finally >4.5 represented strongly agree. The mean value of below 2 indicates that a few of the respondents deviated from the mean A total of 5 statements were used to establish influence of green product selection practice on organizational performance of manufacturing firms in Nairobi County. Results are presented in Table 4.2.

Table 4.2

*Descriptive Statistics for Green Product Selection Practice*

| Statements | | SD | D | N | A | SA | Mean | Std |
|---|---|---|---|---|---|---|---|---|
| 1. The availability of products with a high percentage of recycled materials significantly influences our company's selection process | F | 19 | 29 | 10 | 89 | 47 | 3.60 | 1.28 |
| | % | 9.8 | 14.9 | 5.2 | 45.9 | 24.2 | | |
| 2. When selecting products, our company prioritizes options with high energy efficiency ratings (low energy consumption). | F | 18 | 25 | 11 | 86 | 54 | 3.69 | 1.26 |
| | % | 9.3 | 12.9 | 5.7 | 44.3 | 27.8 | | |
| 3. Our company strongly considers the reduced toxicity of materials and potential health impacts during product selection | F | 17 | 30 | 15 | 79 | 53 | 3.62 | 1.28 |
| | % | 8.8 | 15.5 | 7.7 | 40.7 | 27.3 | | |
| 4. Our company prioritizes sourcing products from local suppliers who practice sustainable production methods | F | 16 | 26 | 15 | 81 | 56 | 3.70 | 1.25 |
| | % | 8.2 | 13.4 | 7.7 | 41.8 | 28.9 | | |
| 5. Third-party certifications for recycled content, energy efficiency, and reduced toxicity heavily influence our green product selection | F | 16 | 27 | 12 | 86 | 53 | 3.69 | 1.24 |
| | % | 8.2 | 13.9 | 6.2 | 44.3 | 27.3 | | |
| **Valid N = 194** | | | | | | | **3.66** | |

Source: Research Data (2025)

According to the results in Table 4.2, the descriptive statistics findings showed that 136(70.1%) of the respondents agreed that the availability of products with a high percentage of recycled materials significantly influences our company's selection process while 48(24.7%) of the respondents disagreed that the availability of products with a high percentage of recycled materials significantly influences our company's selection process. The study findings further revealed that the respondent agreed that the availability of products with a high percentage of recycled materials significantly influences our company's selection process with mean rating of 3.60. From the results of standard deviation of 1.27 implies that a few of the respondents also deviated from the mean. These findings imply that the company should continue to prioritize sustainable sourcing practices, as it not only aligns with environmental goals but also resonates with the values of its employees and potentially its customers. The study done by Rathore, (2017) reveals that sustainable marketing strategies focus on promoting products or services in an environmentally and socially responsible way. These strategies not only benefit the planet but also resonate with consumers who are increasingly conscious about sustainability.

Furthermore, 140(72.1%) of the respondents agreed that when selecting products, their company prioritizes options with high energy efficiency ratings (low energy consumption) and 43(22.2%) of the respondents disagreed that when selecting products, our company prioritizes options with high energy efficiency ratings (low energy consumption). However, respondents agreed in terms of mean and standard deviation that when selecting products, our company prioritizes options with high energy efficiency ratings (low energy consumption) with mean rating of 3.69. Additionally, standard deviation of 1.26 indicates that a few of the respondents deviated from the mean. Findings reveals that the company is likely to benefit from aligning its strategies with these shared values, as doing so can enhance employee engagement, improve operational practices, and strengthen the company's overall market position in a landscape increasingly focused on sustainability. These findings are consistent with Eldor, (2020) indicate that collective engagement, fuelled by shared organizational vision, improves service performance.

Further, 132(68.0%) of the respondents agreed that their company strongly considers the reduced toxicity of materials and potential health impacts during product selection while those who disagreed are 57(23.3%). The study findings revealed that participants agreed with the statement that their company strongly considers the reduced toxicity of materials and potential health impacts during product selection with mean rating of 3.62.

The standard deviation of 1.27 suggests that most respondents had similar views, with only a few deviating from the mean. This implies that the company prioritizes not only the environmental sustainability of its products but also the well-being of consumers and workers by selecting materials that are less harmful to human health. The previous research by Wong et al., (2015) companies like Hewlett-Packard have taken proactive steps to eliminate hazardous materials from their products, demonstrating a commitment to health and environmental stewardship throughout their supply chains.

Similarly, 137(70.7%) of the participants agreed that their company prioritizes sourcing products from local suppliers who practice sustainable production methods. However, 42(21.6%) of the respondents disagreed that their company prioritizes sourcing products from local suppliers who practice sustainable production methods. Further, the study findings revealed that participants agreed towards the statement that their company prioritizes sourcing products from local suppliers who practice sustainable production methods with mean rating of 3.70. The standard deviation of 1.25, which is below 2, indicates that there was low variation in responses, with only a few of the respondents deviating from the general response. This suggests that the company values responsible sourcing practices, which not only contribute to environmental sustainability but also strengthen relationships with local communities and suppliers. According to Villena and Gioia, (2018) reveals that many lower-tier suppliers address their environmental and labour issues passively and constitute the riskiest suppliers in a supply network.

Finally, 139(71.6%) of the respondents agreed that third-party certifications for recycled content, energy efficiency, and reduced toxicity heavily influence our green product selection and on the other hand 43(22.1%) of the respondents disagreed that third-party certifications for recycled content, energy efficiency, and reduced toxicity heavily influence our green product selection.

Additionally, the study results further revealed that the respondents agreed that the third-party certifications for recycled content, energy efficiency and reduced toxicity heavily influence our green product selection with mean rating of 3.69 and a standard deviation of 1.24 indicates that most of responses deviated from the mean, with only a few differing significantly in their view. These findings are consistent with the study done by Darnall, Ji and Vázquez-Brust, (2018) found that consumers' trust of government and environmental NGOs to provide credible environmental information encourages consumers' use of ecolabels sponsored by these entities, and consumers do not differentiate between certified versus uncertified ecolabels in the presence of trust.

**Correlation Analysis Results**
Pearson correlation analysis was carried out to show the strength and direction of the association between independent and dependent variables. Table 4.3 presents the results.

Table 4.3
*Correlation Analysis Results*

| Variables | 1 | 2 |
|---|---|---|
| **Organizational performance** | 1 | |
| **Green product selection practice** | .601** | 1 |

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
Source: Research Data (2025)

The study findings presented in Table 4.3 indicate that green product selection practice and organizational performance of manufacturing firms in Nairobi County had a moderate, positive, and statistically significant correlation (r = 0.601**, p < 0.01). This implies that as firms increase their focus on selecting environmentally friendly products such as those with recycled content, low toxicity and energy efficiency they are likely to experience improved organizational outcomes.

**Simple Linear Regression Analysis**
The analysis is as follows
*Model Summary*
The results are presented in Table 4.4.
Table 4.4
*Model Summary*

| R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|
| .738[a] | .545 | .538 | .60881 |

Source: Research Data (2025)

Table 4.4 displays the regressionn findings, which showed an $R^2$ of 0.545 and an R-value of 0.738. The high linear correlation between the dependent and independent variables was indicated by the R-value of 0.738. According to the coefficient of determination ($R^2$), the

independent variables provided 0.545 of the total explanation. The regression model accounted for roughly 54.5% of the observed variation in the independent variable.

*Regression Model Fitness Test*
The model's fitness was checked to test if it provided the best possible fit for the data. Table 4.5 showed the outcomes of the investigation.

Table 4.5
*Fitness of Regression Model*

|  | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Regression | 84.273 | 3 | 28.091 | 75.789 | .000b |
| Residual | 70.423 | 190 | .371 |  |  |
| **Total** | 154.696 | 193 |  |  |  |

Source: Research Data (2025)

Table 4.5 displayed an F-statistic of (F =75.789), which was statistically significant at the p=0.000 level, demonstrating that the model was accurate. This means that the data were well-fit by the multiple regression model. That is why it was important considering the independent variables while designing the system.

*Regression Model Coefficients*
Running a regression model yielded coefficients for use in the regression equation. Table 4.6 details the study's findings.

Table 4.6
*Regression Model Coefficients*

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
|  | B | Std. Error | Beta |  |  |
| (Constant) | .930 | .116 |  | 8.017 | .000 |
| Green product selection practice | .165 | .051 | .215 | 3.220 | .002 |

Source: Research Data (2025)

Table 4.6 showed that the green product selection practice had a positive linear effect on organizational performance of manufacturing firms in Nairobi County ($\beta_1$=0.165, p=0.002). This showed that a 0.165-unit improvement in green product selection practice leads to an improvement in organizational performance of manufacturing firms in Nairobi County. The resulting regression equation is as follows:
**$Y =0.930 + 0.165X_1$ ……………………………. Equation 4.1**
**Y** organizational performance of manufacturing firms in Nairobi County
**$X_1$** green product selection practice.

## Conclusion

The study concludes that green product selection practices play a crucial role in enhancing organizational performance among manufacturing firms. By prioritizing products made with recycled materials, high energy efficiency, and reduced toxicity, firms align their procurement decisions with sustainability goals, which directly influences product quality and cost-effectiveness.

## Recommendations

Manufacturing companies should engage in maximizing a healthy sustainability-based culture that helps in boosting and boosting green supply chain programs. Future research could explore: potential mediators (employee engagement, innovation capability) in the relationship between green practices and organizational performance.

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