



GREEN PROCUREMENT AND PERFORMANCE OF EAST AFRICA BREWERIES LIMITED

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ABSTRACT

The main purpose of this study is to investigate the impact of green procurement on the performance of manufacturing industries in East Africa Breweries Limited (EABL). The study was based at EABL Headquarters in Ruaraka with operation at the outskirts of Nairobi City. The target population was workers of EABL in the Procurement Department. The study was conducted with the following objectives; to investigate the influence of supplier participation on the performance of the manufacturing industry in Kenya, and to determine the influence of employee training on performance of the manufacturing industry in Kenya. The study took on a descriptive approach.). The target population for the research comprises of the employees working in the procurement department, a population of forty (40) made up of people employees working in the procurement departments at EABL. A simple random sampling without a replacement was applied to select the required sample size. In sampling without replacement, each sample unit (employee) of the population only had one chance to be selected. Data was collected through interviews and questionnaires for qualitative and quantitative analysis. The collected data was analyzed qualitatively through thematic coding, where data was transcribed and arranged into coded themes. The data also used inferential statistics to investigate the influence of green procurement on performance. The study used regression analysis to determine the relationship between independent variables and dependent variables. The study concludes that supplier participation has a positive and significant effect on performance of the manufacturing industry in Kenya. The study also concludes that employee training have a positive and significant effect on performance of the manufacturing industry in Kenya. Based on the findings, the study recommends that the management of manufacturing industries in Kenya should establish collaborative partnerships through long-term contracts and joint innovation programs. By fostering strong relationships with suppliers, manufacturers can ensure better quality, cost-effectiveness, and timely delivery of materials. In addition, the study recommends that the management of manufacturing industries in Kenya should invest in infrastructure development, particularly in energy, transportation, and technology.

Key Words: Green Procurement, Performance of Manufacturing Industries, East Africa Breweries Limited, Supplier Participation, Employee Training

Background of the Study

The green supply chain concept has continued to raise debate amongst scholars and researchers in the last few years. A lot of manufacturing industries all over the world have adopted the sustainability model following competition, regulations, and community pressure (Basl, Buchalcevova & Galga, 2021). Organizations currently have to balance between economic and environmental performance. Much of the concern is inclined towards how activities in manufacturing industries affect the environment following the intense deterioration of the environment, for instance, global warming and the depletion of some natural resources as well as the global health crises (Arrow-smith & Hartley, 2021). Such issues have contributed significantly towards the demand for sustainable products where organizations will be required to show effort towards the reduction of waste and consumption for the sake of the environment while at the same time, boost growth and profitability (Behn, 2022). Subsequently, manufacturing industries and the consumers must embrace environmentally responsible consumption and production such that the quality of the environment can be recovered, reducing poverty and improving economic growth, which will be reflected in, improved working conditions and sustainability (Nasiche & Ngugi, 2023). Green procurement was developed from the larger green marketing concept, which targeted better environmental sustainability and sustainable development. In its usage, Green sustainability is perceived as a multi-faceted idea that can be identified through a repertoire of words such as sustainable supply chain management, environmental supply chain management, closed-loop supply chains, and green manufacturing together with reverse logistics (Seman *et al*, 2021). The concept builds on the principles of the conventional value chain when it incorporates environmentally conscious procedures such as green design and manufacturing, management of waste, recycling, re-usage, and re-manufacturing. Basl, Buchalcevova, and Galga (2021) define GSCM as the inter-organizational coordination of the value chain processes that are inclusive of economic, environmental, and societal considerations aimed at strengthening the performance of a firm (Arrow-smith & Hartley, 2021). The green supply chain has mushroomed from a mere compliance concept to an integrated organizational idea to enhance environmental well-being and the overall performance of an organization. The main advantages of the process include operational and relational efficiency, better corporate image, allowing a sustainable environment, and good financial performance (Behn, 2022).

Green procurement, therefore, involves the integration of environmental issues into the purchasing decisions according to the quality, performance, and price. Activities or products that use fewer natural resources should be considered over others that exert a greater impact on the environment (Nasiche & Ngugi, 2023). To reduce waste and pollution, such products need consideration of the environmental issues, performance, and price among other conventional factors. Arrow-smith and Hartley (2021) outline the merits of adopting green procurement as cost control, enhanced internal and external standards through the performance assessment, and being in tandem with the social and environmental legislation (Seman *et al*, 2021). Notably, green procurement has been practiced over the years has emerged as an important planning paradigm. The Federal Acquisition Regulation of 2005 sustainable procurement aims at mitigating the impacts of greenhouse gases, waste generation, toxicity, and excessive use of resources. It also works to reduce carbon calculations across the supply chain (Basl, Buchalcevova & Galga, 2021).

Objectives of the study

The General objective is to assess the influence of green procurement on the performance of manufacturing industries in Kenya, a case of East African Breweries Limited

Specific of Objectives

- i. To investigate the influence of supplier participation on the performance of the manufacturing industry in Kenya
- ii. To determine the influence of employee training on the performance of the manufacturing industry in Kenya

LITERATURE REVIEW**Theoretical Review****Organizational Theory**

Nawanir *et al* (2021) state that organizational theory in every organization is heavily affected by a broad range of other fields such as economics, sociology, psychology political science among others. Subsequently, it is imperative to understand organizational theory from different perspectives such as through design and structures and organizational behavior. Singh *et al* (2020) define organizational theory as the set of interrelated ideas and definitions that strive to explain the behavior of people or groups of people, who associate with one another to perform activities to accomplish a common goal. Organizational theory has developed into a wide application of a myriad of management studies and operations. Its usage in the supply chain management is gradually becoming more established.

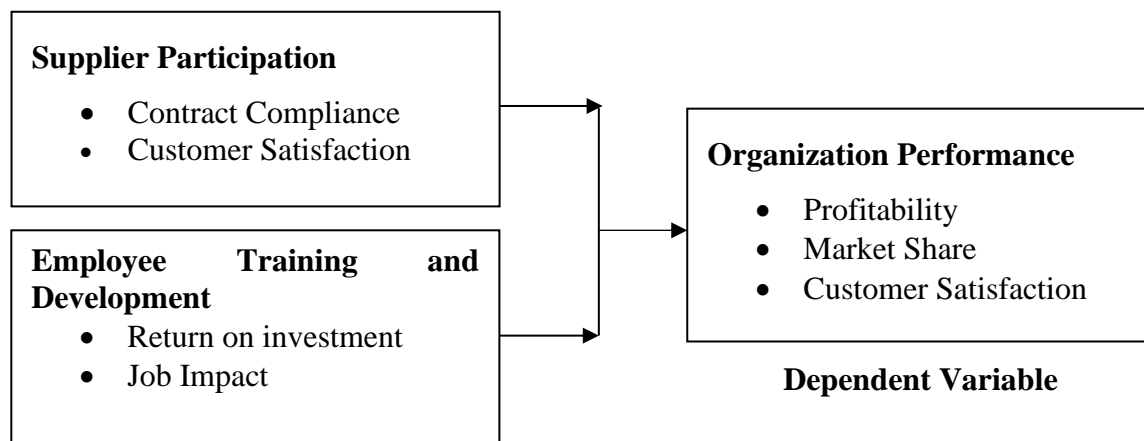
The main significant component in every supply chain is talent. It heavily relies on smart supply chain managers and how they relate with people, the relationships they develop as well as the contemporary issues. The current supply chain management encounters a myriad of hurdles such as globalization, increased logistic costs, more product variety as well as the increased cost of labor, and the rapid development of technology among others. Such challenges require competent employees with dynamic skills to ensure that the supply chain is successful. Subsequently, every activity within the supply chain calls for a distinct set of skills. The management responsible for purchasing should be well aware of the techniques related to sustainability, product positioning, and inter-organizational relationships. What is more, at the plant level, the managers should be aware of activities such as product design, planning, and quality improvement, distribution, and preserving the environment.

Tan *et al* (2020) state that supply chains within manufacturing industries entail the suppliers of the raw materials, in this case, the farmers, elements, and services that the organization requires to produce and distribute the end product and the intermediate or end chain consumer. Supply chains may have various organizational structures that reflect the business rapport or the extent of partnership between the players in the chain. Therefore, the structures may range from informal relationships where organizations make an occasional purchase from a broad group of suppliers, to joint ventures or integrated supply chains where there is a high mark of association and dependency. Brammer and Walker (2023) assert that the organizational structures within firms, and how they influence green procurement are yet to be reviewed extensively. To ascertain the relationship between organizational structures and the adoption of green procurement within the context of organizational theory, various levels of leadership and management need to be reviewed.

Conceptual Framework

A Conceptual Framework is a diagram showing the relationship between the independent variables and the dependent variable (Mugenda, & Mugenda, 2019). In this study the independent variables include; supplier participation, prevailing conditions, environmental

collaboration and employee training while the dependent variable is performance of the manufacturing industry in Kenya.



Independent Variables

Figure 2. 1: Conceptual Framework

Empirical Review

Supplier Participation

Over the years, there is a deep interest in research on the significance of fathoming the role suppliers play in providing raw materials. It is crucial to acknowledge that procurement processes begin with the user identifying a need thereafter generates the specifications and requests that the supplier has made to satisfy the process. It is worth noting that at times, the expectations can be vague, especially for the technology-intensive procurement projects (Laari *et al*, 2023). A supplier who has poor environmental practices is likely to affect the image and performance of the buying companies (Laari *et al*, 2023). Suppliers contribute significantly to the environment as they sell raw materials to organizations, a resource whose existence is dependent on the environment. The relationship between an organization and its suppliers is important in green procurement. It should be designed in a manner that leverages the strategic and operational capacity of the participating firm to assist in guiding them to achieve significant and long-term benefits. Partnership with suppliers should emphasize direct and long-term collaboration while promoting mutual planning and problem-solving efforts. According to Ghosh and Shah, (2023), supply partnerships are established to foster shared benefits between the supplier and the participating organization. Notably, such participation in areas such as technology, markets, and products are strategic to the organization.

Suppliers provide services or supply raw materials as per agreements entered into with the manufacturing entities. It is therefore important to carry out scheduled supplier evaluations to appreciate their levels of compliance with the agreed contract terms.

It is believed that when suppliers provide the resources ordered from them in manageable quantities and within the right time, a great deal of customer satisfaction is likely to be achieved (Bolo, 2022). Supplier participation in green procurement is thus an important aspect in ensuring customer satisfaction is attained by any organization. Customer satisfaction has a direct impact on their loyalty and hence revenues for an organization.

Employee Training

Miguel and Ledur (2022) assert that workplace training is an effective way of promoting human resources development. Research shows that staff training has a direct impact on the performance of an organization as well as sustainable development. Motivating and training

employees not only has a positive influence on the organization's achievement of its environmental goals but also acts as a significant driver in achieving green maturity by firms (Miguel & Ledur, 2022). Therefore, for a company to reduce its environmental impact, it is pivotal to equip employees with the right knowledge and competencies through proper environmental training to increase the motivation and commitment in an effort of improving performance for environmental and sustainable development. Training employees is an imperative contributor to adopting green supply chain practices. The employees become well aware of the sustainable supply chain practices and meeting the demands of consumers. In doing so, the organization can develop towards maturity in regards to environmental management.

When organizations carry out training for their employees, they need to evaluate the impact that the training has on the jobs; whether an employee can accomplish a given task within a shorter time or it has been able to address gaps that existed. In a business setup, this can be measured in terms of the number of calls or emails in a day, the number of sales closed in a day, customer satisfaction ratings, or the average deal size for a given employee (Ferrante, 2020). It is generally believed that organizations that spend aggressively on employee training and development are likely to enjoy higher shareholder returns on investments as compared to those that spend less on this front (Ferrante, 2020). Research has revealed that people are the most important resource in any business.

Organization Performance

Organization performance refers to how effectively and efficiently an organization achieves its goals and objectives. It encompasses a wide range of factors, including financial performance, operational efficiency, employee productivity, customer satisfaction, and innovation (Basl, Buchalcevova & Galga, 2021). High organizational performance is typically measured by the ability to meet or exceed targets, sustain competitive advantage, and maintain long-term growth. Factors influencing organizational performance include leadership, management strategies, company culture, resource allocation, and market conditions (Arrow-smith & Hartley, 2021).

Profitability is a critical measure of an organization's financial health and success. It reflects the company's ability to generate profit from its operations, considering both revenues and costs (Behn, 2022). High profitability indicates that the organization is efficiently managing its resources, pricing strategies, and costs while generating sufficient revenue to cover expenses and provide returns for its stakeholders (Nasiche & Ngugi, 2023). Profitability is often assessed through various financial ratios, such as the net profit margin, return on assets (ROA), and return on equity (ROE). For businesses, achieving and maintaining profitability is essential for long-term growth, reinvestment, and staying competitive in the market. A consistent focus on profitability allows organizations to reinvest in innovation, expand operations, and reward shareholders or employees (Seman *et al*, 2021).

Market share refers to the proportion of total sales in a market that is captured by a company, product, or service. It is a key indicator of competitive strength and influence within a specific industry or sector (Manyura, 2021). A higher market share often signals that a company has a dominant position in the market, which can lead to economies of scale, better brand recognition, and enhanced customer loyalty. Increasing market share can be an essential growth strategy, as it can directly impact profitability and long-term sustainability (Hassanzadeh & Jafarian, 2021). However, gaining market share requires a deep understanding of customer needs, competitive pricing, effective marketing strategies, and continuous innovation. Companies with significant market share tend to enjoy more bargaining power with suppliers and customers and may benefit from reduced business risk due to their established position (Basl, Buchalcevova & Galga, 2021).

Customer satisfaction is a measure of how well a company's products or services meet or exceed customer expectations. It is a crucial factor in determining customer loyalty, repeat business, and overall success (Arrow-smith & Hartley, 2021). Satisfied customers are more likely to become brand advocates, recommend the company to others, and make repeat purchases, thus contributing to long-term profitability. High levels of customer satisfaction often result from providing high-quality products, excellent customer service, and meeting or surpassing expectations (Behn, 2022). Monitoring customer satisfaction through surveys, feedback, and reviews helps companies understand their strengths and areas for improvement. A customer-centric approach is essential for any organization that seeks to foster lasting relationships with its audience, differentiate itself from competitors, and ensure sustainable growth in a highly competitive market (Nasiche & Ngugi, 2023).

RESEARCH METHODOLOGY

The study took on a descriptive approach that answers the how, when, and why the procurement methods adopted at EABL have contributed to overall organizational performance. The target population for the research comprised of the employees working in the procurement department, a population of forty (40) made up of people employees working in the procurement departments at EABL. The selected sample from the procurement department was considered appropriate for the research since as earlier stated, they are responsible for ensuring a smooth chain supply is maintained in the organization as well as establishing the appropriate raw materials and processes necessary to maintain operations. Most of them have had several years' experience working at EABL; therefore, they are best positioned to help the researcher with the information needed to answer the research questions.

According to Bolo (2018), stratified sampling ensures that every sector is represented; in this case, respondents in the middle, senior and low levels from the procurement department. Thereafter, a simple random sampling without a replacement was applied to narrow down to the required sample size. In sampling without replacement, each sample unit (employee) of the population only had one chance to be selected in the sample. For example, if the researcher draws a simple random sample such that no unit occurs more than one time in the sample, the sample will be drawn without replacement.

Data was collected through interviews and questionnaires for qualitative and quantitative research. Questionnaires comprise of close-ended questions while interviews consist of open-ended questions. For the quantitative analysis, the researcher used Pearson's correlation coefficients to establish the relationship between variables as set out in the research objectives (Cohen *et al*, 2019). Data was later analyzed through ANOVA for a clear understanding of the relationship between variables. The linear regression method adopted

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

The researcher sampled 40 respondents who were each administered with the questionnaires. From the 40 questionnaires 35 were completely filled and returned hence a response rate of 87.5%. The response rate was considered as suitable for making inferences from the data collected. As indicated by Metsamuuronen (2019), a response rate that is above fifty percent is considered adequate for data analysis and reporting while a response rate that is above 70% is classified as excellent. Hence, the response rate of this study was within the acceptable limits for drawing conclusions and making recommendations.

Descriptive Statistics Analysis

Supplier Participation and Organization Performance

The first specific objective of the study was to investigate the influence of supplier participation on the performance of the manufacturing industry in Kenya. The respondents were requested to indicate their level of agreement on statements relating to supplier participation and performance of the manufacturing industry in Kenya. The results were as presented in Table 1.

From the results, the respondents agreed that their organization actively collaborates with suppliers to improve quality and innovation ($M=3.935$, $SD= 0.872$). In addition, the respondents agreed that their organization's suppliers consistently meet delivery deadlines ($M=3.926$, $SD=0.852$). Further, the respondents agreed that their organization maintains clear communication with suppliers ($M=3.887$, $SD= 0.572$). The respondents also agreed that their organization benefits from suppliers offering competitive pricing ($M=3.848$, $SD=0.948$).

From the results, the respondents agreed that their organization receives materials that meet required quality standards ($M=3.827$, $SD= 0.840$). In addition, the respondents agreed that their organization's supply chain reliability depends on supplier efficiency ($M=3.810$, $SD= 0.753$). Further, the respondents agreed that their organization's suppliers adopt technologies that improve production efficiency ($M=3.777$, $SD= 0.620$). The respondents also agreed that their organization benefits from suppliers' responsiveness to market demands ($M=3.744$, $SD=0.774$).

Table 1: Supplier Participation and Organization Performance

	Mean	Std. Deviation
Our organization actively collaborates with suppliers to improve quality and innovation	3.935	0.872
Our organization's suppliers consistently meet delivery deadlines	3.926	0.852
Our organization maintains clear communication with suppliers	3.887	0.572
Our organization benefits from suppliers offering competitive pricing	3.848	0.948
Our organization receives materials that meet required quality standards	3.827	0.840
Our organization's supply chain reliability depends on supplier efficiency	3.810	0.753
Our organization's suppliers adopt technologies that improve production efficiency	3.777	0.620
Our organization benefits from suppliers' responsiveness to market demands	3.744	0.774
Aggregate	3.844	0.779

Employee Training and Organization Performance

The second specific objective of the study was to determine the influence of employee training on the performance of the manufacturing industry in Kenya. The respondents were requested to indicate their level of agreement on various statements relating to employee training and performance of the manufacturing industry in Kenya. The results were as presented in Table 2.

From the results, the respondents agreed that their organization's performance improves through regular employee training programs ($M=3.910$, $SD= 0.948$). In addition, the respondents agreed that employee training enhances the skills and efficiency of their workforce, contributing to better manufacturing outcomes ($M=3.833$, $SD= 0.817$). Further, the respondents agreed that their organization invests in employee training to improve production quality and reduce errors ($M=3.762$, $SD= 0.881$). The respondents also agreed that

training programs in their organization help employees adapt to new technologies and manufacturing processes ($M=3.729$, $SD=0.914$).

From the results, the respondents agreed that employee training has a direct impact on their organization's ability to meet production targets ($M=3.722$, $SD=0.823$). In addition, the respondents agreed that their organization's competitive advantage is strengthened by the continuous development of their employees' skills ($M=3.704$, $SD=0.588$). Further, the respondents agreed that well-trained employees in their organization help to maintain high safety standards in the manufacturing process ($M=3.671$, $SD=0.833$). The respondents also agreed that employee training contributes to increased employee satisfaction and retention, positively affecting their organization's performance ($M=3.688$, $SD=0.636$).

Table 2: Employee Training and Organization Performance

	Mean	Std. Deviation
Our organization's performance improves through regular employee training programs	3.910	0.948
Employee training enhances the skills and efficiency of our workforce, contributing to better manufacturing outcomes	3.833	0.817
Our organization invests in employee training to improve production quality and reduce errors	3.762	0.881
Training programs in our organization help employees adapt to new technologies and manufacturing processes	3.729	0.914
Employee training has a direct impact on our organization's ability to meet production targets	3.722	0.823
Our organization's competitive advantage is strengthened by the continuous development of our employees' skills	3.704	0.588
Well-trained employees in our organization help to maintain high safety standards in the manufacturing process	3.671	0.833
Employee training contributes to increased employee satisfaction and retention, positively affecting our organization's performance	3.688	0.636
Aggregate	3.752	0.805

Organization Performance

The respondents were requested to indicate their level of agreement on various statements relating to performance of the manufacturing industry in Kenya. The results were as presented in Table 3.

From the results, the respondents agreed that their organization consistently meets or exceeds profit targets ($M=3.863$, $SD=0.832$). In addition, the respondents agreed that the organization has effective cost management strategies that contribute to profitability ($M=3.852$, $SD=0.879$). Further, the respondents agreed that their organization has a growing market share in their industry ($M=3.831$, $SD=0.644$). The respondents also agreed that their company has a competitive position in the market compared to other industry players ($M=3.764$, $SD=0.875$).

From the results, the respondents agreed that they successfully increased their market share over the past year ($M=3.757$, $SD=0.844$). In addition, the respondents agreed that their customers are consistently satisfied with the products or services they offer ($M=3.742$, $SD=0.609$). Further, the respondents agreed that they regularly receive positive feedback from customers regarding their service quality ($M=3.689$, $SD=0.873$). The respondents also agreed that their organization prioritizes customer needs and strives to meet or exceed their expectations ($M=3.656$, $SD=0.712$).

Table 3: Organization Performance

	Mean	Std. Deviation
Our organization consistently meets or exceeds profit targets.	3.863	0.832
The organization has effective cost management strategies that contribute to profitability.	3.852	0.879
Our organization has a growing market share in our industry.	3.831	0.644
Our company has a competitive position in the market compared to other industry players.	3.764	0.875
We successfully increased our market share over the past year.	3.757	0.844
Our customers are consistently satisfied with the products or services we offer.	3.742	0.609
We regularly receive positive feedback from customers regarding our service quality.	3.689	0.873
Our organization prioritizes customer needs and strives to meet or exceed their expectations.	3.656	0.712
Aggregate	3.769	0.784

Correlation Analysis

The present study used Pearson correlation analysis to determine the strength of association between independent variables (supplier participation and employee training) and the dependent variable (performance of the manufacturing industry in Kenya) dependent variable. Pearson correlation coefficient range between zero and one, where by the strength of association increase with increase in the value of the correlation coefficients.

Table 4: Correlation Coefficients

		Organization Performance	Supplier Participation	Employee Training
Organization Performance	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	35		
Supplier Participation	Pearson Correlation	.864**	1	
	Sig. (2-tailed)	.002		
	N	35	35	
Employee Training	Pearson Correlation	.894**	.208	1
	Sig. (2-tailed)	.000	.111	
	N	35	35	35

From the results, there was a very strong relationship between supplier participation and performance of the manufacturing industry in Kenya ($r = 0.864$, $p \text{ value} = 0.002$). The relationship was significant since the $p \text{ value}$ 0.002 was less than 0.05 (significant level). The findings are in line with the findings of Laari *et al* (2023) who indicated that there is a very strong relationship between supplier participation and organization performance.

The results also revealed that there was a very strong relationship between employee training and performance of the manufacturing industry in Kenya ($r = 0.894$, $p \text{ value} = 0.000$). The relationship was significant since the $p \text{ value}$ 0.000 was less than 0.05 (significant level). The findings are in line with the results of Ferrante (2020) who revealed that there is a very strong relationship between employee training and organization performance

Regression Analysis

Multivariate regression analysis was used to assess the relationship between independent variables (supplier participation, and employee training) and the dependent variable (performance of the manufacturing industry in Kenya)

Table 4. 2: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
		B	Std. Error			
1	(Constant)	0.238	0.063		3.778	0.000
	supplier participation	0.385	0.101	0.386	3.812	0.000
	employee training	0.380	0.099	0.379	3.838	0.001

a Dependent Variable: performance of the manufacturing industry in Kenya

The regression model was as follows:

$$Y = 0.238 + 0.385X_1 + 0.380X_2 + \varepsilon$$

According to the results, supplier participation has a significant effect on performance of the manufacturing industry in Kenya ($\beta_1=0.385$, p value= 0.000). The relationship was considered significant since the p value 0.000 was less than the significant level of 0.05. The findings are in line with the findings of Laari *et al* (2023) who indicated that there is a very strong relationship between supplier participation and organization performance.

In addition, the results revealed that employee training has significant effect on performance of the manufacturing industry in Kenya ($\beta_1=0.380$, p value= 0.001). The relationship was considered significant since the p value 0.001 was less than the significant level of 0.05. The findings are in line with the results of Ferrante (2020) who revealed that there is a very strong relationship between employee training and organization performance.

Conclusions

The study concludes that supplier participation has a positive and significant effect on performance of the manufacturing industry in Kenya. Findings revealed that contract compliance and customer satisfaction influences performance of the manufacturing industry in Kenya.

The study also concludes that employee training have a positive and significant effect on performance of the manufacturing industry in Kenya. Findings revealed that return on investment and job impact influence performance of the manufacturing industry in Kenya.

Recommendations

The study recommends that the management of manufacturing industries in Kenya should establish collaborative partnerships through long-term contracts and joint innovation programs. By fostering strong relationships with suppliers, manufacturers can ensure better quality, cost-effectiveness, and timely delivery of materials

The study also recommends that the management of manufacturing industries in Kenya should implement continuous skill development programs tailored to the specific needs of the industry, focusing on both technical and soft skills.

Suggestions for Further Studies

This study was limited to the influence of green procurement on the performance of manufacturing industries in Kenya, a case of East African Breweries Limited hence the study

findings cannot be generalized to firm performance in other firms in Kenya. The study therefore suggests further studies on the influence of green procurement on firm performance in other firms in Kenya.

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