



PROCUREMENT TRANSFORMATION PROCESS AND PERFORMANCE OF FOOD AND BEVERAGE INDUSTRY IN NAIROBI CITY COUNTY, KENYA

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ABSTRACT

Despite the importance of food manufacturing industry in Kenya, it has been experiencing a lot of turbulence in the recent past including a drop in the GDP, an increasing imbalance of trade and the exiting of large multinationals. This study therefore sought to establish the influence of procurement transformation process on performance of food and beverage industry in Nairobi City County Kenya. Specifically, the study sought to assess the influence of procurement database on performance of food and beverage industry in Nairobi City County Kenya and to determine the influence of technological transformation on performance of food and beverage industry in Nairobi City County Kenya. The study used descriptive survey design. The target population for this study was medium Food and beverage manufacturing companies in Nairobi City County. The manufacturing firms were the unit of analysis while the top manager was the unit of observation. Therefore, 91 top managers in the 91 manufacturing companies were targeted. This study adopted census by focusing on all 91 top managers in the 91 manufacturing companies. Data was collected using a self-administered semi-structured questionnaire. Qualitative reports were analyzed in content analysis and presented in form of essays. Descriptive statistical analysis included frequency, percentages, mean and standard deviation and was used to analyze quantitative data. SPSS version 25 was used for analysis. Inferential statistical analysis used was multiple regression and correlation analysis and tested the relationship between the study variables. The findings were displayed in tables and figures. The study concludes that procurement database has a positive and significant effect on performance of food and beverage industry in Nairobi City County Kenya. In addition, the study concludes that technological transformation has a positive and significant effect on performance of food and beverage industry in Nairobi City County Kenya. Based on the findings, this study recommends that the management of food and beverage firms should ensure adoption and implementation of websites, internet and blockchain. In addition, the management of food and beverage firms should ensure adoption and implementation of that on-job training, workshops/seminars and off job training.

Key Words: Procurement transformation process, Procurement database, Technological transformation and Performance of food and beverage industry

Background of the Study

The Kenyan government, through her socio-economic development agendas such as the Vision 2030 and the Big4 agenda expect the food and beverage industry to contribute, for example, at least 20 percent of GDP to realize the goals of the Vision 2030 and at least 15 percent to realize the Big4 agenda (Kepher, Shalle, and Oduma, 2015). The sector, however, has stagnated at a 10 percent average contribution to the GDP, which is far less expected performance level (Kioko and Were, 2018). This study therefore fronts procurement transformation process as a potential solution to the performance issue.

Procurement transformation refers to a specific type of organizational change management which focuses on strategies to enable major and long-term improvements to procurement and supply management processes, activities and relationships (Day and Atkinson, 2018). Procurement transformation process has seen a lot of growth leading to the formation of procurement related bodies such as the Kenya Institute of Supplies Management and the Chartered Institute of Purchasing and Supply. There has been increased pressure for the merging of procurement procedures and objectives with the organization's goals. The supply chain has been directly linked to the overall company performance and this has therefore made procurement practices vital to company success. Procurement practices positively impact an organization's financial performance, the success of a new product depends on procurement and supplier involvement. Most organizations use a substantial amount of their income in procurement and therefore recognize the importance of strategic procurement practices (Carrand Pearson, 2016). Directors and heads of procurement department greatly influence supplier evaluations and the drafting of specifications to ensure the organization gets the best value for its money.

Procurement transformation process greatly impacts how an organization achieves its objectives. According to Leenders *et al* (2018), purchasing adds value to the organization. Procurement practice is an area that can be improved to further contribute to organizational performance. Organizations tend to choose procurement procedures that are familiar to them; they should instead choose the ones most suited and most beneficial to their organizations success. Narasimhan and Kim (2016), states that there has been increased pressure for purchasing integration. Purchasing integration links purchasing practices to organizational performance (Gattorna, 2016). The direct link of operational efficiency and supply chain to organizational performance therefore means that the adoption of procurement practices is crucial to organizational success. Consolidation of the entire procurement process leading to the implementation of procurement practices such as, green purchasing, just in time delivery (JIT), total quality management (TQM) and e-procurement is necessary so as to boost the overall organizational performance.

Performance is generally an achievement of a given pre-set goals through the undertaking certain tasks within established by an individual or an institution (Richard *et al.*, 2019). Firm performance, therefore, comprises the actual output or results of an organization as measured against its intended outputs (or goals and objectives). Burja, (2019) argues that organizational performance comprises three explicit areas of firm outcomes: financial performance (profits, return on assets, return on investment, etc.); product market performance (sales, market share, etc.); and shareholder return (total shareholder return, economic value-added, etc.). According to Wanjiku and Mwangangi (2019) organization performance can be measured through profitability, customer satisfaction and market share. This study seeks to establish the influence of procurement transformation process on performance of food and beverage industry in Nairobi City County Kenya.

The food and beverage industry is among the largest sectors and constitutes 22 percent of total KAM membership, the sub-sectors under this includes; dairy products, alcoholic beverages, spirits, juices, bakers & millers, water, cocoa, carbonated soft drinks, chocolate & sugar (K.A.M 2016). Food processing entails the transformation of raw ingredients into food or transformation of food

into other forms that can be consumed by humans or animals. Traditionally food processing was meant to make food more digestible and preserve food during times of scarcity. Food processing typically takes clean, harvested crops or butchered animal products and uses these to produce attractive, marketable and often long shelf life food products (Nyaga, Wanja, and Odoyo, 2020).

The food and beverage industry in Kenya has been experiencing a lot of turbulence in the recent past including a drop in the GDP, an increasing imbalance of trade and the exiting of large multinationals (Magutu, Aduda and Nyaoga, 2017). Therefore, proper analysis and improvements in the procurement process would lead to greater benefits. The management of a value stream would result in improved service, growth in market share, suppliers and distribution channels and provides invaluable analytics for continuous improvement (Wilgus, 2017).

Statement of the Problem

Despite importance of food manufacturing industry in Kenya, it has been experiencing a lot of turbulence in the recent past including a drop in the GDP, an increasing imbalance of trade and the exiting of large multinationals (Magutu, Aduda and Nyaoga, 2017). In addition to that, food manufacturing companies in Kenya have been experiencing fluctuations in profitability in their production and inventory management (KAM Directory, 2019). The food manufacturing sector recorded a significant drop in growth from 4.7% to 1.6% and 2.7% to 0.2% respectively according to the World Bank economic update 2018. Further to this, there was a declining growth of agricultural real value-added from 5.2% in 2016 to 1.6% in 2017 (World Bank economic update, 2018). According to Kenya National Bureau of Statistics (KNBS) Economic Survey report of 2022, there has been a tremendous increase in the quantity of manufactured and processed food products by 3.1 per cent in the year 2021 compared to a growth of 5.6 per cent in 2020.

The growth was mainly driven by processing of sugar, meat and meat products, dairy products and bakery products. However, prepared and preserved fruits and vegetables, and animal and vegetable fats and oils registered negative growths in the same period. Production of meat and meat products recorded a 13.1 per cent growth, while dairy production registered a 10.8 per cent growth in 2021, compared to a slump of 6.7 per cent in 2020. The grain milling subsector grew by 6.2 per cent in 2021 compared to 11.7 per cent the previous year as the beverages and tobacco sector showed a 9.2 per cent growth (KNBS, 2022). According to a recent report from ING, technological development helps food manufacturers produce more efficiently for a growing world population. According to TechCrunch (2018), procurement transformation process influences organization performance.

Various studies have been conducted on procurement transformation process and organization performance. For instance; Wanjiku and Mwangangi, (2019) conducted a study on the influence of procurement best practices on the performance of food and beverage manufacturing firms in Kenya, Nabiliki, Wanyoike, and Mbeche, (2018) focused on the influence of supplier development practices on procurement performance in food and beverage manufacturing firms in Nakuru East Sub - County, Kenya and Kioko, and Were, (2018) conducted a study on the factors affecting efficiency of the procurement function at the public institutions in Kenya. Nevertheless, none of these studies focused on procurement transformation process and performance of food and beverage industry in Nairobi City County Kenya. To fill the highlighted gaps, the current study sought to establish the influence of procurement transformation process on performance of food and beverage industry in Nairobi City County Kenya.

General Objective

The study sought to establish the influence of procurement transformation process on performance of food and beverage industry in Nairobi City County Kenya.

Specific Objectives

The study was guided by the following specific objectives;

- i. To assess the influence of procurement database on performance of food and beverage industry in Nairobi City County Kenya.
- ii. To determine the influence of technological transformation on performance of food and beverage industry in Nairobi City County Kenya.

Theoretical Review

Technology Acceptance Theory

Technology Acceptance Model (TAM) was a framework introduced by Fred Davis in 1986 as part of his doctorate proposal, and soon gained popularity as one of the most useful framework to understand how users are willing to accept or reject a new technology. TAM has proved to be a mature and reliable model to measure how a new technology, is well received by the stakeholders in the oil and petroleum industry, (Prof.Vincent, and Honglei 2003). TAM is one of the most widely used theories in innovation and information systems research. It has been considered as the most robust, parsimonious and persuasive model in innovations acceptance behaviour (Wanjiku and Mwangangi, 2019).

The technology acceptance model is the information systems theory that shows how users come to accept and use technology broadly it emphasize that the intensity of an individual intention to use a technology can be explained jointly by his or her perception about the technologies usefulness and attitude towards the technology in the firm (Chau and Hu, 2016).The model suggested that when organization users are presented with a new technology, a number of issues influence their decision about how and when they will use the technology, perceived usefulness and perceived ease of use (Bagozzi, Davis, and Warshaw, 2016). King and He (2016) concluded in a statistical meta-analysis of the technology acceptance model as applied in various fields analyzed 88 published studies that provided sufficient data to be credible. The results showed that TAM was a valid and robust model that has been largely used, but which potentially has wider implications in organizations. This theory was used to assess the influence of technological transformation on performance of food and beverage industry in Nairobi City County Kenya.

Stakeholders Theory

In 1984, Prof. Edward Freeman proposed the stakeholders theory, which was an improvement on then Shareholders theory which had been in existence since early 20th century. Stakeholders theory offered that, shareholders are merely one of many stakeholders in a company. The stakeholder theory however suggested that the ecosystem involves anyone invested and involved in, or affected by, the company: customers, employees, suppliers, political action groups, environmental groups, local communities, the media, financial institutions, governmental groups, and more. Freeman's theory suggests that a company's real success lies in satisfying all its stakeholders, not just those who might profit from its stock.

The area of stakeholder management was pioneered by Freeman (1984) who introduced the idea that corporations have stakeholders and outlined the basic features of the stakeholder concept. The stakeholder approach has been described as a powerful means of understanding the firm in its environment. Mitchell et al., (2018) argue that this approach is intended to broaden the management's vision of its roles and responsibilities beyond the profit maximization function and stakeholders identified in input-output models of the firm, to also include interests and claims of non-stockholding groups.

Donaldson and Preston (2019) elaborated that the stakeholder model entails that all persons or groups with legitimate interests participating in an enterprise do so to obtain benefits and that there

is no pre-set priority of one set of interests and benefits over another. Consequently, stakeholder theory argues that in addition to stockholders there are other external constituencies involved, including communities, community groups, trade unions, trade associations, environmental groups, governmental bodies, associated corporations, employees, customers, and the public that need to be taken into consideration. The basic idea of stakeholder theory is that the organization has relationships with many constituent groups and that it can engender and maintain the support of these groups by considering and balancing their relevant interests (Jones and Wicks, 2019).

Jones and Wicks (2019) set out a comprehensive framework that is ideal and productive in the application of stakeholders' theory to the benefit of a firm. They held that an organization should identify legitimate interests, set priorities right, identify the value of competing interests and make the best decision in the interest of the organization. Stakeholders theory was used to assess the influence of supplier transformation on performance of food and beverage industry in Nairobi City County Kenya

Conceptual Framework

Conceptual framework is a tool used by a researcher to develop awareness and understanding of the situation under scrutiny and to communicate (Kombo and Tromp, 2016). It can also be defined as a concise explanation of an occurrence accompanied by a visual or graphic representation of major variables of the study (Mugenda, 2018).

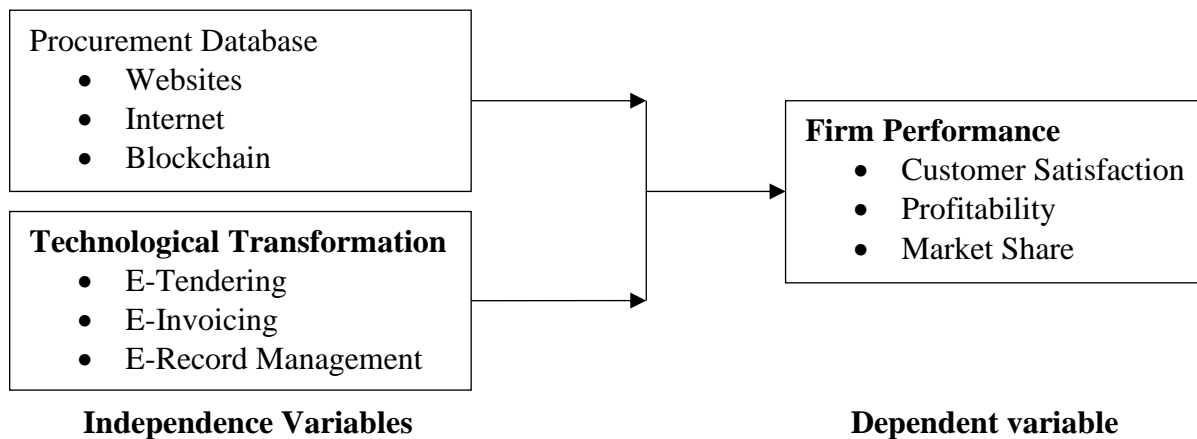


Figure 1: Conceptual Framework

Procurement Database

Procurement Database is the platform of choice for practitioners, government officials, academics, NGOs, industry, and other interested party to access data and share knowledge to better enable global public procurement reform and the adoption of best practices (Kilonzo, 2018). Procurement database entails websites, internet and blockchain.

A blockchain is a type of distributed ledger technology (DLT) that consists of growing list of records, called blocks, that are securely linked together using cryptography. Each block contains a cryptographic hash of the previous block, a timestamp, and transaction data (generally represented as a Merkle tree, where data nodes are represented by leaves). The timestamp proves that the transaction data existed when the block was created. Since each block contains information about the previous block, they effectively form a chain (compare linked list data structure), with each additional block linking to the ones before it. Consequently, blockchain transactions are irreversible in that, once they are recorded, the data in any given block cannot be altered retroactively without altering all subsequent blocks (Leiyan, 2016).

Technological Transformation

Technological transformation entails incorporating the digitalization of assets and increased use of existing technology in a meaningful way, can improve the experience of organizations, customers, employees, suppliers and partners. At the most basic level, digital transformation involves using digital technologies to change a business process to become more efficient or effective. The idea is to use technology not just to replicate an existing service in a digital form, but to use technology to transform that service into something significantly better.

Supplier Transformation

Supplier transformation refers to the concept that uses ICT to arrive at key and strategic decisions on sourcing the correct and efficient suppliers through modules on self-service supplier portals, which provides specific standard qualifications, customized application forms, centralized visibility, and key performance indicators complete with trackers. It also promotes supplier diversity within a centralized system and offers the service seekers a platform for engaging only qualified and certified suppliers. E-Supplier management system helps in understanding the suppliers from the source point to the delivery stage through the process cycle (Obunde, 2019). It provides a platform to analyze supplier responses that helps in making decisions become giving out tender awards.

The process of performance evaluation of the suppliers' ensign modules such as electronic bidding, bid tabulation, assessment of rubrics for supplier responses. Efficient supplier selection is the process of selecting a supplier to acquire the necessary materials to support the outputs of organizations. The effects of poor supplier selection become apparent as an entity grows because it also comes to rely on outsourcing services for its core activities (Chan & Lee, 2018). Selection of the right supplier ensures quality products and services that conform to buyer standards and specifications. Selecting the right supplier makes it easier for the organization to achieve good quality, the right specifications and the necessary technical support when required (Oteki, 2018).

Empirical Review

Procurement Database and Organization Performance

Kilonzo (2018) conducted a study on procurement best practices and organizational performance: case study of Cadbury's Kenya limited. The research design for this study was case study since the unit of analysis is one organization. Stratified proportionate random sampling technique was used to select the sample size of 45 respondents. Primary data was collected using an unstructured questionnaire. The collected data was summarized, coded and tabulated. The study established that company had adopted procurement best practices that were followed when making company purchasing decisions. The study concludes that procurement best practices that are followed when making company purchasing decisions are building supplier relationships, teambased approaches to procurement and proper use of technology. The study recommends that management in Cadbury (K) Limited should ensure that there is an appropriate focus on good practice in procurement and that there is a significant procurement procedure in place to ensure compliance with all relevant guideline. On delivering services management must address the issue of procurement best practices as these has accrued benefits directly to the bottom line of organization

Kipkemoi (2018) conducted a study on the effects of procurement practices on organizational performance within the public sector: a case of east African Portland Cement Company limited. Primary data was collected through questionnaires that focused on staff from the procurement and finance departments. 46 questionnaires out of a total of 58 were satisfactorily filled signifying a 79 percent rate of reply. Data collected is presented using tables, charts and graphs. The study recommends the building of robust relationships with key suppliers to guarantee unflinching supply and quality of inputs. Manufacturing companies must assess where their greatest investments are

made and the benefit procurement can bring to each category. After significant investments are made in machinery, equipment and facilities, the next largest investment should be made in inventories.

Technological Transformation and Organization Performance

Cheruiyot (2017) conducted a study on the effect of technology adoption on organizational performance of dairy societies in UasinGishu County, Kenya. The study adopted the explanatory research design which shows the causal effect of technology adoption and organization performance. A census of all the dairy cooperative societies in UasinGishuCounty was done, where there are a total of 20 dairy societies. The primary data for the study was obtained using questionnaires. Pretest on two dairy societies was done to test for reliability. The reliability of the questionnaire was tested using Cronbach Alpha coefficient. Quantitative data collected was analyzed using descriptive statistical techniques which are frequencies, means, and standard deviation. Inferential statistics such as Pearson moment correlations was used to establish the effects on the variables. Multiple regression was used to establish the cause effect of the variables. The findings of the study indicated that financial information system technologies adoption, information communication technology adoption and Product Processing technologies adoption had significant and positive effect on performance of dairy societies.

According to Lipsey and Chrystal (2017) the adoption of financial information system technologies alters country's comparative advantages and improves its competitiveness through technology transfer, domestic investment which can alter a country's volume and pattern of trade in many income enhancing directions. Countries that suffer from corruption, slow-moving, or ineffective government are likely to resistant the change (La Porta et al., 1999) but in such countries, the opportunity and switching costs are lower which makes the possibility of adopting IFRS advantageous. Financial information system technological projects have been criticized because they face well-known problems concerning crime, problems of adjustment to the social context, and possibly infrastructural problems. While a link between poverty reduction and ICT exists, the connection is yet to be fully understood.

In a study conducted by Lacobbo (2016) in the US it was argued that food producers are responsible for the safety of their products, and to guarantee food safety of dairy products, the dairy industry has implemented Product Processing technologies of critical control points (HACCP) systems that contribute to performance thus greater profits. This enables quality assurance of final products via a chain management approach (European Commission, 2016). The quality and safety of raw milk is essential for the quality and safety of milk and dairy products. The quality and safety of milk is related to the contamination of milk with microorganisms, chemical residues and other contaminants

RESEARCH METHODOLOGY

Research Design

The study used descriptive survey design. Descriptive survey design was useful in describing the features of the population that has been earmarked for study and providing answers to the research questions as noted by Shields and Rangarajan (2017). The study adopted both quantitative and qualitative methods to investigate the connection between the significant study variables.

Target Population

The target population for this study was medium Food and beverage manufacturing companies in Nairobi County. Medium companies are those that have a turnover of between Ksh. 5 million and 800 million and employing 50 to 249 employees. The choice of food manufacturing is informed by the fact that despite their importance in Kenya, it has been experiencing a lot of turbulence in

the recent past including a drop in the GDP, an increasing imbalance of trade and the exiting of large multinationals (World Bank economic update, 2020).

According to Kenya Association of Manufacturers (KAM, 2022), there are 91 medium Food and beverage manufacturing companies in Nairobi County. These manufacturing firms were the unit of analysis while the top managers were the unit of observation. The object from which information is obtained is referred to as a unit of observation (Cooper & Schindler, 2006). Therefore, 91 top managers in the 91 manufacturing companies were targeted.

Data Collection Instruments

This study relied on both primary and secondary data. Secondary data was gathered from the established journals and annual reports of food and beverage manufacturing industries in Nairobi City County, Kenya. On the other hand, primary data was collected from the management employees in food and beverage manufacturing industries in Nairobi City County, Kenya using a semi structured questionnaire.

Pilot Study

A pilot test was conducted to determine validity and reliability of the data collection instrument. A pilot study is a small experiment designed to test logistics and gather information prior regarding a larger study, in order to improve the latter quality and efficiency. A pilot study can reveal deficiencies in the design of proposed experiment and procedure and these can be addressed before time and resources are expended on large scale studies. The responses from respondents were used to adjust and refine questionnaire accordingly. According to Mugenda and Mugenda (2017) the pretest sample should be between 1% and 10% depending on the sample size. Therefore, 9 (10% of study sample) questionnaires were tested on manufacturing firms selected randomly.

Data Analysis and Presentation

Data obtained from the field was coded, cleaned, and entered into the computer for analysis using the SPSS version 25. The data was summarized in order to see emerging trends and issues around specific themes, which are dependent on the variables and objectives. Presentation of data was done in form of quantitative and qualitative reports which was presented in forms of tables and essay. For the quantitative reports, the tables consisted of mean and standard deviation values that were used to make interpretation of the analysis. Percentage, mean and standard deviation were used to show the frequency of responses. Tables were used to display the rate of responses and to facilitate comparison. Qualitative reports were presented in form of essay which were discussed as per the study objectives aligned with the theories and empirical study. Descriptive statistical included frequency, percentages, mean and standard deviation. Inferential statistical analysis to be used was multiple regression and correlation analysis. The significant of each independent variable was tested at a confidence level of 95%.

ANALYSIS AND INTERPRETATION OF DATA

Descriptive Statistics Analysis

Procurement Data Base and Firm Performance

The first specific objective of the study was to assess the influence of procurement database on performance of food and beverage industry in Nairobi City County Kenya. The respondents were requested to indicate their level of agreement on statements relating to procurement database and performance of food and beverage industry in Nairobi City County Kenya. A 5 point Likert scale was used where 1 symbolized strongly disagree, 2 symbolized disagree, 3 symbolized neutral, 4 symbolized agree and 5 symbolized strongly agree. The results were as presented in Table 4.2.

From the results, the respondents agreed that their organization has an automated procurement database. This is supported by a mean of 3.943 (std. dv = 0.981). In addition, as shown by a mean of 3.866 (std. dv = 0.850), the respondents agreed that the procurement data base in their organization stores information related to procurement processes. Further, the respondents agreed that their organization has a functioning website. This is shown by a mean of 3.831 (std. dv = 0.914). The respondents also agreed that information concerning their organization can be accessed through the organization website. This is shown by a mean of 3.796 (std. dv = 0.947). With a mean of 3.789 (std. dv = 0.856), the respondents agreed that their organization website is easy to navigate hence interested parties find it user friendly. The respondents also agreed that blockchain is a key aspect of procurement database in their organization. This is shown by a mean of 3.756 (std. dv = 0.783).

Table1: Procurement Data Base and Firm Performance

	Mean	Std. Dev.
Our organization has an automated procurement database	3.943	0.981
The procurement data base in our organization stores information related to procurement processes	3.866	0.850
Our organization has a functioning website	3.831	0.914
Information concerning our organization can be accessed through the organization website	3.796	0.947
Our organization website is easy to navigate hence interested parties find it user friendly	3.789	0.856
Blockchain is a key aspect of procurement database in our organization	3.756	0.783
Aggregate	3.793	0.873

Technological Transformation and Firm Performance

The second specific objective of the study was to determine the influence of technological transformation on performance of food and beverage industry in Nairobi County Kenya. The respondents were requested to indicate their level of agreement on the statements relating to technological transformation and performance of food and beverage industry in Nairobi County Kenya. The results were as shown in Table 2

From the results, the respondents agreed that technological transformation has significantly influenced procurement process in their organization. This is supported by a mean of 3.996 (std. dv = 0.865). In addition, as shown by a mean of 3.919 (std. dv = 0.945), the respondents agreed that their organization has adopted electronic tendering. Further, the respondents agreed that electronic tendering is effective and efficient since everything is done over the internet. This is shown by a mean of 3.898 (std. dv = 0.611). The respondents also agreed that their organization has adopted electronic invoicing. This is shown by a mean of 3.831 (std. dv = 0.908). With a mean of 3.743 (std. dv = 0.897), the respondents agreed that electronic record management has been adopted in their organization.

Table 2: Technological Transformation and Firm Performance

	Mean	Std. Dev.
Technological transformation has significantly influenced procurement process in our organization	3.996	0.865
Our organization has adopted electronic tendering	3.919	0.945
Electronic tendering is effective and efficient since everything is done over the internet	3.898	0.611
Our organization has adopted electronic invoicing	3.831	0.908
Electronic record management has been adopted in our organization	3.561	0.776
Aggregate	3.782	0.841

Correlation Analysis

The present study used Pearson correlation analysis to determine the strength of association between independent variables (procurement database and technological transformation) and the dependent variable (performance of food and beverage industry in Nairobi City County Kenya) dependent variable.

Table 3: Correlation Coefficients

		Firm Performance	Procurement Database	Technological Transformation
Firm Performance	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	86		
Procurement Database	Pearson Correlation	.840**	1	
	Sig. (2-tailed)	.002		
	N	86	86	
Technological Transformation	Pearson Correlation	.841**	.289	1
	Sig. (2-tailed)	.001	.061	
	N	86	86	86

From the results, there was a very strong relationship between procurement database and performance of food and beverage industry in Nairobi City County Kenya ($r = 0.840$, p value = 0.002). The relationship was significant since the p value 0.002 was less than 0.05 (significant level). The findings are in line with the findings of Lubiset *al* (2022) who indicated that there is a very strong relationship between procurement database and firm performance.

Moreover, the results revealed that there is a very strong relationship between technological transformation and performance of food and beverage industry in Nairobi County Kenya ($r = 0.841$, p value = 0.001). The relationship was significant since the p value 0.001 was less than 0.05 (significant level). The findings conform to the findings of Cha and Kim (2018) that there is a very strong relationship between technological transformation and firm performance.

Regression Analysis

Multivariate regression analysis was used to assess the relationship between independent variables (procurement database and technological transformation) and the dependent variable (performance of food and beverage industry in Nairobi County Kenya)

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.929	.863	.864	.10120

a. Predictors: (Constant), procurement database and technological transformation

The model summary was used to explain the variation in the dependent variable that could be explained by the independent variables. The r-squared for the relationship between the independent variables and the dependent variable was 0.863. This implied that 86.3% of the variation in the dependent variable (performance of food and beverage industry in Nairobi City County Kenya) could be explained by independent variables (procurement database and technological transformation).

Table 5: Analysis of Variance

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	12.027	4	3.018	37.26	.000 ^b
1 Residual	6.568	81	.081		
Total	18.595	85			

a. Dependent Variable: performance of food and beverage industry

b. Predictors: (Constant), procurement database and technological transformation

The ANOVA was used to determine whether the model was a good fit for the data. F calculated was 37.26 while the F critical was 2.484. The p value was 0.000. Since the F-calculated was greater than the F-critical and the p value 0.000 was less than 0.05, the model was considered as a good fit for the data. Therefore, the model can be used to predict the influence of procurement database and technological transformation on performance of food and beverage industry in Nairobi City County Kenya.

Table 6: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
		B	Std. Error			
1	(Constant)	0.205	0.038		5.395	0.000
	procurement database	0.369	0.099	0.367	3.727	0.004
	technological transformation	0.486	0.107	0.487	4.542	0.001

a Dependent Variable: performance of food and beverage industry

The regression model was as follows:

$$Y = 0.205 + 0.369X_1 + 0.486X_2 + \varepsilon$$

According to the results, procurement database has a significant effect on performance of food and beverage industry in Nairobi City County Kenya $\beta_1=0.369$, p value= 0.004. The relationship was considered significant since the p value 0.004 was less than the significant level of 0.05. The findings are in line with the findings of Lubiset *al* (2022) who indicated that there is a very strong relationship between procurement database and firm performance.

The results also revealed that technological transformation has significant effect on performance of food and beverage industry in Nairobi City County Kenya, $\beta_1=0.486$, 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 conform to the findings of Cha and Kim (2018) that there is a very strong relationship between technological transformation and firm performance

Conclusions

The study concludes that procurement database has a positive and significant effect on performance of food and beverage industry in Nairobi City County Kenya. Findings revealed that websites, internet and blockchain influence performance of food and beverage industry in Nairobi County Kenya

In addition, the study concludes that technological transformation has a positive and significant effect on performance of food and beverage industry in Nairobi City County Kenya. Findings revealed that e-Tendering, e-Invoicing and e-Record Management influence performance of food and beverage industry in Nairobi City County Kenya

Recommendations

The study found that procurement database has a positive and significant effect on performance of food and beverage industry in Nairobi City County Kenya. This study therefore recommends that the management of food and beverage firms should ensure adoption and implementation of websites, internet and blockchain.

In addition, the study found that technological transformation has a positive and significant effect on performance of food and beverage industry in Nairobi City County Kenya. This study therefore recommends that the management of food and beverage firms should ensure adoption and implementation of e-Tendering, e-Invoicing and e-Record Management.

Suggestions for Further Studies

This study focused on establishing the influence of procurement transformation process on performance of food and beverage industry in Nairobi City County Kenya. Having been limited to performance of food and beverage industry in Nairobi City County Kenya, the findings of this study cannot be generalized to other firms in Kenya. The study therefore suggests further studies on examining the influence of procurement transformation process on performance of other firms in Kenya.

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