

Innovative Structure and Performance of Manufacturing Small and Medium Enterprises in Kenya

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Abstract:- In the evolving landscape of business, successful organizations of the future will be distinguished by their ability to cultivate exceptional skills in innovation, particularly in the realms of strategy development and organizational design. Innovation, whether manifested in product development, process enhancement, organizational methodologies, or marketing strategies, constitutes a multifaceted and intricate endeavor. It encompasses various dimensions across a singular firm, its clientele, and its network of suppliers (Tafti, Abdolvand, & Harandi, 2019). The study sought to examine the role of innovative structure on performance of SMEs in Kenya. The study applied Organizational Control Theory to investigate the role of innovation strategy implementation on the competitive performance of manufacturing SMEs in Nairobi City County, Kenya. The target population comprised 538 manufacturing SMEs located in Nairobi City County, chosen due to its cosmopolitan nature and concentration of manufacturing businesses. Top managers were selected as respondents because they primarily handle strategic management issues within organizations. Stratified sampling was employed to select the sample, with the population divided into sectors based on the classification provided by the Kenya Association of Manufacturers (KMA). The research adopted a positivism philosophy, aiming to gather empirical evidence to support its hypotheses. A cross-sectional survey design was utilized, combining qualitative and quantitative mixed methods. Data collection relied on a questionnaire, whose validity and reliability were confirmed through a pilot study. Statistical Package for Social Sciences (SPSS) version 25 software was used to analyze quantitative data, while qualitative data underwent thematic analysis and were presented in narrative form. The analysis included descriptive statistics to summarize quantitative findings, which were presented in tables and figures. The study employed a rigorous methodological approach to comprehensively investigate the relationship between innovation strategy implementation and the competitive performance of manufacturing SMEs in Nairobi City County, Kenya. The study also computed correlation and regression analysis to test the relationship between study variables and test the research hypothesis. The study concludes that Innovative structure has a positive and

significant effect on the performance of SMEs in Kenya. The study revealed that centralization, integration, and decision-making influence the performance of SMEs in Kenya. This implies that improvement in innovative structure (centralization, integration, and decision-making) would improve the performance of SMEs in Kenya. This study recommends that the management of manufacturing SMEs in Kenya should formulate and implement effective strategies of investing in innovative strategies to increase the SMEs' competitiveness and improve their performance.

Keywords:- Innovative Structure, Performance of SMEs in Kenya, Organizational Control Theory.

I. INTRODUCTION

In today's rapidly evolving business environment, innovation has become the cornerstone of organizational success (Kamau, Senaji, Eng, & Nzioki, 2019). The pace of global economic growth has been fundamentally transformed by the acceleration of innovation, driven by swiftly advancing technologies, shorter product lifecycles, and an increased rate of new product development (Abu Amuna, Abu-Naser, Al Shobaki, & Abu Mostafa, 2019). Innovation stands out as a critical aspect of entrepreneurial behavior, closely associated with the success and growth of small and medium-sized enterprises (SMEs) (Alrowwad & Abualoush, 2020).

Innovation involves the transformation of new ideas into new processes and products (Jiménez-Jiménez & Sanz-Valle, 2011). Organizations pursue innovation to enhance efficiency and productivity, expand market share, boost profitability, and create economic value for their stakeholders (Baierle, Benitez, Nara, Schaefer, & Sellitto, 2020). As noted by Chege, Wang, and Suntu (2020), organizations implement innovations to adapt to changing environments and to fulfill strategic goals aimed at sustaining and improving performance.

Innovation is an all-encompassing approach that involves renewing and expanding a firm's range of products, services, and markets by adopting new methods or altering existing ones (Shqipe, Gadaf, & Veland, 2013). It entails a transformative shift in accelerating idea generation and the development of new products, services, and industrial processes (Pisano, 2015). According to Alrowwad and Abualoush (2020), innovation is the process of generating ideas and bringing them to fruition. Key drivers of innovative activities include technological capabilities, a trained workforce, and management support for innovation. Achieving high technical innovation performance necessitates organizational flexibility and the successful adaptation of processes and products to environmental changes (Abu Baker & Ahmad, 2010). The advancement of modern technologies and the creation of new products require organizations to engage in practices that promote creativity, flexibility, and experimentation (Das & Joshi, 2011).

According to Hilman and Kaliappen (2015), organizational innovation can be categorized into three dimensions: environmental (external and contextual factors), organizational (structure and culture), and managerial (leadership and human capital). Innovation is widely recognized as a critical factor for enhancing productivity and competitiveness. It serves as a fundamental practice that supports the survival and competitiveness of firms in a globalized market (Sheu, 2017; Kiraka, Kobia, & Katwalo, 2020; Lin & Chen, 2020). In the business context, innovation is often viewed as the foundation of strategic change, enabling firms to gain and maintain a competitive advantage (Cui, Ye, Teo, & Li, 2015).

The successful implementation of strategies is crucial for any organization (Tan, 2004). The process of executing an innovation strategy determines whether an organization will thrive, survive, or fail (Barnat, 2012). As a vital component of firm strategies, innovation can enable companies to differentiate their products, enhance efficiency, enter new markets, and increase market share to build competitiveness (Blind, Pohlisch, & Rainville, 2020). Even the most well-formulated strategy will have no impact if it is not effectively implemented (Candy & Gordon, 2011). A meticulously prepared and robust strategic plan must be paired with proper execution to make a meaningful impact on the organization (Cui et al., 2015). In Kenya, small and medium enterprises (SMEs) play a crucial role in the economy, contributing through income generation via exports, creating new job opportunities, introducing innovations, stimulating competition, and serving as a driving force for employment.

In Kenya, SMEs span across all sectors of the economy and are a major source of employment and income, playing a key role in poverty reduction (GOK, 2020). SMES constitute 98% of all businesses in the country, contributing approximately 25% of GDP and 50% of formal employment, with an annual employment growth rate of 12-14% (MOIED, 2020; KNBS, 2019). Over the years, the sector has been recognized for its significant contributions to the provision of goods and services, stimulating competition, fostering innovation, generating employment, and alleviating poverty (KAM, 2021).

Innovation is closely tied to the growth and performance of small and medium enterprises (SMEs) worldwide, as it enhances firm competitiveness (Alrowwad & Abualoush, 2020). However, the degree of innovation implementation among SMEs varies globally. In a (2017) survey conducted by the Organization for Economic Co-operation and Development (OECD), it was found that SMEs in OECD countries exhibit lower levels of innovation compared to larger companies. For instance, the median national SME share of business R&D across OECD countries stands at 35%. Moreover, small firms with 10-49 employees are approximately half as likely as large firms to possess business website facilitating online ordering, and only about one-third as likely to utilize Enterprise Resource Planning (ERP) software, which integrates core business processes in real-time (OECD, 2017). Furthermore, a study conducted by the Kenya Association of Manufacturers (KAM) in 2020 highlights that the presence of innovations, inventions, and modifications serve as indicators of growth and performance within SMEs.

➤ *Statement of the Problem*

Innovative high-technology SMEs have become a crucial factor in the success of modern economies, increasingly competing in a globalized world despite limited resources (Abu Amuna et al., 2019). Innovation enables companies to navigate the turbulence of the external environment and serves as a key driver of long-term success, particularly in dynamic markets (Vushe, 2021). Previous research on SMEs at the firm level has consistently considered the resource constraints these enterprises face and the implications of these constraints on their performance and business growth (Sahut & Peris-Ortiz, 2014).

The Kenya Vision 2030 economic pillar emphasizes the manufacturing sector as a critical priority for advancing the national development agenda and boosting the country's growth rate, as highlighted in the Kenyan Industrial SMEs Cluster Mapping Report (2021). The significance of the manufacturing sector is underscored by its contribution of 7.7% to the gross domestic product (GDP) in 2018 (KAM, 2020).

To further these goals, the Kenya Association of Manufacturers (KAM) introduced the Manufacturing Priority Agenda (MPA) in 2019. This agenda is a key component of KAM's advocacy efforts aimed at helping Kenya achieve its manufacturing objectives under the Big Four Agenda. The MPA is structured around five main pillars: enhancing competitiveness, expanding market access, strengthening the institutional framework, fostering government-driven SME development, and ensuring the sustainability of the manufacturing industry (KAM, 2022).

Innovativeness in small and medium-sized enterprises (SMEs) denotes a propensity to embrace innovative ideas, pursue novelty, engage in experimentation, and foster creative processes, thereby moving away from traditional practices and technologies (Abouzeedan, 2011). The significance of an innovation strategy for small firms lies in the fact that innovation is the most crucial predictor of performance in SMES (Al Mamun et al., 2019). A 2017 survey by the Organisation for Economic Co-operation and Development (OECD) on innovation levels among SMEs in OECD countries revealed that, on average, SMEs were less innovative compared to larger companies. For instance, across OECD countries, the median national SME share of business research and development (R&D) stands at 35%.

Furthermore, small and medium-sized enterprises (SMEs) are only half as inclined as larger firms to possess a business website facilitating online ordering, and they are only about one-third as likely to utilize Enterprise Resource Planning (ERP), a software platform integrating core business processes in real-time (OECD, 2017). Despite the adoption of innovation by manufacturing SMEs, research indicates that they have not fully capitalized on its potential. For instance, the World Bank's Kenya Economic Outlook report (2020) highlights stagnation in sectoral growth, attributing it in part to overall low productivity and significant efficiency disparities among firms. Consequently, less competitive companies persist in the market.

Most of empirical research examining the relationship between innovation and performance consistently demonstrates a positive correlation (Ho et al., 2018; Kadosca, 2016; Kiraka, 2019; Mensah & Acquah, 2020). However, as noted by Simpson et al. (2016), innovation is both costly and risky, yielding positive outcomes for firm performance

alongside negative consequences such as heightened market risks, increased expenses, employee discontent, or unforeseen disruptions. Despite these insights, studies and reports have largely overlooked the specific structural aspects of innovation and their impact on the performance of manufacturing SMEs in Kenya, while also failing to acknowledge the dynamic nature of firms' innovation strategy implementation.

➤ *General Objective*

To examine the relationship between innovative structure and performance of manufacturing SMEs in Kenya

II. THEORETICAL FRAMEWORK

➤ *Organizational Control Theory*

Organizational control theory was developed by Sullivan Jeremiah in 1998. This theory posits that strategic innovation within organizations entails learning and accumulating knowledge through a trial-and-error process grounded in both individual and collective experimentation. Collective learning, a crucial aspect, refers to an organization's ability to recognize and harness new knowledge. According to this theory, the nature of the innovation process compels firms to either adjust their strategies to establish and foster such a process (innovation strategies) or adopt alternative strategies (adaptation strategies) aimed at ensuring the firm's survival while avoiding the uncertainties associated with the innovation process (Liu, Borman, & Gao, 2014).

The organizational control theory embraces an evolutionary approach to understanding innovative processes. It suggests that successful innovation can embed within firms a set of enduring capabilities, allowing them to sustain themselves in the future even without continuous innovation efforts. This theory acknowledges the intricate dynamics of organizations, their environments, and the innovation journey. In such an environment marked by uncertainty, it's crucial to recognize that decision-making isn't a straightforward, synchronized process. Rather, within firms pursuing innovation strategies, decision-making resembles more of an art of navigating through complexities, where every individual with knowledge contributes (Frey, Homberg, & Osterloh, 2013). Furthermore, the theory emphasizes the role of organizational structures and strategies in dynamically evolving through knowledge accumulation to enhance the performance of SMEs.

III. CONCEPTUAL FRAMEWORK

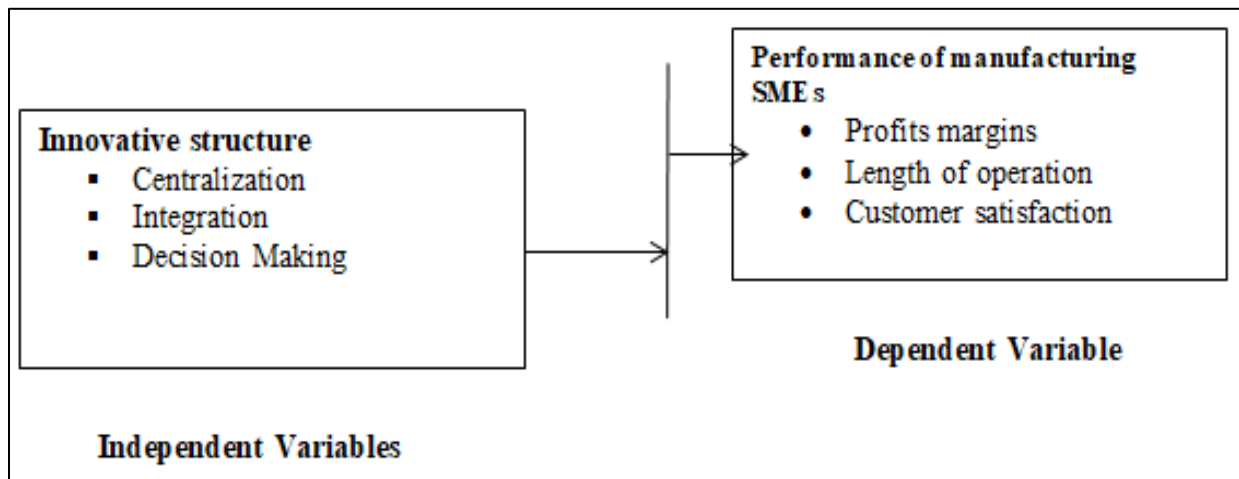


Fig 1 Conceptual Framework

➤ Innovative Structure

Innovation encompasses the introduction of new structures and management methodologies, the implementation of fresh policies, the development of novel plans and initiatives, the adoption of innovative production processes, and the creation of new products and services within an enterprise (Vaccaro et al., 2012). According to the OECD Oslo Manual (2021), innovation is typically classified into four dimensions: product, process, marketing, and management (or organizational) innovation. However, in many studies, innovations are often viewed more broadly, encompassing both technological advancements and management innovations (Kirchner, Smith, Powell, Waltz, & Proctor, 2020).

An organizational structure delineates the distribution of power and responsibility, as well as the implementation of work procedures among members of an organization (Al Mamun et al., 2019). Puranam et al. (2014) identified task division, task allocation, reward distribution, and information provision as the four fundamental challenges in organizing. It outlines how tasks are assigned, the reporting hierarchy, and the overall coordination process and modes of interaction that must be adhered to (Gunday, Ulusoy, Kilic, & Alpkan, 2011). Cegarra-Navarro, Reverte, Gómez-Melero, and Wensley (2016) presented compelling evidence highlighting a strong correlation between performance and structure, suggesting that an effective organizational structure positively impacts both economic and non-economic performance.

IV. EMPIRICAL REVIEW

➤ Innovative Structure and Competitive Performance of SMEs

Establishing organizational structures is a pivotal aspect for companies to facilitate strategic decision-making, conflict resolution, and the efficient coordination of the innovation process (Olson et al., 2015). Scholars in innovation and organizational theory have consistently emphasized that the organizational structure plays a crucial role in fostering or hindering innovation (Aiken and Hage, 2011; Kim, 2010; Damanpour, 2017; Subramanian and Nilakanta, 2016).

Innovation is widely recognized as a critical element in launching new businesses and industries, fostering economic development, enhancing firm performance and competitive advantage, and facilitating efficient management in both public departments and businesses (Alrowwad & Abualoush, 2020). Consequently, creating and sustaining an environment conducive to innovation is crucial for businesses, making it a significant area of academic inquiry (Wang, 2019).

Organizational decision-makers wield considerable influence over innovation within their company by directly shaping the organizational structure (Blind et al., 2020). The distribution of control and responsibility within an organization is dictated by its structure, which also governs the grouping, coordination, and allocation of tasks among departments and employees (Baierle et al., 2020). Scholarly discourse on organizational structure suggests it comprises various sub-dimensions.

Lopes, Ferreira, and Farinha (2019) proposed that variables within organizational structure encompass decentralization, formalization, professionalism, complexity, and both scheduled and unscheduled communication. In a study examining the influence of organizational structure on innovation in logistics, Zhao, Tsai, and Wang (2019) expanded the list to include specialization and decentralization, and introduced 'integration' as an additional subcategory. Damanpour and Wischnevsky (2006), in their investigation into organizational structure and its relationship with product customization, identified sub-dimensions such as operations decentralization, emphasis on formal control, spans of control, and layers.

Esemu and Wood (2014) examined the impact of organizational structure on plant performance and time-based manufacturing. They considered dimensions such as the extent of formalization, hierarchical levels within the organization, decision-making authority, degree of horizontal integration, and communication levels. According to Massa & Tucci (2013), companies that excel in product and process innovation typically have organizational structures that facilitate knowledge development through formal research and development processes, as well as through experiential learning, practice, and interaction among employees, clients, and suppliers.

Innovation encompasses the introduction of new structures and management processes, the implementation of fresh policies, the development of novel plans and programs, the adoption of innovative production processes, and the creation of new products and services within an enterprise (Vaccaro et al., 2012). According to the OECD Oslo Manual (2021), innovation is typically classified into four dimensions: product, process, marketing, and management (or organizational) innovation. However, most studies tend to consider innovation in broader terms, encompassing both technological and management innovations (Kirchner et al., 2020). Another approach to classifying innovation is based on the degree of radicalness, distinguishing between radical innovation and incremental innovation (Chege et al., 2020). More recently, these distinctions have sometimes been referred to as exploitative innovation and exploratory innovation (Ho, Nguyen, Adhikari, Miles, & Bonney, 2018).

Innovative environments demand more flexible and agile structures that facilitate interaction and communication among employees, eschewing rigidly defined functional boundaries in favor of functional integration. Such "adhocratic" or organic structures enable the development of knowledge through practical experience and interaction, thereby enhancing the organization's capacity for innovation (Tafti et al., 2019). This organizational configuration is also best equipped to handle events, as described by M. Chen et al. (2018) – meaning it can effectively navigate unforeseen actions and chance occurrences inherent in innovative settings. While there's no

established organizational structure paradigm for such environments, several authors have explored the organizational characteristics of companies operating within them (Vushe, 2021).

V. RESEARCH METHODOLOGY

➤ *Research Philosophy*

The research employed a cross-sectional survey design to examine the impact of innovation strategy implementation on the competitive performance of manufacturing SMEs in Kenya. Additionally, the study utilized a mixed-methods approach, incorporating both qualitative and quantitative analyses.

➤ *Research Design*

In this study, a cross-sectional survey design was utilized, which involves the collection of data at a single point in time to address a research question (Sekeran & Roger, 2010). This design offers insight into current trends and is valuable for capturing the conditions, characteristics, and perspectives of the study population at a specific moment. It enables the determination of the frequency of specific attributes within a defined population at a particular point in time.

➤ *Target Population*

Abowitz and Toole (2010) suggested that the study population represents the complete universe of individuals or entities from which the sample is drawn. In this study, the target population consisted of manufacturing SMEs that are members of the Kenya Association of Manufacturers. According to KAM (2022), there are 538 registered members of KAM.

Table 1 Target Population

Sector	Population
Agriculture sector/agro-processing	36
Automotive	44
Building, mining, and construction	39
Chemical & allied	32
Energy, electrical and electronics	47
Food and beverages	101
Leather and footwear	18
Metal and allied	43
Paper	25
Pharmaceutical and medical equipment	28
Plastics and rubber	14
Textile and apparels sector	17
Timber	12
Services and consultants	82
	538

Source: (Researcher, 2022)

➤ *Sampling Frame*

A sampling frame comprises a comprehensive list of all individuals or units within the population from which a sample can be selected (Greener, 2008). As noted by Ng'ethe (2013), the sampling frame facilitates the selection of an appropriate random sample, ensuring that all members of the population of interest have an equal opportunity to be included in the sample. For this study, the sampling frame consisted of a list of all 538 manufacturing SMEs located in Nairobi City County, Kenya.

➤ *Sample Size*

A sample refers to a subset of the population of interest (Patten & Newhart, 2017). In this study, the population of interest comprised 538 manufacturing SMEs located in Nairobi City County, Kenya. The study focused on top managers as respondents, as they are primarily responsible for strategic management issues within organizations. According to Sekaran and Bougie (2010), a sample size ranging from larger than 30 to less than 500 is generally suitable for most research endeavors. Slovin's formula (1960) will be applied as illustrated:

$$n = N / (1 + Ne^2),$$

Where;

n = Sample Size

N = Total Population

e = Error of Tolerance with a confidence level of 95 % (giving a margin error of 0.05)

$$n = 538 / (1 + 538 * 0.05 * 0.05) = 229$$

Hence, the sample size was 229.

➤ *Data Collection Instruments*

In this study, a questionnaire was employed as the data collection tool. Questionnaires serve as research instruments designed to uncover individuals' experiences, thoughts, attitudes, and expectations regarding future events (Andres, 2012). The questionnaire comprised a combination of both open-ended and closed-ended questions. This method facilitated the rapid gathering of a substantial amount of information (Abowitz & Toole, 2010), making it feasible to collect data from a large group of participants.

➤ *Pilot Study*

A pilot study was undertaken to evaluate the validity and reliability of the research instruments. As noted by Kothari (2004), conducting a pilot study before employing a questionnaire as a data collection method is advisable. This

allows for the identification of any weaknesses in the questionnaires, and the insights gained can be used to make necessary improvements. According to Tayie (2005), sample sizes of 25 to 50 are commonly utilized for pretesting measurement instruments. In this study, the pilot study involved 10% of the population, resulting in a sample of 23 manufacturing SMEs in Nairobi City County, with representation from each sector.

➤ *Data Analysis and Presentation*

Descriptive statistics, including means and standard deviations, were computed for both the innovation strategy and performance measurement scales. This provided an initial overview of the distribution of participants' responses on these variables and allowed for an assessment of their attitudes towards the measurement items. To assess the significance of the influence of predictor variables on the dependent variable, a multiple regression model was employed. Valipour et al. (2012) utilized a regression model to examine the impact of cost leadership and product differentiation strategies on firm performance in India. The regression analysis was conducted to elucidate how innovative organizational structure, innovative organizational change, innovative organizational learning, and organizational innovation strategy affect the performance of manufacturing SMEs in Kenya.

Descriptive statistics were presented using the mean, with a score ranging from 1 to 2 indicating disagreement, a score of 3 indicating a neutral response, and a score between 4 and 5 representing agreement. Furthermore, the significance of the independent variables was tested using the Fisher distribution test (F-test). The overall significance of the model was determined at a 5% confidence level. The p-value was utilized to assess the strength of the model. In conclusion, a p-value less than 0.05 indicates that the overall model is significant, while a p-value greater than 0.05 suggests that the overall model is insignificant.

VI. PRESENTATION, ANALYSIS, AND INTERPRETATION OF DATA

A. *Descriptive Statistics Analysis*

➤ *Innovative Structure and Performance of Manufacturing SMEs*

The first specific objective of the study was to examine the role of Innovative structure on the performance of manufacturing SMEs in Kenya. The respondents were requested to indicate their level of agreement on statements relating to Innovative structure and performance of manufacturing SMEs in Kenya. The results are presented in Table 2.

Table 2: Innovative structure and Performance of Manufacturing SMEs

	Mean	Std. Deviation
Organizational structure has modified by responding to changes in the internal and external environment of the organization.	4.46	0.943
Human resources develop their own work approaches.	4.15	0.805
Management has based its decisions on general policies that adapt to present demands.	4.50	0.688
Our organization regularly implements new management systems	4.39	0.757
The intra- and inter-departmental communication structure within our organization is regularly restructured	4.28	0.653
We continuously alter certain elements of the organizational structure	4.36	0.854
In new product and service introduction, our company is often first-to-market	3.85	0.946
Exchange of ideas, knowledge, and relevant information between members of the organization has been promoted to improve the activities of the organization	3.43	0.766
Improvement in the ability to identify, assimilate, transform, and exploit external knowledge to solve community problems related to the mission of the SMEs	3.30	0.895
Aggregate	4.08	0.812

According to the results, respondents strongly agreed that management bases its decisions on general policies that adapt to present demands, as indicated by a mean of 4.5 (std. dv = 0.688). Additionally, respondents agreed that the organizational structure has been modified in response to changes in both the internal and external environment of the organization, with a mean of 4.46 (std. dv = 0.943). Furthermore, respondents agreed that the organization regularly implements new management systems, as evidenced by a mean of 4.39 (std. dv = 0.757).

The respondents also indicated agreement that their firm continuously adjusts certain elements of its organizational structure, as evidenced by a mean of 4.36 (std. dv = 0.854). Additionally, with a mean of 4.28 (std. dv = 0.653), respondents agreed that the organization's intra- and inter-departmental communication structure is regularly restructured. Moreover, respondents agreed that human resources develop their own work approaches, with a mean of

4.15 (std. dv = 0.805). Furthermore, with a mean of 3.85 (std. dv = 0.946), respondents agreed that their firm often leads the market by introducing new products and services.

The results indicate that respondents agreed that the exchange of ideas, knowledge, and relevant information among members of the organization has been promoted to enhance organizational activities, as evidenced by a mean of 3.43 (std. dv=0.766). Furthermore, respondents agreed that there has been improvement in their ability identify, assimilate, transform, and exploit external knowledge to address community problems related to the mission of the SMEs, with a mean of 3.3 (std. dv = 0.895).

➤ *Performance of Manufacturing SMEs in Kenya*

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

Table 3: Performance of manufacturing SMEs in Kenya

	Mean	Std. Deviation
Our Total Profits (Total sales – Costs) have been increasing yearly	4.208	.905
The number of employees has been rising every year	4.136	.936
The volume of sales has been increasing ever yearly	4.318	.764
The geographical market size of our products has been expanding	4.214	.87
We are highly satisfied by the returns from assets invested (ROA)	4.045	.959
We are highly satisfied by the returns from borrowed money (ROE)	4.065	0.764
Number of customers satisfied by our products has been rising each year	4.377	.801
The size of our organization has been expanding for the last five years	4.253	.86
The quality of our products has improved considerably	4.344	.874
Aggregate	4.21	0.859

According to the results, respondents agreed that the number of customers satisfied by their products has been increasing annually, supported by a mean of 4.38 (std. dv = 0.801). Additionally, respondents agreed that the quality of

their products has significantly improved, with a mean of 4.34 (std. dv = 0.874). Moreover, respondents agreed that the sales volume has been consistently increasing each year, as indicated by a mean of 4.32 (std. dv = 0.764). Furthermore,

respondents agreed that the organization's size has been expanding over the last five years, with a mean of 4.25 (std. dv = 0.86).

With a mean of 4.21 (std. dv = 0.87), respondents agreed that the geographical market size of their products has been expanding. Additionally, with a mean of 4.21 (std. dv = 0.905), respondents agreed that the firm's total profits (Total sales – Costs) have been increasing annually. Furthermore,

respondents agreed that the number of employees has been increasing each year, as shown by a mean of 4.14 (std. dv = 0.936). Moreover, respondents agreed that the firm is highly satisfied with the returns on equity (ROE), with a mean of 4.07 (std. dv = 0.764). Additionally, respondents agreed that the firm is highly satisfied with the returns from assets invested (ROA), with a mean of 4.05 (std. dv = 0.959).

B. Correlation Analysis

Table 4: Correlation Coefficients

Variables	(1)	(2)	(3)	(4)	(5)
(1) Performance of SMEs	1.000				
(2) Innovative structure	0.670***	1.000			

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

The findings indicated a strong and significant relationship between Innovative structure and the performance of manufacturing SMEs in Kenya, with a correlation coefficient of 0.670. This relationship was considered significant, as the p-value fell below a 1% significance level. These results are consistent with the findings of Baierle et al. (2020), who also found that the grouping, coordination, and division of tasks within organizational structures positively impact organizational performance.

➤ *Test for Hypothesis One*

The first specific objective of the study was to examine the role of innovation implementation strategies on performance of manufacturing SMEs in Kenya. The associated null hypothesis was that Innovative organizational structure has no significant role on the performance of manufacturing SMEs in Kenya. A univariate analysis was conducted in which performance of manufacturing SMEs in Kenya was regressed on Innovative organizational structure.

The R-squared value indicates the proportion of variation in the dependent variable that can be explained by the independent variables. A higher R-squared value suggests a stronger influence of the independent variable on the dependent variable. R-squared values range from 0.000 to 1.000, with 1.000 representing a perfect fit where all data points align with the regression line. In Table 4.17, the R-squared value for the relationship between Information Technology governance and the performance of Tea Producers companies in Kenya was 0.449. This suggests that, at a 95% confidence interval, approximately 44.9% of the variation in the performance of manufacturing SMEs in Kenya can be attributed to changes in Innovative organizational structure. Therefore, Innovative organizational structure explains 44.9% of the changes in performance of manufacturing SMEs in Kenya, leaving 55.1% of the variation to be influenced by other factors.

Table 5 : Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.670 ^a	.449	.445	5.20807

a. Predictors: (Constant), Innovative structure

The analysis of variance (ANOVA) was employed to evaluate the suitability of the regression model for the data. It included the F-test statistic, with the null hypothesis assuming no linear relationship between the variables. The ANOVA results, as shown in Table 4.18, indicated that the Prob>F value of 0.000 was lower than the chosen significance level of 0.05. This suggests that the model, as constructed, has the capability to predict the performance of manufacturing SMEs in Kenya. Moreover, the calculated F-value (123.721) from the table exceeded the critical F-value, further reinforcing the conclusion that Innovative structure can effectively predict the performance of manufacturing SMEs in Kenya.

Table 6: ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	3355.805	1	3355.805	123.721	.000 ^b
	Residual	4122.851	152	27.124		
	Total	7478.656	153			

a. Dependent Variable: Performance of manufacturing SMEs in Kenya
b. Predictors: (Constant), Innovative structure

From the results in Table 6, the following regression model was fitted.

$$Y = 17.839 + 0.631 X_1$$

(X_1 is Innovative structure)

The coefficient analysis unveiled that the constant possessed a coefficient of 17.839, implying that if the Innovative organizational structure remained static at zero, the performance of manufacturing SMEs in Kenya would amount to 17.839 units. Furthermore, the results indicated that the coefficient for Innovative organizational structure was 0.631,

suggesting that a one-unit increase in Innovative organizational structure would correspond to a 0.631 enhancement in the performance of manufacturing SMEs in Kenya. Additionally, it was noted that the p-value for the coefficient of Innovative organizational structure was 0.000, which falls below the specified significance level of 0.05, signifying that Innovative organizational structure was statistically significant. Based on these findings, the study rejected the null hypothesis and embraced the alternative hypothesis, concluding that Innovative organizational structure exerts a positive and significant influence on the performance of manufacturing SMEs in Kenya.

Table 7: Beta Coefficients for Innovative structure

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.839	2.239		7.966	.000
	OS	.631	.057	.670	11.123	.000

a. Dependent Variable: performance of manufacturing SMEs in Kenya

VII. CONCLUSIONS AND RECOMMENDATIONS

REFERENCES

A. Conclusions

The research findings suggest a noteworthy correlation between Innovative structure and the performance of SMEs in Kenya, indicating a positive and significant impact. Additionally, the study identified centralization, integration, and decision-making as key factors influencing SME performance in the Kenyan context. These findings imply that enhancing innovative structure, particularly in terms of centralization, integration, and decision-making processes, holds the potential to enhance the overall performance of SMEs in Kenya.

B. Recommendations

The study's findings indicate that Innovative structures, encompassing aspects such as Centralization, Integration, and decision-making, significantly impact the performance of manufacturing SMEs in Kenya. Consequently, the study offers a recommendation that management within SMEs in Kenya should prioritize the development and implementation of an effective plan coupled with a robust organizational structure characterized by centralization, integration, and efficient decision-making processes to facilitate the successful implementation of innovative strategies.

- [1]. Abdi, K., Mardani, A., Senin, A. A., Tupenaite, L., Naimaviciene, J., Kanapeckiene, L., & Kutut, V. (2018). The effect of knowledge management, organizational culture and organizational learning on innovation in automotive industry. *Journal of Business Economics and Management*, 19(1), 1-19.
- [2]. Abowitz, D. A., & Toole, T. M. (2010). Mixed method research: Fundamental issues of design, validity, and reliability in construction research. *Journal of construction engineering and management*, 136(1), 108-116.
- [3]. Abu Amuna, Y. M., Abu-Naser, S. S., Al Shobaki, M. J., & Abu Mostafa, Y. A. (2019). Fintech: creative innovation for entrepreneurs.
- [4]. Aksoy, H. (2017). How do innovation culture, marketing innovation and product innovation affect the market performance of small and medium-sized enterprises (SMEs). *Technology in Society*, 51(4), 133-141.
- [5]. Awamleh, F., & Ertugan, A. (2021). The relationship between information technology capabilities, organizational intelligence, and competitive advantage. *Sage Open*, 11(2), 21582440211015201.
- [6]. Baierle, I. C., Benitez, G. B., Nara, E. O. B., Schaefer, J. L., & Sellitto, M. A. (2020). Influence of open innovation variables on the competitive edge of small and medium enterprises. *Journal of Open Innovation: Technology, Market, and Complexity*, 6(4), 179.

- [7]. Bilan, Y., Hussain, H. I., Haseeb, M., & Kot, S. (2020). Sustainability and economic performance: Role of organizational learning and innovation. *Engineering Economics*, 31(1), 93-103.
- [8]. Chege, S. M., Wang, D., & Suntu, S. L. (2020). Impact of information technology innovation on firm performance in Kenya. *Information Technology for Development*, 26(2), 316-345.
- [9]. Chen, M.-H., Wang, H.-Y., & Wang, M.-C. (2018). Knowledge sharing, social capital, and financial performance: The perspectives of innovation strategy in technological clusters. *Knowledge Management Research & Practice*, 16(1), 89-104.
- [10]. Cui, T., Ye, H. J., Teo, H. H., & Li, J. (2015). Information technology and open innovation: A strategic alignment perspective. *Information & management*, 52(3), 348-358.
- [11]. Damanpour, F., & Aravind, D. (2012). Organizational structure and innovation revisited: From organic to ambidextrous structure. In *Handbook of organizational creativity* (pp. 483-513): Elsevier.
- [12]. Damanpour, F., & Wischnevsky, J. D. (2006). Research on innovation in organizations: Distinguishing innovation-generating from innovation-adopting organizations. *Journal of Engineering and Technology Management*, 23(4), 269-291.
- [13]. Dedahanov, A. T., Rhee, C., & Yoon, J. (2017). Organizational structure and innovation performance: is employee innovative behavior a missing link? *Career Development International*.
- [14]. Dogan, E. (2017). A strategic approach to innovation. *Journal of Management Marketing and Logistics*, 4(3), 290-300.
- [15]. Duhaylongsod, J. B., & De Giovanni, P. (2018). The impact of innovation strategies on the relationship between supplier integration and operational performance. *International Journal of Physical Distribution & Logistics Management*.
- [16]. Esemu, T., & Wood, E. (2014). Innovation and Value Creation in Emerging African Commercial Agriculture: Evidence from the Ugandan Flower Export Sector. In *Quality Innovation: Knowledge, Theory, and Practices* (pp. 497-521): IGI Global.
- [17]. Etriya, E., Omta, O., Scholten, V., & Wubben, E. (2020). The importance of entrepreneurship and innovation for smallholder vegetable farmers in West Java, Indonesia.
- [18]. Fathema, N., Shannon, D., & Ross, M. (2015). Expanding the Technology Acceptance Model (TAM) to examine faculty use of Learning Management Systems (LMSs) in higher education institutions. *Journal of Online Learning & Teaching*, 11(2).
- [19]. Frey, B. S., Homberg, F., & Osterloh, M. (2013). Organizational control systems and pay-for-performance in the public service. *Organization studies*, 34(7), 949-972.
- [20]. Ghauri, P., Grønhaug, K., & Strange, R. (2020). *Research methods in business studies*: Cambridge University Press.
- [21]. Gitau, R. M. (2011). The relationship between financial innovation and financial performance of commercial banks in Kenya. University of Nairobi,
- [22]. Ho, K. L. P., Nguyen, C. N., Adhikari, R., Miles, M. P., & Bonney, L. (2018). Exploring market orientation, innovation, and financial performance in agricultural value chains in emerging economies. *Journal of Innovation & Knowledge*, 3(3), 154-163.
- [23]. Hvolkova, L., Klement, L., Klementova, V., & Kovalova, M. (2019). Barriers hindering innovations in small and medium-sized enterprises. *Journal of Competitiveness*, 11(2), 51.
- [24]. Kamau, J. G., Senaji, T. A., Eng, R., & Nzioki, S. C. (2019). Effect of information technology capability on competitive advantage of the Kenyan banking sector. *International Journal of Technology and Systems*, 4(1), 1-20.
- [25]. Karlsson, C., & Tavassoli, S. (2016). Innovation strategies of firms: What strategies and why? *The Journal of Technology Transfer*, 41(6), 1483-1506.
- [26]. Kim, J., & Choi, S. O. (2020). The intensity of organizational change and the perception of organizational innovativeness; with discussion on open innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 6(3), 66.
- [27]. Migdadi, M. M. (2019). Organizational learning capability, innovation and organizational performance. *European Journal of Innovation Management*.
- [28]. Walker, R. M., Chen, J., & Aravind, D. (2015). Management innovation and firm performance: An integration of research findings. *European Management Journal*, 33(5), 407-422.
- [29]. Wang, D. S. (2019). Association between technological innovation and firm performance in small and medium-sized enterprises: The moderating effect of environmental factors. *International Journal of Innovation Science*.
- [30]. Waruwu, H., Asbari, M., Purwanto, A., Nugroho, Y. A., Fikri, M. A. A., Fauji, A., . . . Agistiawati, E. (2020). The role of transformational leadership, organizational learning and structure on innovation capacity: Evidence from Indonesia private schools. *EduPsyCouns: Journal of Education, Psychology and Counseling*, 2(1), 378-397.