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Innovation Strategy and Performance of Manufacturing Small and Medium Enterprises in Kenya

[1] Idi Ochieng Juma Masoud ; [2] Dr. Joseph Ndururi, PhD ; [3] Dr. Jane Omwenga, PhD
[1]PhD Student, Jomo Kenyatta University of Agriculture and Technology
[2]Lecturer, Jomo Kenyatta University of Agriculture and Technology
[3]Lecturer, Jomo Kenyatta University of Agriculture and Technology

Abstract:- This study sought to examine the role of innovation strategy on performance of SMEs in Kenya. The study applied Innovation theory. The population of the study was manufacturing SMEs in Nairobi City County, Kenya since Nairobi is a cosmopolitan that is home to several manufacturing SMEs. The target population comprised 538 manufacturing SMEs located in Nairobi City County, Kenya. The study focused on top managers as they primarily handle strategic management issues within organizations. Stratified sampling was employed to select the sample, with the population stratified based on sectors as categorized by the Kenya Manufacturers Association (KMA). The research was underpinned by the positivism philosophy, aiming for an objective understanding of the relationship between innovation strategy implementation and the competitive performance of manufacturing SMEs in Kenya. A cross-sectional survey design was utilized to achieve this objective, integrating both qualitative and quantitative mixed methods. Data collection was carried out through the administration of a questionnaire, following a pilot study to ensure the validity and reliability of the research instruments. The Statistical Package for Social Sciences (SPSS) version 25 software was utilized for data analysis. Qualitative data was subjected to thematic analysis and presented in prose form, while quantitative data underwent descriptive statistical analysis and was presented using tables and figures. The study also computed correlation and regression analysis to test the relationship between study variables and test the research hypothesis. The study also concludes that innovation strategy has a positive and significant effect on the performance of manufacturing SMEs in Kenya. The study revealed that new products, new markets, and product development influence the performance of manufacturing SMEs in Kenya. This implies that improving innovation strategy (new products, new markets, and product development) would improve manufacturing SMEs' performance in Kenya. This study, therefore, recommends that the management of manufacturing SMEs in Kenya should promote an innovative work environment

Keywords:- *Innovation Strategy, Performance of SMEs in Kenya, Innovation Theory.*

I. INTRODUCTION

Innovation involves transforming new ideas into new processes and products (Jiménez-Jiménez & Sanz-Valle, 2011). Organizations pursue innovation to enhance efficiency and productivity, boost market share and profitability, and create economic value for their stakeholders (Baierle, Benitez, Nara, Schaefer, & Sellitto, 2020). Chege, Wang, and Suntu (2020) assert that organizations adopt innovations to respond to environmental changes and fulfill strategic goals aimed at sustaining and enhancing performance.

Innovation is a holistic strategy aimed at renewing and expanding a company's range of products, services, and markets by implementing new methods or altering existing ones (Shqipe, Gadaf, & Veland, 2013). It entails a significant transformation, accelerating the generation of ideas and the development of new products, services, and industrial processes (Pisano, 2015). Alrowwad and Abualoush (2020) argue that innovation encompasses the creation of ideas and their implementation. Key drivers of innovative activities include technological facilities, a skilled workforce, and management support. High technical innovation performance necessitates adaptability and results from an organization's ability to adjust its processes and products in response to environmental changes (Abu Baker & Ahmad, 2010). The development of cutting-edge technologies and new products requires organizations to adopt practices that encourage creativity, flexibility, and experimentation (Das & Joshi, 2011).

Hilman and Kaliappen (2015) categorize organizational innovation into three dimensions: environmental (external, contextual), organizational (structure, culture), and managerial (leadership, human capital). Innovation is widely acknowledged as a pivotal factor for augmenting productivity and competitiveness. It serves as a cornerstone for the survival and competitiveness of companies in a globalized marketplace (Sheu, 2017; Kiraka, Kobia, & Katwalo, 2020; Lin & Chen, 2020). Within the realm of business, innovation is frequently regarded as the bedrock for strategic transformation, empowering firms to attain and uphold a competitive advantage (Cui, Ye, Teo, & Li, 2015).

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The successful implementation of strategies is crucial for any organization (Tan, 2004). The process of executing an innovation strategy determines whether an organization thrives, survives, or fails (Barnat, 2012). As a vital component of corporate strategies, innovation enables firms to differentiate their products, enhance efficiency, enter new markets, and increase market share to build competitiveness (Blind, Pohlisch, & Rainville, 2020). Even the most well-crafted strategy will not impact an organization if it is not effectively implemented (Candy & Gordon, 2011). Therefore, a meticulously developed strategic plan must be paired with effective implementation to truly benefit the organization (Cui et al., 2015).

Small and Medium Enterprises (SMEs) are widely acknowledged as catalysts for global economic growth (Etriya, Omta, Scholten, & Wubben, 2020). They play a crucial role in socio-economic development and competitiveness, thanks to their diverse contributions to the economy (Sahut & Peris-Ortiz, 2014). SMEs generate substantial income and employment, create opportunities for the development and adoption of appropriate technologies, and serve as significant sources of innovation (Ho, Nguyen, Adhikari, Miles, & Bonney, 2018; Shiu & Walker, 2007; Subrahmanya, Mathirajan, & Krishnaswamy, 2010).

Small and medium enterprises (SMEs) play a vital role in the development of many African countries. Often, SMEs emerge due to decreasing job security in large corporations and the public sector, as well as rising education levels and innovation. SMEs tend to flourish when a country's economy is struggling, as public sector employment contracts (Masocha, Zindiye, & Chiliya, 2012). Conversely, when the economy is strong, SMEs benefit from easier access to credit and improved infrastructure, according to the International Finance Corporation (IFC, 2011). In Kenya, SMEs are active across all economic sectors and are crucial for employment, income generation, and poverty reduction (GOK, 2020). They account for 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 role in providing goods and services, fostering competition and innovation, generating employment, and alleviating poverty (KAM, 2021).

Innovation stands as a cornerstone for the growth and success of small and medium enterprises (SMEs) globally, bolstering their competitive edge (Alrowwad & Abualoush, 2020). Nonetheless, the extent to which SMEs embrace innovation varies across different regions. A survey conducted by the Organization for Economic Co-operation and Development (OECD) in 2017 unveiled that, on average, SMEs exhibit lower levels of innovation compared to larger corporations. In OECD nations, the median national share of business R&D within SMEs stands at 35%. Moreover, small firms with 10-49 employees are approximately half as likely as their larger counterparts to possess a business website supporting online transactions, and merely one-third as likely to utilize Enterprise Resource Planning (ERP) systems, which streamline core business processes in real-time (OECD, 2017). Highlighting the significance of innovation, a study conducted by the Kenya Association of Manufacturers (KAM, 2020) underscores that the presence of novel ideas, inventions, and adaptations serves as pivotal 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, competing on a global scale despite having limited resources (Abu Amuna et al., 2019). Innovation enables companies to navigate external environmental turbulence, making it a key driver of long-term business success, especially in dynamic markets (Vushe, 2021). Research on SMEs has consistently considered the resource constraints these firms face and the impact of these limitations on their performance and growth (Sahut & Peris-Ortiz, 2014).

The economic blueprint of Kenya Vision 2030 places paramount importance on the manufacturing sector as a linchpin for the nation's developmental aspirations and accelerated economic growth (Kenyan Industrial SMEs Cluster Mapping Report, 2021). This sector holds considerable significance, contributing 7.7% to the gross domestic product (GDP) in 2018 (KAM, 2020). In 2019, the Kenya Association of Manufacturers launched the Manufacturing Priority Agenda (MPA) as an integral component of its advocacy agenda aimed at supporting Kenya in realizing its manufacturing goals outlined in the Big Four Agenda. The MPA is structured around five key pillars: enhancing competitiveness, expanding market access, fortifying the institutional framework, facilitating government-led SME development, and safeguarding the future trajectory of the manufacturing sector (KAM, 2022).

Innovativeness in SMEs signifies a willingness to embrace innovative ideas, experimentation, and creative processes, moving away from traditional practices and technologies (Abouzeedan, 2011). The significance of an innovation strategy for small firms lies in its role as the most critical factor in predicting their performance (Al Mamun et al., 2019). A 2017 OECD survey revealed that, on average, SMEs are less innovative than larger companies. For instance, the median national SME share of business R&D in OECD countries is 35%.

Additionally, SMEs are significantly less likely than large firms to possess a business website enabling online ordering, and they are only about one-third as likely to utilize Enterprise Resource Planning (ERP) systems, which integrate core business processes in real-time (OECD, 2017). Despite the adoption of innovation by manufacturing SMEs, studies indicate that they have not fully capitalized on its benefits. For instance, the World Bank Kenya Economic Outlook report

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(2020) highlights growth stagnation in the sector, partly attributed to low overall productivity and significant efficiency disparities among firms, allowing uncompetitive companies to persist in the market.

Most empirical studies examining the relationship between innovation and performance consistently demonstrate a positive correlation (Ho et al., 2018; Kadosca, 2016; Kiraka, 2019; Mensah & Acquah, 2020). However, as highlighted by Simpson et al. (2016), innovation is a costly and risky endeavor, with potential positive outcomes on firm performance, but also risks such as increased market exposure, higher costs, employee dissatisfaction, or unforeseen disruptions. Despite these insights, there remains a notable gap in the literature concerning the impact of innovation strategy implementation on the performance of manufacturing SMEs in Kenya.

- *General Objective*

To examine the relationship between innovation strategy and performance of manufacturing SMEs in Kenya.

II. THEORETICAL FRAMEWORK

- *Theory of Innovation*

The theory of innovation, also known as the diffusion of innovation theory, elucidates how developments gain momentum and gradually spread throughout a specific group of individuals. Introduced by Rogers in 2003, this theory utilizes communication as a fundamental concept to elucidate the process through which advancements propagate. These advancements may manifest as new products, ideas, behaviors, or technologies. The theory aims to delineate the journey of technological innovations from their conceptualization to eventual adoption. The desired outcome is the acceptance and incorporation of the product or idea within a social system (Zhou & Li, 2011). However, adoption does not occur simultaneously; rather, it unfolds as a process, with some individuals displaying greater readiness and willingness to adopt the innovation than others.

The theory emphasizes that individuals who embrace an innovation early or later possess distinct characteristics. Understanding the traits of the target population is crucial when promoting an innovation (Maryann, 2014). According to Rogers (2003), there are five categories based on the characteristics of the target population: innovators, early adopters, late adopters, late majority, and laggards. Innovators are typically adventurous and inclined to take risks by trying out new innovations; they require minimal persuasion to adopt an innovation.

Early adopters serve as opinion leaders and are open to embracing changes. The early majority adopts ideas more quickly than the average individual, although they typically do not take on leadership roles. Late majority individuals are generally skeptical of change and only accept an innovation once the majority has endorsed it. Laggards are deeply rooted in tradition and are resistant to adopting innovations (Renana & Eitan, 2019). A person's willingness to adopt a technological innovation is influenced by four factors: awareness of the innovation's significance, their decision-making process, initial usage of the innovation, and sustained utilization over time.

The theory can significantly impact the innovation strategies pursued by small and medium manufacturing enterprises in Kenya to attain a competitive edge. The effectiveness of adopting an idea or product hinges on their comprehension of the target population and the factors that shape their adoption rates (Yusr, 2016). Small and medium enterprises must embrace new innovation strategies, structures, learning methodologies, and adapt to changes that seamlessly disseminate and integrate into the social system.

III. CONCEPTUAL FRAMEWORK

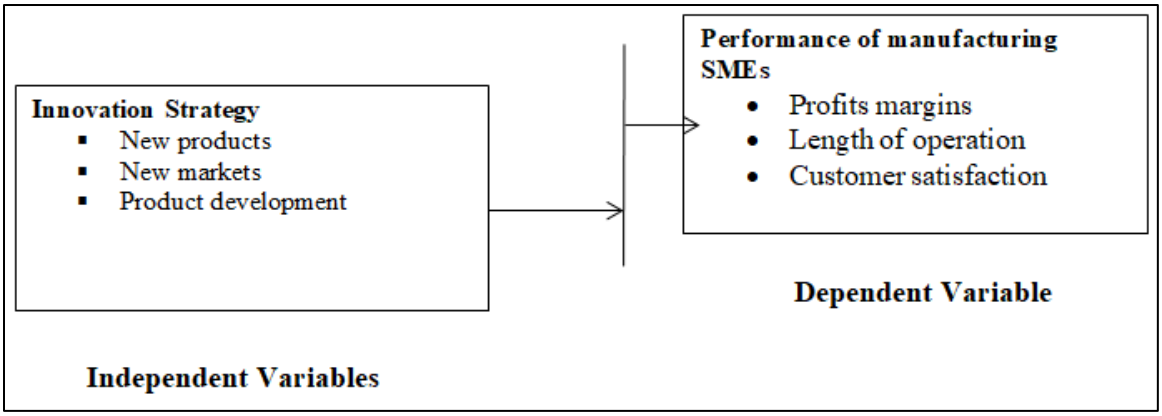

Fig 1 Conceptual Framework

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➢ *Innovation Strategy*

Organizational innovation, as described by Crema et al. (2014), pertains to enhancements in internal interactions within an organization. This encompasses improved collaboration among different units, increased association and participation among various interest groups, and the development of networks within their environment. Baierle et al. (2020) conceptualize organizational innovation as significant alterations in routines, procedures, organizational structure, and strategic orientation management. Innovation within organizations entails learning processes that foster the cultivation of teamwork, knowledge, and skills, thereby facilitating adaptation to change and enhancing competitiveness (Claver-Cortés, Zaragoza Sáez & González-Illescas, 2018).

Fathema, Shannon, and Ross (2015) underscored the importance of innovation strategies as crucial drivers for firm performance, aiding in value creation and maintaining a competitive edge in an increasingly volatile and rapidly evolving business landscape. The success of most firms heavily relies on efficient operational processes, which are often bolstered by investments in technologies that enhance internal efficiencies (Munyoroku, 2014). Consequently, technological innovation strategies adopted by firms should focus on identifying and exploiting new revenue opportunities while enhancing customer satisfaction through reliable service delivery. These strategies involve the implementation of systems such as Enterprise Resource Planning (ERP) systems, which provide capabilities that support and streamline various production processes. Moreover, these systems should contribute to improving overall firm operations by automating routine tasks such as order management (Valacich & Schneider, 2012).

IV. EMPIRICAL REVIEW

➢ *Innovation Strategy and Competitive Performance of SMEs*

Organizational innovation, as defined by Crema et al. (2014), encompasses enhancements in internal interactions within an organization. This includes fostering collaboration between different units, promoting association and participation among various interest groups, and cultivating networks within their environment. Baierle et al. (2020) characterize it as a substantial shift in routines, procedures, organizational structure, and strategic orientation within management practices. Innovation within organizations entails learning processes that stimulate the development of teamwork, knowledge, and skills, thereby facilitating adaptation to change and enhancing competitiveness (Claver-Cortés, Zaragoza Sáez & González-Illescas, 2018).

Morente and Ferràs-Hernández (2017) posit that organizational innovation encompasses various aspects including innovation capacities, organizational culture, individual personality traits, leadership styles, creativity, and entrepreneurship. According to the OECD (2018), organizational innovation involves the implementation of novel organizational methods such as business practices, roles, and external relationships. Prajogo (2016) contends that product and process innovation are intertwined with an organization's specific strategy, enabling firms to respond to market demand and capitalize on opportunities by leveraging their organizational capabilities and competencies. Managers are confronted with strategic decisions regarding the utilization of new knowledge or technology to develop new products or opting for higher returns through more efficient production systems. This dilemma arises from the competition within the firms' operational environment (Filipini & Martini, 2010).

Innovation carries a positive connotation, representing a practical concept with beneficial outcomes for both its creators and adopters. Organizations engage in generating and adopting various types of innovations that are perceived as valuable for achieving their short-term and long-term objectives, thereby enhancing operational efficiency and effectiveness. Advanced techniques play a pivotal role in improving performance across many organizations, leading to increased productivity and market share growth (Chander et al., 2020).

According to Kok and Beimans (2009), product innovation plays a crucial role in creating superior customer value and contributes to overall firm performance. Process innovation, on the other hand, serves as a significant source of competitive and strategic advantages for firms, often remaining hidden from competitors due to their internal nature within organizations (Maine et al., 2012). Prajogo (2016) suggests that firms focusing on process innovations may not prioritize aggressive development of new products for markets. Instead, they may compete in established (mature) markets, where strategies primarily revolve around producing and delivering products to customers with enhanced value propositions such as speed, flexibility, or cost-effectiveness (Klingenberg et al., 2013).

Process innovations, such as the adoption of new process technology, can serve as strategic maneuvers for firms to elevate entry barriers for competitors, thereby safeguarding their market advantage (Porter, 1985). Marketing innovation, on the other hand, enables firms to address customer needs, explore new markets, and position their products effectively, all aimed at enhancing competitive advantage (Kiveu et al., 2019). According to ZuńigaCollazos and Castillo-Palacio (2016), innovative marketing strategies have the potential to enhance customer satisfaction and improve the perception of a company's products and services. Through marketing innovation activities, firms can cater to both existing and new markets while enhancing the image of their products and services. The extent of firms' engagement in marketing innovation is influenced by their activities and the industry in which they operate (Herman, Hady, & Arafah, 2018).

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The competitive landscape confronting companies today differs significantly from the environment that shaped the concept of strategy fifty years ago (Cho & Lee, 2018). This rapid evolution of the strategy environment has led to the partial obsolescence of certain traditional strategy concepts, such as industry structure analysis, while simultaneously sparking numerous new insights (Narver, Slater, & MacLachlan, 2000). Indeed, this shifting context has prompted the emergence of several new themes within the realm of strategy, including foresight, knowledge, competencies, coalitions, networks, extramarket competition, ecosystems, transformation, and renewal. In order to thrive in the "innovate or die" milieu of the new economy, companies must develop a new strategy, which is of paramount importance for their survival (Dedahanov et al., 2017).

Effective management of innovation is a critical component of corporate strategy, playing a pivotal role in a company's competitive advantage (Kach et al., 2015). Consequently, the strategic management of innovation has emerged as a foundational concern within the field of strategic management. Innovation can manifest in various forms, including new products or services, advancements in production process technology, novel organizational structures or administrative systems, and fresh plans or programs involving organizational members (Keupp et al., 2012). Strategy, on the other hand, encompasses vital aspects of ensuring the entity's survival, ushering in new activities and areas of interest, and addressing atypical challenges faced by the organization (Dogan, 2017).

In an era dominated by discontinuity, strategic innovation is recognized as paramount for generating wealth and as the primary means to overcome resource constraints for new market entrants and sustain success (Massa & Tucci, 2013). Amidst a turbulent economic landscape characterized by rapid and radical changes, enterprises must possess the capability to pivot and engage in a different game. Crafting a distinctive strategy necessitates a high level of innovation, proactivity, calculated risk-taking, and thorough analysis of shifts in customer preferences and competitor behaviors (Preda, 2013). Companies are urged to prioritize strategic innovation, which encompasses and even transcends all dimensions of innovation, in order to foster sustainable growth (Dogan, 2017).

V. RESEARCH METHODOLOGY

➢ *Research Philosophy*

The study used a cross-sectional survey design to establish the role of innovation strategy implementation on the competitive performance of manufacturing SMEs in Kenya. The study also used both qualitative and quantitative mixed methods.

➢ *Research Design*

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

➢ *Target Population*

Abowitz and Toole (2010) posited that the study population is the entire universe of people or things from which the sample is selected. This study's target population was the manufacturing SMEs who are members of the Kenya Association of Manufacturers. According to KMA (2022), there are 538 registered members of KMA.

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 refers to a comprehensive list of all individuals or units within a population from which a sample can be selected (Greener, 2008). As highlighted by Ng'ethe (2013), the sampling frame plays a crucial role in enabling researchers to draw 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 comprised a listing of all 538 manufacturing SMEs situated in Nairobi City County, Kenya.

➢ *Sample Size*

A sample refers to a portion of the population under investigation (Patten & Newhart, 2017). In this study, the target population consisted of 538 manufacturing SMEs located in Nairobi City County, Kenya. Given that strategic management issues are primarily handled by top managers within organizations, this group was specifically targeted. According to Sekaran and Bougie (2010), a sample size ranging from

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larger than 30 to less than 500 is deemed appropriate for most research endeavors. Slovin's formula (1960) will be applied as illustrated:

n = N/ (1+Ne2),
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, data collection was conducted using a questionnaire, which serves as a research instrument to uncover individuals' experiences, thoughts, attitudes, and anticipations of future events (Andres, 2012). The questionnaire comprised a combination of open-ended and closed-ended questions. This approach facilitated the swift gathering of extensive information (Abowitz & Toole, 2010), enabling data collection from a large and diverse group of respondents.

➢ *Pilot Study*

A pilot study was undertaken to assess the validity and reliability of the research instruments. As noted by Kothari (2004), conducting a pilot study of questionnaires before their actual use is advisable. This process helps to identify any weaknesses in the questionnaires, and the insights gained can be leveraged to make improvements. Tayie (2005) recommends using sample sizes of 25-50 for pretesting measurement instruments. In this study, the pilot study involved 10% of the population, resulting in a sample of 23 manufacturing SMEs located in Nairobi City County, selected from each sector.

➢ *Data Analysis and Presentation*

Descriptive statistics, including means and standard deviations, were calculated for both the innovation strategy and performance measurement scales. This analysis aimed to offer an initial understanding of the distribution of participant responses on these variables and to gauge their attitudes toward the measurement items. Moreover, a multiple regression model was utilized to assess the significance of the predictor variables on the dependent variable. For example, Valipour et al. (2012) employed a regression model to explore the effects of cost leadership and product differentiation strategies on firm performance in India. In the present study, the regression analysis focused on elucidating how innovative organizational structure, innovative organizational change, innovative organizational learning, and organizational innovation strategy impact the performance of manufacturing SMEs in Kenya.

Descriptive statistics were presented using mean scores, where values between 1 and 2 indicated disagreement, a mean of 3 represented neutral responses, and scores falling between 4 and 5 denoted agreement. Furthermore, the significance of the independent variables was evaluated using the Fisher distribution test (F-test), with the overall significance of the model assessed at a 5% confidence level. The strength of the model was determined by examining the p-value. A conclusion was drawn based on the p-value, whereby a value less than 0.05 signified a significant overall model, while a p-value greater than 0.05 indicated an insignificant overall model.

VI. PRESENTATION, ANALYSIS, AND INTERPRETATION OF DATA

A. Descriptive Statistics Analysis

➢ *Innovation Strategy and Performance of Manufacturing SMEs*

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

Table 2: Innovation Strategy and Performance of Manufacturing SMEs

	Mean	Std. Deviation
We manage to cope with market demands and develop new products and services quickly	3.57	.88
We continuously modify design of our products and services and rapidly enter new markets	4.43	.84
Our firm manages to deliver special products/services flexibly according to customers' orders.	3.83	.82
We continuously improve old products and services and raise quality of new products	4.54	.84
Development of new channels for products and services offered by our corporation is an on-going process.	4.65	.72
We deal with customers' suggestions or complaints urgently and with utmost care	4.53	.87
In marketing innovations (entering new markets, new pricing methods, new distribution methods, etc.) our company is better than competitors	4.5	.77
Business departments understands the IT environment (e.g., its current and potential capabilities, systems, services, processes)	4.48	.76
There is better coordination and integration of information flow and activities within and/or between firm boundaries	4.80	.84

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Business managers understand the work environment of IT	4.48	.84
The organizational strategies are consistent with the other organization's positions	4.25	.76
Aggregate	**4.369**	**0.813**

From the results, the respondents strongly agreed that there is better coordination and integration of information flow and activities within and between firm boundaries (M=4.80, SD=0.72). In addition, the respondents strongly agreed that developing new channels for products and services offered by our corporation is an on-going process (M=4.65, SD=0.72). Further, the respondents strongly agreed that their firm continuously improves old products and services and raises the quality of new products (M=4.54, SD=0.84). The respondents also strongly agreed that they urgently deal with customers' suggestions or complaints and with utmost care (M=4.53, SD=0.87).

The respondents strongly agreed that our company is better than competitors in marketing innovations (entering new markets, new pricing, and distribution methods) (M=4.50, SD=0.77). In addition, the respondents agreed that business departments understand the IT environment (e.g., its current and potential capabilities, systems, services, processes) (M=4.48, SD=0.76). Further, the respondents agreed that their business managers understand the work environment of IT (M=4.48, SD=0.84). The respondents also agreed that the firm continuously modifies design of our products and services and rapidly enters new markets (M=4.43, SD=0.84).

From the results, the respondents agreed that the organizational strategies are consistent with the other organization's positions (M=4.25, SD=0.76). In addition, the respondents agreed that our firm delivers special products/services flexibly according to customers' orders (M=3.83, SD=0.82). Further, the respondents agreed that the firm can quickly cope with market demands and develop new products and services (M=3.57, SD=0.88). The respondents also agreed that effective programs are in place to attract and retain the best IT professionals with technical and business skills (M=3.24, SD=0.95). The respondents agreed that individuals are responsible for collecting, assembling and distributing employees' suggestions internally (M=3.17, SD=0.73).

- *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 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**

From the results, the respondents agreed that the number of customers satisfied by our products has been rising each year (M=4.38, SD=0.801). In addition, the respondents agreed that the quality of our products has improved considerably (M=4.34, SD=0.874). Further, the respondents agreed that the sales volume has been increasing yearly (M=4.32, SD=0.764). The respondents also agreed that the organization's size has been expanding for the last five years (M=4.25, SD=0.86).

The respondents agreed that the geographical market size of our products has been expanding (M=4.21, SD=0.87). In addition, the respondents agreed that generally, the firm total Profits (Total sales – Costs) have been increasing yearly (M=4.21, SD=0.905). Further, the respondents agreed that the number of employees has increased yearly (M=4.14, SD=0.936). The respondents also agreed that the firm is highly satisfied with the borrowed money returns (ROE) (M=4.07, SD=0.764). The respondents also agreed that the firm is highly satisfied by the returns from assets invested (ROA) (M=4.05, SD=0.959).

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B. Correlation Analysis

Table 4: Correlation Coefficients

Variables	(1)	(2)	(3)	(4)	(5)	
(1) Performance of SMEs	1.000					
(5) innovation strategy	0.683***	0.818***	0.858***	0.874***	1.000	
*** p<0.01, ** p<0.05, * p<0.1						

The analysis revealed a strong correlation between innovation strategy and the performance of manufacturing SMEs in Kenya (r = 0.683). This correlation was statistically significant, with a p-value below the 1% significance level. These results are consistent with the findings of Minjeong and Sungyong (2021), who also observed a highly significant correlation between organizational innovation strategy and the performance of manufacturing SMEs. The study's conclusion emphasizes the pivotal role of formulating and executing a robust organizational innovation strategy in driving overall business performance, highlighting the strategic imperative of innovation for maintaining a competitive edge.

➢ *Test for Hypothesis Four*

The objective of the study was to find out innovation strategy has no significant role on performance of manufacturing SMEs in Kenya. The corresponding hypothesis was:

Ho_4: Innovation strategy has no significant role on performance of manufacturing SMEs in Kenya.

A univariate analysis was conducted to scrutinize the null hypothesis. As per the model summary provided in Table 4.24, the r-squared value for the relationship between organizational innovation strategy and the performance of manufacturing SMEs in Kenya was determined to be 0.467. This signifies that, within a 95% confidence interval, approximately 46.7% of the variation in the performance of manufacturing SMEs in Kenya can be attributed to changes in organizational innovation strategy. Therefore, organizational innovation strategy has the potential to account for 46.7% of the observed changes in the performance of manufacturing SMEs in Kenya. Nevertheless, the remaining 53.3% variation in the performance of manufacturing SMEs in Kenya suggests that other factors beyond organizational innovation strategy play a role in explaining performance within this context.

Table 5: Model Summary for innovation strategy

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.683[a]	.467	.464	5.12035
a. Predictors: (Constant), innovation strategy				

The analysis of variance (ANOVA) was utilized to evaluate the adequacy of the regression model in fitting the data. Based on the ANOVA findings presented in Table 4.5, it was observed that the Prob>F value of 0.000 was below the chosen significance level of 0.05. This indicates that the model, as formulated, was indeed appropriate for predicting the performance of manufacturing SMEs in Kenya. Furthermore, the calculated F-value obtained from the table (133.249) exceeded the critical F-value derived from the F-distribution tables (3.924). This supports the conclusion that innovation strategy can effectively forecast the performance of manufacturing SMEs in Kenya.

Table 6: ANOVA for Innovation strategy

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3493.522	1	3493.522	133.249	.000[b]
	Residual	3985.134	152	26.218		
	Total	7478.656	153			
a. Dependent Variable: Performance of manufacturing SMEs in Kenya						
b. Predictors: (Constant), innovation strategy						

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

$Y = 0.142 + 0.411\ X_4$

(X_4 is Information Technology communication)

Upon conducting coefficient analysis, it was revealed that the constant exhibited a coefficient of 10.777. This suggests that if the innovation strategy were to remain constant at zero, the performance of manufacturing SMEs in Kenya would reach 10.777 units. Furthermore, the results indicated that the

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coefficient for organizational innovation strategy stood at 0.635. This implies that a one-unit increase in organizational innovation strategy would result in a 0.635-unit enhancement in the performance of manufacturing SMEs in Kenya. Remarkably, the p-value for organizational innovation strategy was determined to be 0.000, which falls below the predetermined significance level of 0.05. This signifies that the innovation strategy holds statistical significance.

Based on these findings, the study rejected the null hypothesis and accepted the alternative hypothesis, concluding that innovation strategy has a positive and significant influence on the performance of manufacturing SMEs in Kenya.

Table 7: Beta Coefficients for innovation strategy

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.777	2.762		3.902	.000
	OIS	.635	.055	.683	11.543	.000
a. Dependent Variable: performance of manufacturing SMEs in Kenya						

VII. CONCLUSIONS AND RECOMMENDATIONS

A. Conclusions

The study also concludes that innovation strategy has a positive and significant effect on the performance of manufacturing SMEs in Kenya. The study revealed that new products, new markets, and product development influence the performance of manufacturing SMEs in Kenya. This implies that improving innovation strategy (new products, new markets, and product development) would improve manufacturing SMEs' performance in Kenya.

B. Recommendations

The study recommends that the management of manufacturing SMEs should encourage a culture of innovation within manufacturing SMEs by fostering an environment that values creativity, experimentation, and risk-taking. This could involve establishing innovation labs, organizing brainstorming sessions, and providing incentives for innovative ideas. In addition, allocate resources towards R&D activities to drive the development of new products and processes.

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