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THE MODERATING EFFECT OF ENVIRONMENTAL DYNAMISM IN THE RELATIONSHIP BETWEEN INNOVATION CAPABILITY AND PERFORMANCE OF MANUFACTURING FIRMS IN NAIROBI CITY COUNTY, KENYA

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ABSTRACT

The manufacturing sector is well known for its significance in upholding the economic prosperity of many nations. However, the manufacturing sector's contribution to the gross domestic product has been consistently falling across the last few years, giving rise to fears of a premature de-industrialization phenomenon in Kenya. A growing research literature posits that the innovation capability can be considered a theoretical answer to the question of how organizations in various industries are able to achieve and sustain superior performance in turbulent environments. However, scholars still lack a complete understanding of the specific innovation capability that sustain superior firm performance over time in the dynamic environment. The purpose of this study was to examine the moderating effect of environmental dynamism in the relationship between innovation capability and performance of manufacturing firms in Nairobi City County, Kenya. The study employed the correlational, cross-sectional survey research design. The proportionate stratified random sampling technique was used to select a sample size of 228 manufacturing firms from a target population of 526 manufacturing firms in Nairobi City County, Kenya. The Pearson's product moment correlation analysis results indicated that product innovation capability, process innovation capability, marketing innovation capability and technological innovation capability had positive and significant relationship with performance of manufacturing firms in Nairobi City County, Kenya. The standard multiple regression results showed that product innovation capability, process innovation capability, marketing innovation capability and technological innovation capability had a positive and significant effect on performance of manufacturing firms in Nairobi City County, Kenya. The moderated multiple regression results showed that environmental dynamism had a significant moderating effect on the relationship between innovation capability and performance of manufacturing firms in Nairobi City County, Kenya. The study recommended that it is imperative for the managers to implement innovation capability and strategically manage the environmental dynamism to foster the performance of manufacturing firms. Policy makers should consider initiating policy review to encourage stakeholders to implement innovation capability and strategically manage the environmental dynamism to foster the performance of manufacturing firms. The study pointed to several intriguing paths for future research.

Key Terms: *Environmental Dynamism, Innovation Capability, Firm Performance, Marketing Innovation Capability, Process Innovation Capability*

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INTRODUCTION

The COVID-19 pandemic has had a direct impact on the manufacturing sector in Kenya, because all economic activities had to be suspended for some time. The rapid changes in the global environment and the effects of existing economic issues triggered by COVID-19 and the war in Ukraine have posed several challenges for manufacturing firms (Hashem & Aboelmaged, 2023). Some SMEs in the manufacturing sector have been struggling to survive and scale up, due to a host of factors (Albloushi, Alharmoodi, Jabeen, Mehmood, & Farouk, 2023). The manufacturing sector's contribution to the gross domestic product (GDP) has been consistently falling across the last few years (Sinha, Mishra, Manogna, & Prabhudesai, 2023). The Kenya's manufacturing sector's contribution to GDP has significantly declined giving rise to fears of a premature de-industrialization phenomenon (Mungai & Ndiritu, 2023). Therefore, in order to succeed, manufacturing firms must undertake new initiatives to innovate to attain sustainable business growth and performance during the COVID-19 pandemic.

In a global context of change and uncertainty, the innovation capability of organizations is the key to their sustained development (Larios-Francia & Ferasso, 2023). In this regard, innovation is considered the most valuable and inevitable knowledge-based intangible resource for the survival, competitiveness and long-term sustainability of enterprises (González-Ramos, Guadamillas, & Donate, 2023; Odhiambo, 2022). Innovation has become an indispensable tool for organizations to gain competitive advantage (Bange, 2022; Latip, Sharkawi, & Mohamed, 2021), venture into new markets and survive in such a competitive atmosphere (Kaur & Kaur, 2021; Leppänen, George, & Alexy, 2023). Existent literature posits that innovation plays an important role in the development of companies and nations (Henao-García & Cardona Montoya, 2023; Oketch, 2023). With increasing global competition, innovation capability plays a vital role in boosting firm performance (Issak & Odollo, 2023; Valdez-Juárez, Ramos-Escobar, & Borboa-Álvarez, 2023). In this regard, innovation capability has become a key indicator of national progress. However, measuring innovation capability is challenging (Gyedu, Heng, Ntarmah, He, & Frimppong, 2021).

In Peru and Colombia, Larios-Francia and Ferasso (2023) empirically analyzed the relationship between innovation and firm performance of micro, small and medium-sized enterprises (MSMEs) in the wearing apparel sector. The results showed that product innovation and business process innovation, explained 47.1 % of organizational performance, 41.0 % of economic performance, 39.5 % of commercial performance and 36.9 % of productive performance. However, the findings indicated that product innovation was not a significant predictor of productive or organizational performance in emerging countries.

In Tanzanian context, Ringo, Kazungu, and Tegambwage (2023) examined the effect of innovation Capability on export performance in manufacturing SMEs. The findings indicated that innovation Capability had a positive and significant effect on export performance of manufacturing SMEs. Additionally, the findings indicated that marketing innovation capability had a significant moderating effect in the relationship between innovation Capability and export performance of manufacturing SMEs.

In the Kenyan context, there remains a paucity of empirical research on innovation Capability and firm performance. In the context of the manufacturing sector, Were (2021) examined the effect of innovation capability on firm performance in the furniture manufacturing firms in Kenya. The findings indicated that innovation capability had a positive and statistically significant effect on firm performance. However, the results showed that firm size and firm age had insignificant moderating effect on the relationship between innovation capability and firm performance. The study revealed that innovation capability has a great impact on the overall firm performance.

In Thika, Wachira, Ngugi, and Nyang'au (2022) examined the influence of innovation capability on performance of small and medium enterprises in Kenya. The study was anchored on the innovation diffusion theory. The findings indicated that innovation capability had a positive and significant influence on the performance of small and medium enterprises.

In the context of the banking industry, Issak and Odollo (2023) examined the effect of innovation practices on performance of Islamic banks in Nairobi County. The purpose of the study was to investigate the effect of product innovation practices, process innovation practices, technological innovation practices and market innovation practices on the performance of Islamic banks in Kenya. The results indicated that product innovation practices, process innovation practices, technological innovation practices and market innovation practices had positive and significant effect on the performance of Islamic banks in Kenya.

In Nairobi City County, Mugambi and Kinyua (2020) examined the role of innovation capability on firm performance in the context of commercial banks in Kenya. The target population of the study encompassed employees of 42 commercial banks operating in Nairobi City County. The study revealed that innovation capability had a positive and significant effect on firm performance.

In Kenya, the manufacturing sector remains an important strategy for seeking to boost economic outcomes. Kenya envisioned to fast-track its economic growth by increasing the manufacturing sector's contribution from 8% to 15% by 2022 (Macharia *et al.*, 2022). The Vision 2030, the Kenya Industrial Transformation Programme (KITP) and most recently Big 4 Agenda have all been designed by the Government to revamp the manufacturing sector (Cheronoh & Rono, 2021). However, the manufacturing sector's share of gross domestic product (GDP) has remained stagnant with only limited increases in the last three decades, contributing an average of 10% from 1964-73 and rising marginally to 13.6% from 1990-2007 and averaging below 10% in recent years (Kipkirui & Kimungunyi, 2022). The manufacturing sector in Kenya has faced significant challenges in the last 15 years, which has seen its contribution to GDP drop significantly giving rise to fears of a premature de-industrialization phenomenon (Mungai & Ndiritu, 2023).

Statement of the Problem

In today's business environment, contributions made by the manufacturing sector to the economy and social development is evident. In Kenya, the manufacturing sector has a huge contribution to the economic development (Mungai & Ndiritu, 2023). It is a crucial engine for sustaining economic growth and development, job creation and poverty alleviation (Baariu *et al.*, 2021). The Vision 2030, the Kenya Industrial Transformation Programme and most recently Big 4 Agenda have all been designed by the Government to revamp the manufacturing sector (Cheronoh & Rono, 2021; Mbudzya *et al.*, 2022). However, there is growing concern about the performance of the manufacturing sector. Despite the interventions put in place in Kenya to foster SMEs in manufacturing sector, the performance has been poor (Kiiru *et al.*, 2023; Were, 2021). In Kenya, the manufacturing sector's contribution to GDP has significantly declined across the last few years, giving rise to fears of a premature de-industrialization phenomenon (Mungai & Ndiritu, 2023). Like many other developing countries, Kenya has not managed to develop a robust manufacturing sector and growth has been primarily driven by the agriculture and services sectors respectively (Macharia *et al.*, 2022; Kipkirui & Kimungunyi, 2022).

A growing body of literature suggests that innovation Capability play a vital role in boosting firm performance (Ayinaddis, 2023; Issak & Odollo, 2023; Valdez-Juárez *et al.*, 2023; Wijaya & Rahmayanti, 2023). However, the empirical literature has sparked scholarly discussions on innovation Capability and firm performance, which appear to point in several directions (Aslam *et al.*, 2023). The existing empirical studies on innovation Capability and firm performance has produced mixed or inconsistent results (Dwikat *et al.*, 2022). The role of innovation capability in improving firm performance, especially during the COVID-19 pandemic, still needs to be identified further (Rumanti, Rizana, Septiningrum, Reynaldo, & Isnaini, 2022). There is a need to study how environmental dynamism affects the links between innovative capability and firm performance manufacturing in developing countries (Ruba *et al.*, 2023).

Research Objectives

The general objective of this study was to examine the moderating effect of environmental dynamism on the effect of innovation capability and performance of manufacturing firms in Nairobi City County, Kenya.

Specific Objectives

- To determine the effect of product innovation capability on performance of manufacturing firms in Nairobi City County, Kenya.
- To establish the effect of process innovation capability on performance of manufacturing firms in Nairobi City County, Kenya.
- To assess the effect of marketing innovation capability on performance of manufacturing firms in Nairobi City County, Kenya.
- To establish the effect of technological innovation capability on performance of manufacturing firms in Nairobi City County, Kenya.
- To examine the moderating effect of environmental dynamism in the relationship between innovation Capability and performance of manufacturing firms in Nairobi City County, Kenya.

In total, five null hypotheses were tested:

- $H_0$1: Product innovation capability has no significant effect on performance of manufacturing firms in Nairobi City County, Kenya.
- $H_0$2: Process innovation capability has no significant effect on performance of manufacturing firms in Nairobi City County, Kenya.
- $H_0$3: Market innovation capability has no significant effect on performance of manufacturing firms in Nairobi City County, Kenya.
- $H_0$4: Technological innovation capability has no significant effect on performance of manufacturing firms in Nairobi City County, Kenya.
- $H_0$5: Environmental dynamism has significant moderating effect on the relationship between innovation Capability and performance of manufacturing firms in Nairobi City County, Kenya.

LITERATURE REVIEW

Theoretical Framework

The study was guided by the following theoretical framework

Resource Based View Theory

The study uses the resource-based view (RBV) theory as the underpinning theory for its research model. The Resource based-view (RBV) theory (Barney, 1991; Penrose, 1959) points that firms' competitiveness even in the same industry varies based on a firm's resources and Capability (Zulkiffli *et al.*, 2022). Consistent with Were (2021), the study uses the RBV theory to explain the effect of innovation Capability on firm performance. The RBV theory emerged in the 1980s, when a number of strategic-management scholars (Peteraf, 1993; Rumelt, 1984; Wernerfelt, 1984) began theorizing that a firm earns rents from leveraging its unique resources (Teece, 2023). The theorists opine that such unique resources are difficult to monetize directly through contracting arrangements that would allow other firms to utilize the resources in exchange for service fees (Chatterjee, Chaudhuri, Vrontis, & Thrassou, 2023). The RBV theory (Barney, 1986; Barney, Ketchen Jr, & Wright, 2011) describes resources, competitive advantage, and Capability as the factors that give a company the ability to be more competitive (Chatterjee *et al.*, 2023). From the perspective of the RBV, a firm that meets the criteria of value, rarity, inimitability, and non-substitutability, can gain a long-term competitive advantage and superior firm performance (Alvarez, Newman, Barney, & Plomaritis, 2023).

The RBV theory places an emphasis on the firm's resources heterogeneity, and seeks to answer how firms should deploy resources to attain and secure competitive advantage (Chatterjee *et al.*, 2023). In order to sustain a company's competitive advantage, competitive Capability become the focus of the RBV (Zulkiffli *et al.*, 2022). The RBV theory of strategic management was introduced by Penrose (1959) as being the inside-out perspective of firm as a pool of resources attributing to its competitive advantage (Were, 2021). In this regard,

Penrose (1959) sets the foundation of the RBV theory by considering a firm as a collection of resources, and that the heterogeneity of productivity derived from the resources differentiates firms from each other (Alvarez *et al.*, 2023).

A deeper understanding on how business performance can be sustained and how a competitive edge can be established during the COVID-19 crisis by exploiting innovative Capability can be obtained by companies through the RBV theory (Chatterjee *et al.*, 2023). Therefore, the theoretical framework used to explain the effect of product innovation, process, marketing and technological innovation Capability on firm performance with environmental dynamism moderator is the RBV theory. The RBV theory argues that each company has varying resources with differences in resulting performances (Telagawathi, Yasa, Giantari, & Ekawati, 2022). An understanding of whether innovation Capability can lead to firm performance that can be sustained can be achieved in this study with the help of the RBV theory (Zulkiffli *et al.*, 2022).

Despite the broad application of the RBV theory in multiple disciplines, it has attracted certain criticisms. The criticisms relate to the tautology in the RBV theory given that resources that generate competitive advantage defined by their ability to generate competitive advantage (Chatterjee *et al.*, 2023). The criticisms pertain to the insufficient attention on the role of valuable, rare, inimitable, and no substitutable resources in addressing firm growth, in addition to competitive advantage (Alvarez *et al.*, 2023). The criticisms pertain to the static nature of the theoretical arguments espoused by the RBV theory (Teece, 2023). Addressing the criticisms of the RBV theory led to the evolution of the dynamic Capability view theory.

Innovation Diffusion Theory

The innovation diffusion (IDT) theory (Rogers, 1962; Zahra & George, 2002) is one of the oldest social science theories (Kamin, 2021). The study uses the IDT theory as a relevant theoretical framework to explain the effect of innovation Capability on performance of manufacturing firms in Nairobi City County, Kenya. Anchored on the IDT theory, Wachira, Ngugi, and Nyang'au (2022) examined the influence of innovation capability on performance of small and medium enterprises in Kenya. Existent research used the IDT theory as a relevant theoretical framework to explain innovation Capability as a mediator between business analytics and firm performance (Alaskar, 2023). The IDT theory (Agarwal, 2000) is a popular theoretical framework, because it explains how potential users form opinions about whether or not to adopt a given innovation (Kamboj & Sharma, 2023). The IDT theory (Verma & Chaurasia, 2019) originated in communication to explain how, over time, an idea or product gains momentum and diffuses or spreads through a specific population or social system (Fang, Liu, Xiao, & Park, 2023).

The IDT theory proposes that people who adopt an innovation early have different characteristics than people who adopt an innovation later (Fang *et al.*, 2022). Existent literature posits that the end result of the innovation diffusion is that people, as part of a social system, adopt a new idea, behavior, or product (Kamboj & Sharma, 2023). In this regard, the adoption means that a person does something differently than what they had previously, that is, purchase or use a new product, acquire and perform a new behavior (Gharaibeh, Gharaibeh, & De Villiers, 2020). According to the IDT theory, the key to adoption is that the person must perceive the idea, behavior, or product as new or innovative. It is through this that diffusion is possible (Al-Rahmi *et al.*, 2021).

The IDT theory suggest that there are five established adopter categories, namely innovators, early adopters, early majority, late majority and laggards (Park, Yu, Menassa, & Kamat, 2023). Therefore, it is still necessary to understand the characteristics of the target population as the majority of the general population tends to fall in the middle categories (Alaskar, 2023). The IDT theory postulates that when promoting an innovation to a target population, it is important to understand the characteristics of the target population that will help or hinder adoption of the innovation.

The IDT theory proposes that innovation is anything deemed novel by individuals or groups who adopt it (Park *et al.*, 2023). In this regard, the IDT theory suggests that the adoption of a new idea, behavior, process, technology, or product or innovation does not happen simultaneously in a social system, but rather is a process whereby some people are more apt to adopt the innovation than others (Al-Rahmi *et al.*, 2021). Therefore, the IDT theory is the relevant theoretical grounding to explain the effect of product innovation capability, process innovation capability, marketing innovation capability and technological innovation capability on performance of manufacturing firms in Nairobi City County, Kenya.

Service-Dominant Logic Theory

This study uses the service-dominant logic (SDL) theory to explain the effect of innovation Capability on performance of manufacturing firms in Nairobi City County, Kenya. The SDL theory (Vargo & Lusch, 2004, 2008, 2017) explains how companies with good innovation Capability can capture, create, and deliver good value to customers in order to improve their performance (Mitariani *et al.*, 2023). The SDL theory (Lusch, Vargo, & O'brien, 2007; Prahalad, 2004; Williams & Aitken, 2011) states that humans basically apply their competencies to benefit others and reciprocally benefit from competencies applied by others (Wijaya & Rahmayanti, 2023). The SDL theory (Navarro, Andreu, & Cervera, 2014) demonstrates that innovation is very important to the development of a globally integrated market associated with the emergence of new technologies and competition (Telagawathi *et al.*, 2022).

The SDL theory also provides a basis for the thinking that products need to provide appropriate value for the target customers and those with more appropriate value are expected to generate better interest (Helmefalk, Palmquist, & Rosenlund, 2023). Moreover, the SDL theory suggests that firms should not be static in offering value propositions or services in a dynamic environment, thereby, making service innovation very important (Telagawathi *et al.*, 2022). The SDL theory demonstrates that innovation capability of a company can be described as the capacity to develop innovation continuously in response to a changing environment (Barrios, Camacho, & Estrada-Mejia, 2023). The SDL theory explains how firms with dynamic product innovation, process, marketing and technological innovation Capability can capture, create, and deliver good value to customers in order to improve their performance (Mitariani *et al.*, 2023). Therefore, the SDL theory is a relevant theoretical framework that can be used to explain the effect of product innovation, process, marketing and technological innovation Capability on performance of manufacturing firms in Nairobi City County, Kenya.

Conceptual Framework

The conceptual framework illustrates that product innovation capability, process innovation capability, marketing innovation capability and technological innovation capability are conceptualized as the independent variables. However, the conceptual framework suggests that firm performance is conceptualized as the dependent variable. Furthermore, environmental dynamism is conceptualized as the dependent variable.

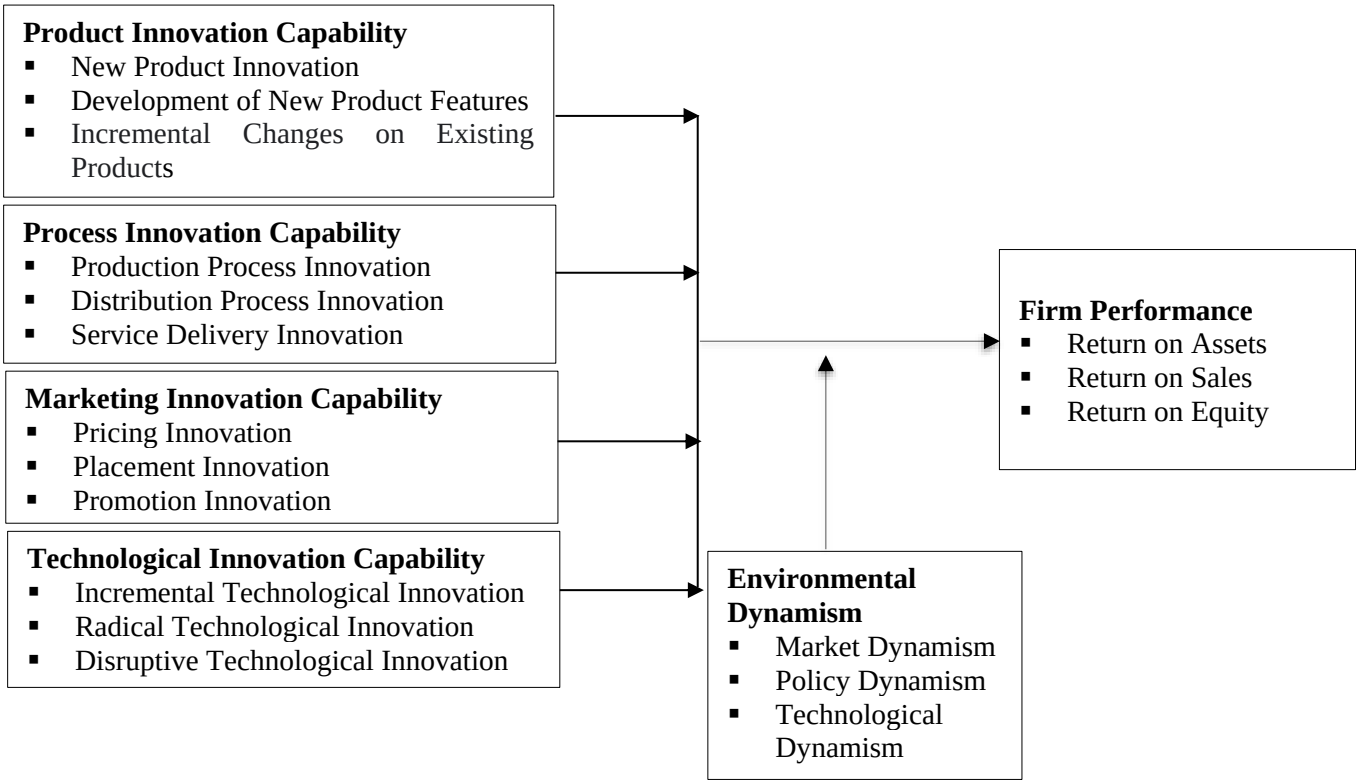

Figure 1: Conceptual Framework

Review of Literature on Variables

Product Innovation Capability

Product innovation capability is the firm's ability of creating a new product or improving an existing one product to meet customers' needs in a novel way. Existent literature posits that product innovation capability is the firm's capacity of developing and adapting new products able to satisfy market needs (Zastempowski, 2022). Product innovation refer to the introduction of new products or services to the market (Issak & Odollo, 2023). Scholars opine that product innovation capability the ability to continuously transform knowledge and ideas into new products, processes and systems for the benefit of a firm and its stakeholders (Thoumrungroje & Racela, 2022). Product innovation capability is the firm's ability to create better or more effective products that are accepted by markets, governments and society (). Existent literature posits that product innovation is the launch of a new or improved good or service (Aslam *et al.*, 2022).

Process Innovation Capability

Process innovation capability is the firm's ability to reinforce and extend existing processes through implementation of a new or significantly improved production method or service delivery method (Wongsansukcharoen & Thaweepaiboonwong, 2023). Extant literature posits that process innovation capability is the firm's capacity of introducing new and enhanced method of production or service delivery (Issak & Odollo, 2023). In this regard, process innovation involves small, incremental improvements coming from employees and not necessarily managers (Gyedu *et al.*, 2021).

Marketing Innovation Capability

Marketing innovation capability is the firm's ability to implement a new or significantly-improved marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing (Dwivedi & Pawsey, 2023). It is the firm's ability to use its existing resources to implement marketing

and other related tasks so as to achieve the desired marketing objectives. Besides, marketing innovation capability is the firm's capacity of developing and adapting new products able to satisfy market needs (Zastempowski, 2022). Scholars opine that product innovation capability the ability to continuously transform knowledge and ideas into new products, processes and systems for the benefit of a firm and its stakeholders (Thoumrungroje & Racela, 2022). Product innovation capability is the firm's ability to create better or more effective products that are accepted by markets, governments and society (Wongsansukcharoen & Thaweepaiboonwong, 2023). Marketing innovation may include a new marketing method where substantial changes are incorporated regarding packaging, product placement, or promotion (Aslam *et al.*, 2022).

Technological Innovation Capability

Technological innovation capability is a comprehensive and synergistic capability based on technological innovation (Gheitarani, Guevara, Nawaser, & Jahanshahi, 2022). Scholars opine that technological innovation capability is a firm's ability to deal with the technological innovation's mechanism and relationship issues from input to output (Fan, Huang, & Xiong, 2023). Technological innovation practices are considered as a process which is science, technology and systems are incorporated into firm's processes to improve its overall performance (Issak & Odollo, 2023). The technological innovation Capability are abilities to adapt to unexpected technological change, develop new products and use new technological processes in order to meet current and expected future needs (Su, Mou, & Zhou, 2023). Extant literature posits that technological innovation Capability make it possible for firms to response to changes rapidly and to acquire technological innovation strategies and innovative outputs (Tu, Zhang, Sun, & Mao, 2023).

Environment Dynamism

Environmental dynamism is the extent of unpredictable and instable variations in a business environment (Ruba *et al.*, 2023). Furthermore, environmental dynamism is the level of uncertainty or volatility observed in a business environment (Yu, Tao, Hanan, Ong, Latif, & Ali, 2022). Environmental dynamism is also the unpredictable frequency of external environmental changes (Gambacorta, Natarajan, & Saal, 2021). Recently, the environment has become increasingly dynamic, characterized by hyper turbulence and high-velocity (Chen, Wang, Shen, Tan, Matac, & Samad, 2022). From a contingency perspective, the dynamism and stability of the business environment are decisive elements that determining the firm performance (Ogaga, Ezenwakwelu, Isichei, & Olabosinde, 2022).

Firm Performance

Firm performance is the set of financial and nonfinancial indicators which provide information on the degree of achievement of set goals and objectives (Úbeda-García *et al.*, 2021). Extant literature posits that performance usually refers to financial parameters such as profitability, market share, and growth rate (Walter, 2021). However, firms that want to survive in the competition should also consider non-financial indicators such as employee performance, job satisfaction, learning, and quality (Rodrigues, Ruivo, & Oliveira, 2021). In this regard, there are different dimensions of performance that have been used in the literature regarding firm performance measurement (Yoo, 2021).

In the strategic management research, firm performance has been recognized as a relevant construct. Extant literature posits that firm performance has been frequently recognized as a dependent variable (Walter, 2021). Firm performance is intended to be comparable among different organizations. For instance, the financial performance indicators include revenue, profits, and return on capital, or others such as market share (Oudgou, 2021). However, an effective firm performance evaluation system includes financial performance measures and non- financial performance measures in order to evaluate the real firm performance (Rodrigues, Ruivo, & Oliveira, 2021). Scholars opine that financial performance measures only reveal past performance of an organization, which may not reflect the present or future state of a firm (Salehi & Arianpoor, 2021).

Empirical Review

In the Kenyan context, Issak and Odollo (2023) examined the effect of product innovation practices on performance of Islamic banks in Nairobi County. The results indicated that product innovation practices had positive and significant effect on the performance of Islamic banks in Kenya. The study provides empirical evidence that suggests that product innovation practices significantly predict firm performance.

In the context of Kosovo, Ramaj *et al.* (2022) analyzed the effect product innovation on the sales growth of manufacturing small and medium-sized enterprises (SMEs). The findings showed that product innovation had positive and significant effect on sales growth of manufacturing SMEs. The study provides empirical evidence on product innovation as a success key for manufacturing SMEs.

In the context of Thailand, Wongsansukcharoen and Thaweepaiboonwong (2023) examined the effect of process innovation capability on competitive advantage and performance of wholesale and retail SMEs. The findings indicated that process innovation capability had a positive and significant effect on competitive advantage of SMEs. The results showed that process innovation capability had a positive and significant effect on performance of SMEs.

In Tanzania, Ringo *et al.* (2023) examined the effect of process innovation on export performance in manufacturing SMEs. Additionally, the study investigated the moderating effect of marketing innovation capability in the relationship between innovation Capability and export performance of manufacturing SMEs. The results indicated that process innovation capability had a negative and significant effect on export performance of manufacturing SMEs. The findings indicated that marketing innovation capability had an insignificant moderating effect in the relationship between process innovation capability and export performance of manufacturing SMEs.

In the context of Ghana, Gyedu *et al.* (2021) examined the effect of marketing innovation on business performance in the telecommunication sector. The study used a quantitative survey and a sample size of 579 departmental heads, branch managers and permanent staff from the Greater Accra, Ashanti and Western Region in the Ghana telecommunication sector. The results indicated that marketing innovation had positive and significant effect on business performance.

In the Congolese context, Ruba *et al.* (2023) examined the moderating effect of environmental dynamism on the relationship between innovativeness and firm performance in manufacturing companies. The findings showed that innovativeness had a positive and significant effect on firm performance in manufacturing companies. However, the results indicated that environmental dynamism had a negative and significant moderating effect on the relationship between innovativeness and firm performance in manufacturing companies.

METHODOLOGY

Correlational, cross-sectional survey design was employed to examine the hypothesized non-causal relationships at a single point in time. The target population consisted of 526 manufacturing firms in Nairobi City County, Kenya. This was as per the Kenya Association of Manufacturers (KAM, 2023)'s data base as at 31st March 2023. The unit of analysis was the manufacturing firm, while the unit of observation was the chief executive officer of the manufacturing firm. The sampling frame consisted of the complete the list of the 526 manufacturing firms in Nairobi City County, Kenya (Appendix III). This was as per the Kenya Association of Manufacturers (KAM, 2023)'s data base as at 31st March 2023. The study utilized the Yamane (1967)'s formula to determine the sample size and verify that the sample size is sufficiently large (Bell *et al.*, 2022). The sample size consisted of 228 manufacturing firms in Nairobi City County, Kenya, at a 5% significance level. As the target population was heterogeneous, the proportionate stratified random sampling technique was used to select a sample size of 228 manufacturing firms from a target population of 526 manufacturing firms in Nairobi City County, Kenya.

A structured self-administered questionnaire was used as the means of collecting primary data, because of its ability to collect a large amount of information in a reasonably quick span of time.
Data processing was conducted before proceeding with data analysis. The collected data was checked for accuracy, completeness and consistency. The data was coded, edited, and entered into the Statistical Package for Social Sciences (SPSS) version 26 to create a data sheet that was used for data analysis. Descriptive analysis of the collected data was conducted to compute, summarize the data in respect to each variable, and describe the sample's characteristics. The Pearson's product moment correlation analysis was performed to confirm or deny the relationship between the study variables. The standard multiple linear analysis was conducted with product innovation capability, process innovation capability, marketing innovation capability and technological innovation capability predicting firm performance. A moderated multiple linear analysis was performed to examine the moderating effect of environmental dynamism in the relationship between innovation capability and performance of manufacturing firms in Nairobi City County, Kenya.

The standard multiple linear regressions model was specified as:
$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$ ... Model 1
Where:
Y = Firm Performance
β_0 = Constant Term
X_1 = Product Innovation Capability
X_2 = Process Innovation Capability
X_3 = Marketing Innovation Capability
X_4 = Technological Innovation Capability
$\beta_1 - \beta_4$ = Regression Coefficients to be Estimated
ε = Stochastic Error Term

The moderated multiple linear analysis was specified as:
$Y = \beta_0 + \beta_5 X + \varepsilon$ ……. Model 2

$Y = \beta_0 + \beta_6 X + \beta_7 Z + \varepsilon$ ……. Model 3

$Y = \beta_0 + \beta_8 X + \beta_9 Z + \beta_{10} X*Z + \varepsilon$ ……. Model 4

Where:
Y = Firm Performance
β_0 = Constant Term
X = Innovation Capability
Z = Environmental Dynamism
X*Z = Innovation Capability * Environmental Dynamism
$B_5 - \beta_{10}$ = Regression Coefficient to be estimated
ε = Stochastic Error Term

FINDINGS

Correlation Analysis Results

The Pearson's product moment correlations analysis was performed to confirm or deny the relationships between the innovation Capability, environmental dynamism and performance of manufacturing firms in Nairobi City County, Kenya. The findings indicated that product innovation capability had a moderately strong positive and significant relationship with performance ($r = 0.557$, $p \leq 0.01$) of manufacturing firms in Nairobi City County, Kenya. The results showed that process innovation capability had a strong positive and significant

relationship with performance (r = 0.730, p ≤ 0.01) of manufacturing firms in Nairobi City County, Kenya. The findings indicated that marketing innovation capability had a strong positive and significant relationship with performance (r = 0.721, p ≤ 0.01) of manufacturing firms in Nairobi City County, Kenya. The results showed that technological innovation capability had a strong positive and significant relationship with performance (r = 0.707, p ≤ 0.01) of manufacturing firms in Nairobi City County, Kenya. The findings indicated that environmental dynamism had a moderately strong negative and significant relationship with performance (r = -0.458, p ≤ 0.01) of manufacturing firms in Nairobi City County, Kenya. Table 1 presented the Pearson's product moment correlations analysis results.

Table 1: The Pearson's Product Moment Correlations Results

Variable		X_1	X_2	X_3	X_4	Z	Y
Product Innovation Capability (X_1)	Pearson Correlation	1					
	Sig. (2-tailed)						
	n	141					
Process Innovation Capability (X_2)	Pearson Correlation	.478**	1				
	Sig. (2-tailed)	.000					
	n	141	141				
Marketing Innovation Capability (X_3)	Pearson Correlation	.298**	.535**	1			
	Sig. (2-tailed)	.000	.000				
	n	141	141	141			
Technological Innovation Capability (X_4)	Pearson Correlation	.353**	.517**	.509**	1		
	Sig. (2-tailed)	.000	.000	.000			
	n	141	141	141	141		
Environmental Dynamism (Z)	Pearson Correlation	-.022	-.252**	-.272**	-.428**	1	
	Sig. (2-tailed)	.800	.003	.001	.000		
	n	141	141	141	141	141	
Firm Performance (Y)	Pearson Correlation	.557**	.730**	.721**	.707**	-.458**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	n	141	141	141	141	141	141

****. Correlation is significant at the 0.01 level (2-tailed).**

Standard Multiple Linear Regressions Analysis Results

A standard multiple linear regression analysis was performed with firm performance as the dependent variable and product innovation capability, process innovation capability, market innovation capability and technological innovation capability as the predictor variables. The standard multiple linear regression analysis, α = .05 (two-tailed), was conducted to examine the extent to which, if any, of the linear combination of product innovation capability, process innovation capability, market innovation capability and technological innovation capability predict the on performance of manufacturing firms in Nairobi City County, Kenya. A standard multiple linear regression analysis is a powerful analytical tool used to determine which specific independent variables predicts the variance of dependent variable selected by the research (Kothari & Garg, 2019).

Model Summary

The standard multiple linear regression results showed that the model as a whole was able to significantly predict the variance in the firm performance, F (4, 140) = 130.439, p < 0.001, R^2 = 0.793, in manufacturing firms in Nairobi City County, Kenya. From the model summary table, the value of coefficient of correlation (R) was 0.891, while the value of coefficient of determination (R^2) was 0.793, the value of the adjusted R^2 was 0.787, the Std. Error of the Estimate value of 0.166, and the Durbin-Watson statistic was 2.179. The R^2 value of 0.793 indicates that the linear combination of predictor variables (product innovation capability, process innovation capability, market innovation capability and technological innovation capability) could significantly predict and explain approximately 79.3% of the variance in the performance of manufacturing firms in Nairobi City County, Kenya.

The Adjusted R Square value of 0.787 indicates that the model as a whole was able to significantly predict and explain approximately 78.7% of the variance in the performance of manufacturing firms in Nairobi City County, Kenya. However, the Std. Error of the Estimate value of 0.166 indicates that there are other factors not included in the model, in the current study that could also predict the remaining 24.6% of the variance in the performance of manufacturing firms in Nairobi City County, Kenya. Therefore, there in need for future research to discover the other variables not included in the model in the current study that also predict the remaining variance in the on performance of manufacturing firms in Nairobi City County, Kenya.

From the model summary table, the Durbin-Watson test statistic had a value of 2.179, falling within the optimum range of 1.5 to 2.5, implying that there was no severe autocorrelation detected in the in the residual values in the datasets. Existent literature posits that the Durbin-Watson statistics falling within the optimum range of 1.5 to 2.5 indicate that there is no severe autocorrelation detected in the in the residual values in the datasets (Hair *et al.*, 2020). Table 2 presented the standard multiple linear regression's model summary results.

Table 2: The Standard Multiple Linear Regression's Model Summary[b] Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.891[a]	.793	.787	.166	2.179

a. Predictors: (Constant), Technological Innovation Capability (X_4), Product Innovation Capability (X_1), Marketing Innovation Capability (X_3), Process Innovation Capability (X_2)

b. Dependent Variable: Firm Performance (Y)

Analysis of Variance

From the Analysis of Variance (ANOVA) table results, the overall multiple regression model (the model involving constant, product innovation capability, process innovation capability, market innovation capability and technological innovation capability), achieved a high degree of fit, as reflected by $F(4, 140) = 130.439$, $p < 0.001$. From the results, the model as a whole was able to significantly predict firm performance, $F(4, 140) = 130.439$, $p < 0.001$, $R^2 = 0.793$, in manufacturing firms in Nairobi City County, Kenya. This led to the rejection of the null hypothesis that postulated that the linear combination of predictor variables (product innovation capability, process innovation capability, market innovation capability and technological innovation capability) do not significantly predict the performance of manufacturing firms in Nairobi City County, Kenya. Therefore, the linear combination of predictor variables (product innovation capability, process innovation capability, market innovation capability and technological innovation capability) significantly predict the performance of manufacturing firms in Nairobi City County, Kenya. Table 3 presents the standard multiple linear regression's ANOVA results.

Table 3: The Standard Multiple Linear Regression's ANOVA[a] Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.302	4	3.575	130.439	.000[b]
	Residual	3.728	136	.027		
	Total	18.030	140			

a. Dependent Variable: Firm Performance (Y)

b. Predictors: (Constant), Technological Innovation Capability (X_4), Product Innovation Capability (X_1), Marketing Innovation Capability (X_3), Process Innovation Capability (X_2)

Regressions Coefficients

From the coefficients table, when the unstandardized regression coefficients (B) were substituted to the multiple regression model specified for the study, the final predictive equation was:

$$Y = 1.339 + 0.120X_1 + 0.162X_2 + 0.188X_3 + 0.200X_4$$

From the results, holding all factors in to account constant (product innovation capability, process innovation capability, market innovation capability and technological innovation capability), constant at zero, the performance of manufacturing firms in Nairobi City County, Kenya would be 1.339. The multiple regression suggests that with all other factors held constant, a unit increase in product innovation capability would lead to 0.120 unit increase in the performance of manufacturing firms in Nairobi City County, Kenya. The findings revealed that with all other factors held constant, a unit increase in process innovation capability would lead to 0.162 unit decrease in the performance of manufacturing firms in Nairobi City County, Kenya. The results also indicated that with all other factors held constant, a unit increase in marketing innovation capability would lead to 0.188 unit increase in the performance of manufacturing firms in Nairobi City County, Kenya. The findings further showed that with all other factors held constant, a unit increase in technological innovation capability would lead to 0.200 unit increase in the performance of manufacturing firms in Nairobi City County, Kenya. Based on the magnitude of the unstandardized regression coefficients (B) of the independent variables, the technological innovation capability, was the best predictor of the value of in the performance of manufacturing firms in Nairobi City County, Kenya. Based on the magnitude of the unstandardized regression coefficients (B) of the independent variables, the technological innovation capability, was the best predictor of the value of in the on performance of manufacturing firms in Nairobi City County, Kenya.

In the standard multiple linear regression model, product innovation capability had a positive and significant effect on the performance ($\beta_1 = 0.208$; $t = 4.636$; $p \leq 0.05$) of manufacturing firms in Nairobi City County, Kenya. The research findings showed that process innovation capability had a positive and significant effect on the performance ($\beta_2 = 0.283$; $t = 5.435$; $p \leq 0.05$) of manufacturing firms in Nairobi City County, Kenya. The findings revealed that marketing innovation capability had a positive and significant effect on the performance ($\beta_3 = 0.350$; $t = 7.174$; $p \leq 0.05$) of manufacturing firms in Nairobi City County, Kenya. The results further showed that technological innovation capability had a positive and significant effect on the performance ($\beta_4 = 0.309$; $t = 6.377$; $p \leq 0.05$) of manufacturing firms in Nairobi City County, Kenya. From the coefficients table, it is also clear that the tolerance values were greater than 0.1, while the variance inflation factors (VIF) values were less than 10, demonstrating that there was no multicollinearity among the predicator variables (Hair *et al.,* 2020). Table 4 presents the standard multiple regression coefficients results.

Table 4: The Standard Multiple Linear Regression's Coefficients[a] Results

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.339	.115		11.658	.000		
	Product innovation capability (X_1)	.120	.026	.208	4.636	.000	.756	1.322
	Process innovation capability (X_2)	.162	.030	.283	5.435	.000	.559	1.789
	Marketing innovation capability (X_3)	.188	.026	.350	7.174	.000	.640	1.563
	Technological innovation capability (X_4)	.200	.031	.309	6.377	.000	.646	1.547

a. Dependent Variable: Firm Performance (Y)

Moderated Multiple Linear Regressions Analysis Results

This section provides the results for the moderating effect of environmental dynamism in the relationship between innovation Capability and performance of manufacturing firms in Nairobi City County, Kenya.

Model Summary

From the model summary table, it is clear that the value of the coefficient of correlation (R) was 0.680 for model 1, suggesting a strong positive correlation between innovation Capability and the performance of manufacturing firms in Nairobi City County, Kenya. Additionally, the value of the coefficient of determination (R^2) was 0.463 for model 1, suggesting that innovation Capability could significantly predict and explain approximately 46.3% of the variance in the performance of manufacturing firms in Nairobi City County, Kenya. Moreover, the value of the adjusted R^2 was 0.459 for model 1, suggesting that innovation Capability significantly predicted approximately 45.9% of the variance in the performance of manufacturing firms in Nairobi City County, Kenya. Furthermore, the value of the Std. Error of the Estimate was 0.267 for model 1, suggesting that there are other factors not included in the model that could predict the remaining 54.1% of the variance in the performance of manufacturing firms in Nairobi City County, Kenya.

From the model summary table, it is clear that the value of the coefficient of correlation (R) was 0.820 for model 1, suggesting a strong positive correlation between the predictor variables (innovation Capability, environmental dynamism) and the performance of manufacturing firms in Nairobi City County, Kenya. Besides, the value of the coefficient of determination (R^2) was 0.672 for model 2, suggesting that the linear combination of predictor variables (innovation Capability, environmental dynamism) could significantly predict and explain approximately 67.2% of the variance in the performance of manufacturing firms in Nairobi City County, Kenya. Additionally, the value of the adjusted R^2 was 0.667 for model 2, suggesting that the linear combination of predictor variables (innovation Capability, environmental dynamism) significantly predicted approximately 66.7% of the variance in the performance of manufacturing firms in Nairobi City County, Kenya. Moreover, the value of the Std. Error of the Estimate was 0.207 for model 2, suggesting that there are other factors not included in the model that could predict the remaining 33.3% of the variance in the performance of manufacturing firms in Nairobi City County, Kenya.

From the model summary table, it is clear that the value of the coefficient of correlation (R) was 0.896 for model 3, suggesting a strong positive correlation between the predictor variables (constant, innovation Capability, environmental dynamism, innovation Capability * environmental dynamism) and the performance of manufacturing firms in Nairobi City County, Kenya. Additionally, the value of the coefficient of determination (R^2) was 0.803 for model 3, suggesting that the linear combination of predictor variables (constant, innovation Capability, environmental dynamism, innovation Capability * environmental dynamism) could significantly predict and explain approximately 80.3% of the variance in the performance of manufacturing firms in Nairobi City County, Kenya. Moreover, the value of the adjusted R^2 was 0.799 for model 3, suggesting that the linear combination of predictor variables (constant, innovation Capability, environmental dynamism, innovation Capability * environmental dynamism) could significantly predicted approximately 79.9% of the variance in the performance of manufacturing firms in Nairobi City County, Kenya. Furthermore, the value of the Std. Error of the Estimate was 0.161 for model 3, suggesting that there are other factors not included in the model that could predict the remaining 20.1% of the variance in the performance of manufacturing firms in Nairobi City County, Kenya.

From the model summary table, the Durbin-Watson test statistic had a value of 1.588, falling within the optimum range of 1.5 to 2.5, suggesting that there was no severe autocorrelation detected in the in the residual values in the datasets. Durbin-Watson statistics falling within the optimum range of 1.5 to 2.5 indicate that there is no severe autocorrelation detected in the in the residual values in the datasets (Hair *et al.*, 2020). Table 5 presents the model summary results.

Table 5: The Moderated Multiple Regression's Model Summary[d]

					Change Statistics					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.680[a]	.463	.459	.264	.463	119.686	1	139	.000	
2	.820[b]	.672	.667	.207	.209	88.023	1	138	.000	
3	.896[c]	.803	.799	.161	.131	91.645	1	137	.000	1.588

a. Predictors: (Constant), Innovation Capability (X)
b. Predictors: (Constant), Innovation Capability (X), Environmental Dynamism (Z)
c. Predictors: (Constant), Innovation Capability (X), Environmental Dynamism (Z), Innovation Capability * Environmental Dynamism (X * Z)
d. Dependent Variable: Firm Performance (Y)

Analysis of Variance

From the Analysis of Variance (ANOVA) table, the results indicated that model 1 (the model involving constant, and innovation Capability), achieved a high degree of fit, as reflected by R = 0.680, R^2 = 0.463, adj. R^2 = 0.459, F (1, 140) = 119.686, p< 0.001. the results revealed that model 1 (the model involving constant, and innovation Capability), as a whole was able to significantly predict firm performance, F (1, 140) = 119.686, p < 0.001, R^2 = 0.463, in manufacturing firms in Nairobi City County, Kenya. The results showed that innovation Capability significantly predicted the variance in the performance of manufacturing firms in Nairobi City County, Kenya.

From the Analysis of Variance (ANOVA) table, the results showed that model 2 (the model involving constant, innovation Capability, and environmental dynamism) achieved a high degree of fit, as reflected by R = 0.820, R^2 = 0.672, adj. R^2 = 0.667, F (2, 140) = 141.320, p< 0.001. The results indicated that model 2 showed a substantial improvement compared to model 1, and the model. The results showed that model 2 (the model involving constant, innovation Capability, and environmental dynamism), as a whole was able to significantly predict the performance, F (2, 140) = 141.320, p < 0.001, R^2 = 0.672, of manufacturing firms in Nairobi City County, Kenya. The regression results indicated that the linear combination of predictor variables (innovation Capability and environmental dynamism) significantly predicted on performance of manufacturing firms in Nairobi City County, Kenya.

From the ANOVA table results, the results indicated that model 3 (the model involving constant, innovation Capability, environmental dynamism, and innovation Capability * environmental dynamism) achieved a high degree of fit, as reflected by R = 0.896, R^2 = 0.803, adj. R^2 = 0.799, F (3, 140) = 186.645, p< 0.001. The results showed that model 3 as a whole (the model involving constant, innovation Capability, environmental dynamism, and innovation Capability * environmental dynamism) was able to significantly predict the performance, F (3, 140) = 186.645, p < 0.001, R^2 = 0.803, of manufacturing firms in Nairobi City County, Kenya. The moderated multiple regression results indicated that the linear combination of predictor variables (innovation Capability, environmental dynamism, and innovation Capability * environmental dynamism) significantly predicted on performance of manufacturing firms in Nairobi City County, Kenya. From the results, model 3 showed substantial improvement compared to model 1, suggesting that environmental dynamism had a significant moderating effect on the relationship between innovation Capability and performance of manufacturing firms in Nairobi City County, Kenya. Table 6 presents the moderated multiple linear regression's ANOVA results.

Table 6: The Moderated Multiple Regression's ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.342	1	8.342	119.686	.000[b]
	Residual	9.688	139	.070		
	Total	18.030	140			
2	Regression	12.115	2	6.057	141.320	.000[c]
	Residual	5.915	138	.043		
	Total	18.030	140			
3	Regression	14.485	3	4.828	186.645	.000[d]
	Residual	3.544	137	.026		
	Total	18.030	140			

a. Dependent Variable: Firm Performance (Y)
b. Predictors: (Constant), Innovation Capability (X)
c. Predictors: (Constant), Innovation Capability (X), Environmental Dynamism (Z)
d. Predictors: (Constant), Innovation Capability (X), Environmental Dynamism (Z), Innovation Capability * Environmental Dynamism (X * Z)

Regressions Coefficients

From the coefficients table, the unstandardized regression coefficients (B) were substituted to the regression coefficients that were to be estimated in the study to specify the final predictive equations. The regressions models for the testing the moderating effect of environmental dynamism on the relationship between innovation Capability and performance of manufacturing firms in Nairobi City County, Kenya had been specified as:

$Y = \beta_0 + \beta_5 X + \varepsilon$ ……. Model 2

$Y = \beta_0 + \beta_6 X + \beta_7 Z + \varepsilon$ ……. Model 3

$Y = \beta_0 + \beta_8 X + \beta_9 Z + \beta_{10} X*Z + \varepsilon$ … Model 4

Where:

Y = Firm Performance

β_0 = Constant Term

X = Innovation Capability

Z = Environmental Dynamism

X*Z = Innovation Capability * Environmental Dynamism

$B_5 – \beta_{10}$ = Regression Coefficient to be estimated

ε = Stochastic Error Term

Therefore, when the unstandardized regression coefficients (B) were substituted to the regression coefficients, the final predictive equations were:

$Y = 1.216 + 0.678X + \varepsilon$

$Y = 1.191 + 1.800X + -1.127Z + \varepsilon$

$Y = 8.661 + 0.233X + -3.282Z + 0.640X*Z$

From the coefficients table, it is clear that in model 1, the simple linear regressions results suggest that holding all factors in to account constant (innovation Capability, constant at zero, the performance of manufacturing firms in Nairobi City County, Kenya would be 1.216. The positive slope for innovation Capability, $\beta_6 = 0.678$ indicates that with all other factors held constant, a unit increase in innovation Capability would lead to 0.678 unit increase in the performance of manufacturing firms in Nairobi City County, Kenya.

From the coefficients table, it is clear that in model 2, the multiple regression results suggest that holding all factors in to account constant (innovation Capability, environmental dynamism, constant at zero, the performance of manufacturing firms in Nairobi City County, Kenya would be 1.191. The positive slope for innovation Capability, $\beta_7 = 1.800$ suggests that with all other factors held constant, a unit increase in innovation Capability would lead to 1.800 unit increase in the performance of manufacturing firms in Nairobi City County,

Kenya. However, the negative slope for environmental dynamism, $\beta_8 = -1.127$ suggests that with all other factors held constant, a unit increase in environmental dynamism would lead to 1.127 unit decrease in the performance of manufacturing firms in Nairobi City County, Kenya.

From the coefficients table, it is clear that for model 3, the moderated multiple linear regression results suggest that holding all factors in to account constant (innovation Capability, environmental dynamism, and innovation Capability * environmental dynamism, constant at zero, the performance of manufacturing firms in Nairobi City County, Kenya would be 8.661. The positive slope for innovation Capability, $\beta_8 = 0.233$ suggests that with all other factors held constant, a unit increase in innovation Capability would lead to 0.233 unit increase in the performance of manufacturing firms in Nairobi City County, Kenya. However, the negative slope for environmental dynamism, $\beta_9 = -3.282$ suggests that with all other factors held constant, a unit increase in environmental dynamism would lead to 3.282 unit decrease in the on performance of manufacturing firms in Nairobi City County, Kenya. The positive slope for the interactive term, innovation Capability*environmental dynamism, $\beta_{10} = 0.640$ indicates that with all other factors held constant, a unit increase in innovation Capability*environmental dynamism would lead to 0.640 unit increase in the performance of manufacturing firms in Nairobi City County, Kenya.

In the first step for the moderation testing, the composite independent variable (innovation Capability) was regressed on the dependent variable (performance) of manufacturing firms in Nairobi City County, Kenya. Therefore, model 1 was fitted with innovation Capability predicting performance of manufacturing firms in Nairobi City County, Kenya. For model 1, the simple linear regression results indicated that innovation Capability had a positive and significant effect on the performance ($\beta_5 = 0.680$; $t = 10.940$; $p \leq 0.05$) of manufacturing firms in Nairobi City County, Kenya.

In the second step for the moderation testing, the composite independent variable (innovation Capability) and the moderating variable (environmental dynamism) were regressed on the dependent variable (performance) of manufacturing firms in Nairobi City County, Kenya. For model 2, the multiple regression results showed that innovation Capability had a positive and significant effect on the performance ($\beta_6 = 1.806$; $t = 13.943$; $p \leq 0.05$) of manufacturing firms in Nairobi City County, Kenya. However, the multiple regression results indicated that environmental dynamism had a negative significant effect on the performance ($\beta_7 = -1.215$; $t = -9.382$; $p \leq 0.05$) of manufacturing firms in Nairobi City County, Kenya.

For model 3, the moderated multiple linear regression results showed that innovation Capability had positive and significant effect on the performance ($\beta_8 = 0.306$; $t = 4.455$; $p \leq 0.05$) of manufacturing firms in Nairobi City County, Kenya. However, the results indicated that environmental dynamism had a negative and significant effect on the performance ($\beta_9 = -3.538$; $t = -13.470$; $p \leq 0.05$) of manufacturing firms in Nairobi City County, Kenya. The moderated multiple linear regression results showed that the interactive term, innovation Capability * environmental dynamism had a positive and significant effect on the performance ($\beta_{10} = 4.536$; $t = 9.573$; $p \leq 0.05$) of manufacturing firms in Nairobi City County, Kenya. Therefore, environmental dynamism had a significant moderating effect on the relationship between innovation Capability and performance of manufacturing firms in Nairobi City County, Kenya.

Table 7 presents the moderated multiple linear regression coefficients results.

Table 7: The Moderated Multiple Regressions Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.216	.243		4.997	.000		
	Innovation Capability (X)	.678	.062	.680	10.940	.000	1.000	1.000
2	(Constant)	1.191	.191		6.239	.000		
	Innovation Capability (X)	1.800	.129	1.806	13.943	.000	.245	4.086
	Environmental Dynamism (Z)	-1.127	.120	-1.215	-9.382	.000	.214	4.673
3	(Constant)	8.661	.794		10.904	.000		
	Innovation Capability (X)	.233	.052	.306	4.455	.000	.197	5.067
	Environmental Dynamism (Z)	-3.282	.244	-3.538	-13.470	.000	.238	4.020
	Innovation Capability * Environmental Dynamism (X * Z)	.640	.067	4.536	9.573	.000	.229	4.367

a. Dependent Variable: Firm Performance (Y)

Hypotheses Test Results

In total, five null hypotheses were tested to examine the direct and the indirect of innovation Capability on firm performance. The $H_0$1, $H_0$2, $H_0$3 and $H_0$4 were on the direct effect of innovation Capability on firm performance. However, $H_0$5 was on the direct effect of innovation Capability on firm performance, with environmental dynamism as the moderator. The standardized regression coefficient (β), the corresponding t-values, and P-values were used to test the $H_0$1, $H_0$2, $H_0$3 and $H_0$4 at 95% confidence level, $\alpha = 0.05$, and $t = 1.960$ to statistically help draw acceptable and realistic inferences. Therefore, the decision rule was to reject the null hypothesis H_0i if the $P \leq 0.05$, and otherwise fail to reject the null hypothesis H_0i if the $P > 0.05$. Existent literature posits that in hypotheses testing at 5% level of significance ($\alpha = 0.05$) and 95% confidence level, the decision rule is to reject the null hypothesis H_0i if the $P \leq 0.05$, and otherwise fail to reject the null hypothesis H_0i if the $P > 0.05$ (Bryman & Bell, 2019).

Hypothesis One Test Results

The first null hypothesis ($H_0$1) predicted that showed that product innovation capability has no significant effect on performance of manufacturing firms in Nairobi City County, Kenya. The decision rule was to reject the null hypothesis $H_0$1 if the $\beta_1 \neq 0$, $t \geq 1.960$, $P \leq 0.05$, and otherwise fail to reject the null hypothesis $H_0$1 if the $\beta_1 = 0$, $t < 1.960$, $P > 0.05$. The standard multiple regression results showed that product innovation capability had a positive and significant effect on the performance ($\beta_1 = 0.208$; $t = 4.636$; $p \leq 0.05$) of manufacturing firms in Nairobi City County, Kenya. Consequently, the $H_0$1 was rejected, providing the empirical support for $H_1$1. Therefore, conclusion was made that product innovation capability has a significant effect on performance of manufacturing firms in Nairobi City County, Kenya.

Hypothesis Two Test Results

The second null hypothesis ($H_0$2) predicted that process innovation capability has no significant effect on performance of manufacturing firms in Nairobi City County, Kenya. The decision rule was to reject the null hypothesis $H_0$2 if the $\beta_2 \neq 0$, $t \geq 1.960$, $P \leq 0.05$, and otherwise fail to reject the null hypothesis $H_0$2 if the $\beta_2 = 0$, $t < 1.960$, $P > 0.05$. The standard multiple regression results revealed that process innovation capability had a positive and significant effect on the performance ($\beta_2 = 0.283$; $t = 5.435$; $p \leq 0.05$) of manufacturing firms in Nairobi City County, Kenya. Consequently, the $H_0$2 was rejected, providing the empirical support for $H_1$2.

Therefore, conclusion was made that process innovation capability has a significant effect on performance of manufacturing firms in Nairobi City County, Kenya.

Hypothesis Three Test Results

The third null hypothesis ($H_0 3$) predicted that marketing innovation capability has no significant effect on performance of manufacturing firms in Nairobi City County, Kenya. The decision rule was to reject the null hypothesis $H_0 3$ if the $\beta_3 \neq 0$, $t \geq 1.960$, $P \leq 0.05$, and otherwise fail to reject the null hypothesis $H_0 3$ if the $\beta_3 = 0$, $t < 1.960$, $P > 0.05$. The standard multiple regression results indicated that that marketing innovation capability had a positive and significant effect on the performance ($\beta_3 = 0.350$; $t = 7.174$; $p \leq 0.05$) of manufacturing firms in Nairobi City County, Kenya. Consequently, the $H_0 3$ was rejected, providing the empirical support for $H_1 3$. Therefore, conclusion was made that marketing innovation capability has a significant effect on performance of manufacturing firms in Nairobi City County, Kenya.

Hypothesis Four Test Results

The fourth null hypothesis ($H_0 4$) predicted that technological innovation capability has no significant effect on performance of manufacturing firms in Nairobi City County, Kenya. The decision rule was to reject the null hypothesis $H_0 4$ if the $\beta_1 \neq 0$, $t \geq 1.960$, $P \leq 0.05$, and otherwise fail to reject the null hypothesis $H_0 4$ if the $\beta_1 = 0$, $t < 1.960$, $P > 0.05$. The standard multiple regression results showed that technological innovation capability had a positive and significant effect on the performance ($\beta_4 = 0.309$; $t = 6.377$; $p \leq 0.05$) of manufacturing firms in Nairobi City County, Kenya. Therefore, the $H_0 4$ was rejected, providing evidence for the support of the $H_1 4$. Subsequently, conclusion was made that technological innovation capability has a significant effect on performance of manufacturing firms in Nairobi City County, Kenya.

Hypothesis Five Test Results

The fifth null hypothesis ($H_0 5$) predicted that environmental dynamism has no significant moderating effect on the relationship between innovation Capability and performance of manufacturing firms in Nairobi City County, Kenya. To test the $H_0 5$, a moderated multiple regression analysis was performed by regressing firm performance as the dependent variable with the innovation Capability, environmental dynamism, and the interactive innovation Capability*environmental dynamism as predictors.

In the first step for the moderation testing, the composite independent variable (innovation Capability) was regressed on the dependent variable (performance) of manufacturing firms in Nairobi City County, Kenya. Therefore, model 1 was fitted with innovation Capability predicting performance of manufacturing firms in Nairobi City County, Kenya. From the simple linear regression results, in model 1, innovation Capability had positive and significant effect on the performance ($\beta_5 = 0.680$; $t = 10.940$; $p \leq 0.05$) of manufacturing firms in Nairobi City County, Kenya.

In the second step for the moderation testing, the composite independent variable (innovation Capability) and the moderating variable (environmental dynamism) were regressed on the dependent variable (performance) of manufacturing firms in Nairobi City County, Kenya. With model 2, the results showed that innovation Capability had a positive and significant effect on the firm performance ($\beta_6 = 1.806$; $t = 13.943$; $p \leq 0.05$). However, environmental dynamism had a negative and significant effect on the performance ($\beta_7 = -1.215$; $t = -9.382$; $p \leq 0.05$) of manufacturing firms in Nairobi City County, Kenya.

In the third step for the moderation testing, the composite independent variable (innovation Capability) and the moderating variable (environmental dynamism) and the interaction term (innovation Capability * environmental dynamism) were regressed on firm performance. From the moderated multiple linear regression results in model 3, innovation Capability had a positive and significant effect on the performance ($\beta_8 = 0.306$; $t = 4.455$; $p \leq 0.05$) of manufacturing firms in Nairobi City County, Kenya. However, environmental dynamism had a negative and significant effect on the performance ($\beta_9 = -3.538$; $t = -13.470$; $p \leq 0.05$) of manufacturing firms in Nairobi City County, Kenya. The moderated multiple linear regression results showed that the interactive term,

innovation Capability*environmental dynamism, had a positive and significant effect on the performance (β_{10} = 4.536; t = 9.573; $p \leq 0.05$) of manufacturing firms in Nairobi City County, Kenya. Therefore, the $H_0$5 was rejected, providing evidence for the support of the $H_1$5. Subsequently, conclusion was made that the environmental dynamism has a positive significant moderating effect on the relationship between innovation Capability and performance of manufacturing firms in Nairobi City County, Kenya.

Table 8 presents the hypotheses test results.

Table 8: Hypotheses Test Results

Hypothesis	β	t	Sig.	Decision
$H_0$1: Product innovation capability has no significant effect on performance of manufacturing firms in Nairobi City County, Kenya.	.208	4.636	.000	Reject the $H_0$1
$H_0$2: Process innovation capability has no significant effect on performance of manufacturing firms in Nairobi City County, Kenya.	.283	5.435	.000	Reject the $H_0$2
$H_0$3: Marketing innovation capability has no significant effect on performance of manufacturing firms in Nairobi City County, Kenya.	.350	7.174	.000	Reject the $H_0$3
$H_0$4: Technological innovation capability has no significant effect on performance of manufacturing firms in Nairobi City County, Kenya.	.309	6.377	.000	Reject the $H_0$4
$H_0$5: Environmental dynamism has no significant moderating effect on the relationship between innovation Capability and performance of manufacturing firms in Nairobi City County, Kenya.				Reject the $H_0$5

Model		B	Std. Error	β	t	Sig.	Decision
1	(Constant)	1.216	.243		4.997	.000	
	Innovation Capability (X)	.678	.062	.680	10.940	.000	Reject the $H_0$5
2	(Constant)	1.191	.191		6.239	.000	
	Innovation Capability (X)	1.800	.129	1.806	13.943	.000	
	Environmental dynamism (Z)	-1.127	.120	-1.215	-9.382	.000	
3	(Constant)	8.661	.794		10.904	.000	
	Innovation Capability (X)	.233	.052	.306	4.455	.000	
	Environmental dynamism (Z)	-3.282	.244	-3.538	-13.470	.000	
	Innovation Capability * Environmental dynamism	.640	.067	4.536	9.573	.000	

a. Dependent Variable: Firm Performance (Y)

Discussions of Key Findings

This section presents a discussion of the key findings of the study. The purpose of this quantitative non-experimental correlational study was to examine the effect of innovation Capability on performance in manufacturing firms, with environmental dynamism as a moderator in Nairobi City County, Kenya. Specifically, the study examined the effect of product innovation capability, process innovation capability, market innovation capability and technological innovation capability on performance of manufacturing firms in Nairobi City County, Kenya. Additionally, the study examined the moderating effect of environmental

dynamism on the relationship between innovation Capability and performance of manufacturing firms in Nairobi City County, Kenya. The regression results showed that innovation Capability had positive and significant effect on the performance of manufacturing firms in Nairobi City County, Kenya. The results are consistent to previous studies (Alaskar, 2023; Aslam *et al.*, 2022; Kamal *et al.*, 2023; Kavana & Puspitowati, 2022; Zhang *et al.*, 2023). However, the results are inconsistent with the results of some prior research (Vrontis *et al.*, 2022).

Effect of Product Innovation Capability on Firm Performance

The first specific objective was to examine of product innovation capability on performance of manufacturing firms in Nairobi City County, Kenya. The first null hypothesis ($H_0$1) predicted that product innovation capability has no significant effect on performance of manufacturing firms in Nairobi City County, Kenya. The Pearson's product moment correlation analysis results indicated that product innovation capability had a moderately strong positive and significant relationship with performance of manufacturing firms in Nairobi City County, Kenya. The standard multiple regression results showed that product innovation capability had a positive and significant effect on performance of manufacturing firms in Nairobi City County, Kenya. Therefore, the $H_0$1 was rejected, providing empirical support for $H_1$1. Subsequently, conclusion was made that product innovation capability has a significant effect on performance of manufacturing firms in Nairobi City County, Kenya. The results are consistent to previous studies (Agyapong *et al.*, 2021; Christa & Kristinae, 2021; Gyedu *et al.*, 2021; Issak & Odollo, 2023; Ramaj *et al.*, 2022; Ringo *et al.*,2023; Wongsansukcharoen & Thaweepaiboonwong, 2023). However, the results are inconsistent with the results of some prior research (Mung'ora, 2020).

Effect of Process Innovation Capability on Firm Performance

The second specific objective was to establish the effect of process innovation capability on performance of manufacturing firms in Nairobi City County, Kenya. The second null hypothesis ($H_0$2) predicted that process innovation capability has no significant effect on performance of manufacturing firms in Nairobi City County, Kenya. The Pearson's correlation analysis results indicated that process innovation capability had a strong positive and significant relationship with performance of manufacturing firms in Nairobi City County, Kenya. The standard multiple regression results showed that process innovation capability had a positive and significant effect on performance of manufacturing firms in Nairobi City County, Kenya. Consequently, the $H_0$2 was rejected, providing the empirical support for $H_1$2. Therefore, conclusion was made that process innovation capability has a significant effect on performance of manufacturing firms in Nairobi City County, Kenya. The results are in harmony with the findings of past studies (Gyedu *et al.*, 2021; Issak & Odollo, 2023; Wongsansukcharoen & Thaweepaiboonwong, 2023). However, the results are inconsistent with the results of some prior studies (Mung'ora, 2020; Ringo *et al.*, 2023).

Effect of Marketing Innovation Capability on Firm Performance

The third specific objective was to examine the effect of marketing innovation capability on performance of manufacturing firms in Nairobi City County, Kenya. The third null hypothesis ($H_0$3) predicted that marketing innovation capability has no significant effect on performance of manufacturing firms in Nairobi City County, Kenya. The Pearson's correlation analysis results indicated that marketing innovation capability had a strong positive and significant relationship with performance of manufacturing firms in Nairobi City County, Kenya. The standard multiple regression results showed that marketing innovation capability had a positive and significant effect on performance of manufacturing firms in Nairobi City County, Kenya. Therefore, the $H_0$3 was rejected, providing the empirical support for $H_1$3. Subsequently, conclusion was made that marketing innovation capability has a significant effect on performance of manufacturing firms in Nairobi City County, Kenya. The results are in harmony with the findings of past studies (Gyedu *et al.*, 2021; Issak & Odollo, 2023; Ramaj *et al.*, 2022; Wongsansukcharoen & Thaweepaiboonwong, 2023). However, the results are inconsistent with the results of some prior studies (Ringo *et al.*,2023).

Effect of Technological Innovation Capability on Firm Performance

The fourth specific objective was to assess the effect of technological innovation capability on performance of manufacturing firms in Nairobi City County, Kenya. The fourth null hypothesis ($H_0$4) predicted that technological innovation capability has no significant effect on performance of manufacturing firms in Nairobi City County, Kenya. The Pearson's correlation analysis results indicated that technological innovation capability had a strong positive and significant relationship with performance of manufacturing firms in Nairobi City County, Kenya. The standard multiple regression results showed that technological innovation capability had a positive and significant effect on performance of manufacturing firms in Nairobi City County, Kenya. Therefore, the $H_0$4 was rejected, providing the empirical support for $H_1$4. Subsequently, conclusion was made that technological innovation capability has a significant effect on performance of manufacturing firms in Nairobi City County, Kenya. The results are in harmony with the findings of past studies (Agyapong *et al.*, 2021; Issak & Odollo, 2023).

The Moderating Effect of **Environmental Dynamism on the Relationship Between Innovation Capability and Firm Performance**

The fifth specific objective was to examine the moderating effect of environmental dynamism on the relationship between innovation Capability and performance of manufacturing firms in Nairobi City County, Kenya. The fifth null hypothesis ($H_0$5) predicted that environmental dynamism has no significant moderating effect on the relationship between innovation Capability and performance of manufacturing firms in Nairobi City County, Kenya. The Pearson's correlation analysis results indicated that environmental dynamism had a moderately strong negative and significant relationship with performance of manufacturing firms in Nairobi City County, Kenya.

In the first step for the moderation testing, the composite independent variable (innovation Capability) was regressed on the dependent variable (performance) of manufacturing firms in Nairobi City County, Kenya. Therefore, model 1 was fitted with innovation Capability predicting performance of manufacturing firms in Nairobi City County, Kenya. For model 1, the simple linear regression results indicated that innovation Capability had a positive and significant effect on the performance of manufacturing firms in Nairobi City County, Kenya.

In the second step for the moderation testing, the composite independent variable (innovation Capability) and the moderating variable (environmental dynamism) were regressed on the dependent variable (performance) of manufacturing firms in Nairobi City County, Kenya. For model 2, the multiple regression results showed that innovation Capability had a positive and significant effect on the performance ($\beta_6 = 1.806$; $t = 13.943$; $p \leq 0.05$) of manufacturing firms in Nairobi City County, Kenya. However, for model 2, the multiple regression results indicated that environmental dynamism had a negative significant effect on the performance of manufacturing firms in Nairobi City County, Kenya.

In the third step, the composite independent variable (innovation Capability), the moderating variable (environmental dynamism) and the interaction term (innovation Capability * environmental dynamism) were regressed on the dependent variable (performance) of manufacturing firms in Nairobi City County, Kenya. For model 3, the regression results showed that innovation Capability had positive and significant effect on the performance of manufacturing firms in Nairobi City County, Kenya. However, for model 3, the regression results indicated that environmental dynamism had a negative and significant effect on the performance of manufacturing firms in Nairobi City County, Kenya. For model 3, the regression results showed that the interactive term (innovation Capability * environmental dynamism) had a positive and significant effect on the performance of manufacturing firms in Nairobi City County, Kenya. Therefore, the $H_0$5 was rejected, providing evidence for the support of the H15. Subsequently, conclusion was made that the environmental dynamism has a significant moderating effect on the relationship between innovation Capability and performance of manufacturing firms in Nairobi City County, Kenya. The results are in harmony with the findings of Agyapong

et al. (2021) which showed that market dynamism positively and significantly moderated the relationship between technological innovation and firm performance. The findings are consistent with the results of Gyedu *et al.* (2021) which indicated that technological turbulence positively and significantly moderated the relationship between innovation capability and business performance. However, the findings are inconsistent with the results of Ruba *et al.* (2023) which showed that environmental dynamism had a negative and significant moderating effect on the relationship between innovativeness and firm performance in manufacturing companies. The results are also inconsistent with the findings of Gyedu *et al.* (2021) which indicated that indicated that market turbulence negatively and significantly moderates the relationship between innovation capability and business performance. The findings are also inconsistent with the findings of Agyapong *et al.* (2021) which showed that market dynamism had an insignificant moderating effect on the relationship between technological innovation and firm performance.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

The purpose of this quantitative non-experimental correlational study was to examine the effect of innovation Capability on performance in manufacturing firms, with environmental dynamism as a moderator in Nairobi City County, Kenya. Specifically, the study examined the effect of product innovation capability, process innovation capability, market innovation capability and technological innovation capability on performance of manufacturing firms in Nairobi City County, Kenya. Furthermore, the study examined the moderating effect of environmental dynamism on the relationship between innovation Capability and performance of manufacturing firms in Nairobi City County, Kenya. The Pearson's correlations analysis results indicated that there was positive and significant relationship between innovation Capability and on performance of manufacturing firms in Nairobi City County, Kenya. The study found that innovation Capability had positive and significant effect on the on performance of manufacturing firms in Nairobi City County, Kenya. Therefore, the conclusion of study was that innovation Capability positively and significantly predict the performance of manufacturing firms in Nairobi City County, Kenya.

Effect of Product Innovation Capability on Firm Performance

The first specific objective was to examine of product innovation capability on performance of manufacturing firms in Nairobi City County, Kenya. The first null hypothesis ($H_0$1) predicted that showed that product innovation capability has no significant effect on performance of manufacturing firms in Nairobi City County, Kenya. The Pearson's product moment correlation analysis results indicated that there was a strong positive and significant relationship between product innovation capability on performance of manufacturing firms in Nairobi City County, Kenya. The standard multiple regression results showed that product innovation capability had a positive and significant effect on performance of manufacturing firms in Nairobi City County, Kenya. Consequently, the $H_0$1 was rejected, providing the empirical support for $H_1$1. Therefore, the first conclusion was that product innovation capability has a significant effect on performance of manufacturing firms in Nairobi City County, Kenya.

Effect of Process Innovation Capability on Firm Performance

The second specific objective was to establish the effect of process innovation capability on performance of manufacturing firms in Nairobi City County, Kenya. The second null hypothesis ($H_0$2) predicted that process innovation capability has no significant effect on performance of manufacturing firms in Nairobi City County, Kenya. The Pearson's product moment correlation analysis results indicated that there was a moderate strong negative significant relationship between process innovation capability on performance of manufacturing firms in Nairobi City County, Kenya. The standard multiple regression results showed that process innovation capability had a negative and significant effect on performance of manufacturing firms in Nairobi City County, Kenya. Consequently, the $H_0$2 was rejected, providing the empirical support for $H_1$2. Therefore, the second

conclusion was that process innovation capability has a significant effect on performance of manufacturing firms in Nairobi City County, Kenya.

Effect of Marketing Innovation Capability on Firm Performance

The third specific objective was to examine the effect of marketing innovation capability on performance of manufacturing firms in Nairobi City County, Kenya. The third null hypothesis ($H_0$3) predicted that marketing innovation capability has no significant effect on performance of manufacturing firms in Nairobi City County, Kenya. The Pearson's product moment correlation analysis results indicated that there was a strong positive significant relationship between marketing innovation capability on performance of manufacturing firms in Nairobi City County, Kenya. The standard multiple regression results showed that marketing innovation capability had a positive and significant effect on performance of manufacturing firms in Nairobi City County, Kenya. Therefore, the $H_0$3 was rejected, providing the empirical support for $H_1$3. Subsequently, the third conclusion was that marketing innovation capability has a significant effect on performance of manufacturing firms in Nairobi City County, Kenya.

Effect of Technological Innovation Capability on Firm Performance

The fourth specific objective was to assess the effect of technological innovation capability on performance of manufacturing firms in Nairobi City County, Kenya. The fourth null hypothesis ($H_0$4) predicted that technological innovation capability has no significant effect on performance of manufacturing firms in Nairobi City County, Kenya. The Pearson's product moment correlation analysis results indicated that there was a strong positive significant relationship between technological innovation capability on performance of manufacturing firms in Nairobi City County, Kenya. The standard multiple regression results showed that technological innovation capability had a positive and significant effect on performance of manufacturing firms in Nairobi City County, Kenya. Therefore, the $H_0$4 was rejected, providing the empirical support for $H_1$4. Subsequently, the fourth conclusion was that technological innovation capability has a significant effect on performance of manufacturing firms in Nairobi City County, Kenya.

The Moderating Effect of Environmental Dynamism on the Relationship Between Innovation Capability and Firm Performance

The fifth specific objective was to examine the moderating effect of environmental dynamism on the relationship between innovation Capability and performance of manufacturing firms in Nairobi City County, Kenya. The fifth null hypothesis ($H_0$5) predicted that environmental dynamism has no significant moderating effect on the relationship between innovation Capability and performance of manufacturing firms in Nairobi City County, Kenya. The regression results showed that the interactive term (innovation Capability * environmental dynamism) had a positive and significant effect on the performance of manufacturing firms in Nairobi City County, Kenya. Therefore, the $H_0$5 was rejected, providing evidence for the support of the H15. Subsequently, the fifth conclusion was that the environmental dynamism has a significant moderating effect on the relationship between innovation Capability and performance of manufacturing firms in Nairobi City County, Kenya.

Recommendations

The study provides important managerial recommendation, policy recommendations and areas for future research.

Managerial Recommendations

The study recommends that it is imperative for the managers to implement innovation Capability to foster the performance of manufacturing firms in Nairobi City County, Kenya. First, the study recommends that it is imperative for the managers to implement product innovation capability to foster the performance of manufacturing firms in Nairobi City County, Kenya. Second, the study recommends that it is imperative for the managers to implement process innovation capability to foster the performance of manufacturing firms in Nairobi City County, Kenya. Third, the study recommends that it is imperative for the managers to implement

marketing innovation capability to foster the performance of manufacturing firms in Nairobi City County, Kenya. Fourth, the study recommends that it is imperative for the managers to implement technological innovation capability to foster the performance of manufacturing firms in Nairobi City County, Kenya. Fifth, the study recommends that it is imperative for the managers to identify strategies for coping with the environmental dynamism to foster the performance of manufacturing firms in Nairobi City County, Kenya.

Policy Recommendations

The study recommends that policy makers should consider initiating policy review to encourage stakeholders to implement innovation Capability and strategically manage the environmental dynamism to foster the performance of manufacturing firms in Nairobi City County, Kenya. First, the study recommends that it is imperative for the policy makers to initiate policy review that could encourage stakeholders to implement product innovation capability to foster the performance of manufacturing firms in Nairobi City County, Kenya. Second, the study recommends that it is imperative for the policy makers to initiate policy review that could encourage stakeholders to implement process innovation capability to foster the performance of manufacturing firms in Nairobi City County, Kenya. Third, the study recommends that it is imperative for the policy makers to initiate policy review that could encourage stakeholders to implement marketing innovation capability to foster the performance of manufacturing firms in Nairobi City County, Kenya. Fourth, the study recommends that it is imperative for the policy makers to initiate policy review that could encourage stakeholders to implement technological innovation capability to foster the performance of manufacturing firms in Nairobi City County, Kenya. Fifth, the study recommends that it is imperative for the policy makers to initiate policy review that could encourage stakeholders to identify strategies for coping with the environmental dynamism to foster the performance of manufacturing firms in Nairobi City County, Kenya.

Areas for Future Research

The study points to several intriguing paths for future research. First, future researchers should consider examining the effect of other innovation Capability on performance of manufacturing firms in other regions or contexts. Second, future researchers should consider investigating the moderating effect of environmental dynamism on the relationship between innovation Capability and firm performance in other regions, sectors or contexts. Third, future researchers should consider utilizing the longitudinal survey to examine the moderating effect of environmental dynamism on the relationship between innovation Capability and firm performance a period to time.

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