INNOVATION CAPABILITIES AND PERFORMANCE OF MANUFACTURING FIRMS IN NAIROBI CITY COUNTY, KENYA

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ABSTRACT

The purpose of this study was to examine the effect of innovation capabilities on performance of manufacturing firms in Nairobi City County, Kenya. The study was anchored on the positivist research philosophy and the non-experimental quantitative research methodology. 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. A pilot study was conducted to test the validity and reliability of the constructed survey questionnaire. Through the drop and pick method, a cross-sectional survey-based approach was used to collect primary data from the manufacturing firms in Kenya. The collected data was processed and entered into the statistical package for social sciences (SPSS) version 26 to create a data sheet that was used for data analysis. The Pearson's product moment correlation analysis was performed to confirm or deny the relationship between the study variables. The Pearson's 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. A standard multiple regression analysis was performed with product innovation capability, process innovation capability, marketing innovation capability and technological innovation capability predicting the performance of manufacturing firms in Nairobi City County, Kenya. The 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 study recommended that it is imperative for the managers to implement innovation capabilities to foster the performance of manufacturing firms. Policy makers should consider initiating policy review to encourage stakeholders to implement innovation capabilities to foster the performance of manufacturing firms. The study points to several intriguing paths for future research.

Key terms: *Product Innovation Capability, Technological Innovation Capability, Process Innovation Capability, Marketing Innovation Capability, Innovation Capability, Environmental Dynamism*

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INTRODUCTION

In today's business environment, contributions made by the manufacturing sector to the economy and social development is evident. The manufacturing sector is well known for its significance in upholding the economic prosperity of many nations (Shela, Ramayah, & Noor Hazlina, 2023). In Kenya, the manufacturing sector is a crucial engine for sustaining economic growth and development, job creation and poverty alleviation (Baariu, Gathungu, &Ndemo, 2021). The Kenyan manufacturing sector has a huge contribution to the economic development (Mungai & Ndiritu, 2023). The National Economic Survey Report by the Central Bank of Kenya (CBK), revealed that the Kenyan manufacturing SMEs constitute 98% of all the businesses in Kenya contributing to 30% of jobs annually (Muiruri, 2021). Kenya has termed the manufacturing sector as one of its Big Four Agenda - 2017 to 2022 presidential dispensation goals-aimed at promoting economic development in the country (Mbudzya, Gido, & Owuor, 2022).However, there is growing concern about the performance of the manufacturing sector. Despite, the interventions put in place in Kenya to foster small and medium-sized enterprises (SMEs) in manufacturing sector, the performance has been poor (Kiiru, Mukulu, & Ngatia, 2023; Were, 2021). 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, Ngui, & Gathiaka, 2022; Kipkirui & Kimungunyi, 2022).

In the Saudi Arabia context, Alaskar (2023) examined the effect of innovation capabilities on firm performance. The study was anchored on the innovation diffusion theory. A quantitative approach was adopted for data collection and analysis. Based on 386 responses, the findings indicated that innovation capabilities had positive and significant effect on firm performance. In West Jakarta, Kavana and Puspitowati (2022) examined the effect of innovation on business performance of the food and beverage business. The results showed that innovation had a positive and significant effect on business performance.

In the context of Ghana, Gyedu*et al.* (2021) investigated the effect of innovation capability on business performance in the telecommunication sector. The results showed that innovation capability had a positive and significant effect on business performance. The findings indicated that technological turbulence positively and significantly moderated the relationship between innovation capability and business performance. However, the results showed that market turbulence negatively and significantly moderates the relationship between innovation capability and business performance.

In the Kenyan context, there remains a paucity of empirical research on innovation capabilities 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.

The Kenyan manufacturing sector is diverse, comprising a variety of different sub-sectors, and consists of both large businesses and small and medium-sized enterprises (SMEs), which have a huge contribution to the economic development (Mungai & Ndiritu, 2023). The manufacturing sector is critical for Kenya's economic development, job creation, and poverty eradication. In Kenya, the manufacturing sector is a crucial engine for sustaining economic growth and development, job creation and poverty alleviation (Baariu, Gathungu, & Ndemo, 2021). The Kenyan manufacturing sector is diverse, comprising large businesses and small and medium enterprises, which have a huge contribution to the economic development (Mungai

& Ndiritu, 2023). However, the performance of manufacturing small and medium enterprises in Kenya has been negatively affected by high industry competition, low technology uptake, and industry regulation (Muthoka, Kilika, &Muathe, 2021; Muthoka, Kilika, & Muathe, 2022). 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 (Kipkirui & Kimungunyi, 2022). The National Economic Survey Report by the Central Bank of Kenya (CBK), revealed that the Kenyan manufacturing SMEs constitute 98% of all the businesses in Kenya contributing to 30% of jobs annually (Muiruri, 2021).

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 capabilities 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 capabilities and firm performance, which appear to point in several directions (Aslam *et al.*, 2023). The existing empirical studies on innovation capabilities 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).

Research Objectives

The general objective of this study was to examine the effect of innovation capabilities on performance of manufacturing firms in Nairobi City County, Kenya. The specific objectives were;

- 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.

In total, four 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.

LITERATURE REVIEW

Theoretical Framework

Dynamic Capabilities Theory

This study uses the dynamic capabilities view (DCV) theory to explain the effect of innovation capabilities on performance of manufacturing firms in Nairobi City County, Kenya. The DCV theory (Eisenhardt & Martin, 2000; Teece, Pisano, &Shuen, 1990) suggests that firms should develop the ability to build, integrate, and reconfigure resources and competencies to achieve competitive advantages (Gerulaitiene*et al.*, 2020). The DCV theory views dynamic capability as the firm's ability to integrate, build and reconfigure internal and external competencies to address the rapidly changing environments (Martins, 2023).

The DCV theory (Teece & Pisano, 2003; Teece, Pisano, & Shuen, 1997) addresses the particular shortcomings of the RBV theory as a means for firms to evolve in changing environments and maintain a competitive edge (Hällerstrand, Reim, & Malmström, 2023). Therefore, the DCV theory is considered an extension for RBV theory to deal with the changes occurred in the environment due to digital technologies (Teece, 2023).Dynamic capabilities are the firm's ability to integrate, build, and reconfigure internal and external resources/competences to address and shape rapidly changing business environments (Muneeb, Ahmad, Abu Bakar, & Tehseen, 2023). As a dynamic capability, innovation capability is the firm's ability to transform ideas and knowledge into new unique products for the market (Zulkiffli*et al.*, 2022). The DCV theory is concerned with how firms can sustain and enhance their competitive advantage, notably when facing changing environments (Solem, Fredriksen, & Sørebø, 2023).Therefore, the DCV theory is a relevant theoretical framework that can be used to explain the effect of product innovation, process, marketing and technological innovation capabilities 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.

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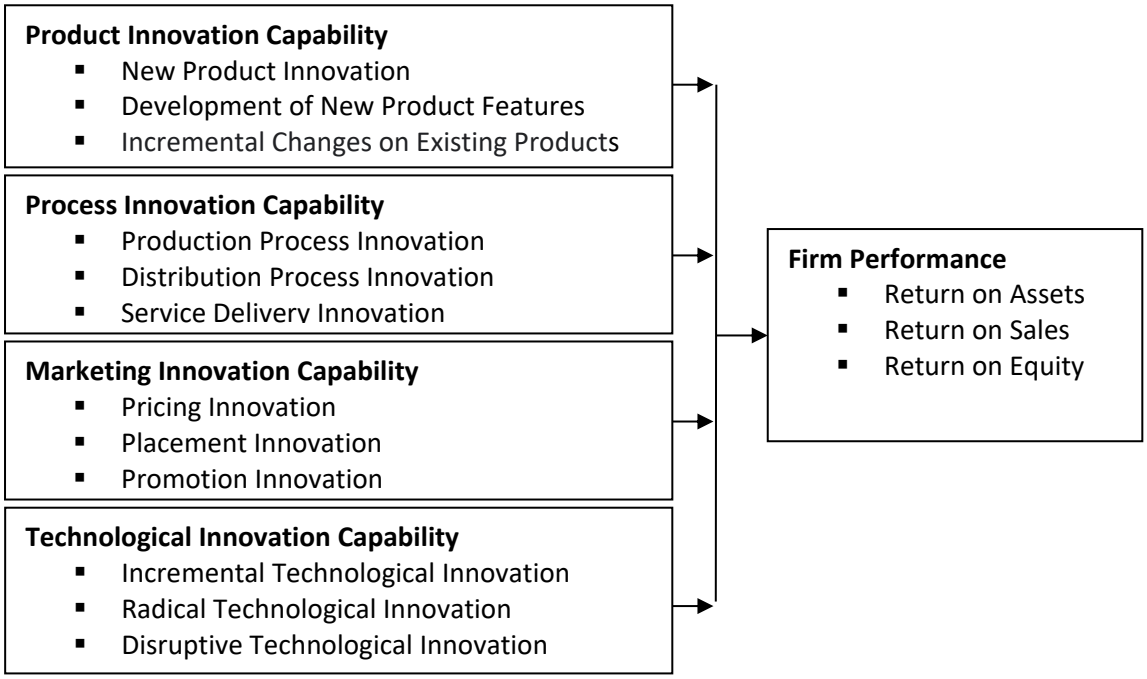

Independent Variables **Dependent Variable**

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).Itis 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 capabilities 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 capabilities make it possible for firms to response to changes rapidly and to acquire technological innovation strategies and innovative outputs (Tu, Zhang, Sun, & Mao, 2023).

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).

METHODOLOGY

The 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. 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 of 228. 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. The structured self-administered questionnaire allows the collection of primary data from a relatively large sample in an economic way (Bell *et al.*, 2022). 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.

The standard multiple linear analysis was conducted with product innovation capability, process innovation capability, marketing innovation capability and technological innovation capability predicting firm performance. 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

FINDINGS

Response Rate

In total, 228 survey questionnaires were distributed to the chief executive officers of the manufacturing firms in Nairobi City County, Kenya. However, only 141 survey usable questionnaires were received. Therefore, there was a valid response rate of 61.8%, which as per the assertions of Creswell (2020), was sufficient for data analysis and reporting purposes. Table 1 presents the response rate for the study.

Table 1: Response Rate

Strata	No. of Survey Questionnaires Distributed	No. of Usable Survey Questionnaires Returned	Response Rate
Building, Construction and Mining	9	6	66.7%
Chemical and Allied	32	20	62.25%
Energy, Electrical and Electronics	17	10	56.2%
Food and Beverage	37	21	56.8%
Leather and Footwear	3	2	66.7%
Metal and Allied	25	17	68.0%
Motor Vehicle and Accessories	15	10	66.7%
Paper and Board	29	18	62.1%
Pharmaceutical & Medical Equipment	11	7	63.6
Plastic and Rubber	25	15	60.0%
Fresh Produce	2	1	50%
Textiles and Apparels	17	10	64.7%
Timber, Wood and Furniture	6	4	66.7%
Total	**228**	**141**	**61.8%**

Face Validity Test Results

Face validity was ensured by extensive literature survey on nature of the research problem and reinforced by developing the survey questionnaires based on validated scales. Scholars opine that face validity can be ensured by extensive literature survey on the research problem and developing survey questionnaire based on validated scales (Semancik*et al.*, 2021). For face validity test, the researcher shared the constructed survey questionnaire with an expert panel of five peer-review professionals in the strategic management field to judge whether, on the face of it, the measure seems to reflect the concept concerned. Existing literature posits that face validity test involves sharing the constructed data collection

instrument with an expert panel of per-review professionals with experience and expertise in the field to judge whether, on the face of it, the measure seems to reflect the concept concerned (Stribinget *al.*, 2022).

Feedback from the peer-review panel was used to effect changes to the survey questionnaire to ensure that questions are more straightforward, more direct, and that the terms used are non-technical. From the results, the panel of experts deemed the face validity of the survey questionnaire acceptable. Their feedback related to the wording of some of the statements, the structure, and the layout of the survey questionnaire. Their comments were considered and various changes were made to refine of the items in terms of using more objective methods for measuring items and better wording.

Content Validity Test Results

Content validity was ensured by extensive literature survey on nature of the research problem. Scholars opine that content validity can be ensured by conducting extensive literature survey on the research problem (*et al.*, 2023).Additionally, content validity was strengthened by developing the survey questionnaires based on validated scales. Content validity can also be ensured by developing the data collection instrument based on validated scales (Karhulahtiet *al.*, 2023).

For content validity test, the researcher shared the constructed survey questionnaire with an expert panel of 5 judges in the field of strategic management to judge whether, it covered and measured the concepts it purported to measure and the relevant content domain for all the constructs had been covered. Content validity test is involves sharing the constructed data collection instrument with an expert panel of per-review professionals with experience and expertise in the field to judge whether, the measure seems to reflect the concept concerned (Roebiantoet *al.*, 2023).

The feedback from the expert panel of five judges was used to establish the percentage representation using the content validity index. From the content validity test results, the content validity index was 0.939and the congruency percentage was 93.9%, signifying that the constructed survey questionnaire had acceptable content validity test and the relevant content domain for all the constructs had been covered. Table2 presents the content validity test results.

Table 2: Content Validity Test Results

Variable	No. of Items	Content Validity Index	Congruency Percentage	Decision
Product Innovation Capability (X_1)	3	0.940	94.0%	Valid
Process Innovation Capability (X_2)	3	0.937	93.7%	Valid
Marketing Innovation Capability (X_3)	3	0.933	93.3%	Valid
Technological Innovation Capability (X_4)	3	0.948	94.8%	Valid
Firm Performance (Y)	3	0.936	93.6%	Valid
Entire Scale	**18**	**0.939**	**93.9%**	**Valid**

Construct Validity Test Results

Factor analysis was performed to test the construct validity as measured by its two sub-components, namely convergent and discriminant validity. A series of factor analysis with varimax rotation was performed for data reduction to detect the factor structure in the observed variables using SPSS package software version 26. However, prior to the extraction of the constructs, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and the Bartlett's test of sphericity were conducted to determine the appropriateness of the data for factor analysis. The KMO measure of sampling adequacy and the Bartlett's test of sphericity is conducted prior to the extraction of the constructs to determine the suitability of the data set for factor analysis (Saunders *et al.*, 2020).

The results showed that the KMO measure of sampling adequacy was 0.826, greater than the threshold of 0.7, while the Bartlett's test of sphericity was significant (Approx. Chi-Square = 517.248; df = 6; p ≤ 0.001), signifying appropriateness of the data for factor analysis. Extant literature posits that a KMO statistic of greater than 0.7, and an associated Bartlett's p-value of less than or equal to 0.05, and an Anti-image correlation statistic of greater than 0.6 suggests an adequate correlation exists to justify factor analysis (Bell *et al.*, 2022). Table 3 presents the results of the Kaiser-Meyer-Olkin (KMO) test of Sampling Adequacy and Bartlett's test of Sphericity.

Table 3: Construct Validity Test Results

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.826
Bartlett's Test of Sphericity	Approx. Chi-Square	517.248
	df	6
	Sig.	0.000

Reliability Test Results

Reliability of the survey questionnaire was tested using Cronbach Alpha coefficient. The Cronbach Alpha coefficient was calculated to verify the internal consistency reliability. Reliability test results showed that the Cronbach Alpha coefficient of the entire scale (15 items) for the pilot study was 0.836, greater than the threshold of 0.7, signifying that the entire scale passed the reliability test. Additionally, the pilot study results indicated that Cronbach Alpha coefficients of the five variables were greater than the threshold of 0.7, ranging from 0.781 and 0.793, implying acceptable internal consistency reliability. Existent literature posits that the general rule of thumb is that a Cronbach's alpha coefficient of 0.70 or greater indicates acceptable internal consistency reliability (Bell *et al.*, 2022). Table 4 presents the reliability test results of the study variables.

Table 4: Reliability Test Results

Variable	n	No. of Items	No. of Items Deleted	Cronbach's Alpha (α)	Decision
Product Innovation Capability (X_1)	30	3	0	.786	Reliable
Process Innovation Capability (X_2)	30	3	0	.782	Reliable
Marketing Innovation Capability (X_3)	30	3	0	.784	Reliable
Technological Innovation Capability (X_4)	30	3	0	.781	Reliable
Firm Performance (Y)	30	3	0	.793	Reliable
Entire Scale	**30**	**15**	**0**	**.836**	**Reliable**

Correlation Analysis Results

The Pearson's product moment correlations analysis was performed to confirm or deny the relationships between the study variables. The findings indicated that product innovation capability had a moderately strong positive and significant relationship with performance(r = 0.557, p ≤ 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. Table 5 presents the Pearson's product moment correlations analysis results.

Table 5: The Pearson's Product Moment Correlations Results

Variable		X_1	X_2	X_3	X_4	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	
Firm Performance (Y)	Pearson Correlation	.557**	.730**	.721**	.707**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	n	141	141	141	141	141

Standard Multiple Linear Regressions Analysis Results

A standard multiple linear regression analysis was performed with the performance of manufacturing firms as the dependent variable and product innovation capability, process innovation capability, market innovation capability and technological innovation capabilityas the predictor variables. The standard multiple linear regression analysis, $\alpha = .05$ (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 6 presented the standard multiple linear regression's model summary results.

Table 6: 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 7 presents the standard multiple linear regression's ANOVA results.

Table 7: 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 8 presents the standard multiple regression coefficients results.

Table 9: Regression 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)

Hypotheses Test Results

In total, five null hypotheses were tested to examine the direct and the indirect of innovation capabilities on firm performance. The $H_0$1, $H_0$2, $H_0$3 and $H_0$4 were on the direct effect of innovation capabilities on firm performance. However, $H_0$5 was on the direct effect of innovation capabilities 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, α = 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_0iif the P ≤ 0.05, and otherwise fail to reject the null hypothesis H_0iif the P > 0.05. Existent literature posits that in hypotheses testing at 5% level of significance (α = 0.05) and 95% confidence level, the decision rule is to reject the null hypothesis H_0iif the P ≤ 0.05, and otherwise fail to reject the null hypothesis H_0iif 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$1if the $\beta_1 \neq 0$, t ≥ 1.960, P ≤ 0.05, and otherwise fail to reject the null hypothesis $H_0$1if 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 (β_1 = 0.208; t = 4.636; p ≤ 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$2if the $\beta_2 \neq 0$, t ≥ 1.960, P ≤ 0.05, and otherwise fail to reject the null hypothesis $H_0$2if 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 (β_2 = 0.283; t = 5.435; p ≤ 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$3if the $\beta_3 \neq 0$, t ≥ 1.960, P ≤ 0.05, and otherwise fail to reject the null hypothesis $H_0$3if 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 (β_3 = 0.350; t = 7.174; p ≤ 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$4if the $\beta_1 \neq 0$, t ≥ 1.960, P ≤ 0.05, and otherwise fail to reject the null hypothesis $H_0$4if 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 (β_4 = 0.309; t = 6.377; p ≤ 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. Table 10 presents the hypotheses test results.

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Table 10: 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

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 capabilities on performance in manufacturing firms 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. The Pearson's product moment correlations analysis was performed to confirm or deny the relationships between the study variables. The findings indicated that product innovation capability, process innovation capability, market innovation capability and technological innovation capability had positive and significant relationship with performance of manufacturing firms in Nairobi City County, Kenya.

A standard multiple linear regression analysis was performed with the performance of manufacturing firms as the dependent variable and product innovation capability, process innovation capability, market innovation capability and technological innovation capabilityas the predictor variables. The regression results showed that innovation capabilities 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).

CONCLUSIONS AND RECOMMENDATIONS

The purpose of this quantitative non-experimental correlational study was to examine the effect of innovation capabilities on performance in manufacturing firms 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. The Pearson's correlations analysis results indicated that there was positive and significant relationship between innovation capabilities and on performance of manufacturing firms in Nairobi City County, Kenya. The study found that innovation capabilities 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 capabilities positively and significantly predict the performance of manufacturing firms in Nairobi City County, Kenya.

The study recommends that it is imperative for the managers to implement innovation capabilities 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.

The study recommends that policy makers should consider initiating policy review to encourage stakeholders to implement innovation capabilities 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.

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 capabilities 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 capabilities 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 capabilities and firm performance a period to time.

REFERENCES

Abdala, K. A. (2022). *Cost leadership strategy and performance of food and beverages manufacturing firms in Mombasa County, Kenya* (Masters research project, Kenyatta University).

Achieng, S. G. (2021). *The role of innovation in attaining sustainable competitive advantage among Deposit-Taking Savings and Credit Cooperatives (SACCOS) in Nairobi County, Kenya* (Masters thesis, Strathmore University).

Agyapong, A., Mensah, H. K., &Akomea, S. Y. (2021). Innovation-performance relationship: The moderating role of market dynamism. *Small Enterprise Research*, *28*(3), 350-372.

Alaskar, T. H. (2023). Innovation capabilities as a mediator between business analytics and firm performance. *Sustainability*, *15*(6), 5522-5534.

Al-Rahmi, W. M., Yahaya, N., Alamri, M. M., Alyoussef, I. Y., Al-Rahmi, A. M., &

AlTaweel, I. R., & Al-Hawary, S. I. (2021). The mediating role of innovation capability on the relationship between strategic agility and organizational performance. *Sustainability*, *13*(14), 7564.

AlTaweel, I. R., & Al-Hawary, S. I. (2021). The mediating role of innovation capability on the relationship between strategic agility and organizational performance. *Sustainability*, *13*(14), 7564-7578.

Alvarez, S., Newman, A. B., Barney, J., &Plomaritis, A. (2023). Creating stakeholder legitimacy in the eyes of stakeholders: The case of Havana's paladares. *Entrepreneurship Theory and Practice*, *47*(1), 17-65.

Asiaei, K., Bontis, N., Askari, M. R., Yaghoubi, M., & Barani, O. (2023). Knowledge assets, innovation ambidexterity and firm performance in knowledge-intensive companies. *Journal of Knowledge Management*, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/JKM-04-2022-0277

Aslam, M., Shafi, I., Ahmed, J., de Marin, M. S. G., Flores, E. S., Gutiérrez, M. A. R., & Ashraf, I. (2023). Impact of innovation-oriented human resource on small and medium enterprises' performance. *Sustainability*, *15*(7), 6273-6296.

Awoleye, O. M., Ilori, O. M., &Oyebisi, T. O. (2020). Sources of innovation capability and performance of ICT agglomerated MSMEs in Nigeria. *International Journal of Innovation Management*, *24*(04), 2050032.

Ayinaddis, S. G. (2023). The effect of innovation orientation on firm performance: Evidence from micro and small manufacturing firms in selected towns of Awi Zone, Ethiopia. *Journal of Innovation and Entrepreneurship*, *12*(1), 26-45.

Bange, T. (2022). *Innovation capabilities and performance of Fintech firms in Nairobi* (Masters research project, University of Nairobi).

Barrios, A., Camacho, S., & Estrada-Mejia, C. (2023). From service to social innovation with a service-dominant logic approach. *Journal of Services Marketing*, *37*(2), 201-215.

Behl, A., Pereira, V., Jayawardena, N., Nigam, A., & Mangla, S. (2023). Gamification as an innovation: a tool to improve organizational marketing performance and sustainability of international firms. *International Marketing Review*, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/IMR-05-2022-0113

Chabbouh, H., &Boujelbene, Y. (2022). Open innovation, dynamic organizational capacities and innovation performance in SMEs: Empirical evidence in the Tunisian manufacturing industry. *The International Journal of Entrepreneurship and Innovation*, 14657503211066014.

Chaudhuri, R., Chatterjee, S., Vrontis, P. D., &Vicentini, F. (2023). Effects of human capital on entrepreneurial ecosystems in the emerging economy: The mediating role of digital knowledge and innovative capability from India perspective. *Journal of Intellectual Capital*, *24*(1), 283-305.

Chatterjee, S., Chaudhuri, R., Vrontis, D., &Thrassou, A. (2023). Revisiting the resource-based view (RBV) theory: From cross-functional capabilities perspective in post COVID-19 period. *Journal of Strategic Marketing*, 1-16.

Chen, J., Wang, X., Shen, W., Tan, Y., Matac, L. M., & Samad, S. (2022). Environmental uncertainty, environmental regulation and enterprises' green technological innovation. *International Journal of Environmental Research and Public Health*, *19*(16), 9781.

Chi, N. T. K. (2021). Innovation capability: the impact of e-CRM and COVID-19 riskperception. *Technology in Society*, *67*, 101725.

Christa, U., &Kristinae, V. (2021). The effect of product innovation on business performance during COVID 19 pandemic. *Uncertain Supply Chain Management*, *9*(1), 151-158.

Dana, L. P., Salamzadeh, A., Mortazavi, S., &Hadizadeh, M. (2022). Investigating the impact of international markets and new digital technologies on business innovation in emerging markets. *Sustainability*, *14*(2), 983-994.

Deng, Q., &Noorliza, K. (2023). Integration, resilience, and innovation capability enhance LSPs' operational performance. *Sustainability*, *15*(2), 1019-1027.

Dwikat, S. Y., Arshad, D., & Mohd Shariff, M. N. (2022). The influence of systematic strategic planning and strategic business innovation on the sustainable performance of manufacturing SMEs: The case of Palestine. *Sustainability*, *14*(20), 13388.

Dwivedi, A., & Pawsey, N. (2023). Examining the drivers of marketing innovation in SMEs. *Journal of Business Research*, *155*, 113409.

Edeh, F. O., Zayed, N. M., Nitsenko, V., Brezhnieva-Yermolenko, O., Negovska, J., &Shtan, M. (2022). Predicting innovation capability through knowledge management in the banking sector. *Journal of Risk and Financial Management*, 15(7), 312-326. doi.org/10.3390/jrfm15070312

Fan, M., Huang, W., & Xiong, S. (2023). How enterprise interactions in innovation networks affect technological innovation performance: The role of technological innovation capacity and absorptive capacity. *Plos one*, *18*(3), e0282540.

Fang, M., Liu, F., Xiao, S., & Park, K. (2023). Hedging the bet on digital transformation in strategic supply chain management: A theoretical integration and an empirical test. *International Journal of Physical Distribution & Logistics Management*.

Ferreira, J., Coelho, A., &Moutinho, L. (2020). Dynamic capabilities, creativity and innovation capability and their impact on competitive advantage and firm performance: The moderating role of entrepreneurialorientation. *Technovation*, *92*, 102061.

Forliano, C., Ferraris, A., Bivona, E., & Couturier, J. (2022). Pouring new wine into old bottles: A dynamic perspective of the interplay among environmental dynamism, capabilities development, and performance. *Journal of Business Research*, *142*, 448-463.

Fu, Q., Sial, M., Arshad, M., Comite, U., Thu, P., & Popp, J. (2021). The inter-relationship between innovation capability and SME performance: The moderating role of the external environment. Sustainability, 13, 9132. doi:10.3390/su13169132

Gharaibeh, M. K., Gharaibeh, N. K., & De Villiers, M. V. (2020). A qualitative method to explainacceptance of mobile health application:Using innovation diffusion theory. *International Journal of Advanced Science and Technology*, *29*(4), 3426-3432.

Gheitarani, F., Guevara, R., Nawaser, K., &Jahanshahi, A. A. (2022). Identifying dimensions of dynamic technological capability: A systematic review of the last two decades of research. *International Journal of Innovation and Technology Management*, *19*(04), 2230002.

Goni, J. I. C., & Van Looy, A. (2022). Process innovation capability in less-structured business processes: a systematic literature review. *Business Process Management Journal*, (ahead-of-print).

Goni, J. I. C., & Van Looy, A. (2022). Process innovation capability in less-structured business processes: a systematic literature review. *Business Process Management Journal*, (ahead-of-print).

González-Ramos, M. I., Guadamillas, F., & Donate, M. J. (2023). The relationship between knowledge management strategies and corporate social responsibility: Effects on innovation capabilities. *Technological Forecasting and Social Change*, *188*, 122287.

Grözinger, A. C., Wolff, S., Ruf, P. J., & Moog, P. (2022). The power of shared positivity: Organizational psychological capital and firm performance during exogenous crises. *Small Business Economics*, *58*(2), 689-716.

Gui, L., Lei, H., & Le, P. B. (2021). Determinants of radical and incremental innovation: The influence of transformational leadership, knowledge sharing, and knowledge-centered culture. *European Journal of Innovation Management*, *54*, 414-438. doi.org/10.1108/EJIM-12-2020-0478

Gui, L., Lei, H., & Le, P. B. (2022). Determinants of radical and incremental innovation: the influence of transformational leadership, knowledge sharing and knowledge-centered culture. *European Journal of Innovation Management*, *25*(5), 1221-1241.

Gumulya, D., Purba, J. T., Hariandja, E. S., &Pramono, R. (2023). Cultural product design as a key strategy for innovation capability development: Evidence from Indonesian creative social enterprises. *Archives of Design Research*, *36*(1), 21-40.

Gyedu, S., Heng, T., Ntarmah, A. H., He, Y., &Frimppong, E. (2021). The impact of innovation on economic growth among G7 and BRICS countries: A GMM style panel vector autoregressive approach. *Technological Forecasting and Social Change*, *173*, 121169.

Hällerstrand, L., Reim, W., & Malmström, M. (2023). Dynamic capabilities in environmental entrepreneurship: A framework for commercializing green innovations. *Journal of Cleaner Production*, *402*, 136692.

Heenkenda, H. M. J. C. B., Xu, F., Kulathunga, K. M. M. C. B., &Senevirathne, W. A. R. (2022). The role of innovation capability in enhancing sustainability in SMEs: An emerging economy perspective. *Sustainability*, *14*(17), 10832.

Helmefalk, M., Palmquist, A., &Rosenlund, J. (2023). Understanding the mechanisms of household and stakeholder engagement in a recycling ecosystem: The SDL perspective. *Waste Management*, *160*, 1-11.

Henao-García, E. A., & Cardona Montoya, R. A. (2023). Fostering technological innovation through management and marketing innovation. The human and non-technological linkage. *European Journal of Innovation Management*, *26*(1), 183-206.

Hoglund, L. T., Scalzitti, D. A., Bolgla, L. A., Jayaseelan, D. J., & Wainwright, S. F. (2023). Patient-reported outcome measures for adults and adolescents with patellofemoral pain: A systematic review of content validity and feasibility using the COSMIN Methodology. *Journal of Orthopaedic& Sports Physical Therapy*, *53*(1), 23-39.

Ireri, D. K., Wasike, S., & Mungai, C. (2020). Innovative strategies and organizational performance: A case of Telkom Kenya Limited.*International Journal of Research in Engineering*, *10*(10), October 2020, 20-26.

Issak, A. I. S., &Odollo, L. (2023). Innovation practices and performance of Islamic banks in Nairobi-Kenya. *Journal of Business and Strategic Management*, *8*(1), 52-76.

Jusufi, G., Ukaj, F., &Ajdarpašić, S. (2020). The effect of product innovation on the export performance of Kosovo SMEs. *Management: Journal of Contemporary Management Issues*, *25*(2), 215-234.

Kamal, E. M., Lou, E. C., &Kamaruddeen, A. M. (2023). Effects of innovation capability on radical and incremental innovations and business performance relationships. *Journal of Engineering and Technology Management*, *67*, 101726.

Kamalrulzaman, N. I., Ahmad, A., Ariff, A. M., & Muda, M. S. (2021). Innovation capabilities and performance of Malaysian agricultural SMEs: The moderating role of strategic alliance. *International Journal of Business and Society*, *22*(2), 675-695.

Kanyi, E. G., &Kihara, A. (2022). Influence of innovation strategies on performance of internet service provider companies in Nairobi Kenya. *Journal of Business and Strategic Management*, *7*(3), 1-29.

Kartono, E. L., Bernarto, I., Sudibjo, N., &Pramono, R. (2021). Transformational leadership and organizational innovation: the role of goal-oriented synergistic interaction. *The Journal of Asian Finance, Economics and Business*, *8*(6), 909-920.

Karhulahti, V. M., Martončik, M., &Adamkovič, M. (2023). Measuring Internet gaming disorder and gaming disorder: a qualitative content validity analysis of validated scales. *Assessment*, *30*(2), 402-413.

Kaur, N., & Kaur, P. (2021). What drives innovation in micro, small, and medium enterprises?. *Journal of Public Affairs*, *21*(2), e2336.

Kavana, H., &Puspitowati, I. (2022, May). The effect of proactive action, innovation and risk taking on business performance. In *Tenth International Conference on Entrepreneurship and Business Management 2021 (ICEBM 2021)* (pp. 284-289). Atlantis Press.

Kiiru, D. K., Mukulu, E., & Ngatia, P. (2023). Innovativeness and Performance: Evidence from Kenyan SMEs. *European Journal of Business and Management Research*, *8*(2), 113-119.

Kijkasiwat, P., &Phuensane, P. (2020). Innovation and firm performance: The moderating and mediating roles of firm size and small and medium enterprise finance. *Journal of Risk and Financial Management*, *13*(5), 97.

Kim, K. (2021). The interplay between the social and economic human resource management systems on innovation capability and performance. *International Journal of Innovation Management*, *25*(07), 2150074.

Kamboj, S., & Sharma, M. (2023). Social media adoption behaviour: Consumer innovativeness and participation intention. *International Journal of Consumer Studies*, *47*(2), 523-544.

Kamin, Y. B. (2021). Integrating innovation diffusion theory with technology acceptance model: Supporting students' attitude towards using a massive open online course (MOOCs) system. *Interactive Learning Environments*, *29*(8), 1380-1392.

Koyluoglu, S., & Dogan. M. (2021). the impact of innovation strategies on business performance: Practices in high technology companies in Turkey. *Marketing and Management of Innovations, 4,* 168- 183. doi.org/10.21272/mmi.2021.4-13

Lam, L., Nguyen, P., Le, N., & Tran, K. (2021). The relation among organizational culture, knowledge management, and innovation capability: Its implication for open innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, *7*(1), 66.

Larios-Francia, R. P., &Ferasso, M. (2023). The relationship between innovation and performance in MSMEs: The case of the Wearing Apparel Sector in emerging countries. *Journal of Open Innovation: Technology, Market, and Complexity*, 100018.

Lathong, L., Phong, B. L., &Saeheng, P. (2021). Transformational leadership, knowledge sharing and innovation capability: An empirical study from Lao Firms. Journal of *International Business Management*, *4*(9), 1–10. doi.org/10.37227/ jibm-2021-08-1154

Latip, M., Sharkawi, I., & Mohamed, Z. (2021). The impact of innovation attributes and the mediating effect of environmental attitudes towards environmental management practices among SMEs. *International Social Science Journal*, *71*(239-240), 91-108.

Le, P. B. (2021). Determinants of frugal innovation for firms in emerging markets: the roles of leadership, knowledge sharing and collaborative culture. *International Journal of Emerging Markets*, (ahead-of-print).

Lei, H., Gui, L., & Le, P. B. (2021). Linking transformational leadership and frugal innovation: The mediating role of tacit and explicit knowledge sharing. *Journal of Knowledge Management*, 25(7), 1832-1852. doi.org/10.1108/JKM04-2020-0247

Leppänen, P., George, G., &Alexy, O. (2023). When do novel business models lead to high performance? A configurational approach to value drivers, competitive strategy, and firm environment. *Academy of Management Journal*, *66*(1), 164-194.

Li, H., Lu, Z., & Yin, Q. (2023). The development of Fintech and SME innovation: Empirical evidence from China. *Sustainability*, *15*(3), 2541.

Li, J., Li, Y., Song, H., & Fan, C. (2021). Sustainable value creation from a capability perspective: How to achieve sustainable product design. *Journal of Cleaner Production*, *312*, 127552.

Lusch, R. F., Vargo, S. L., &O'brien, M. (2007). Competing through service: Insights from service-dominant logic. *Journal of retailing*, *83*(1), 5-18.

Makanyeza, C., Mabenge, B. K., &Ngorora-Madzimure, C. P. K. (2023). *Factors influencing small and medium enterprises' innovativeness: Evidence from manufacturing companies in Harare, Zimbabwe*. Global Business and Organizational Excellence published by Wiley Periodicals LLC.

Martins, A. (2023). Dynamic capabilities and SME performance in the COVID-19 era: the moderating effect of digitalization. *Asia-Pacific Journal of Business Administration*, *15*(2), 188-202.

Mitariani, N., Yasa, N., Giantari, I., & Setiawan, P. (2023). Improving export performance trough innovation capability during COVID-19 pandemic: The mediation role of aesthetic-utilitarian value and positional advantage. *Uncertain Supply Chain Management*, *11*(1), 361-374.

Mohamed, S. (2021). *Catalyzing and implementing innovation strategies in the information technology industry workforce* (Doctoral dissertation, Walden University).

Mugambi, L. M., & Kinyua, G. M. (2020). Role of innovation capability on firm performance in the context of commercial banks in Nairobi City County, Kenya. *International Journal of Current Aspects in Finance, Banking and Accounting*, *2*(3), 14-23.

Muneeb, D., Ahmad, S. Z., Abu Bakar, A. R., &Tehseen, S. (2023). Empowering resources recombination through dynamic capabilities of an enterprise. *Journal of Enterprise Information Management*, *36*(1), 1-21.

Mung'ora, M. N. (2020*). Innovative strategies and the performance of savings and credit cooperatives in Nyeri County, Kenya* (Masters research project, Kenyatta University).

Mungai, E., &Ndiritu, S. W. (2023). Peeling the Onion! What are the drivers and barriers of cleaner production? A case of the Kenyan manufacturing SMEs. *Journal of Cleaner Production*, *383*, 135436.

Muthoka, R. K. (2022). *Strategic alliance and performance of small and medium enterprises in manufacturing sector in Nairobi City County, Kenya* (Doctoral thesis, kenyatta university).

Muthoka, R. K., Kilika, J. M., &Muathe, S. M. (2022). Alliance motives among manufacturing SMEs: Evidence from an emerging economy. *European Scientific Journal*, *18*(22), 180-194.

Muthoka, R., Kilika, J., &Muathe, S. (2021). Strategic alliance among small and medium enterprises: Firm based motive in the manufacturing sector in Kenya. *International Journal of Economic, Commerce and Management*, *9*(11), 334-359.

Navarro, S., Andreu, L., &Cervera, A. (2014). Value co-creation among hotels and disabled customers: An exploratory study. *Journal of business research*, *67*(5), 813-818.

Novillo-Villegas, S., Ayala-Andrade, R., Lopez-Cox, J. P., Salazar-Oyaneder, J., & Acosta-Vargas, P. (2022). A roadmap for innovation capacity in developing countries. *Sustainability*, *14*(11), 6686.

Marin-Dett, A., &Anzules-Falcones, W. (2022). Sustaining the path for innovation capability from a developing country perspective: A conceptual framework. *Sustainability*, *14*(19), 12807.

Odhiambo, E. N. (2022). Influence of technology and innovation on performance of bar and restaurant businesses in Nairobi County, Kenya during COVID-19 crisis. *European Journal of Management and Marketing Studies*, *7*(3), 160-171.

Ogaga, I. A., Ezenwakwelu, C. A., Isichei, E. E., &Olabosinde, T. S. (2022). Ethical leadership and sustainability of agro-allied firms: Moderating role of environmental dynamism. *International Journal of Ethics and Systems*.

Oketch, F. (2023). *Successful innovation strategies of Ugandan small and medium enterprises* (Doctoral dissertation, Walden University).

Oudgou, M. (2021). Financial and non-financial obstacles to innovation: Empirical evidence at the firm level in the MENA Region. *Journal of Open Innovation: Technology, Market, and Complexity*, *7*(1), 28-39

Poi, G., &Lebura, S. (2022). Revitalizing strategic agility in a turbulent environment: A conceptual discourse. *International Journal of Scientific Research and Management*, *10*(01), 2844-2851.

Prahalad, C. K. (2004). The blinders of dominant logic. *Long range planning*, *37*(2), 171-179.

Ramaj, V., Cucovic, A., &Jusufi, G. (2022). Innovation as a success key for manufacturing SMEs: Empirical insights from Kosovo. *Economic Studies*, *31*(4), 113-127.

Ringo, D. S., Kazungu, I., &Tegambwage, A. G. (2023). Effect of innovation capabilities on export performance: Evidence from manufacturing SMEs in Tanzania. *Technological Sustainability*, *Vol. ahead-of-print* No. ahead-of-print. doi.org/10.1108/TECHS-09-2022-0038

Rogers, E. M. (1995). Diffision of innovations. *The Free Press, New York*.

Rodrigues, J., Ruivo, P., & Oliveira, T. (2021). Mediation role of business value and strategy in firm performance of organizations using software-as-a-service enterprise applications. *Information & Management*, *58*(1), 103289-103303.

Ruba, R. M., Chiloane-Phetla, G. E., & Van Der Westhuizen, T. (2023). Moderating effect of business environmental dynamism in innovativeness - firm performance relationship of Congolese manufacturing companies, *9*(1), 1-12.

Rumanti, A. A., Rizana, A. F., Septiningrum, L., Reynaldo, R., &Isnaini, M. M. R. (2022). Innovation capability and open innovation for small and medium enterprises (SMEs) performance: Response in dealing with the COVID-19 pandemic. *Sustainability*, *14*(10), 5874.

Salehi, M., &Arianpoor, A. (2021). The relationship among financial and non-financial aspects of business sustainability performance: evidence from Iranian panel data. *The TQM Journal*, *8*(1), 49-67.

Solem, B. A. A., Fredriksen, J. I., &Sørebø, Ø. (2023). Dynamic capabilities in the realisation of omnichannel retailing. *International Journal of Retail & Distribution Management*, *51*(1), 21-38.

Strobl, A., Kallmuenzer, A., & Peters, M. (2023). Entrepreneurial leadership in Austrian family SMEs: A configurational approach. *International Small Business Journal*, *41*(2), 152-180.

Su, X., Mou, C., & Zhou, S. (2023). Institutional environment, technological innovation capability and service-oriented transformation. *Plos one*, *18*(2), e0281403.

Sultana, S., Akter, S., &Kyriazis, E. (2022). Theorising data-driven innovation capabilities to survive and thrive in the digital economy. *Journal of Strategic Marketing*, 1-27. Mendoza-Silva, A. (2021). Innovation capability: A sociometric approach. *Social Networks*, *64*, 72-82.

Teece, D. J. (2023). The evolution of the dynamic capabilities framework. *Artificiality and sustainability in entrepreneurship*, 113.

Telagawathi, N., Yasa, N., Giantari, I., &Ekawati, N. (2022). The role of innovation strategies in mediating covid-19 perceptions and entrepreneurship orientation on Endek weaving craft business performance. *Uncertain Supply Chain Management*, *10*(3), 913-922.

Thoumrungroje, A., &Racela, O. C. (2022). Innovation and performance implications of customer-orientation across different business strategy types. *Journal of Open Innovation: Technology, Market, and Complexity*, *8*(4), 178-189.

Tu, W., Zhang, L., Sun, D., & Mao, W. (2023). Evaluating high-tech industries' technological innovation capability and spatial pattern evolution characteristics: Evidence from China. *Journal of Innovation & Knowledge*, *8*(1), 100287.

Valdez-Juárez, L. E., Ramos-Escobar, E. A., &Borboa-Álvarez, E. P. (2023). Reconfiguration of technological and innovation capabilities in Mexican SMEs: Effective strategies for corporate performance in emerging economies. *Administrative Sciences*, *13*(1), 15-40.

Vargo, S. L., &Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of marketing*, *68*(1), 1-17.

Vargo, S. L., &Lusch, R. F. (2008). Service-dominant logic: continuing the evolution. *Journal of the Academy of marketing Science*, *36*, 1-10.

Vargo, S. L., &Lusch, R. F. (2014). Service-dominant logic: What it is, what it is not, what it might be. In *The service-dominant logic of marketing* (pp. 61-74). Routledge.

Verma, S., &Chaurasia, S. (2019). Understanding the determinants of big data analytics adoption. *Information Resources Management Journal (IRMJ)*, *32*(3), 1-26.

Wachira, P., Ngugi, P., &Nyang'au, S. (2022). Influence of innovation capability on performance of small and medium enterprises in Kenya. *African Journal of Emerging Issues*, *4*(4), 53-66.

Wanjala, K. S., &Awuor, E. (2021). Business response strategies and performance during COVID-19 pandemic among manufacturing firms in Kenya: A case study of East African Breweries Limited. *International Research Journal of Business and Strategic Management*, *3*(3), 754-771.

Weidner, N., Som, O., & Horvat, D. (2023). An integrated conceptual framework for analysing heterogeneous configurations of absorptive capacity in manufacturing firms with the DUI innovation mode. *Technovation*, *121*, 102635.

Were, J. N. (2021). Innovation capability strategy and firm performance in the furniture manufacturing sector in Kenya. *Journal of Economics, Business, & Accountancy Ventura*, *24*(2), 233-245.

Wijaya, N., &Rahmayanti, P. (2023). The role of innovation capability in mediation of COVID-19 risk perception and entrepreneurship orientation to business performance. *Uncertain Supply Chain Management*, *11*(1), 227-236.

Wijaya, O. (2023). The role of supply chain management in entrepreneurial activities and product innovation on SMEs performance. *Uncertain Supply Chain Management*, *11*(2), 443-450.

Williams, J., & Aitken, R. (2011). The service-dominant logic of marketing and marketing ethics. *Journal of business ethics*, *102*, 439-454.

Wongsansukcharoen, J., &Thaweepaiboonwong, J. (2023). Effect of innovations in human resource practices, innovation capabilities, and competitive advantage on small and medium enterprises' performance in Thailand. *European Research on Management and Business Economics*, *29*(1), 100210.

Zahra, S. A., & George, G. (2002). The net-enabled business innovation cycle and the evolution of dynamic capabilities. *Information systems research*, *13*(2), 147-150.

Zastempowski, M. (2022). What shapes innovation capability in micro-enterprises? New-to-the-market product and process perspective. *Journal of Open Innovation: Technology, Market, and Complexity*, *8*(1), 59-67.

Zastempowski, M., Glabiszewski, W., Krukowski, K., &Cyfert, S. (2020). Technological innovation capabilities of small and medium-sized enterprises,

Zhang, Y., Ma, X., Pang, J., Xing, H., & Wang, J. (2023). The impact of digital transformation of manufacturing on corporate performance-The mediating effect of business model innovation and the moderating effect of innovation capability. *Research in International Business and Finance*, *64*, 101890.

Zulkiffli, S. N. A., Zaidi, N. F. Z., Padlee, S. F., &Sukri, N. K. A. (2022). Eco-innovation capabilities and sustainable business performance during the COVID-19 pandemic. *Sustainability*, *14*(13), 7525-7542. 7525.doi.org/10.3390/su14137525