

Original Research Article

Innovation Strategies and Competitive Advantage of Ceramic Manufacturers in Kenya

Sonia Mutende^{1*}, Dr. Justice Mutua¹, Sonia Mutende², Dr. Justice Mutua³¹School of Business & Economics, Daystar University, Kenya²PhD Candidate, School of Business & Economics, Daystar University, Kenya³Lecturer, School of Business & Economics, Daystar University, Kenya**Article History**

Received: 05.03.2024

Accepted: 16.04.2024

Published: 18.04.2024

Journal homepage:<https://www.easpublisher.com>**Quick Response Code**

Abstract: Manufacturing firms are crucial for Kenya's economic growth and industrialization efforts aligned with Vision 2030 objectives. However, recent trends show a decline in competitive advantage for these firms, reflected in decreasing market share, customer loyalty, and sales growth. To address this, firms have adopted innovative strategies like process, product, and technology innovation to enhance their competitive edge. The decline in competitive advantage poses risks to profitability, market position, and long-term sustainability, underscoring the importance of investigating the impact of innovation strategies on the competitive advantage of ceramic manufacturers in Kenya. Therefore, the purpose of the study is to evaluate the relationship between innovation strategies and the competitive advantage of ceramic manufacturers in Kenya. The purpose of the study was to ascertain how Kenyan ceramic producers' competitive advantage was impacted by innovation in technology, products, and processes. The study used a desktop research approach, and theme analysis was used to examine the data. The study discovered that Kenyan ceramic producers' competitive edge stems from process innovation. Furthermore, the results showed that Kenyan ceramic producers' competitive advantage stems from product innovation. The results also showed the impact of technological innovation on Kenyan ceramic producers' competitive edge. The study concluded that Kenyan ceramic producers had a competitive edge due to process, product, and technological innovation. Manufacturers of ceramics must take a whole-hearted commitment to innovation, covering all facets such as procedures, goods, and technology.

Keywords: Innovation strategies, competitive advantage, process innovation, product innovation, technology innovation.

Copyright © 2024 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution **4.0 International License (CC BY-NC 4.0)** which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

INTRODUCTION AND BACKGROUND OF THE STUDY

The manufacturing sector operates in a highly competitive global marketplace, where companies must constantly innovate to maintain or gain a competitive edge (Vijaya, 2021). Pressure from low-cost competitors, particularly from emerging economies, incentivizes companies to innovate in areas such as cost reduction, quality improvement, and product differentiation. The manufacturing industry, stimulated by globalization, has begun to invest further in innovation to improve productivity and meet customer demands (Wang & Islam, 2017). In today's changing market environment, companies may use developing technology to their advantage. Innovation is more than just creating new technology for goods or services; it also

frequently involves coming up with fresh approaches to conducting business in the face of change (Ondiek & Teh, 2024).

The manufacturing sector in Kenya is under increasing pressure to sustain growth and remain globally competitive, highlighting the critical importance of understanding the nexus between innovation strategies and competitive advantage. Rapid technological advancements, globalization, and evolving consumer expectations necessitate a strategic emphasis on innovation to ensure long-term success and market leadership. Studies, such as those by Zhang (2017) and Kofi (2019), underscore the pivotal role of innovation in enhancing competitiveness, enabling firms to differentiate products, improve productivity, and enter new markets. Additionally, Canh *et al.*, (2019)

emphasize the significance of product and process innovations in supporting firms' sustainability and maintaining a competitive edge in rapidly evolving global markets.

The ceramic manufacturing industry in Kenya, recognized as a vital contributor to industrialization and economic growth, faces various challenges despite its inherent potential. Innovation emerges as a key driver for achieving competitive advantage in this sector, facilitating industry transformation and enhancing market differentiation (Wanaswa & Owino, 2023). With Kenya's Vision 2030 highlighting innovation as a catalyst for economic development, the ceramic manufacturing industry must harness innovation to address industry-specific challenges and capitalize on emerging opportunities (UNCTAD, 2019). However, empirical research on innovation strategies within the Kenyan ceramic manufacturing context remains limited, necessitating comprehensive investigations to provide actionable insights for policymakers, industry stakeholders, and ceramic manufacturers to foster innovation-driven growth and enhance global competitiveness.

The symbiotic affiliation between novelty strategies and competitive advantage underscores the significance of strategic innovation adoption for manufacturing firms. By integrating innovation into work processes, reducing costs, and enhancing service delivery, companies can improve competitiveness and fortify their market position over time (Chege & Suntu, 2019). Innovation-driven differentiation not only creates barriers to entry but also fosters brand loyalty, enabling manufacturing companies to distinguish themselves from competitors and sustain long-term success (Nuzulul & Nurul, 2020). Thus, leveraging innovation strategies is essential for manufacturing firms to navigate dynamic market landscapes and secure sustainable competitive advantages.

In manufacturing firms, innovative strategies are vital for staying competitive by adapting to market changes and meeting evolving customer demands. They drive efficiency gains, cost reductions, and productivity improvements, enhancing profitability and sustainability. The most commonly adopted innovation strategies among manufacturing firms include product innovation, process innovation, market innovation and technology innovation (Zainurossalamia, 2016; Nduati, 2022; Mugo & Macharia, 2021; Wambua, 2020). This study looked at three innovation strategies which include process innovation, product innovation, and technology innovation. The indicators of process innovation include organizational procedures, new workflow and modification of existing processes (Wambua, 2020). In manufacturing firms product innovation is conceptualized in terms of new products, products upgrading, and improved product features (Muigai & Gitau, 2018). The indicators of technology innovation

include new hardware, new system and software, and research and development (Mugo & Macharia, 2021).

Competitive advantage is a business's ability to outperform its intrants in terms of profitability, market share, customer satisfaction, and/or other key metrics, often achieved through superior value creation, cost efficiency, differentiation, innovation, or strategic positioning (Aktharsha, 2019; Mugo & Macharia (2021). This study looked at competitive advantage in terms of market share, customer loyalty, and sales growth. Organizational learning plays a key role in enhancing innovation and competitive advantage in manufacturing firms. The indicators of organizational learning include acquisition of knowledge, knowledge sharing, and knowledge utilization (Sundusiah & Wibowo, 2020).

STATEMENT OF THE PROBLEM

Manufacturing firms, including ceramic manufacturers, play a critical role in driving economic growth, fostering industrialization, and supporting Kenya's Vision 2030 goals of sustainable development and global competitiveness (Nduati, 2022). However, manufacturing firms in Kenya have been low competitive advantage as shown by declining market share, reduce customer loyalty and declining sales growth. As such, manufacturing firms have adopted innovative strategies, such as process innovation, product innovation and technology innovation, to improve their competitive advantage. Ayoroh and Muli (2023) indicate that between the year 2018 and 2019, the sales volume of manufacturing firms decreased by 12.15%, which decreased again in 2020 by 3.5% and 6.6% in 2021. According to the Kenya Association of Manufacturers (2021) report, manufacturing firms were under-stocked and there was a decline in stock levels between 2019 and 2020 by 14%, which led to a decline in customer loyalty. A decline in competitive advantage in ceramic manufacturers leads to reduced profitability, market competitiveness, and long-term sustainability, potentially leading to loss of market position and decreased revenue streams (Chege & Suntu, 2019). Examining how innovative tactics affect Kenyan ceramic producers' competitive advantage is crucial. Kenya has seen a number of research on competitive advantage and innovation initiatives. For example, Kasevu (2017) investigated the relationship between innovation strategies and competitive advantage among Kenyan commercial banks; Wambua (2020) investigated the relationship between innovation strategies and performance of real estate firms in Mavoko Sub-County, Kenya; and Mugo and Macharia (2021) investigated the relationship between innovation strategies and competitive advantage in Kenyan telecommunication companies. However, these studies were conducted in telecommunication companies, commercial banks and real estate firms and hence the findings cannot be generalized to ceramic manufacturers in Kenya. In addition, Mugo and Macharia (2021) used a cross-sectional research design, while Kasevu (2017) and

Wambua (2020) utilized a descriptive research design. Also, Wambua (2020) used performance as the dependent variable, which is different from competitive advantage.

Purpose of the study

The purpose of the study was to evaluate the relationship between innovation strategies and competitive advantage of ceramic manufacturers in Kenya.

Research Objectives

The research objectives of the study were;

- i. To determine the effect of process innovation on competitive advantage of ceramic manufacturers in Kenya
- ii. To examine the effect of product innovation on competitive advantage of ceramic manufacturers in Kenya
- iii. To establish the effect of technology innovation on competitive advantage of ceramic manufacturers in Kenya
- iv. To examine the moderating effect of organizational learning on the relationship between innovation strategies and competitive advantage of ceramic manufacturers in Kenya

METHODOLOGY

The study adopted a desktop research design. Desktop research involves the collection and analysis of existing data, literature, and information relevant to a research topic without directly collecting new data from primary sources (Basias & Pollalis, 2018). This approach allows researchers to synthesize existing knowledge, identify key trends, theories, and best practices, and contextualize their study within the broader literature and knowledge base. Desktop research offers several advantages, including cost and time efficiency, comprehensive coverage, and the ability to access a wide range of information from diverse sources. Desktop research design has previously been adopted by previous authors including Nduati (2022) in a study on the influence of strategic innovation on performance of manufacturing firms in Kenya.

Desktop research design was used in this study because it provides an opportunity to access existing literature and data to fill this gap in knowledge. In addition, conducting primary research in Kenya, such as surveys or interviews with ceramic manufacturers, may present logistical challenges and resource constraints. Desktop research offers a cost-effective and efficient way to gather relevant information and insights without the need for extensive fieldwork. Additionally, by synthesizing information from a variety of sources, desktop research helps in gaining a comprehensive understanding of innovation strategies and competitive dynamics within the Kenyan ceramic manufacturing sector, contributing valuable insights to industry stakeholders and decision-makers.

THEORETICAL FRAMEWORK

The diffusion of innovation theory served as the study's foundation, Porter's theory of competitive advantage, and Schumpeter's theory of innovation. Schumpeter's theory of innovation asserts that economic progress is propelled by the disruptive force of entrepreneurial innovation, which leads to the creation of new industries and the replacement of outdated ones (Callegari & Nybakk, 2022). According to this theory, the continuous introduction of new technologies, products, and business methods by entrepreneurs is essential for driving economic growth and dynamism. In the context of ceramic manufacturers in Kenya, the adoption of innovation strategies such as process innovation, product innovation, and technology innovation, can lead to differentiation and competitive advantage. Leveraging innovation strategies in process, product, and technology domains can empower ceramic manufacturers in Kenya to differentiate themselves, drive growth, and maintain a sustainable competitive advantage in the industry. Critics of this theory question its applicability in explaining economic phenomena across diverse contexts and industries, suggesting that it may oversimplify the complexities of innovation dynamics and their impact on competitiveness and growth (Langroodi, 2021).

The Diffusion of Innovation (DOI) Theory was developed by E.M. Rogers in 1962 (Rogers, 1962). It elucidates how process innovation, technology innovation, and product innovation contribute to competitive advantage through the process of adoption and diffusion within a market. Process innovation, which involves improvements in organizational procedures and workflows, can enhance competitive advantage by optimizing efficiency and reducing costs, thus increasing productivity and customer loyalty (Salahshoor, 2018). Technology innovation, such as the introduction of new tools, systems, or software, can provide firms with a competitive edge by enabling them to offer novel or superior products and services, enhance operational capabilities, or streamline processes. Product innovation, which entails the development of new or improved goods or services, can differentiate firms in the market, attract customers, and increase market share. The theory was adopted by Aktharsha (2019) to explain the relationship between innovation strategies and competitive advantage of firms.

The Diffusion of Innovation (DOI) Theory has been criticized for its propensity to oversimplify the process of adopting innovations by emphasizing adopters' and innovations' characteristics alone, ignoring the larger socio-cultural, institutional, and economic factors that affect adoption decisions (Jeong, 2021). Moreover, the theory's focus on individual-level attributes may not adequately capture the role of collective decision-making, organizational dynamics, and structural constraints in shaping adoption patterns,

particularly in diverse and rapidly changing environments.

Porter theory of competitive advantage elucidates that manufacturing firms can attain superiority through process, product, and technology innovations, each influencing market share, customer loyalty, and sales growth. These forms of innovation, guided by Porter's theory, empower manufacturing firms to attain competitive advantage by amplifying market share, nurturing customer loyalty, and fueling sales growth. Mugo and Macharia (2021) used Porter theory of competitive advantage to explain competitive advantage of manufacturing firms.

Criticism of Porter's theory of competitive advantage includes several points. Firstly, some argue that the model's focus on industry-level analysis

overlooks the importance of firm-specific factors such as resources, capabilities, and strategies in determining competitiveness (Redding, 2020). In addition, the theory's emphasis on achieving either cost leadership or differentiation leads to a limited understanding of the complexities of competitive strategy, as firms often pursue a combination of both strategies or employ other approaches such as niche marketing or innovation (Darmawan & Grenier, 2021).

CONCEPTUAL FRAMEWORK

The relationship between the independent and dependent variables is seen in Figure 1. Process innovation, production innovation, and technological innovation were the independent factors. Competitive advantage will be the dependent variable.

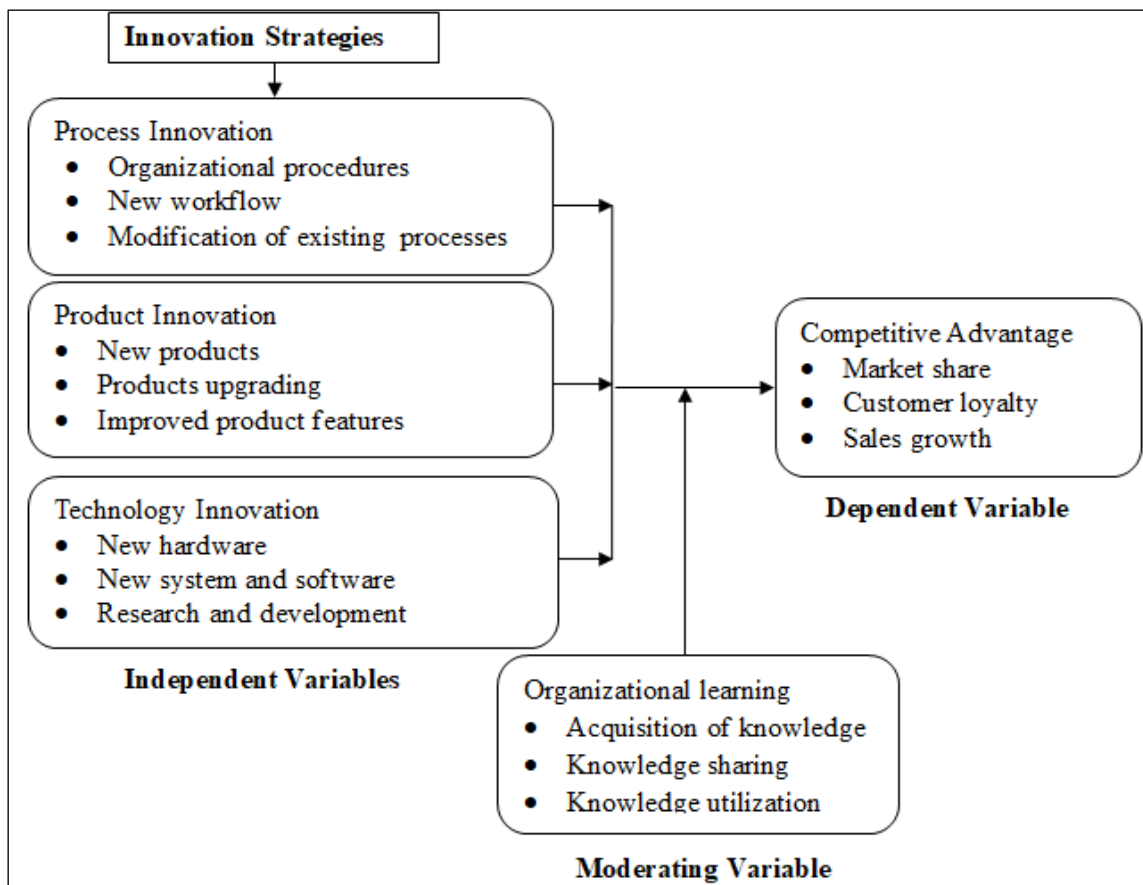


Figure 1: Conceptual Framework

EMPIRICAL LITERATURE

Process Innovation and Competitive Advantage

According to Hari and Tita (2020) who conducted a study to examine the connection between process innovation and the financial success of pharmaceutical companies in Indonesia. The study used a survey research approach, gathering data from managers of Indonesian pharmaceutical companies using a survey questionnaire. Partial Least Squares (PLS) statistical software was then used for analysis. The

results showed that process innovation and a company's financial success were positively correlated ($r=0.676$, $p\text{-value}=0.000$). However the study was carried out in Indonesia, a nation whose macroeconomic climate differs from Kenya's. Furthermore, rather of using competitive advantage as the dependent variable, the research used financial performance. Additionally, the study employed a survey research design and used questions to collect primary data; whereas, the current study employed a desktop research methodology.

In Nigeria, Kowo, Akinbola and Akinrinola (2018) conducted a study on effect of process innovation on organizational performance in the telecommunications sector. The study adopted a descriptive research design and through the administration of 114 questionnaires to employees of major telecommunications operators, primary data were collected and analysed using descriptive and inferential statistics. The findings of the study indicated a significant positive effect of process innovation on organizational performance ($r=0.408$, $p\text{-value}=0.000$). However, this study used a descriptive research design and questionnaires in the collection of data. Also, the study was conducted in the telecommunications sector in Lagos State in Nigeria and hence they cannot be generalized to the manufacturing sector. Also, the dependent variable in this study was organizational performance, which is different from competitive advantage.

In Nairobi County, Kenya, Christopher and Yussuf (2021) investigated how process improvements affect the performance of small and medium-sized manufacturing companies. A structured questionnaire was used to gather data from 254 managers or owner-managers of manufacturing SMEs using a positivist approach and an explanatory research methodology. After that, descriptive and inferential statistical analyses were carried out, and the results showed that process innovations and firm performance had a substantial positive association, with process innovations accounting for 47.2% of the variation in company performance. The results showed that small and medium-sized manufacturing enterprises' performance is significantly impacted by process innovation ($\beta_1=0.558$, $p\text{-value}=0.05$). Performance was, nonetheless, the dependent variable in the research. Additionally, the study utilized an explanatory research design and a positivist methodology; whereas, the current study employed a desktop research design.

Product Innovation and Competitive Advantage

Vijaya (2021) investigated the connection between PT Toyota Astra Motor's competitive advantage and product innovation. A cross-sectional research approach was employed in the study. The study population consisted of 618 people who bought products from Toyota dealers in Malang Raya in 2020. Purposive sampling was used to pick 158 respondents for the sample. Product innovation has a considerable impact on competitive advantage, according to data analysis utilizing the Partial Least Square (PLS) approach ($p\text{-value} = 0.000$). However, because the scope of this study was restricted to PT Toyota Astra Motor in India, the results cannot be applied to Kenyan ceramic producers because of the country's different macroeconomic climate and regulatory system. Furthermore, although the current study employed a desktop research approach, the previous study used a cross-sectional research design.

The impact of product innovation strategy on the performance of big manufacturing enterprises in China was examined by Xiao, Hajar, and Hutahayan (2022). The study employed a descriptive research approach and its observation unit consisted of managers and middle management level workers from a subset of Beijing's leading manufacturing enterprises. Questionnaires were used to gather data, and the results showed that performance and product innovation strategy had a substantial and positive link ($\beta=0.684$, $p=0.004$). It was discovered that 15.74% of the variances in the performance of Chinese manufacturing companies could be explained by product innovation strategy. However, because of the disparities in the legal system and business climate in Kenya, the study's conclusions cannot be applied there since they were restricted to big industrial companies in China. Descriptive research approach was also employed in the study, however the current study used desktop research design.

The relationship between competitive advantage and product innovation in Fast-Moving Consumer Goods (FMCG) companies in Nigeria was studied by Adedapo and Bamiduro (2020). The study used a descriptive research methodology and a structured questionnaire distribution approach to gather primary data from ten industrial enterprises in the city of Ibadan. The study validates a linear association ($r=0.677$, $p\text{-value}=0.000$) between product innovation and sustained competitive advantage by data analysis utilizing descriptive and inferential statistics. The study comes to the conclusion that manufacturing businesses' sustained competitive advantage is positively impacted by product innovation. Nevertheless, as this study's scope was restricted to FMCG (fast-moving consumer goods) companies in Nigeria, its conclusions cannot be applied to Kenyan ceramic producers. Furthermore, whereas the previous study used a desktop research approach, this one used a descriptive research design.

Technology Innovation and Competitive Advantage

The impact of technical innovation on competitive advantage in Kenya's telecommunications sector was studied by Wanaswa and Owino (2023) employing a census technique, the study covered all 83 big licensed telecoms service providers employing positivist philosophy and descriptive cross-sectional survey methodology. Using both descriptive and inferential statistics, the results showed that technical innovation had a substantial and favorable impact on competitive advantage ($\beta=0.376$, $p\text{-value}=0.000$), accounting for 65% of the fluctuations in competitive advantage. However, the results of this study, which was carried out in Kenya's telecom sector, indicate that ceramic manufacturers' innovation tactics are not the same as ours. The present study employed a desktop research design, while the previous study likewise used positivist philosophy and a descriptive cross-sectional survey design.

Mugo and Macharia (2020) studied how technological advancement affected Kenyan telecommunication companies' ability to compete. Data was gathered from 247 managers using proportional sampling and a descriptive survey approach. The findings indicate that technological innovation has a beneficial impact on Kenyan telecommunication businesses' competitive advantage ($R^2=0.399$, $\beta=0.222$, $p\text{-value}=0.001$). The study comes to the conclusion that technological innovation boosts Kenyan telecommunications businesses' competitive advantage. Nevertheless, since this study was carried out inside Kenyan telecom companies, it is not possible to extrapolate the results to Kenyan ceramic producers. Furthermore, although the current study used a desktop research approach, the previous study used a descriptive survey design.

The connection between technological innovation and company success in Kenya was investigated by Chege and Suntu (2019). The study's research design is descriptive. Descriptive and inferential statistics were used to analyze primary data obtained from questionnaires with a sample of 240 medium-sized businesses. The results of using structural equation modeling show that technological innovation and company success are positively correlated ($\beta=0.543$, $p\text{-value}=0.000$). According to the research, technological innovation accounts for 43.3% of Kenyan firms' performance. Nevertheless, the research was restricted to Kenyan medium-sized businesses, none of which were ceramic makers explicitly. Furthermore, although the previous study used a descriptive research methodology, the current study used a desktop research approach.

Organizational Learning, Innovation Strategies and Competitive Advantage

It was looked at how organizational learning and innovation affected Indonesian Vocational High Schools' (SMK) ability to compete by Sundusiah and Wibowo (2020). The research design used in the study was explanatory. The study, which sought input from SMK principals, was centered on SMK students in West Java Province, Indonesia, and using the Partial Least Squares Structural Equation Modelling (PLS-SEM) methodology. The results showed that innovation ($\beta=0.453$, $p\text{-value}=0.000$) and organizational learning ($\beta=0.234$, $p\text{-value}=0.002$) had a favorable influence on competitive advantage. Twenty-three.8% of the difference in competitive advantage was explained by the two components. Organizational learning was utilized as a moderating variable in the current investigation, whereas it was employed as an independent variable in this study. Furthermore, because the research was done at vocational high schools in Indonesia, it cannot be applied to Kenyan ceramic businesses.

Organizational learning capacity and organizational innovation's impact on competitive

advantage were investigated by Nuzulul and Nurul (2020). A descriptive research design was employed in the study. The study used structural equation modeling to analyze the data and used convenience sampling with a sample size of 300 MSMEs. The results demonstrated that organizational innovation ($\beta=0.220$, $p\text{-value}=0.000$) and learning capability ($\beta=0.323$, $p\text{-value}=0.000$) had positive and substantial effects on competitive advantage. A total of 67.8% of the variation in competitive advantage was explained by organizational learning capability and organizational innovation. Organizational learning capability was employed as a moderating variable in the current study, whereas it was used as an independent variable in the previous one. Furthermore, the research was carried out among MSMEs, which were not just manufacturing companies.

STUDY FINDINGS

This study used a desktop research design and focused on Kenyan ceramic producers. Competitive advantage was the dependent variable, and the innovation techniques used were process, product, and technological innovation. Furthermore, this study evaluated the moderating role of organization learning capability in the link between ceramic manufacturers' competitive advantage and innovation methods.

Process innovation has a positive and significant effect on the competitive advantage of ceramic manufacturers in Kenya. Optimizing internal operations and streamlining workflows helps ceramic manufacturers to improve efficiency, reduce production costs, and enhance overall productivity (Nduati, 2022). This allows them to deliver products to market more swiftly, respond promptly to changing consumer demands, and maintain high levels of customer satisfaction. Moreover, process innovation enables ceramic manufacturers to differentiate themselves from competitors by offering unique value propositions such as faster lead times, higher product quality, and greater customization capabilities (Zainurossalamia, 2016).

The competitive advantage of Kenyan ceramic producers is favorably and dramatically impacted by product innovation. Ceramic producers may stand out from the competition, draw in clients, and increase their market share by consistently releasing new items or improving their current lineup (Aktharsha, 2019). Product innovation also enables producers to keep up with changing consumer demands and tastes, anticipate market developments, and remain relevant in a cutthroat environment. Ceramic producers in Kenya may ultimately strengthen their competitive edge, spur growth, and maintain long-term success in the market by utilizing product innovation as a strategic strategy (Wambua, 2020).

Technology innovation had a positive and significant effect on competitive advantage of ceramic manufacturers in Kenya. By leveraging advanced

technologies, such as automated production systems, digital design software, and advanced materials research, manufacturers can enhance their operational efficiency, product quality, and innovation capabilities (Nduati, 2022). This enables them to produce ceramic products that are superior in terms of durability, aesthetics, and performance, thereby gaining a competitive edge in the market. Moreover, technology innovation facilitates the development of new product lines, customization options, and production techniques, allowing manufacturers to meet diverse customer needs and preferences effectively (Adedapo & Bamiduro, 2020).

Organizational learning serves as a significant moderating factor in the relationship between innovation strategies and competitive advantage of ceramic manufacturers in Kenya. Fostering a culture of continuous learning and knowledge exchange helps ceramic manufacturers to enhance their capacity to effectively implement innovation strategies and leverage their benefits for competitive advantage (Sundusiah & Wibowo, 2020). Through the acquisition of new knowledge, such as market insights, technological advancements, and best practices, manufacturers can identify and capitalize on opportunities for innovation and differentiation in the market. Knowledge sharing promotes collaboration and cross-functional synergy, enabling the organization to harness the collective expertise and creativity of its workforce to develop innovative solutions and products. Furthermore, the effective utilization of knowledge ensures that innovation strategies are implemented efficiently and effectively, leading to tangible improvements in operational performance, product quality, and customer satisfaction, ultimately driving competitive advantage.

The findings provide empirical support for Schumpeter's theory of innovation. The study demonstrates the practical relevance of innovation strategies in enhancing competitiveness among ceramic manufacturers, thus addressing the criticism on the theory's applicability in explaining economic phenomena across diverse contexts and industries. The findings contribute in addressing several gaps and criticisms in the DOI Theory. Firstly, by demonstrating the impact of various types of innovation on competitive advantage, the study expands beyond the narrow focus on the characteristics of innovations and adopters, addressing the criticism that DOI oversimplifies innovation adoption by neglecting broader socio-cultural, economic, and institutional factors. In addition, the study's focus on the competitive advantage of ceramic manufacturers in Kenya acknowledges the role of organizational dynamics and structural constraints in shaping adoption patterns, thereby offering insights into the collective decision-making processes and contextual factors that influence innovation diffusion in diverse and rapidly changing environments, which DOI often overlooks.

The findings also help in addressing gaps and criticisms of Porter's theory of competitive advantage. By demonstrating the importance of innovation in enhancing competitiveness, the study shifts focus from industry-level analysis to firm-specific factors, such as the ability to innovate, adapt, and leverage technological advancements. This addresses the criticism that Porter's model overlooks the significance of firm-specific resources and capabilities in determining competitiveness. Secondly, the study's findings challenge the notion that competitive advantage must be achieved solely through cost leadership or differentiation strategies, as it highlights the role of innovation in creating a competitive edge. This broader perspective aligns with the criticism that Porter's framework limits understanding by focusing too narrowly on these two strategies, neglecting other approaches such as innovation.

CONCLUSIONS AND RECOMMENDATIONS

The study comes to the conclusion that Kenyan ceramic producers' competitive advantage is significantly impacted by process innovation. The study also comes to the conclusion that Kenyan ceramic producers' competitive advantage is significantly impacted by product innovation. The study also finds that Kenyan ceramic producers' competitive advantage is significantly impacted by technological innovation. The study goes on to say that organizational learning moderates the association between Kenyan ceramic producers' competitive advantage and their innovation methods. Ceramic producers can help Kenya Vision 2030 achieve its goals for industrialization and economic growth by putting an emphasis on innovative techniques. This will create a manufacturing sector that is both internationally competitive and dynamic. By leveraging organizational learning to optimize innovation processes, ceramic manufacturers can drive transformative change, advancing towards the realization of Sustainable Development Goal (SDG) 9 (Industry, Innovation, and Infrastructure) while simultaneously fostering economic prosperity and environmental sustainability in alignment with Kenya's long-term development aspirations.

From the findings, the study made several recommendations to various stakeholders. For ceramic manufacturers, it's essential to adopt a comprehensive approach to innovation encompassing all aspects, including processes, products, and technologies. Fostering a culture of organizational learning within the company can further enhance innovation capabilities. Collaborations and partnerships with industry peers, research institutions, and technology providers can also be beneficial in staying ahead of industry trends and innovations. For governments and policymakers, it's crucial to develop and implement policies and incentives that support innovation and research and development (R&D) investments within the ceramic manufacturing sector. Strengthening educational and training programs

to cultivate a skilled workforce capable of driving innovation is also recommended. Additionally, facilitating knowledge-sharing platforms and networks can promote collaboration and innovation within the sector.

Investors should recognize the importance of innovation in driving competitive advantage and profitability within the ceramic manufacturing industry. Conducting thorough due diligence to identify investment opportunities with strong potential for growth and innovation is essential. Consumers should stay informed about advancements in ceramic products and provide feedback to manufacturers to drive continuous improvement and innovation. For other researchers and academicians, building upon the study's findings to further explore the relationship between innovation strategies and competitive advantage in the ceramic manufacturing sector is recommended. Collaboration with industry stakeholders, policymakers, and fellow researchers can facilitate knowledge sharing and the development of innovative solutions to industry challenges.

REFERENCES

- Callegari, B., & Nybakk, E. (2022). Schumpeterian theory and research on forestry innovation and entrepreneurship: The state of the art, issues and an agenda. *Forest Policy and Economics*, 138, 102720.
- Langroodi, F. (2021). Schumpeter's Theory of Economic Development: a study of the creative destruction and entrepreneurship effects on the economic growth. *Journal of Insurance and Financial Management*, 4(3), 23-34.
- Adedapo, A., & Bamiduro, F. (2020). Product Innovation and Its Effects on Sustainable Competitive Advantage among 10 Selected Manufacturing Firms in Ibadan Metropolis, Nigeria. *The International Journal of Humanities & Social Studies*, 8(6). <https://doi.org/10.24940/theijhss/2020/v8/i6/HS2006-051>
- Ahawo, R. O. (2020). Process innovation and performance of non-profit organizations in Kenya. *The Strategic Journal of Business & Change Management*, 8(1), 18 – 27. <https://strategicjournals.com/index.php/journal/article/view/1889>
- Aktharsha, S. (2019). The Effect of Innovation on Competitive Advantage in IT Companies: An Empirical Investigation. *A Journal of Composition Theory*, 7(11), 1013. <https://jmc.edu/SSR/C-3/3.4.3/19-20/7.pdf>
- Ayoroh, E. A., & Muli, S. (2023). Reverse Logistics and Performance of Footwear Manufacturing Firms in Kenya. *International Journal of Logistics and Procurement Management*, 4(1), 1-13. <http://serialpublishers.com>
- Basias, N., & Pollalis, Y. (2018). Quantitative and qualitative research in business & technology: Justifying a suitable research methodology. *Review of Integrative Business and Economics Research*, 7, 91-105.
- Chege, S., & Suntu, S. (2019). Impact of information technology innovation on firm performance in Kenya. *Information Technology for Development*, 26, 1-30. [10.1080/02681102.2019.1573717](https://doi.org/10.1080/02681102.2019.1573717).
- Darmawan, D., & Grenier, E. (2021). Competitive advantage and service marketing mix. *Journal of Social Science Studies*, 1(2), 75-80.
- Jeong, M. (2021). *Consumer adoption of the Uber mobile application: Insights from diffusion of innovation theory and technology acceptance model*. Routledge.
- Kasevu, V. (2017). Innovation Strategies and Competitive Advantage among Commercial Banks in Kenya. *Digital Business*, 2(2), 100040. <https://doi.org/10.1016/j.digbus.2022.100040>
- Kenya Association of Manufacturers. (2021). *Footwear manufacturing companies in Kenya*. Retrieved from <http://kam.co.ke/>
- Mugo, P. & Macharia, J. (2020). Technological innovation and competitive advantage in telecommunication companies in Kenya. *International Journal of Research in Business and Social Science*, 9(5), 38-47. DOI:10.20525/ijrbs.v9i5.866
- Mugo, P., & Macharia, J. (2021). Innovation strategies' influence on competitive advantage in telecommunication companies in Kenya. *The University Journal*, 3(1), 81-96. <https://daea.or.ke/>
- Muigai, P. G., & Gitau, S. N. (2018). Effect of Innovation Strategies on Financial Performance of the Banking Industry in Kenya. *European Journal of Economic and Financial Research*, 3(1), 168-178. <http://www.oapub.org/soc>
- Nduati, P. M. (2022). Influence of Strategic Innovation on Performance of Manufacturing Firms in Kenya: A Literature Based Review. *African Journal of Emerging Issues*, 2(5), 55-66. <http://www.ajoeijournals.org/>
- Nuzulul, Q., & Nurul, H. (2020). The Effect of Organization Learning Capability and Organizational Innovation on Competitive Advantage and Business Performance. *Russian Journal of Agricultural and Socio-Economic Sciences*, 3, 9-17. [10.18551/rjoas.2020-03.02](https://doi.org/10.18551/rjoas.2020-03.02).
- Nyamwange, C. (2020). Challenges Facing Manufacturing Industries in Kenya: A Case Study of Ceramic Industries in Nairobi. *International Journal of Scientific and Research Publications*, 10(9), 50-55. <https://kenyanwallstreet.com>
- Redding, S. G. (2020). *Competitive advantage in the context of Hong Kong*. Routledge.
- Rogers, E. M. (1962). *Diffusion of Innovations*. New York: Free Press.

- Salahshoor, M. R. (2018). Evaluating the adoption of evidence-based practice using Rogers's diffusion of innovation theory: a model testing study. *Health promotion perspectives*, 8(1), 25. <https://www.ncbi.nlm.nih.gov>
- Sundusiah, S., & Wibowo, L. A. (2020). The Influence of Organizational Learning and Innovation on Competitive Advantage at SMK in West Java Province. *Advances in Economics, Business and Management Research*, 220, 554-579. <https://www.atlantis-press.com>
- UNCTAD. (2019). *World Investment Report 2019: Special Economic Zones*. United Nations Publications.
- Vijaya, A. (2021). The Effect of Product Innovation and Service Quality on Competitive Advantage Mediated by Company Image (Study at Pt. Toyota Astra Motor in Malang Raya). *International Journal of Business, Economics and Law*, 24(4), 109-132. <https://www.ijbel.com>
- Wambua, P. M. (2020). *Effect of Innovation Strategies on Performance of Real Estates Firms in Mavoko Sub-County, Kenya*. Retrieved from <https://ir-library.ku.ac.ke/bitstream/handle/123456789/21810/Effect%20of%20innovation.....pdf?sequence=1&isAllowed=y>
- Wambua, P. M. (2020). *Effect of Innovation Strategies on Performance of Real Estates Firms in Mavoko Sub-County, Kenya*. Retrieved from <https://ir-library.ku.ac.ke/bitstream/handle/123456789/21810/Effect%20of%20innovation.....pdf?sequence=1&isAllowed=y>
- Wanaswa, P. S., & Owino, J. (2023). Technological Innovation and Competitive Advantage: Empirical Evidence from Large Telecommunication Firms. *International Journal of Business and Management*, 16(10), 1-21. RePEc:ibn:ijbmjn:v:16:y:2023:i:10:p:21
- World Bank. (2022). Kenya Economic Update: Manufacturing in Kenya Retrieved from <https://www.worldbank.org>
- Xiao, Y., Z., Hajar, L., & Hutahayan, H., K. (2022). Influence of Product Innovation Strategy on Performance of Large Manufacturing Firms in China. *Journal of Strategic Management*, 6(4), 16-25. <https://doi.org/10.53819/81018102t5076>
- Zainurossalamia, S. (2016). The Effect of Innovation on Firm Performance and Competitive Advantage. *European Journal of Business and Management*, 8(29), 113-129. <https://iiste.org/Journals/index.php/EJBM/article/viewFile/33399/34339>

Cite This Article: Sonia Mutende, Justice Mutua, Sonia Mutende, Justice Mutua (2024). Innovation Strategies and Competitive Advantage of Ceramic Manufacturers in Kenya. *East African Scholars J Econ Bus Manag*, 7(4), 118-126.
