Industrial Parks: Analysing the Extent to Which Competitiveness Amongst Operating Firms Impact Industrial Revolution of Nascent Economies

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Abstract: Small and medium-sized businesses (SMEs) are found in various sectors, including manufacturing, services, hospitality, agriculture, and trade and commerce. They have exceptional potential flexibility and adaptation in reaction to changing market conditions, despite their size, scope, and lack of resources compared to large firms. Due to their capacity to create jobs, boost economic growth, and thwart youth restlessness and poverty, these industries have become pivotal to nascent economies. As such, this study analyses the extent to which competitiveness amongst operating firms, impacts the industrial revolution of nascent economies. Data was collected through a questionnaire from 1342 staff across five SME categories, namely Manufacturing; Engineering, Automobile, Construction; Pharmaceuticals & Medicals; Agriculture & Allied Products; and Trade, Commerce & Tourism. Using the regression analysis, the study indicated that competitiveness among operating firms in a nascent economy had a statistically significant impact on industrial revolution. Therefore, the study concluded that competitiveness amongst operating firms impact the industrial revolution of nascent economies. The operating firms exhibited resilience and creativity that fostered idea generation and development strategically amid intense rivalry for market leadership.

Keywords: Competitiveness, Dynamic capability, Industrial inventiveness, Nascent economy, Operating firms

Introduction

In economic literature, the term "industrial park" is compared to an employment area, factory estate, trading estate, or industrial estate (Yudianto, Mulyani, Fahmi, & Winarningsih, 2021; Steg & Vlek, 2009). For the fact that it provides benefits including minimal or no tax payments, no formal registration is required to receive imported goods, consistent electricity, proximity to seaports and airports, and easy access to markets. It is currently used interchangeably with the term "free trade zone." The world's first industrial parks were created in Great Britain in the 1930s and, later Germany in the 1960s. Over time, the German Federal Government has acknowledged the unique contribution that SMEs make to the creation of new goods, employment, and economic stability. In countries such as these, research and development activities in the 1960s were generally concentrated on fields such as data processing, space technology, and nuclear energy, which are only appropriate for major enterprises seeking further industrialisation. A diverse range of industries, including manufacturing, services, hospitality, agriculture, and trade and commerce, are home to small and medium-sized enterprises (SMEs). They have exceptional potential flexibility and adaptation in reaction to changing market conditions, despite their size, scope, and lack of resources compared to large firms (Federal Government of Nigeria (FGN), 2021). Due to their capacity to create jobs, boost economic growth, and thwart youth restlessness and poverty, these industries are the main engines of the national economy (Sokoto and Abdullahi, 2013; Ali, 2021; Muhammad, Ahmadu, and Musa, 2023). Businesses currently operate in a dynamic, digitally driven environment that brings with it previously unheard-of opportunities and difficulties, resulting in a significant shift in the business landscape for SMEs. This transformative era is also prompting the rethinking of the traditional business frameworks of SMEs due to global market competition, which is highly dependent on the rate and

scope of innovation in the industry (Salfore, Ensermu, & Kinde, 2023; Sakare, De Obesso, & Ribeiro-Navarrete, 2023; Lewandowska, Berniak-Wozny, & Ahmad, 2023).

The fierce rivalry between the large companies makes it clear that SMEs in recent times, experience high levels of instability. Some of these companies struggle to differentiate their products in terms of price, branding, and other value creation, even when they make an effort to gain a competitive edge. Most businesses fall short of stakeholders' expectations in terms of value derived (Monyei, Igwe, Onyeanu, Kelvin-Iloafu & Ukpere, 2022). Entrepreneurial tenacity, resilience, and agility to reposition the business through superior and adaptable product offerings that facilitate market penetration, the application of marketing strategies to increase the demand for an existing product in an existing market, are characteristics of SMEs in nascent economies. Monyei and Ukpere (2024) assert that nascent economies are also referred to as emerging economies which sconnotes an economy that is in its early stages of advancement, usually characterized by high rates of new business formation by individuals actively involved in business start-ups. Despite these economies still evolving, they have the potential to grow significantly, even in the face of related development and stability challenges. Additionally, the presence of SMEs encourages competitiveness among participants and socioeconomic development. Given its enormous impact on people's well-being, the industry is positioned as a key driver of economic prosperity that merits the attention of the government and other pertinent stakeholders in the areas of necessary infrastructure, property and life safety, benevolent laws, etc. that will promote innovation, efficient production to maximise profits, and high productivity to satisfy consumer demand (Heru and Sri, 2020). Some SMEs struggle to differentiate their products in terms of price and added value creation, even when they work hard to gain a competitive edge. Most businesses fall short of their stakeholders' expectations when it comes to the value that may be obtained from a product (Ngwu et al., 2023; Monyei et al., 2022). SMEs must therefore embrace innovation as their core strength if they want to prosper and stay competitive in this digital age. To gain a competitive edge, SMEs can use revolutionary innovation to create new goods, improve existing procedures, implement current organisational structures, and use marketing innovation tactics to reach a wider audience.

Additionally, innovation promotes adaptation and resilience, which helps SMEs to deal with the uncertainties and disruptions brought on by competitive marketing environments and shifting trends (Zighan & Ruel, 2023; Lewandoowska et al., 2023). The unstable business climate and the development of the fourth industrial revolution have caused SMEs to adjust their business context to a human-centric approach to innovation. The new paradigm emphasises that technology should be used to enhance human capabilities rather than to replace them (Hein-Pensel, Winkler, Bruckner, Wolke, Jabs, Kirschenbaum, Friedrich, & Zinke-Wehlmann, 2023). This trend pushes SMEs to focus on revolutionary innovation in areas like market penetration and product differentiation. The continuous development of artificial intelligence and the integration of technologies (such as augmented reality and sophisticated robotics) further enhance the likelihood that enterprises will turn a profit and obtain a competitive advantage (Madhavan, Wangtueal, Sharafuddin, & Chaichana, 2022). However, it is important to highlight that researchers have not given much attention to innovation about competitiveness (Ojenike, 2024; Muhammed, Ahmadu, & Musa, 2023; Diodabo, Moncada-Paterno-Castello, Rentocchini, & Tubka, 2022; Endres, Auburger, & Helm, 2024; Morley & Richard, 1995; Woltjer, Van Galen, & Logatcheva, 2019). Although research on industrial innovation for competitive sustainability was carried out in advanced economies. However, there is a paucity of studies on industrial parks and industrial innovation and competitiveness in emerging economies. Furthermore, research on industrial creativity and SMEs' competitiveness is scarce, particularly in developing nations like Nigeria. The aforementioned conclusion made it necessary to look into the reasons behind these difficulties and provide potential fixes. This study therefore examines the level of competition among operational businesses in an industrial park as a correlate of industrial revolution in the context of a developing economy, based on the clear gap in literature.

Research Objective

To examine the extent to which competitiveness amongst operating firms impact industrial revolution of nascent economies.

Literature Review and Theoretical Underpinnings

The Dynamic Capabilities Theory (DCT) by Teece, Pisano, and Shuen (1997)

The Dynamic Capabilities Theory (DCT) developed by Teece, Pisano, and Shuen (1997) forms the basis of this study. Because of its perspective on enterprise competencies and competitiveness, which is in line with the factors being studied, this theory was chosen. The ability of an organisation to strategically employ its resources to develop core competencies that will position it for growth and survival in a highly competitive global market is described by dynamic capability theory (Tece et al., 1997). The ability to think creatively, develop novel concepts, and establish

more efficient processes to accomplish its goals and objectives is what makes an organisation competitive (Monyei, Okeke, and Nwosu, 2021). Accordingly, the primary source of competitive advantage is the capacity to create new goods that either match or go beyond consumers' expectations for value (Lawson & Samson, 2001). To maintain its position as the industry leader, DCT asserts that the company's management structure must be flexible to adjust to changes, fend off challenges, and seize business opportunities. Teece et al. (1997) state that for SMEs to become highly competitive, they must be proactive in recognising changes in consumer preferences, seize new opportunities to develop unique product value through industrial revolution and adapt their operations to meet new market demands and associated challenges (Ngwu, Onodugo, Monyei, Ukpere, Onyekwelu & Mmamel, 2023). Thus, the combination of industrial innovation and competitiveness emphasises the essential components that SMEs must possess to get a competitive edge over their competitors (Monyei et al., 2021).

Research Hypothesis

From the above analysis the hypothesis below is formulated:

H_1: Competitiveness amongst operating firms significantly impact industrial revolution of nascent economies.

Conceptual Understanding of Industrial Revolution

The rapid or continuous improvements and reconfigurations in the physical, relational, or virtual aspects of business operations are referred to as innovation. Along with managing new ideas to help solve pressing issues and further satisfy customer needs through value creation, it also involves the acquisition and sharing of knowledge to facilitate synergistic interactions among relevant stakeholders (Ramadani, Hisrich, Abazi-Alili, Dana, Panthi, & Abazi-Bexheti, 2019; Aires, Costa, & Brandao, 2022). Industrial revolution is the development and application of novel strategies for wise resource allocation, value generation, and efficient decision-making (Kesavan, 2021). To strengthen the company's competitive edge, new goods, procedures, creative marketing strategies, and an adaptable organisational structure are also introduced (Merrritt, 1985; Endres, Auburger & Helm, 2024; Rena, 2023). Enhancing productivity, quality, efficiency, market share, and competitive edge are the goals of industrial revolution from the standpoint of SMEs (Williams and Shaw, 2011). According to Schumpeter (1934), who was cited by Mary, Mary, and Stephen (2019), industrial revolution is defined as the introduction of products that are of higher quality and value than those that are already on the market, new production processes, the discovery of new markets, and marketing strategies that alter an industry's marketing structure.

Depending on the type or level of originality, innovation may also be categorised as radical or gradual. Radical innovation is distinct and powerful; it entails significant advancements or modifications that result in the replacement of current goods and services with new ones, and it is also thought to be the primary factor that alters the competitive landscape of industries (Ahuja and Lambert, 2001). Global marketplaces are not new to radical innovation. To promote productivity with greater quality and values, necessitates entirely new knowledge, technology, and resources. It offers notable and unparalleled performance that results in the establishment of new markets or the transformation of current ones (Varis & Littunen, 2010). A significant amount of research and development (R&D) is also necessary. Therefore, cooperation with research organisations and universities is indeed valuable (Todtling & Kaufuman, 2001). On the other hand, incremental revolution offers ways to improve the performance and usefulness of current goods or services through product enhancements, modifications, and refinements (Garcia & Calantone, 2002). For the fact that it builds on a company's current expertise and resources, it is the most prevalent form of innovation in many businesses, particularly SMEs. Due to their intricacy, several indicators are commonly used to measure industrial revolution, including enterprise inputs like R&D spending and outputs like goods and services (Ahuja & Katila, 2001; Romjin & Albaladejo, 2002). The OECD (2005) defines industrial revolution as the use of a novel or significantly improved enterprise management framework, method, product, or marketing plan. Therefore, novelty and product commercialization, which is the act of introducing goods, procedures, and techniques to the market with cutting-edge and advantageous features, are crucial elements of innovation.

Two traditional methods of classification are worth noting below:

i) The object of change and

(ii) The novelty or extent of change has been used to identify various forms of innovation. These were further divided into four categories below:

(i) product,

(ii) Process,

(iii) Marketing, and

(iv) Organisational revolution (OECD, 2005).

Product Revolution

According to Mary, Mary, and Stephen (2019), product revolution is the introduction of new, higher-quality items that consumers are not currently familiar with. He emphasises the importance of innovative items in promoting business expansion and contends that slight pricing differences between current products are greatly outweighed by competition from new ones. Product revolution, according to Wan, Ong, and Lee (2005), is the launch of new goods to expand markets, attract new clients, or satisfy existing clients or markets with the value that the new goods offer. Technical specifications, materials and components, integrated software, usability, and other functional aspects may all benefit from significant enhancements. According to Mensah and Acquah (2015), it is equally linked to new advancements in business operations that offer the main product while enhancing its market appeal. It is also a strategic method for SMEs to easily adjust to changing market trends and customer demands, which will increase profitability (Farida & Nuryakin, 2021). The launch of new products with advanced values allows SMEs to differentiate their goods or services, increase customer attraction, and strengthen the loyalty of current customers.

Process Revolution

The goal of process revolution is to re-engineer internal organisational processes by implementing certified management best practices, introducing ethical workflow procedures, and adopting contemporary technologies (Schallmo, Brechht, & Ramosaj, 2018). Additionally, it describes the implementation of novel manufacturing techniques that are not yet widely accepted in a certain industry (Mary et al., 2019). Process revolution is the process of re-engineering and enhancement of the internal operations and capabilities of business processes (Sidek & Rosli, 2013). These processes include commercial operations, administration, and enterprise technical and structural design. New practices, guidelines, and information that are incorporated into goods, applications, distribution methods, and consumer demands, preferences, and expectations are all examples of process creation. Its main goals are to raise quality, lower manufacturing costs per unit, and greatly increase product value and profitability (OECD, 2005). Process revolution, according to O-Neira, Linman, and Fernandez (2009), is important for companies that are facing intense competition, limited resources, inadequate infrastructure, and operational inefficiencies because of its ability to lower costs through the realisation of economies of scale, efficient resource allocation and utilisation, and increased profitability (Tariq, Mad-Lazim, & Iteng, 2019). However, the productivity and enterprise dynamics of SMEs with limited resources and skilled labour may suffer as a result of the capital-intensive and sometimes difficult process revolution implementation caused by employee rigidity and related hidden agendas (Tariq et al., 2019).

Market Revolution

Through the use of cutting-edge marketing techniques like social media marketing, personalised advertisements, and interactive customer experiences, the era of digitalisation has expanded the range of marketing dynamics. These days, SMEs may build strong client relationships and successfully interact with their target audience to boost sales and profitability (Jeong & Chung, 2023). Daniel and Isaac (2017), also posited that the development of an industrial cluster affected not only the micro-firms' ability to compete but its ability to operate within any market with revolutionary tendencies. Marketing innovation, as defined by the OECD (2005), is the use of novel marketing techniques that require significant changes to product positioning, design, promotion, and pricing. Sidek and Rosli (2013) define marketing revolution and innovation as the fusion of goods and services designed to satisfy customer demands. Therefore, its main objective is to meet consumer needs while seizing market prospects. To boost its competitiveness, it places a strong emphasis on coming up with efficient ways to meet the needs of clients, expanding into new areas, and establishing a business product in the marketplace (OECD, 2005). Some academics, however, had opposing opinions, and believed that marketing innovation could only benefit enterprise competition when paired with a strong marketing orientation (Yadete, Kante, & Kero, 2023; Sedibe, 2020; Van Burg, Podoynitsyna, Beck, & Lommelen, 2012). They added that while technology-savvy businesses have a greater impact than traditional ones, SMEs' lack of finances and inadequate infrastructure make it difficult for them to adopt workable, creative marketing tactics.

Competitiveness

In practically every corporate setting, competition is unavoidable, yet it is beneficial to the company since it encourages the production of higher-quality goods (Tansley, 2014). Except in a monopolistic market, any profit-driven business venture faces competition (Joekes and Evans, 2008). Joekes and Evans (2008) define competition as the process of trying to acquire something in a business or industry that other people are fighting for and that has a higher reward level. Competition is the struggle between businesses in the same sector that provide similar or near-replaceable products or services. Businesses need to be creative and adaptable to the constantly shifting business

environment to compete successfully in a particular industry and increase market share, growth, and profitability (Porter, 1990; as cited in Mary, Mary, & Stephen, 2019). Lall (2001) backed Porter's argument by confirming that competitiveness is the ability of businesses to outperform their rivals in terms of product differentiation, market penetration, and profitability as well as to hold onto their market position by providing premium goods and services at competitive prices. He continues by saying that SMEs' competitiveness is essential to preserving and enhancing their market position. In their disposition, Tansley (2014) assert that the impact of competition on the performance of mobile telecommunication firms is significant. Evans and Appolonius (2016) also concur that the effects of competitive strategy on performance is positive as well significant, and Irene (2014) stressed that the impact of competitive strategies on the performance of SMEs in Kenya is positively influential. While productivity, efficiency, profitability, market penetration, value creation, and customer satisfaction are some of the interrelated factors that determine competitiveness, firms' competitiveness is derived from a variety of sources, including product quality and differentiation, novelty, process efficiency, cost leadership, and the adoption of modern technology (Pedraza, 2014). A wide range of competitiveness metrics, from simple indicators to complex indices, have been studied (Buzzigoli & Viviani, 2009). Enterprise competitiveness and long-term profit were closely linked for a while. Higher returns on investment and enterprise profitability are further indicators of a company's competitiveness (Liargovas & Skandalis, 2010). The various Categories of Competitiveness are highlighted below:

i. Direct competition: businesses that cater to the same target market with identical goods or services are directly competing with one another. For businesses to compete directly with one another, they need to: Work in the same sector; offer comparable or identical goods and services; target the same market or clientele; meet the same client needs; and employ the same distribution channel.

ii. Indirect competition: Indirect rivalry offers close alternative items and services that meet the same customer needs but are not exact replicas. This kind of company targets the same market, works in the same sector, and meets the same demands.

iii. Replacement competition: This refers to companies and brands that can replace the goods and services of current businesses by creating new goods and services that better meet the demands of their target market. For instance, because mobile phone makers met the same need with a better and more practical method, they eventually displaced landline phone producers. An organisation can be identified as a replacement competitor if it successfully adds value and meets customer wants by providing an existing product or service in a novel and creative manner.

Product Differentiation

Businesses utilise product differentiation as a marketing strategy to forge a distinctive character in a particular market. According to Davison (2011), product differentiation can also refer to brand positioning that makes a product stand out from those of competitors and presents a distinctive image. The main goal of the differentiation strategy is to create a product or service offering that is unique to the company and is regarded as such by the industry. To sustain this approach, SMEs need to have (i) strong R&D capabilities, (ii) effective engineering skills for products and services, (iii) strong creative abilities, (iv) smooth distribution channels, (v) effective marketing capabilities, (vi) the capacity to convey the significance of the product features, (viii) ongoing product improvement, and (ix) the ability to draw in highly qualified and innovative staff.

Industrial Revolution and Competitiveness of Firms

Since revolutionary innovation affects competitiveness, it is seen as a crucial business factor. Innovation-focused businesses will thrive during the period of fierce competition because of their ability to generate fresh business concepts (Terziopski, 2007). The ability of innovation to increase the competitiveness of SMEs has made the relationship between industrial revolution and competition a focal topic of discussion (Beck, 2013). The competitiveness of SMEs is significantly impacted by industrial revolution, as claimed by Waheed, Miao, Waheed, Ahmad, and Majeed (2019). Their research showed that knowledge sharing, employee participation in management choices, flexible enterprise structures, and continuous process improvement improve small and medium-sized businesses' enterprise product differentiation, market penetration, and profitability. According to Kuratko and Howard (2016), innovation influences gaining a competitive edge in addition to fostering efficiency. The results of a study conducted by Nadia, Aziz, and Samad (2016) further corroborate the aforementioned assumption by demonstrating that innovation has a significant positive influence on competitiveness in Malaysia's food industry. Consequently, businesses with a high degree of innovation will eventually build fundamental skills. In times of recession and poor economic growth, SMEs' competitiveness, innovativeness, and competitive edge are crucial factors in the market (Beck, 2013). Innovative businesses effectively identify, clarify, and apply knowledge throughout the entire

organisation. SMEs will be less vulnerable in the current global business environment if they can become more revolutionary. According to Hassan, Yaacob, and Abdullatiff (2014), SMEs can ensure a competitive advantage over time by progressively improving their production processes.

Empirical Insight

Ojenike's (2024) study on the effect of innovation strategy on the performance of selected SMEs in Lagos found that product innovation strategy has a significant impact on product quality ($R^2 = 0.602$, F (1,196) = 14,995, p-value < 0.05) and process innovation strategy has a significant impact on sales volume quality of a subset of SMEs in Lagos State ($R^2 = 0.159$, $p < 0.05$, F (1,196) = 9.367, p-value < 0.05). To meet customer needs, the study recommended that SMEs must focus on measures to embrace innovation, improve quality and increase organisational sales volume.

Al-Azzam, Al-Rwaidan, Alserhan, and Arda (2024) conducted a study on how innovation affects competitive advantage in Jordanian SMEs. The study findings provide empirical evidence that SMEs that embrace innovation become more competitive. It was recommended that future research investigate potential mediators and moderators to uncover more complex implications. The study contributes to the corpus of knowledge about innovation-focused competitive strategies for SMEs in developing economies.

Similarly, Muhammed, Ahmadu, and Musa (2023) investigated the impact of innovation on SMEs' performance using data from Yobe State. A cross-sectional survey was used in the study, and PLS-SEM was used to assess data from 142 SME owners across the state's three senatorial zones. The results showed that product and process innovations as predictors were positively and statistically significant and correlated with the performance of SMEs. Consequently, recommendations were made to encourage the growth and development of SMEs in Yobe State by utilising innovation as a vital tool.

Research Methodology

A descriptive survey design was used in the current investigation. Through the use of a questionnaire and a methodical interview style, this strategy uncovers, interprets, synthesises, and integrates data; it also detects implications and their relationships to collect factual and interpretive information that is necessary for the study. Therefore, it is deemed suitable for the conduct of this investigation. The study's target audience consists of 1342 employees of businesses chosen from the five (5) SMEs that were included in the study. The justification for the involvement of this set of personnel is based on their, number of years in service, entrepreneurial activities; and their direct capacity to be involved in business operations. The population figures are provided by the Heads of administration of the SMEs under study. The SMEs' categories include Manufacturing Industries; Engineering, Automobile, Construction & Allied Merchandise; Pharmaceuticals & Medicals; Agriculture & Allied Products; and Distributive Trade, Commerce & Tourism. These SMEs' categorization was purposively chosen based on their economic contributions to society, number of years in service delivery, transactional operations, resource base, workforce strength, and also with national reach.

These criteria permit a valid generalization of the research findings. To determine the required sample size and sampling technique adopted for this study, both the Bill Godden (2004) statistical formula and Bowley's Proportional Allocation were adopted, due to the finite nature of the population, yielding a value of 281. The questionnaire is the study's data collection tool; it is designed to be easily understood and to extract both factual and interpretive data. The questionnaire was created with the topic's 5-point Likert scale questions in mind. With 5 denoting strongly agree, 4 agree, 3 unsure, 2 disagree, and 1 strongly disagree, and respondents must thus check against the proper score scale of 1–5. Additionally, the researcher manually delivered and retrieved the completed questionnaires, with a consent form presented to the respondents to seek their approval to participate in the study and provide the data utilised for inference making. Five management experts from the academic and industry sectors, namely two from Manufacturing Industries and Pharmaceuticals & Medicals, and three from the Department of Management, University of Nigeria, Enugu campus was used to measure the validity of the instrument using content and face validation.

To guarantee that the instruments are valid for the study, appropriately constructed, and clearly expressed to remove ambiguity and inconsistency, the instrument was adjusted and refined based on their feedback, analysis, and opinions. Within two weeks, the test-retest method, which involves asking the same question twice, was used to determine the reliability of the research tools. Because the connection increases with a shorter time interval and decreases with a greater time gap, the amount of time between administrations was taken into account. Cronbach Alpha was used to determine the test's coefficient, and the reliability test yielded a result of $r = 0.83$ based on the inter-item correlation of the questionnaire's six (6) items. This shows that the items are internally consistent and reliable as 83% of the variances came from true estimation while the remaining 17% is the result of the error margin. The data collected and

responses gathered for the study will be presented and analysed using tables and variances. These responses will be translated into figures and percentages for each variable. The Regression analyses was utilised in data analytics. It is most suited for data obtained through an ordinal scale (i.e. 5-point Likert scale), which allows the assessment of an independent variable on a dependent variable; and also indicates the inter-relationship between the observed and the latent variables. The computed statistic value was compared to the table value to test hypotheses. The table value acts as a standard by which to judge whether the created hypotheses should be accepted or rejected. Thus, the null hypothesis is rejected if the calculated value at the 5% significance level with the corresponding degree of freedom is higher than the table value; if not, the null hypothesis is to be accepted.

Data Presentation and Analysis

Table 1: Evaluate the extent competitiveness amongst operating firms impact the industrial revolution of nascent economies.

S/N	Competitiveness	SA	A	U	D	SD	Mean	S/N	Revolution	SA	A	U	D	SD	Mean
1(i)	Product alternatives are caused by the new entry of firms into the industry	39	166	13	19	15	3.77	(i)	Firms conduct a regular market survey to understand consumer demands	7	30	25	59	131	1.90
2(ii)	Substitute goods improve other firms' commodities	6	26	10	18	192	1.56	(ii)	Creating and introducing new products is hindered by budget	43	177	07	6	19	3.87
3(iii)	Rivalry leads to improvement in firms' outputs	68	148	0	24	12	3.94	(iii)	Revolutionary innovations are better when workers collaborate	19	193	0	28	12	3.71

Information about the respondents' answers to questions about competition and revolution is provided in Table 1. With a mean score of 3.77, the respondents, using the same assessment technique (mean), agreed that the new enterprises entering the market are the reason for product alternatives. However, with a mean of 1.56, they disapproved of the idea that alternative items enhance the commodities of other businesses. The respondents agree that competition improves enterprises' outputs, as indicated by the mean score of 3.94. According to the questions used to gauge revolution, the respondents disagreed that businesses should regularly survey the market to learn about customer needs. With corresponding means of 3.87 and 3.71, they did, however, concur that budgetary constraints impede the development and introduction of innovative items, and that employee collaboration improves ideas.

Test of Hypotheses

Restating the hypotheses:

H_0: Competitiveness among operating firms do not significantly impact industrial revolution of nascent economies.

H_1: Competitiveness among operating firms significantly impact industrial revolution of nascent economies.

Decision Criteria: If the computed value with the corresponding degree of freedom at the 5% significance level is higher than the table value, reject the null hypothesis; if not, accept it.

Table 2 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.976[a]	.952	.951	.585

a. Predictors: (Constant), COMPET

Source: Field Survey, 2025

The model summary for the study proposition, which asserts that industrial revolution in emerging economies is significantly impacted by competition among operational enterprises, is displayed in Table 2. According to the results displayed in the table, R is 0.976, suggesting a positive correlation between the variables, and R Square is 0.952, indicating that variations in competition account for 95% of the variation in industrial revolution.

Table 3 ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1683.450	1	1683.450	4925.182	.000[b]
	Residual	85.451	250	.342		
	Total	1768.901	251			

a. Dependent Variable: REVOL

b. Predictors: (Constant), COMPET

Source: Field Survey, 2025

Table 3 displays the ANOVA result from the regression analysis for the study's hypotheses. According to the statement, revolutionary innovation is significantly impacted by competition. According to the table, the F is 4925.182 and the P-value is 000, both of which are below the selected level of significance of 0.05. As a result, the alternate hypothesis is accepted, according to which corporate competitiveness has a statistically significant effect on revolution.

Discussion of Results

The results of the analysed data are discussed under this section and linked to related and relevant literature of the study.

The research objective was to examine the extent to which competitiveness amongst operating firms impact industrial revolution of nascent economies. The hypotheses were analysed using Regression analysis, which indicated that competitiveness among operating firms in a nascent economy had a statistically significant impact on industrial revolution (R = 0.976; R Square = 0.952; F = 4925.182; P-value < 0.05), this implies that the operating firms' capacity for innovativeness is dependent on the level of competition. This outcome is entirely consistent with the research conducted by Daniel and Isaac (2017), who looked into how the development of an industrial cluster affected micro-firms' ability to compete. Their findings revealed a positive and influential association between industrial clusters and competitiveness of firms. The findings also indicated that clustered enterprises' competitive advantage and capacity for innovation are improved by horizontal networking.

Furthermore, it facilitates the development of a robust knowledge base for companies in a clustered zone, which fosters innovation. Furthermore, it has been shown and confirmed that an effective competitive strategy is still essential and highly relevant to the operations of creative locus firms. This is corroborated in Tansley's (2014) examination of the impact of competition on the performance of mobile telecommunication firms. The study's findings reveal a positive link between competition and performance. Also, Evans and Appolonius (2016) investigation on the effects of competitive strategy on performance, found a significant effect of both variables. In addition, Irene (2014) study examined the impact of competitive strategies on the performance of SMEs in Kenya and found a statistically positive impact of competition strategy and SME's performances. Furthermore, research on internationalisation and innovation in tourism by Williams & Shaw (2011) and strategic agility as a potential for the long-term viability of microbusinesses' performance in South-Eastern Nigeria by Monyei et al. (2021) both showed that innovation is still essential to productivity and competitiveness. It has gone one step further to address the role of competition among

enterprises as a genuine instrument required to promote, improve, and enhance the innovativeness of firms located within an industrial park, which is a distinctive addition to this finding. Consequently, it can provide its thronging customer base with high-quality goods and services.

Contribution to Knowledge

Muhammed, Ahmadu, and Musa (2023); and Ojenike (2024) conducted studies on innovation and competitiveness in Nigeria, while other scholars Morley and Richard (1995); Woltjer, Van Galen, and Logatcheva (2019); Diodato, Moncada-Paterno-Castello, Rentocchini and Tubka (2022); and Endres, Auburger and Helm (2024) all examined industrial innovation for competitive sustainability in Europe. None of the above studies examined the inventiveness of industries as a correlate of SMEs' competitiveness. Therefore, accentuating the paucity of empiricism and the urgency to examine its connectedness, especially within a nascent economic context. Hence, the result from this study contributes to its quota theoretically by bridging the existent gap and offering an indication of how SMEs in nascent economies can merge competitiveness with industrial revolution and still excel in any business environment.

Suggested Areas for Further Studies

This study has analysed the extent to which competitiveness amongst operating firms in an industrial park impacts industrial revolution of nascent economies. Future research should consider investigating industrial parks as a correlate of economic sustainability while extending the geographical scope to focus on specific countries using existent panel data for its analyses. This will permit the generalization of the research facts and findings.

Conclusion and Recommendations

Small and medium-sized businesses (SMEs) are starting to place a higher priority on the necessity of maximising the utilities from their unique resources and core competencies/capabilities to obtain a competitive edge in any business environment. This is due to the current fourth industrial revolution (4IR), the ongoing economic downturn, or the worldwide pandemics, as well as the growing desire for strategy sustainability. In contemporary times, industrial parks have now become most nations' strategic focus in advancing sustainable economic development. Consequently, the creation and existence of these industrial parks, have led governments to improve on policy enactments that propel stakeholders' impetus to respond to the demands of global best practices. Hence, drawing evidence from the empirical investigation and the reviewed literature, it is concluded that the revolution of industries especially SMEs serves as the crux of nascent economy's sustained competitiveness. The operating firms exhibited resilience and creativity, which fosters idea generation and development strategically amid intense rivalry for market leadership. This further underscores the significance of the existing correlation between variables under study and the adverse implications if misaligned. Based on the findings of the investigation, the ensuing recommendations were proffered:

Executive of SMEs must by the outcome of this study embrace competition and utilize its positive function effectively. As competition amongst firms operating in an IP has been agreed to avail businesses, firms or organisations with pre-requisite knowledge that are required to deliver sustained innovation capability and maintain a competitive edge. This can be achieved through government regulatory agencies, and other relevant stakeholders endeavouring to create a business environment that thrives on innovativeness. Furthermore, policymakers are implored to improve their efforts in the area of price regulation and quality control as these will help alleviate excess exploitation and curb the offering of substandard commodities. Lastly, there must be policies that advance competitiveness amongst operating firms in an industrial park to positively impact industrial revolution of nascent economies.

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