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Appropriate Entrepreneurial Technology usage and Small and Medium Scale Enterprises Performance in Odeda Local Government Area, Ogun State, Nigeria

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Abstract

The study examined appropriate entrepreneurial technology usage and small and medium scale enterprises performance in Odeda local government area of Ogun State, Nigeria. The specific objects are to: determine effect of product innovation on SMEs profitability, examine extent to which process innovation affect, market leadership and analyze the effect of marketing innovation on customer satisfaction. The method adopted for the research was a probability sampling technique as far as data collection was concerned. This was administered on one hundred and seven (107) respondents. The result from the model summary table revealed the extent to which the variance in SMEs profitability can be explained by technological product innovation is 10.5% i.e. (R Square =0.105). The ANOVA table shows the F-values statistics 12.283 at 0.001, significance level. Therefore for every 100% change increase in SMEs profitability, technological product innovation contributed 35.6%. The decision for the above result however implies technological product innovation have significant effects on SMEs profitability, Since our P value (0.001) is less than 0.05,then, the decision would be to reject null hypothesis (Ho_1) and accept the alternative hypothesis (H_1). To this end, it is true to assert that technological product innovation have significant effects on SMEs profitability.

Keywords: Entrepreneurial technology, SMEs, Product, Innovation, Marketing innovation

Introduction

The current technological advancements are wielding considerable alteration in smoothing small and medium scale enterprises operative field. They impact firms and their products, consumers and market. More so than ever, this has resulted in turbulent and rapid changes in customers' tastes and needs, resulting in shortage of products brands' life cycles. The product brand that enhances firm's profitability today can be the cause of its failure in the near future as technologies are obliging firms to rethink and retool everything they do internally, especially the products they produced and the processes of production. Technology has intensified small manufacturing business innovativeness effort, making production faster, easier and cheaper than that of the larger organizations. This is because customers through technological advancements have prompt information of new innovative product brands of competitors. Therefore, most firms irrespective of their size have an innovative objective. The study argues that in order for firms to remain competitive in the global market, they need to intensify their efforts to achieve their innovative objectives through the improvement of existing products, introduction of entirely novel products and also introduction of new processes or techniques of production (Piening and Salge, 2015). Small and medium scale manufacturing firms generally struggle to achieve these objectives in order to grow. As a result, technological innovativeness, once an option for small scale manufacturing firms, has become a crucial factor of their growth (Iorun, 2014).Innovation comes about because of so many issues that include success, failure or unexpected event; inconsistency between reality and what is expected; tasks or processes that require improvement, demographics‟ changes; changes in meaning and in perception of this of newly acquired knowledge (Lin,2014).

In their study Daim et al (2006) cited in Dougherty (2010) found an optimistic and significant relationship between innovation, market orientation and the superior performance of organizer Innovation is considered to be of importance to the growth of firms, despite their size, with great leverage in creating economic values and competitive advantages and in driving changes (Dougherty, 2010, cited in Corradini et al, 2016). The uprising of the developing markets and economies has created conspicuous changes through structural reforms and growth-enhancing investments and are providing firm with more opportunities and propitious environments (Jiaji et al, 2000, cited in (Piening & Salge, 2015).

Technology involves tools, techniques, materials and methods firms used to produce new product/process or improved products/or process. Technology can enhance small and medium scale enterprises innovativeness opportunities in manufacturing, logistic, customer service, finance and almost every business activity (Oyeku, Oduyoye, Asikhia, Kabuoh, & Elemo, 2014). The keyword in technological innovativeness is "novelty or improved product/services and processes" applied to a firm. Technological innovativeness therefore enables small scale manufacturing firms to either clinch to only product-oriented innovativeness, which includes altering the product shapes, dimensions, size, color or introducing improved versions of the existing products, or entirely introducing a novel product either to the firm or to the market. This is aimed at increasing sales growth and employment growth.

Technological innovation is unavoidable for firms which want to develop and maintain a competitive advantage and/or gain entry in to new markets (Engel et al 2004, cited in Oyeku, Oduyoye, Asikhia, Kabuoh, & Elemo, 2014). . There is a great need for any country to plan, to manage change in the context of globalization and focus on S & T intervention for heightening economic activity within the country to attain economic independence. Technology adoption in SMEs context is a growing area of interest in developing countries. There are established theories in technology adoption that have been extensively applied to western context. Many of these theories have not been widely applied to developing country context. Technology adoption is also crucial for the growth of enterprises in the private sector (MMSMF 2007, cited in Xiaoqiang, 2015).

From this process, new products and production method are introduced, new markets are exploited, new raw materials or semi-finished products are obtained and new business organizations are formed. Based on the relevance of technological innovation, Xiaoqiang (2015) noted that technological innovation capability should be defined to be under the condition of certain scale, technology and economy. It is pertinent that entrepreneurs should make good use of available resources for technological innovation.

Feifei and Li (2007) cited in Piening & Salge (2015) testified that technological innovation encompasses a series of activities such as conceptualizing new ideas, designing products, prototyping, producing in volume, marketing, and commercializing among others. It is a process of knowledge creation, conversion, and application. The essence of technological innovation is the emergence of new techniques in production and its commercial application. Only through continuous product innovation that SMEs can increase their competitive advantages and cope with market opposition (Hall and Denster, 2002). They also affirm that the promotion of sustainable development of SME through technological innovation can be revealed

through the application of information technology as a driving mechanism to stimulate industrialization.

The use of automated means in all types of industries will transform technology level of traditional industries so as to enhance and lay a solid foundation for industrial competitiveness as well as restructuring the old industrial enterprises thereby improving organizational structure of SME, boost the vitality of traditional enterprises and promote enterprise collaboration. More so, through technological innovation and transformation, SMEs are opportune to transform and improve the techniques of their processing equipment, manage resources, assess environmental protection, stimulate clean production, accelerate R&D of new materials and new energy sources (Feifei and Li, 2007, cited in Piening & Salge, 2015)

SMEs are significant parts that links, strengthen and enhances the development of the countries. Their performance and growth in manufacturing, agriculture, services, etc., has been considered as the drivers and has contributed to the Nigeria economy. Furthermore, the SME sector is a major driver of innovation and plays a significant role in global markets employing around two-thirds of the world's workforce. The impact of SMEs on the economy of both developed as well as developing nations is considerable.

Owualah (2000) cited in Iorun, (2014), affirms that small and medium scale enterprises in Nigeria are mostly determined by various quantitative parameters. Such parameters include the number of people employed in the enterprises, the capital base, the magnitude or size of the plant capacity, the sophistication of the equipment, sales turnover, profit margin and market share. Oluba (2009) cited in Iorun, (2014), observed that the importance of SMEs differs with sectors and with the developmental level of a country. He opined that what makes SMEs in Nigeria less amenable is the disappointing outcomes from their inappropriate developmental strategies they often adopt that focus on large capital base, capital intensive and high import dependency while they are supposed to take into consideration the level of capital allocation requirements, management size and arrangement as well as their market accessibility in decision making. This study search to establish the relationship which exists between technological innovation and SMEs performance in Odeda Local Government Area, Ogun State, Nigeria.

Statement of the Problem

SMEs, world over have been found to provide jobs for about 75% of the workforce of any country. In periods of liberalization and privatization SMEs especially in emerging economics, has become vital economic tools and bedding seeds for entrepreneurship development and indigenous technology that create employment and are better positioned over bigger firms in their capacity to be innovative. However there are

barriers to the activities of innovation in SMEs which include lack in capital investment, infrastructure, education and training systems, and in general deficiencies in know-how and skills acquisition. Other barriers include constrained managerial capabilities, difficulty in utilizing technology which results in low productivity among others. Despite the significant contribution of SMEs to the Nigerian economy, challenges still persist that hinder the growth and development of the sector (Akingunola, 2019, Atul, 2020).

According to the Nigeria Bureau of Statistics, small and medium scale enterprises (SMEs) in Nigeria have contributed about 48% of the national GDP in the last five years. With a total number of about 17.4 million, they account for about 50% of industrial jobs and nearly 90% of the manufacturing sector, in terms of number of enterprises. Therefore as a result of problems experienced by all sub-sectors of the economy. Some of the problem responsible for their poor performance and development are low adoption of technological product, process and marketing innovation.

Research shows that most SMEs in Nigeria are not innovative, and this led to negative effect on growth. Hence business that fails to adopt new technological innovation in terms of product, process and marketing innovation usage will remain still on the long run. Hence most SMEs still prefer using the existing technologies to carryout business operations as they are of the notion that whether new technological products or not, it is not the sole determinant of their business profitability. They also maintain the view that the cost of acquiring and installing these new technologies (machines and equipment) are highly costly. Lack of technical know-how, obsolesce and other factors are reasons while they fail to adopt technological innovation. (Hunt and Morgan, 2017)

In addition due to the fact that modern technology as brought change to the society, some SMEs are doing nothing to keep up with the technological mode of doing business. And this has led most SMEs to follow the route of traditional marketing towards growing their business due to lack of expertise, which however require technological competencies and skill upgrade. Consequently, investing in innovative behaviors strengthens knowledge of employees and individuals that drive resilience of the organizations to create new products, processes, and new behavior of working that generates improve competitiveness and achievement of necessary goals to shape performance. Though some SMEs in Odeda local government area show degree of technological innovation while some fail to take full advantage of technology to improve their business. The problem confronting this research is to determine technology innovations on SMES growth in Odeda Local Government Area, Ogun State, Nigeria. However analyzing the effects of technological innovation on SMEs growth a process of interest. Therefore it is the interest of the study to analyze the

effect of technological innovation on SMEs as regard technological product, process, and marketing innovation and it impact on SMEs performance (profitability, market leader and customer satisfaction) in Odeda Local Government Area, Ogun State, Nigeria.

Research Questions

To address the problem raised above, this study provides answers to the following research questions.

1. What effect does product innovation has on SMEs profitability?
2. To know the effect that process innovation has on market leadership?
3. What is the effect of marketing innovation on customer satisfaction?

Product Innovation

Product innovation is the introduction of new products to the market, redesigning already well-known goods, or make use of improved resources in the production of goods that are already in the market. Daneels & Kleinsmith (2010) cited in Corradini, Demirel, & Battisti (2016) defined product innovativeness as product that possesses newness or a degree of newness. Product innovation refers to a product which is new, at least in some respects if not all, for the market which the product is being introduced. Innovation is driven by customer and market requirements as well as competition among suppliers in order to satisfy a certain need. Technology evolution is key in innovation of products and services (Lin, 2014, cited in Corradini, Demirel, & Battisti, 2016) Innovation does not have to arise from new discoveries but it can result from products processes and organizational changes and a combination of technologies that are already in existence (Karagouni et al, 2013, cited in Corradini, Demirel, & Battisti, 2016).

Product innovation may be measured in a number of ways; there are both input and output measures of innovation. Research and development expenditure is an input measure of innovation; while the number of new or redesigned products introduced into the market, the percentage of revenue from new or enhanced products and overall firm performance are some of the output measures of product innovation. Another potential set of output measures are intellectual property such as patents and trademarks registered (Jiang, 2001, cited in Corradini, Demirel, & Battisti, 2016).

Process Innovation

Hansen and Birkinshaw (2007) cited in Palm et al (2015) affirm process innovation (PI) as an active and conscious process of an organization's control, and execution of activities that lead to innovation. Reviews these frameworks combining innovation process, this study views the innovation process as a four-phase process that involves

idea generation, idea selection, development idea, and the idea of diffusion. Idea generation offer section with the process of generating ideas for new products (goods and/or services, in general). Ideas are the raw materials for innovation, and they can have a significant impact on the success or failure of innovation management. It deals with inputs in an organization such as slack resources roommates are regarded as an important catalyst for innovation (Ogbami, 1990; cited in Ogbami, 2007) knowledge management within an organization, the which involves sourcing information through internal cross-collaboration and external sourcing; and organizational structure and culture, the which encourage information flow and foster creativity. Motivation process innovation becomes important in this phase to ensure that people in an organization are engaged.

Idea selection offer section with the screening of Reviews those new concepts based on an organization of strategic orientation and taking into account the organization's resource allocation conditions and objectives. It involves strategy and portfolio management to select the best new idea for the organization. Portfolio management focuses on making strategic, technological and resource choices that govern the project selection and the future shape of the organization (Cooper 2020 . A clear vision, resource allocation, and long-term commitment to innovation are crucial in idea selection.

Idea development offer section with converting ideas into viable products based on known best practices. It involves strong project management that supports the processes required to turn inputs into a marketable innovation. Internal and external communications are important in project management

Idea diffusion offer section with delivering new innovative products to end customers. Sharma (2016) cited in Rahman et al (2016) refers this innovation process as a commercialization phase of innovation. Commercialization is concerned with making an innovative process or product into a commercial success. It involves marketing, selling, distributing and creating joint ventures. Thus, diffusion stage is one of the fundamental aspects of the process of growth and transformation of the economics of an organization with respect to innovation (Lendel et al, 2015). At this phase of the innovation process, strategy execution, "thinking in time", communication and organizational discipline are important factors to Ensure successful execution of idea-diffusion. The goal of process innovation is to Ensure that an organization is continuously providing new innovative products and services to end customers, as well as business model innovation to maintain the organization's competitiveness by having a sustained innovation performance.

Marketing Innovation

Marketing innovation referring to all practices of developing new marketing processes, marketing, and selling products or services. Marketing innovation is “the implementation of a new marketing method involving significant changes in product

design or packaging, product placement, product promotion or pricing. (OECD, 2005, cited in Rahman et al, (2016) These frameworks have been used by marketing researchers to explain marketing innovation as the emergence of a new idea, that is, a breakthrough or radical innovation, or an incremental modification of an existing concept for improvisation, that is, an incremental innovation (Lin 2014). Breakthrough innovations argued by Mytalka (2000) include the introduction of a new product or a business model, and incremental innovations instead have been identified by authors as creating extra value through initiatives, such as launching a better version of the product or the extension of a market or creating new alliances. These studies, when evaluated for development of a competitive advantage, highlight factors that are central for managers of a firm to consider before identifying initiatives that are innovative in nature (Hunt & Morgan, 2017).

However, they have neglected the limitations of firms operating in an industrial setting to adopt innovative marketing practices and not recognised the importance of the contributions made by partner firms to the competitiveness required for identifying innovative marketing practices. While previous literature suggests that marketing innovation is a consequence of competitiveness, the context of the study highlights the importance of its relationship with competitiveness as an indicator or an outcome. To understand the relationships, this research employed complexity theory (Wikhaun, 2019; Weihrich et al , 2008).

Market Leadership

It has long been recognized that there may be distinct advantages associated with being first to market. Researchers have identified advantages to leading the market as a first-mover. Lee et al (2016) cited in (Wikhaun, 2019) also notes that first-movers may be more likely to impose switching costs on buyers. At the consumer level, experiments have shown that order of entry can have a significant impact on customer preferences, memory, learning, and judgment (Becheich et al, 2019, Ibidunni et al, 2014).

Although the first-mover advantage may be thought of as an "empirical generalization" in the marketing literature (Kollmannand Stockmann, 2012) stated that these advantages are not guaranteed (Hoffman et al, 2019). In fact, despite the well documented benefits of market leadership, late adoption may actually make sense "if the market is growing rapidly and significant scale economies are available for a late entrant" (Hall and Densten, 2002, cited in Lee, 2016). In some situations, there may actually be disadvantages associated with leading the market as a first-mover (Kotler, 2006; Lawal and Ijaiya, 2007). This is because followers may have important advantages as well, including the ability to learn more about a technology before committing scarce resources, the advantage of observing market

reaction to product design and features, and the ability to avoid sunk investment in what may become obsolete technology (Cottrell and Sick, 2010). Therefore, although leading the market as a first-mover may be desirable, the ultimate success associated with this approach may be dependent on the unique environmental characteristics of the industry in which one is competing.

Therefore, the degree of market leadership exhibited by a firm can be thought of as lying on a continuum ranging from a consistent tendency to pursue a wide variety of first-mover efforts (first-movers), to a strategic posture in which firms may be content to merely follow the market (followers). In the context of the current study, the term "market leader" is used to refer to those firms that exhibit high levels of strategic marketing initiative. This includes being among the first to introduce new products, new promotions, new pricing changes, or new distribution ideas, as well as adopting new technologies or seeking out new markets. Followers are those firms that take a decidedly measured approach, preferring to follow the market changes rather than to initiate strategic change.

Customer Satisfaction

In regard to customer satisfaction, Cardozo applied the concept of satisfaction to the field of marketing for the first time in 1965. Customer satisfaction was conducive to promoting customers 'consumption behaviors. Customer satisfaction refers to people's evaluation of their satisfaction with the products they purchase and the services they enjoy. The level of customer satisfaction depends on the relationship between their expectations of the products and their actual consumption experiences Egbetokun et al, 2008, Hamson and Watson, 2021). Robinson (2009) cited in Wikhaun (2019) illustrated that after using a product; customers assess the product and evaluate their expectations prior to the purchase, which influence customer satisfaction. When the opinions for both are consistent, the customers feel satisfied. Otherwise, they do not. Customer satisfaction is based on the user's comparison between the efficacy of the product or service and his or her expectations (Wikhamn 2019). Kotler (2006) cited in Wikhamn, (2019) indicated that if satisfied, the customer will usually be more willing to make the purchase again, pleasantly discuss the product of the company with others, ignore advertisement of other competitors' brands, and refuse to buy products of other companies.

Technological Innovation

The essence of these technological activities is to create greater values that ensure customers satisfaction through reduced price, increased qualities and work efficiency Kollmann & Stöckmann (2012) cited in Wikhamn (2019). Technology makes whole lot of differences in the local made goods and foreign made goods. This means links

between high innovativeness and technological leadership. Hence, Mammala et al (2012) found that advanced countries of the world are known to use advanced technology in their production compared to developing or undeveloped countries. Nevertheless, the goal of innovation is the creation of marketable competitive advantage rather than pure technological innovation. This shows that the personal characteristics of the firm owners have a lot of influence on the firm's technological innovativeness. Technology innovativeness also includes patent right, trade mark and design. Patent and design ownership only apply to ideas or creations that are new to the world, while trademarks are associated with product launches that may either be new to the firm or new to the world (Oshagbemi, 1983). An active patent strategy allows commercialization through know-how transfer projects and licensing of those patents that cannot be realized efficiently inside the firm or do not fit its innovation strategy. Sharma (2016) testified technological innovativeness as product-oriented innovativeness and process-oriented innovativeness. Most highly technological innovative small scale manufacturing firms achieve these two at the same time.

SMEs Performance

Performance can be attributed to an increase in factors of production, improvements in the efficient allocation across economic activities, knowledge and rate of innovation. Innovativeness is considered as one of the critical issues in the firm growth. The dimension of business growth used in this study includes: employment growth, sale growth, firm size growth and market share growth.

Employment Performance: Employment generation is a very important aspect of the country economic growth. Small and medium enterprises are seen as a great force in generating employment in the country. Employees are the most crucial resource of an organization. Some expertise is embedded in them. Quality of employees affects the firms' ability to embark in innovativeness. While product innovation boost employment process innovation is associated with job losses.

Sale Performance: This is considered a very important and popular determinant of micro business growth because business growth is measured through sales. Increase in sales makes it possible for businesses to invest in additional factors of production, such as equipment and employees, which in turn results in raising the profits of the business, although sales can be affected by inflation.

Firm Size: The size of a firm mediates between the internal and external firm's environment. The size of a firm measured by its employees is a consequence of the firm's hiring strategy. It is also decisively influenced by the market-oriented view of Schumpeter and the resource-based view. Large firms are less likely to embark on innovativeness. It is well-known that small firms are more affected by innovativeness obstacles and thus they are prevented from innovative activities.

Market Share: Market share is portion or percentage of sales of a particular product or service in a given region that are controlled by a firm. It is used by firms to determine their competitive strength in a sector as compared to other firms in the same sector. It takes account of the market conditions that may have improved or decreases sales which sale or revenue may not capture.

Overview of SMEs in Nigeria

Small and medium scale enterprises (SMEs) as defined by Lawal and Ijaiya (2007) cited in Wikhamn (2019), refer to business enterprises whose aggregate amounts of assets is not more than two hundred million naira (N200,000,000.00) only excluding land. Indeed, there is no universal or national acceptable standard definition for SMEs unless the scale or size of business needs is defined for a specific purpose. SMEs identification is a major problem in developing countries because apart from the fact that small and medium scale business are difficult to count, they are also problematic to quantify independently, hence data on the number, size, geographical distribution and activities of enterprises and the SME subsectors are difficult to obtain (Engel et al, 2004, Egbetokun, 2008,cited in Rahman, Yaacob, & Radzi, 2016). According to Owualah (2000) cited in (Rahman, Yaacob, & Radzi, 2016) remarked that small and medium scale enterprises in Nigeria are mostly determined by various quantitative parameters. Such parameters include the number of people employed in the enterprises, the capital base, the magnitude or size of the plant capacity, the sophistication of the equipment, sales turnover, profit margin and market share.

The recent national definition of SMEs in Nigeria as adopted at the National Council on Industry (NCI) in 1996 and as cited by the Central Bank of Nigeria (MMSME, 2007) cited in Rahman, Yaacob, & Radzi, 2016), categorizes small scale enterprises as those with total cost, including working capital but excluding cost of land exceeding N1.0 million, but not above N40.0 million with a labour capacity of between 11 and 35 employees. Medium scale enterprises are defined as those enterprises with total cost, including capital but excluding cost of land above N40.0 million but not exceeding N150.0 million with a labour size of between 36 and 100 employees. Apart from a concise definitional issue of SMEs in Nigeria, there exists a high level of consensus of its importance, especially from the sub-sector to economic growth and development (Akingunola, 2019, cited in Atul,, 2020). Oluba (2009) cited in Cooper, 2020) observed that the importance of SMEs differs with sectors and with the developmental level of a country. He opined that what makes SMEs in Nigeria less amenable is the disappointing outcomes from their inappropriate developmental strategies they often adopt that focus on large capital base, capital intensive and high import dependency while they are supposed to take into consideration the level of

capital allocation requirements, management size and arrangement as well as their market accessibility in decision making.

Research Methodology

This study target 175 SMEs in Odeda local government, Ogun State, Nigeria. This study targets this area because of the urban influences. The method employed SPSS 20.0 to analyze the Bio - data of the respondents vis-a-vis the distribution of their gender, age, marital status, educational status, family size. While the inferential statistics involves regression model to show the relationship which exist between dependent variable and the explanatory variables. The data that were collected through survey questionnaires were collated and coded in a spreadsheet. For inferential statistics, regression was employed. Cronbach's alpha test of reliability was conducted on the questionnaire that was used for the pre-test so as to assess the internal consistency of the entire scale. However, the result found to be consistent as indicated in the reliability statistics table below (0.737).

Reliability Statistics

Cronbach's Alpha	**Cronbach's Alpha Based on Standardized Items**	**N of Items**
.737	.650	41

Presentation of Data

The research questionnaire was administered to one hundred and twenty two **(122)** respondents which is a sample size of the study.

Analysis of Questionnaire

A total number of 122 structured questionnaires were distributed among the respondents, out of which one hundred and seven (107) were appropriately filled and returned. Given this, it implies that approximately 87.7 % of the administered questionnaires were retrieved. The tabular presentation of the questionnaire analysis is given below:

Table 1 Analysis of Response Rate

Questionnaire	Respondent	Percentage (%)
Returned	107	87.70
Not Returned	15	12.29
Total Distributed	**122**	**100**

Source: Field Survey, 2023

Table 2: Respondents' Socio-Demographic Data

		Frequency	Percentage (%)	Valid Percent	Cumulative Percent
Gender					
	Male	36	33.6	33.6	33.6
Valid	Female	71	66.4	66.4	100.0
	Total	107	100.0	100.0	
Indicate the highest level of education attained					
	Secondary	15	14.0	14.0	14.0
	College	16	15.0	15.0	29.0
Valid	University	57	53.3	53.3	82.2
	Post graduate	19	17.8	17.8	100.0
	Total	107	100.0	100.0	
Marital status of the Respondent					
	Married	44	41.1	41.1	41.1
Valid	Single	56	52.3	52.3	93.5
	Divorced	7	6.5	6.5	100.0
	Total	107	100.0	100.0	
Age Bracket					
	18-25	12	11.2	11.2	11.2
	26-30	32	29.9	29.9	41.1
Valid	31-35	36	33.6	33.6	74.8
	35-above	27	25.2	25.2	100.0
	Total	107	100.0	100.0	
Occupation					
	Student Entrepreneur	34	31.8	31.8	31.8
	Practitioners	14	13.1	13.1	44.9
Valid	Business Operation	45	42.1	42.1	86.9
	Customers	14	13.1	13.1	100.0
	Total	107	100.0	100.0	

Source: Field Survey, 2023

Table 2 revealed the analysis of response rate. 36 (33.6%) were male, while71 (66.4%) of the respondents were female. This implies that majority of the respondents were female. In terms of education, it was revealed that, 15 (14.0%) were secondary, 16 (15.0%) were College, 57 (53.3%) were University, 26 (8.6%) were postgraduate and others were 19 (17.8%). This means that the research study has the University holders as it highest respondents. Concerning marital status, it was revealed that, 44 (41.1 %) were married, 56 (52.3 %) of the respondents were single, while 7 (6.5 %) were divorced. This implies majority of the respondents were single.

Table 2 further explains that, 12 (11.2%) were between 18-25years of age, 32 (29.9 %) were between 26-30years of age, while 36 (33.6 %) were between 27 years and above. This implies that majority of the respondents' falls between the ages 36 years. It also, explains that, 34 (31.8) were student entrepreneur, 14(13.1) were practitioner, 45(42.1) were business operation, 14 (13.1) were customer,

Test of Hypotheses

Regression model was used to test the effect and relationship of the independent variable on the dependent variable of hypotheses 1, 2 and 3.

Hypothesis one

H_1: Technological Production innovation has no significant effect on SMEs profitability

Table 3A Model Summary result for Technological Production innovation and SMEs profitability

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.324[a]	.105	.096	1.11466

a. **Predictors: (Constant)**, Technological Production innovation

b **Dependent Variable:** SMEs profitability

Table 3B. ANOVA[a] result for Technological Product innovation and SMEs profitability

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.261	1	15.261	12.283	.001[b]
	Residual	130.459	105	1.242		
	Total	145.720	106			

a. **Dependent Variable:** SMEs profitability

b. **Predictors: (Constant),** Technological Product innovation

The result from the model summary table revealed the extent to which the variance in SMEs profitability can be explained by Technological Product innovation is 10.5% i.e. (R Square =0.105). The ANOVA table shows the F-values statistics 12.283 at 0.001, significance level.

Table 3C. Coefficients[a] result for Technological Product innovation and SMEs profitability

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.295	2.087		6.372	.000
	Technological Production innovation	.356	.101	.324	3.505	.001

a. Dependent Variable: **SMEs profitability**

The coefficients table above shows that Technological Product innovation has a positive effects on SMEs profitability. The model is mathematically as follows: Y=a+Bx Where; Y is SMEs profitability (SP) and X is Technological Product innovation (TPI), 'a' is a constant and 'b' is the value of the coefficient. This therefore implies that; SP = 13.295 + 0.356 . Therefore for every 100% change increase in SMEs profitability, Technological Product innovation contributed 35.6%. .The above result however implies Technological Product innovation have significant effects on SMEs profitability, Since our P value (0.001) is less than 0.05,then, the decision would be to reject null hypothesis (Ho_1) and accept the alternative hypothesis (H_1). To this end, it is true to assert that Technological Product innovation have significant effects on SMEs profitability.

Hypothesis Two

Ho_2 : Technological process innovation does not have effect on market leadership.

Table 4A Model Summary Technological process innovation and market leadership.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.618[a]	.382	.376	.96716

a. **Predictors: (Constant),** Technological process innovation

b. **Dependent variable:** market leadership

Table 4B ANOVA[a] result for Technological process innovation and market leadership

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	60.662	1	60.662	64.851	.000[b]
	Residual	98.217	105	.935		
	Total	158.879	106			

a. **Dependent Variable**: market leadership

b. **Predictors: (Constant),** Technological process innovation

The result from the model summary table revealed the extent to which the variance in market leadership can be explained by technological process innovation is 38.2% i.e. (R Square = 0.382). The ANOVA table shows the F-values statistics 64.851 at 0.000, significance level.

Table 4C Coefficients[a] result for Technological process innovation and market leadership

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.503	2.398		.210	.834
	Technological process innovation	.912	.113	.618	8.053	.000

a. Dependent Variable: **market leadership**

The coefficients table above shows that the sample model expresses how technological process innovation affects market leadership and that there is a positive relationship between the variables. The model is mathematically as follows: Y= a + Bx Where; Y is market leadership (ML) and X is Technological process innovation (TPIn), 'a' is a contant and' is the value of the coefficient. This therefore implies that; ML = 0.503 + 0.912TPIn. Hence, for every 100% change increase in market leadership, Technological process innovation accounts for 91.2%.

The above result however implies Technological Process innovation have positive significant effects on market leadership, Since our P value (0.000) is less than 0.05,then, the decision would accept the alternative hypothesis (H_2).which states that technological process innovation have significant effect on market leadership. Hence, the null hypothesis (Ho_2) should be rejected.

Hypothesis Three

Ho_3: Marketing innovation does not have significant effect on customer satisfaction.

Table 5A Model Summary result for Marketing innovation and customer satisfaction.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.443[a]	.196	.188	1.10290

a. Predictors: (Constant), **Marketing innovation**

a. **Dependent variable:** customer satisfaction

Table 5B ANOVA[a] result for Marketing innovation and customer satisfaction.

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	31.157	1	31.157	25.615	.000[b]
	Residual	127.721	105	1.216		
	Total	158.879	106			

a. Dependent Variable: customer satisfaction

b. Predictors: (Constant), Marketing innovation

The result from the model summary table revealed the extent to which the variance in customer satisfaction can be explained by marketing innovation is 44.3% i.e. (R Square = 0.443). The ANOVA table shows the F-values statistics 25.615 at 0.000, significance level.

Table 5C Coefficients[a] result for Marketing innovation and customer satisfaction

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.051	1.733		6.378	.000
	Marketing innovation	.430	.085	.443	5.061	.000

a. Dependent Variable: customer satisfaction

The coefficients table above shows that the sample model expresses how Marketing innovations affect customer satisfaction. The model is mathematically as follows: Y=a+Bx, Where, Y is customer satisfaction (CS) and X is marketing innovation (MI), 'a' is a constant and

'b' is the value of the coefficient. This therefore implies that; CS = 11.051+ 0.430MI. Therefore, for every 100% change increase in customer satisfaction, marketing innovation contributes 43.0% .

The above result however connotes that Therefore marketing innovation have a significant positive effects on customer satisfaction, since our P value (0.00) is less than 0.05. Then the decision would be accept alternative hypothesis (H_3) and reject the null hypothesis (Ho_3). This therefore implies that marketing innovation have significant effects on customer satisfaction.

Conclusions

Technological innovations have assumed a great significance in the present day's context. In view of importance of awareness of the technological innovations on the SMEs growth, it therefore becomes expedient to examine how technological innovation affects the growth of small and medium scale enterprises. Technological innovations (product, process, marketing innovation) affecting SMEs growth.

It is however discovered that technological innovations is not the only factor that determines SMEs growth but to an extent affect SMEs growth other factors are exogenous variable such as economy, socio-cultural factors, and the political environment all influence the growth of of small and medium scale enterprises.

Recommendations

Having discussed the findings of the study, summary and conclusion, it then becomes relevant to put forward some important recommendations that will help improve the growth of small and medium scale enterprises in relation to technological innovations. These include:

1. Firms need to continuously adopt new production processes as well as improve their distribution strategies as this research has technological process innovation increases organisations productivity.
2. SMEs should engage more in R&D, as this will not only improve the firm's technological innovation capabilities but also help the firm develop technical know-how as regard latest technological innovation
3. Firms must adopt new technological product innovation irrespective of its cost implication as this will help to raise a firm's profit margin in the long-run.

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