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Technological Entrepreneurship: A Way Forward for Small Medium Scale Enterprise in Nigeria

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ABSTRACT

Technology entrepreneurship is an investment in a project that assembles and deploys specialized individuals and heterogeneous assets that are intricately related to advances in scientific and technological knowledge for the purpose of creating and capturing value for a firm. The main objective of the study is to investigate technological entrepreneurship; A Way Forward for Small Medium Scale Enterprise in Nigeria**.** The following are the specific objectives to: Investigate the effect of technical entrepreneurship on the growth of small medium scale enterprise in Nigeria; examine the effect of techno-entrepreneurship on the growth of small medium scale enterprise in Nigeria and assess the effect of technology entrepreneurship on the growth of small medium scale enterprise in Nigeria. Descriptive survey design was adopted. The purpose of descriptive survey design is to collect detailed and factual information that describes an existing phenomenon. The data collected were analyzed using both descriptive and inferential statistics. Descriptive statistics which included simple percentages and mean was used to answer the research questions while inferential statistics involving multiple regression was used to test all the hypotheses. The test was performed at 0.05 level of significance. The result of the study revealed that technical entrepreneurship, techno-entrepreneurship, technology entrepreneurship had positive and significant effect on the growth of small medium scale enterprise in Nigeria. The study thus concludes that technological entrepreneurship have positive and significant effects on the growth of small medium scale enterprise in Nigeria. Over the last four decades, technology entrepreneurship has become an increasingly important global phenomenon. It is perceived as necessary for growth, differentiation, and competitive advantage of the firm, regional, and national levels. Technology entrepreneurship appeals mainly to leaders and top management teams of small and medium scale enterprises and large firms who use technology to create, deliver, and capture value for their stakeholders. Amongst the recommendation is that capacity building and sensitization programmes for all registered SMEs should be put in place by government to enlighten them on the benefits of good risk management and insurance of their businesses. Both the government and deposit money banks should mutually agree on a credit guaranteed scheme

strategy that will incorporate a risk-sharing arrangement as a way of encouraging the deposit money banks to channel funds to the SMEs in Nigeria.
Keywords*:* Technological Entrepreneurship, Small Medium Scale Enterprise, Nigeria

INTRODUCTION

Technology entrepreneurship is an investment in a project that assembles and deploys specialized individuals and heterogeneous assets that are intricately related to advances in scientific and technological knowledge for the purpose of creating and capturing value for a firm (Steve, 2018). Technological entrepreneurship centered on the growth of firms and regional economic development which involves the selection of stakeholders to take ideas to the market and educate managers, engineers and scientist. Technology entrepreneurship is a vehicle that facilitates prosperity in individuals, firms, regions, and nations. The study of technology entrepreneurship therefore, serves an important function beyond satisfying intellectual curiosity.

According to Gbandi, and Amissah, (2014) an important problem in the process of developing and increasing competitiveness of young companies is the level of technological innovativeness and uniqueness of products and services. In pursuing these objectives an important role can be played by the concept of technological entrepreneurship understood as a process involving greater practical usefulness of scientific research findings on modern technologies. An essential element of this process is effective cooperation between research institutions, research and development centers, capital market institutions, business-related sphere and enterprises in order to diffuse knowledge and scientific potential into commercial solutions regarding technological innovations. The basis for the development of technological entrepreneurship is formed, therefore, through interactions between science, technology and business (Baig, 2007). This is a creative and innovative ability of knowledge-based companies and an adaptation response to the real business environment (Aribaba, 2013).

Technology entrepreneurship is basically the merger of two words from two disciplines. Technology from the innovation discipline and entrepreneurship from the business discipline. Technology entrepreneurship is thus understood in this study as the integration of technological and entrepreneurial realms. High-tech start-ups and technology development firms, also known as technological entrepreneurs, play an important role in developing and commercializing technologies worldwide. It is perceived as necessary for growth, differentiation, and competitive advantage at the firm, regional, and national levels. Technological entrepreneurship takes place when entrepreneurship and technology joins hands to improve the standards of business. Small scale business needs innovation for sustenance and cannot neglect the need that latest technology is also required as a huge resource for growth, performance and business outcomes. There are several words and definitions used in scientific articles for technological entrepreneurship such as Technical Entrepreneurship, Technology Entrepreneurship and Techno-Entrepreneurship (Therin, 2007).

The most cited authors Dorf and Byers define technological entrepreneurship as a style of business leadership that involves identification and human resource high-potential capitalization, technology-intensive commercial opportunities, managing accelerated growth and significant risk taking (Dorf & Byers, 2005). In their definition Shane and Venkataraman (2004) see technological entrepreneurship as the processes of assembling resources, technical systems and strategies by an entrepreneurial venture to pursue opportunities (Shane & Venkataraman, 2004). The importance of Small and Medium-sized Enterprises (SMEs) to national economies has been widely recognized and documented in the literature of finance and entrepreneurship. Generally, SMEs are highly innovative and extremely impactful as far as national economic development is concerned. Further to this is the observation of Bubou and Okrigwe, (2011) that entrepreneurship (especially Technological Entrepreneurship) and innovation (Technological Innovation) are the twin pillars of socioeconomic development in this modern era. To date, several informative studies have explored the subject of innovation in SMEs but the extent to which technology innovation influence small business performance is a question for empirical investigation.

Small Medium Scale enterprises are still thriving in developing countries like Nigeria. Hence, technology might be seen as a factor that hiders SME's. For every growing small medium scale enterprises, there

must be the presence of power supply. In Nigeria, it isn't news that power supply has been backlog to the growth of small medium scale enterprises. This isn't far- fetched, that technology such as power supply makes business easy and fast. Technology has brought the world together and so has it for small medium scale enterprises (Udechukwu, 2003).

REVIEW OF RELATED LITERATURE

Conceptual Framework

Entrepreneurship

Entrepreneurship can be defined as the process of identifying opportunities in the market place, marshalling the resources required to pursue these opportunities and investing the resources to exploit the opportunities for long term gains. It involves creating wealth by bringing together resources in new ways to start and operate an enterprise (Thaddeus, 2012).

According to Eneh,. (2010), entrepreneurship occurs when an enterprising individual pursues lucrative business opportunities, mobilizing men, materials, machines and financial resources in order to produce new products and to serve new market. He added that it is the process of looking for things in such a way that possible solutions to problems, needs, ethics, standards and dealings evolved based on morals and values. Entrepreneurship is a process by which individuals pursue opportunities, fulfillments of needs through innovations without regards to the resources they currently control (Ramachandran & Janakiraman, 2018).

Entrepreneurship cuts across academic discipline, age and gender. Recently, it was discovered that there are more male entrepreneurs than females. Entrepreneurship is the key to industrialization. The concept of entrepreneurship is further refined when principles and terms from business, managerial and personal perspective are considered. In particular, the concept of entrepreneurship from a personal perspective has been thoroughly explored in the country. Matejun, (2016) defines entrepreneurship as an undertaking in which one is involved in the task of creating and managing an enterprise for a purpose (The purpose may be personal, social or developmental).

Entrepreneurship is the process of identifying opportunities in the market place, marshalling the resources required to pursue these opportunities and investing the resources to exploit the opportunities for long term gains (Gbandi, & Amissah, 2014). It involves creating wealth by bringing together resources in new ways to start and operate an enterprise (Akande, 2015).

Kao and Harvard (1984) define entrepreneurship as the attempt to create value recognition of business opportunity, the management of risk-taking appropriate to the opportunity and through the communication and management skills to mobilize human, financial and material resources necessary to bring a project to fruition. Filion, 1997) viewed an entrepreneur as a necessary destabilization force, stating the economic equilibrium which optimizes what already exists does not create healthy economics. Dynamic economy takes as it forms the equilibrium brought about by the conscience charge and innovation (Filion, 1997). Peter Drucker (1994) defines an entrepreneur as someone who always searches for change, responds to it and exploits it as an opportunity. The term later became broader to include anyone who engaged in economic activity and came to be associated with essential characteristics of innovation and risk taking.

Gbandi and Amissah, (2014) define an entrepreneur as the person who bears risk, unites various factors of production and carries out innovation. Dorf and Byers (2005) defines entrepreneur as "the owner or manager of a business enterprise who, by risks and initiative, attempts to make a profit". He organizes the factors of production – that is land, labour, capital and his own enterprise to transform a business idea into profitable reality. The risk referred to in the definition according to him arises from the fact that these factors or resources are committed now in expectation of a reward that lies in the future and this reward may not happen.

An entrepreneur is the individual or a group of individuals who try to create something new, who organizes production and undertakes risk involved in the establishment and operation of a business enterprise.

To an economist, an entrepreneur is one who brings resources, labour, materials and other assets into combinations that make their value greater than before, and also one who introduces changes, innovations and a new order.

To a psychologist, an entrepreneur is typically driven by certain forces, the need to obtain something, to experiment, to accomplish or perhaps to escape the authority of others.

To a business-man, an entrepreneur appears as a threat, an aggressive competitor, whereas to another business-man, the same entrepreneur may be an ally, a source of supply, a customer or someone who creates wealth for others as well as find better ways to utilize resources, reduce waste and produce jobs that are financially beneficial to others.

An entrepreneur is an exploiter or an idea, one who spots a gap in the market or opportunity in the economy and mobilizes the factors of production in order to give something of value to the society in return for profit.

To be an entrepreneur is to be an active player in the economy that is one who innovates products. Some entrepreneurs set up new companies and ventures; others acquire and revive established concern.

Small Medium Scale Enterprise

Small and Medium Scale Enterprises constitutes the vital element in the business life of Nigeria. Nigeria small business enterprises are still predominantly in the traditional state with only a few in the better organized stage. National Council on Industry (2001) see 'Owa Afolabi, (2008) brought out four broad definitions of Small and Medium Enterprises; (a) Micro/Cottage Enterprises, (b) Small Scale Industry/Enterprises and (c) Medium Scale Industry/Enterprises and (d) Large Scale /Companies. The first term refers to an industry/enterprise with a labour size of not more than 10 workers or total cost of not more than N1.5 million, including Working Capital but excluding the cost of land. Second, this is an industry or enterprise with workers' strength of between 11 and 100 or a total cost of not more than N50 million, including the cost of land. Third, a Medium Scale Industry refers to an industry with a labour size of between 101-300 workers or a total cost of over N50 million, but not more than N200millioin including working capital, but excluding the cost of land. The forth term refers to an industry or enterprise with a labour size of over 300 workers or a total cost of over N200 million.

Many economies, developed and developing have come to realize the value of small businesses. They are seen to be characterized by dynamism, witty innovations, efficiency, and their small size allows for faster decision-making process (Akande & Oladejo, 2019). SMEs are key generators of employment and income, drivers of innovation and growth. In the OECD area, "SMEs employ more than half of the labour force in the private sector. In the European Union, they account for over 99 % of all enterprises. Furthermore, 91 % of these enterprises are micro-firms with less than 10 workers". Given their importance in all economies, they are essential for the economic recovery. SMEs are increasingly being recognized as the principal means for achieving equitable and sustainable industrial diversification and dispersal "(Udechukwu, 2003). The contribution of technological entrepreneurship to national economic growth has been well documented in the finance and economic literature, (Aribaba, Asaolu, Olaopa 2011). Firms are the means for realizing entrepreneurial ambitions of individual entrepreneurs. Entrepreneurial ventures work on the principle motto of profitability and growth with a long term desire of market dominance. This is based on innovation in products, processes or practices. The benefits of technological entrepreneurship cannot be overemphasized and the realization of this could be said to be the motivation behind government expenditure towards the programme (Erik & Pages, 2006).

Similarly, a country's competitiveness as well as the economic performance of industry is determined by technological capability (Raghavendra & Bala Subrahmanya, 2006). The involvement of developing countries in producing new technologies and innovations is almost negligible (Juma & Agwara, 2006). High-technology incubators responsible for creating wealth and jobs worldwide have been particularly successful in the US, Israel and China as incubators reduce the business failure rate by providing quality training and guidance to such companies in the initial stages (Khanduja, Khanduja & Singh 2008). By nurturing SMEs' (Juma & Agwara, 2006) and especially technology-based SMEs (Stefanovic, Devedžic & Eric, 2008) most countries have improved their economies and perhaps moved a step closer to development. Such countries include China, Korea and India. For instance India country made deliberate

efforts to encourage entrepreneurship, education, training and research (Khanduja, Khanduja, & Singh, 2008). Technology (-based) businesses can be referred to as businesses that engage in technology related products, processes and services. They may be low-, medium- or high-technology. One area of the economy which has seen significant growth is that focused on new technology-based products and services and the high-technology sectors are perceived as major sources of future economic prosperity and employment growth (Bubou & Okrigwe, 2011).

Challenges of Small Medium Scale Enterprise

Factors of Small Businesses, The entrepreneurial factors are variables that relate to the owners and managers of small businesses and include their personal traits, skills, experiences, and background (Idam, 2014). The entrepreneurial factors were widely used by researchers that were investigating growth and success of small businesses (Keagan, 2013). Age, educational level, entrepreneurial orientation, gender, personality, prior work experience and management skills of owners and managers are reviewed to identify their impact to small businesses in Nigeria and the challenges posed by each factor and how the challenges are mitigated in the Nigerian small business environment (Bula, 2012).

Each of the factors was assumed to play a critical role in the success of small businesses. An applied qualitative survey of 70 small businesses in Sao Paulo, Brazil on the managerial life cycles of small businesses found the owners' roles and the managers' functions changed at different levels of the life cycle of the business (Keagan, 2013). Waithanji, (2014) found a positive relationship between the roles of the owners and the functions of the managers in small businesses. Peter (2014) defined a small business owner as a person who creates a business with the hope of realizing profits, employs 50 people, and risks financial loss. Ahmeti (2014) determined most of the small business owners work for their well-being while entrepreneurs desired innovation and growth of their businesses. Small business owners usually strategize to provide an existing product or service to an existing market where competition is imminent while entrepreneurs work toward providing new goods and services with new ideas into an existing market or create a new market. Most small business start-ups have no monetary benefits motive and are usually for the owner to be the boss, have a flexible schedule, or have controlled working hours (Ahmeti 2014). Kibet, Kenneth and Omwono (2015) found learning new skills are necessary for managers of small businesses to make decisions to assist them in creating success. Many small business owners in Nigeria are dissatisfied with being self-employed which leads to low commitment and eventual business failure. For the small business owners to be successful, Farrington found they must be satisfied with self-employment, have a passion for the job, show a commitment to the business, and have a personal involvement in steering the enterprises to success. Small business owners are those operating businesses to provide income to their families while entrepreneurs aimed at achieving profit and growth of businesses (Ionita, 2012). The intention of business owners is important. Farrington stated if owners of small businesses restrict their intention to providing income to their families, the growth of the business is not guaranteed. Therefore, the small business owners are faced with the challenge of their intention of starting a new business for family income or make a profit and grow the business. The literature revealed a challenge of intention of owners to the growth and survival of small businesses. There is enough evidence that if the intention of owners is for self-sustenance, small businesses might not grow, but an entrepreneur who set a business for profit usually grow the business. A study on the adoption of e-commerce in small businesses in Nigeria by Yusuf Amao and Olawale (2013) stated 44.74 percent of successful small business owners and managers are between 40 and 60 years, 30.70% are between 20 and 40 years, 19.30% are over 60 years, and only 5.26% is less than 20 years. Keagan, (2013) stated 92% of small business managers and owners are adults most of them having families to support with their income. Madole, (2013) stated there is no significant relationship between age of owners and managers of small businesses in Nigeria regardless of the fact adult owners and managers manage most of the successful small businesses. Similarly, Peter (2014) suggested age and the educational background of small business managers played a role in influencing success. Matejun, (2016) revealed owners and managers that are above the age of twenty contribute to the success of small businesses. Gbandi, and Amissah, (2014) found planning activity in small businesses has nothing to do with the demography of

the owners. However, educational background and experience of the managers help the use of financial plans to make an impact on the performance of small business start-ups (Akande, & Oladejo, 2019).

Technological Entrepreneurship

Dorf & Byers (2005) describes "Technology Entrepreneurship as a style of business leadership that involves identifying high-potential, technology-intense commercial opportunities, gathering resources such as talent and capital, and managing rapid growth and significant risks using principled decision-making skills." Shane and Venkataraman see technological entrepreneurship as the processes of assembling resources, technical systems and strategies by an entrepreneurial venture to pursue opportunities (Shane & Venkataraman, 2004). Nicholas and Armstrong (2003) interprets technology entrepreneurship as Organization, management, and risk bearing of a technology based business. Also,Venkataraman and Sarasvathy (2000) sees it as solutions in search of problems . (Jones Evans, 1995 describes T.E as an establishment of a new technology venture.

The definitions suggests that technology entrepreneurship is about operating small businesses, finding problems or applications for a particular technology; launching new ventures, introducing new applications, or exploiting opportunities that rely on scientific and technical knowledge with ultimate outcome in other to create and capture value for the firms. It should be considered that technology is at the core and origin of the new venture and we will refer to technology based-entrepreneurship

Moreso, technology Entrepreneurship can be seen as purposeful and goal-oriented process in a complex and interwoven scientific/technical, cultural, social, economic, legal and political situation driven by a person (or group), the entrepreneur(s), and associated with a practice of starting a new technology-based organization or "renewing" an existing technology-based organization.

The primary function of technology entrepreneurship is to assemble a combination of specialized individuals and heterogeneous assets in order to create and capture value for the firm through collaborative exploration and experimentation. The combination, some of the assets, or the assets' attributes may be unique and novel. The initial combination may change over time.

The aspects of technology entrepreneurship to which we need to pay particular attention are identified. These aspects are: i) the interdependence between scientific and technological change and the selection and development of new combinations, assets, and asset attributes; ii) biases in the existing entrepreneurship literature; iii) conceptualization of technology entrepreneurship as an investment in a project, rather than opportunity recognition or venture formation; and iv) links among technology entrepreneurship, the theory of sustainable competitive advantage, and the theory of the firm.

For the entrepreneurs to be effective in creating wealth and employment opportunities, the government needs to create an investor-friendly environment encompassing stable macro-economic policies. Government need to address urgently the dilapidated infrastructural facilities in the country, starting with the power sector, roads and railways, provide adequate security and give every citizen the sense of belonging. The inputs into an entrepreneurial process; capital, management, technology, buildings, communications and transportation infrastructure, distribution channels and skilled labor, tend to be easier to find in urban areas. Professional advice is also hard to come by. Consequently, entrepreneurial behavior, which is essentially the ability to spot unconventional market opportunities, is most lacking in those rural areas where it is most needed i.e., where the scarcity of 'these other inputs' is the highest.

Small businesses employ citizens of Nigeria, and the sector is faced with the massive failure of the businesses within the first five years of operations. Most of the failure is due to critical challenges which negate the survival of their operations. For small business owners to be successful, they need to understand the challenges and develop strategies to mitigate the challenges. The researcher identified many challenges ranging from those affecting entrepreneurial factors, enterprise factors, and business environmental factors. The paper presented many challenges as highlighted by researchers to providing information to small business owners that they can use to develop strategies to mitigate small business challenges. The findings can also be used by researchers to investigate strategies for mitigating small business challenge

The study concludes that the government should promote technological entrepreneurship to enhance the performance of small and medium scale enterprises (SMEs) in Nigeria by giving deposit money banks the opportunity to operate freely and give loan to the SMEs in Nigeria through the formulation and implementation credit policies.

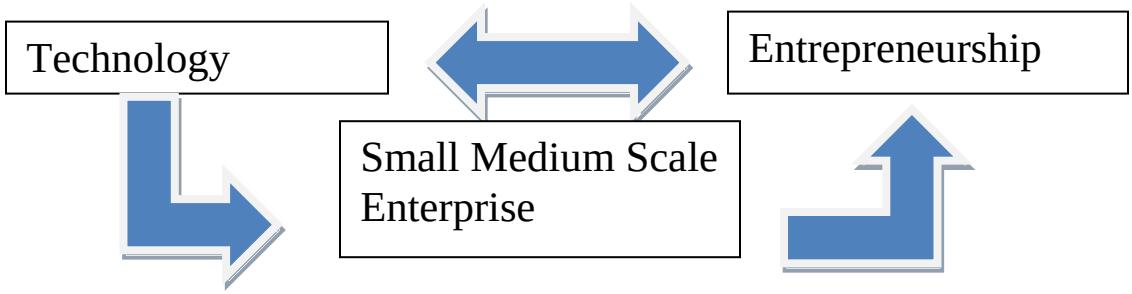

Figure 1. Conceptual Framework of Technological Entrepreneurship and Small Scale Enterprise

Theoretical Frameworks

This study is anchored upon the Technological Determinism theory which was propounded by Thorstein Veblen (1857–1929), whose theoretical framework was based upon the idea that changes in technology and productive technology are the primary influence on the organization of social relations, and that social relations and cultural practice ultimately revolve around the technological and economic base of a society. Thorstein Veblen position has become embedded in contemporary society, where the idea that fast-changing technologies alter human lives is all-pervasive. Technology marches in seven-league boots from one ruthless, revolutionary conquest to another, tearing down old factories and industries, flinging up new processes with terrifying rapidity. Technological determinism seeks to show technical developments, media, or technology as a whole, as the key mover in history and social change. Most interpretations of technological determinism share two general ideas that the development of technology itself follows a predictable, traceable path largely beyond cultural or political influence, and that technology in turn has "effects" on societies that are inherent, rather than socially conditioned or produced because that society organizes itself to support and further develop a technology once it has been introduced. Strict adherents to technological determinism do not believe the influence of technology differs based on how much a technology is or can be used. Instead of considering technology as part of a larger spectrum of human activity, technological determinism sees technology as the basis for all human activity. Technological determinism has been summarized as 'The belief in technology as a key governing force in society. 'The idea that technological development determines social change. It changes the way people think and how they interact with others and can be described as a three-word logical proposition: "Technology determines history. It is, the belief that social progress is driven by technological innovation, which in turn follows an "inevitable" course.' This 'idea of progress' or 'doctrine of progress' is centralized around the idea that social problems can be solved by technological

Empirical Review

Akande and Oladejo, (2019) assessed whether participation in technological entrepreneurial development programmes has positive impact on the performance of SMEs in Lagos state with a view to providing solution to issues and problems. Using multi-stage probability sampling technique, a sample of 240 respondent small businesses were selected from a list of 4,535 registered small businesses as provided by NASSMEs. Data collected were coded and analyzed using frequency table, percentage and mean score while non-parametric statistical test, ANOVA was used to test the formulated hypothesis using STATA 10 data analysis package. The result of the analysis and the hypotheses tested showed significant (F-value of 1381.56.) positive impact of technology entrepreneurship development programmes on the performance of the participating small businesses.

Steve (2018) identify the themes that dominate the technology entrepreneurship literature, provide a definition of technology entrepreneurship, and identify its distinguishing aspects relative to economics, entrepreneurship, and management. The author argues that technology entrepreneurship is an investment in a project that assembles and deploys specialized individuals and heterogeneous assets to create and capture value for the firm. What distinguishes technology entrepreneurship from other entrepreneurship types (e.g., social entrepreneurship, small business management, and self-employment) is the collaborative experimentation and production of new products, assets, and their attributes, which are intricately related to advances in scientific and technological knowledge and the firm's asset ownership rights.

Matejun (2016) studied the impact technology entrepreneurship in SME sector companies has on the level of innovativeness. The survey conducted using a sample of 300 small and medium enterprises based in the vicinity of the city of Łódź. The results showed that the surveyed enterprises believe that their technology entrepreneurship is developed at a medium level; a too-low level of interactions with the research and development environment constitutes a significant inhibitor of technology entrepreneurship, involvement in the sphere of technology entrepreneurship has a significant effect on the level of innovativeness of surveyed enterprises, mostly stimulating the scope of implementation of innovations in products and in medium-sized companies in technology.

Kaya (2016) examined the impact of each U.S. states' business friendliness score in technology use on the entrepreneurial activity in that state. Results of the study confirm that small businesses and entrepreneurs with certain characteristics tend to prefer high technology use states, again the study revealed that new startups, entrepreneurs that are independent in the political scale and community college graduates tend to prefer states with high internet startup scores and high internet tax scores. Female entrepreneurs also tend to prefer states with high internet startup scores and that single employee firms, entrepreneurs with previous entrepreneurial experience, entrepreneurs that are liberal in the political scale and technical college graduates tend to prefer states with high internet licensing scores.

Akande O. (2015) in his study examine (IT) perceptions about business benefits of Information Technology (IT) and provided an insight on the barriers for the adoption of Information Technology. The study was carried out in Lagos state with Two hundred (200) Questionnaires administered and distributed to the member of national association of small and medium businesses (NASMBs) across all the (20) Twenty local Council Development Area (LCDA) in Lagos state purposively. The sample was drawn from small and medium Business consisting of manufacturing, services businesses, printing businesses, food vendors and restaurants, business centers, and Artisan with employment capacity ranging from 2-30 employees. The data collected were analyzed using descriptive and inferential statistical tools. In view of the findings of this study, it was concluded that the implementation of information technology to the operations of Small business has made a great positive impact on Entrepreneurial practices in Nigeria. Also finding from the tested hypothesis buttress the Significance of Information Technology to Entrepreneurial practice from the perspectives of SMBs in Nigeria.

Oyewale (2013) in his study analyzed the impact of innovation, technology and on the entrepreneurial development activities in Nigeria using simple random sampling technique and a total of 12 entrepreneurs from Lagos State which constituted the sample size. The results showed that there is significant relationship between technological innovation and entrepreneurship development in Nigeria

RESULT AND ANALYSIS

Descriptive Statistics

The descriptive statistics shows the minimum value, maximum value, mean and standard deviation of the variables used in the study. The result is presented in table 4.35 below:

table 1 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Technical Entrepreneurship	354	9	30	21.20	4.301
Techno-Entrepreneurship	354	10	30	18.25	4.059
Technology Entrepreneurship	354	11	30	20.22	4.086
Growth of Small Medium Scale Enterprise	354	11	30	22.54	3.208

Source: SPSS Version 21.0

This table present the summary of statistics used in the analysis. It provides information about the mean and standard deviation of the variables used in the study. Technical entrepreneurship has a mean value of 21.20 with a standard deviation of 4.301. Techno-entrepreneurship has a mean value of 18.25with a standard deviation of4.059

Technology entrepreneurship has a mean value of 20.22 and a standard deviation of 4.086. Again the growth of small medium scale enterprise recorded a mean value of 22.54 with a standard deviation of 3.208. Low values of standard deviation for each of the variables indicate a consensus on statements associated with each of the variables.

Multiple Regression Analysis

Multiple regression result was employed to test the effect of independent or explanatory variables on the dependent variables. The result of the multiple regression analysis is presented in the tables below.

Table 2 Summary of the Regression Result

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.294[a]	.686	.572	3.185	.086	6.151	5	326	.000	1.875

a. Predictors: (Constant), TE,TNE,TCE

b. Dependent Variable: Growth of Small Medium Scale Enterprise

Source: SPSS 21.0

Table 2 shows that R^2 which measures the strength of the effect of independent variable on the dependent variable have the value of 0.686. This implies that 69% of the variation on the growth of small medium scale enterprise is explained by variations in technological, entrepreneurship (Technical Entrepreneurship, Techno-Entrepreneurship, Technology Entrepreneurship the Growth of Small Medium Scale Enterprise in Nigeria). This was supported by adjusted R^2 of 0.572. In order to check for autocorrelation in the model, Durbin-Watson statistics was employed. Durbin-Watson statistics of 1.875 in table 4.5 shows that the variables in the model are not autocorrelated and that the model is reliable for predications.

Table 3 Analysis of Variance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	312.052	5	62.410	6.151	.000[b]
	Residual	3307.502	326	10.146		
	Total	3619.554	331			

a. Predictors: (Constant), TE,TNE,TCE

b. Dependent Variable: Growth of Small Medium Scale Enterprise

Source: SPSS 21.0

The f-statistics value of 6.151 in table 4.5 with f-statistics probability of 0.000 shows that the independent variables has significant effect on dependent. This shows that technical entrepreneurship, techno-entrepreneurship, technology entrepreneurship can collectively explain the variations in the growth of small medium scale enterprise in Nigeria

Test of Hypotheses

Here, the three hypotheses formulated in this study were tested using t-statistics and significance value of the individual variables in the regression result. The essence of this is to ascertain how significant are the effect of individual independent or explanatory variables on the dependent variables. The summary of the result is presented in the table below.

Table 4 T-Statistics and Probability Value from the Regression Result

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	18.916	1.918		9.863	.000
	Technical Entrepreneurship	.123	.043	.158	2.870	.007
	Techno-Entrepreneurship	.028	.044	.204	3.632	.006
	Technology Entrepreneurship	.085	.044	.202	2.923	.008

a. Dependent Variable: GSME

Source: SPSS 21.0

Test of Hypothesis One

Ho: Technical entrepreneurship has no positive and significant effect on the growth of small medium scale enterprise in Nigeria

Hi: Technical entrepreneurship has positive and significant effect on the growth of small medium scale enterprise in Nigeria

In testing this hypothesis, the t-statistics and probability value in table is used.1 Technical entrepreneurship had a t-statistics of 2.870 and a probability value of 0.007 which is statistically significant. Therefore, we reject the null hypothesis and accept the alternative hypotheses which state that Technical entrepreneurship has positive and significant effect on the growth of small medium scale enterprise in Nigeria

Test of Hypothesis Two

Ho: Techno-entrepreneurship has no positive and significant effect on the growth of small medium scale enterprise in Nigeria

Hoi: Techno-entrepreneurship has positive and significant effect on the growth of small medium scale enterprise in Nigeria

Techno-entrepreneurship has a t-statistics of 3.632 and a probability value of 0.008 which is statistically significant. Therefore, we reject the null hypothesis and accept the alternative hypotheses. The implication of the result is that techno-entrepreneurship has positive and significant effect on the growth of small medium scale enterprise in Nigeria.

Test of Hypothesis Three

Ho: Technology entrepreneurship has no positive and significant effect on the growth of small medium scale enterprise in Nigeria

Hi: Technology entrepreneurship has positive and significant effect on the growth of small medium scale enterprise in Nigeria

Technology entrepreneurship had a t-statistics of 2.923 and a probability value of 0.008 which is statistically significant. Therefore, we reject the null hypothesis and accept the alternative hypotheses which implies that technology entrepreneurship has positive and significant effect on the growth of small medium scale enterprise in Nigeria

CONCLUSION AND RECOMMENDATION

The result of the study revealed that technical entrepreneurship, techno-entrepreneurship, technology entrepreneurship has positive and significant effect on the growth of small medium scale enterprise in Nigeria. The study thus concludes that technological entrepreneurship has positive and significant effects on the growth of small medium scale enterprise in Nigeria. Over the last four decades, technology entrepreneurship has become an increasingly important global phenomenon. It is perceived as necessary for growth, differentiation, and competitive advantage at the firm, regional, and national levels. Technology entrepreneurship appeals mainly to leaders and top management teams of small and medium

scale enterprises and large firms who use technology to create, deliver, and capture value for their stakeholders. Technology entrepreneurship also appeals to personnel of regional economic development agencies that attract investments in productive technologies and talent to a particular geography. Amongst the recommendation is that capacity building and sensitization programmes for all registered SMEs should be put in place by government to enlighten them on the benefits of good risk management and insurance of their businesses. Both the government and deposit money banks should mutually agree on a credit guaranteed scheme strategy that will incorporate a risk-sharing arrangement as a way of encouraging the deposit money banks to channel funds to the SMEs in Nigeria.

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