The Impact of Technology and Management Competence on the Growth of Small and Medium Scale Enterprises in Ado Ekiti Metropolis, Ekiti State, Nigeria

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ABSTRACT: Considering the enormous contributions of Small and Medium Scale Enterprises' (SMEs) towards economic growth, employment generation and poverty alleviation across nations of the world, makes it impossible to de-emphasize its significant roles in bringing about desired development within an economy despite the various challenges confronting this sector. This study therefore seeks to investigate the determinants of the growth of small and medium scale enterprises in Ado-Ekiti Metropolis. The objectives of the study include assessing influence of technology and managerial competence on Small and Medium Scale Enterprises (SMEs) growth. Descriptive research design and ordinary least square techniques were used in analysing the primary data generated through the administered copies of questionnaire. Results obtained indicated that both technology and managerial competence positively impacted on the growth of SMEs in Ado-Ekiti. It is therefore concluded that technology and managerial competence have contributed to the growth of SMEs in Ado-Ekiti Metropolis but not as much as projected. Hence, it is recommended that improved technology should be adopted by SMEs coupled with competent management team to enable them produce at optimal level and to further engender their growth.

SUMMARY OF THE ARTICLE

The study explored the determinants of SMEs Growth in Ado-Ekiti Metropolis, Ekiti State, Nigeria. Simple percentages and Ordinary Least Squares technique of estimation were used in achieving the objectives of the study which are finding out if managerial competence can stimulate SMEs growth and likewise if technology impacts. From the study it was found that both factors significantly and positively impact the growth of the SMEs within the metropolis. Business registration and SMEs growth were found to be directly related implying that any business that is registered has the potential of growing faster than those that are not.

It therefore follows that private small business owners should be ready to invest more on the training and development of their personnel so as to further boost their productivity and ultimately the growth of SMEs. In the same manner, they should embrace the use of modern technology either locally invented where available or foreign technology in the absence of the former. Moreover, SMEs desirous of business expansion should formalise their business activities to enhance their greater acceptability in business world.

KEYWORDS: SMEs Growth, Technology, Managerial competence, Employment generation, Poverty alleviation
JEL Classifications: L26; M00; M21

1. INTRODUCTION

The enormous contributions of Small and Medium Scale Enterprises' (SMEs), virtually world over, towards poverty reduction, employment generation/creation, and income generation and increasing economic growth cannot be overemphasized. Also, several authors have equally affirmed that SMEs is a potent tool in addressing several social ills such as robbery, theft, prostitution amongst others (see Akinguola, 2011, Fayomi, 2012, Bowale and Akinlo 2012, Zacheus and Omoseni, 2014, Aina, 2015, Jonathan, Victor and Tuluma 2015).

SMEs play a key role in the transition and developing countries, these firms typically account for more than 90 percent of all firms outside the agricultural sector, constitute a major source of employment and generate significant domestic and export earnings. As

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such, SME development emerges as key instrument in poverty reduction efforts (Organization for Economic Corporation and Development (OECD), 2014). SMEs are perceived as a synthetic construction mainly of social and political importance. Other empirical studies showed that SMEs contributes to over 55 percent Gross Domestic Product (GDP) and over 65 percent of total employment in high-income countries while it contributes to over 60 percent of GDP and 70 percent of GDP in middle-income countries. Equally, SMEs are an important source of export revenues in most developing economies.

In most transition economies such as Russian federation, small and medium scale enterprises account for about 25 percent of businesses going on in these economies. Meanwhile, in Balkan economy, SMEs have increased in number such that their share contribution to gross domestic product is as high as 70% of the total GDP. Moreover, in terms of employment, SMEs contribute significantly to employment by providing over 80% of the populace with job in the referenced economies. However, in most emerging economies such as Belarus, Georgia, Serbia, Ukraine, Albania, and Russia among others, SMEs account for half of the employed population in the private sector. Similarly, SMEs account for 60 to 70% of jobs in most OECD countries with a very large share in Italy and Japan, and a relatively smaller share in United States (United Nations Economic Commission for Europe Reports, 2022).

Small and medium scale enterprises have been described as important source of development for undeveloped regions. This might not be unconnected with the capacity of the sector in generating about 61.5% employment in Turkey manufacturing industry (Ceren & Gokhan, 2020). SMEs are described as the cornerstone of the Euro economy because they represent bulk of firms in this region (99.8%). More so, share contribution of SMEs to employment and value added stood at 70% and 60% respectively in this region, these shares comparatively are higher than that of United States, where SMEs accounted for about 50% of both business employment and value added. Further, SMEs are seen to be playing dominant role for EURO area in terms of investment flows per person employed accounting for about 50% of total business investment (Monetary and Financial Development, 2013).

Despite the immense positive contributions of the SMEs to several macroeconomic variables such as unemployment, gross domestic product and export in developed nations, otherwise has been observed in developing nations, Nigeria in particular as the sector still performs below the desired capacity in reducing unemployment, stimulating economic growth via sustained gross domestic product growth rate cum economic development and ultimately mitigating poverty rate among citizenry. Myriads of challenges faced by this sector that include; use of obsolete technology, low level of education cum non-constant training, poor management, poor infrastructural facilities, adverse environmental factors such as high tax being imposed by the government on the profit of SMEs owners just to mention few could have been the cause (Abiodun and Olumuyiwa, 2009).

Majority of the SMEs in Nigeria are found of using obsolete technology in carrying out their production activities and in discharging their services thus resulting in poor quality of products and services emanating from this sector that cannot competitively match other products at the international market. Hence, little or no foreign exchange earnings have these sectors been able to generate for the economy. This has also reduced their market share both at home and international market which ultimately impacts their profit level negatively and consequently slowing down their investment rate (Yusuf, Adeyemi and Micheal, 2017). Moreover, the adoption of the obsolete technology by this sector has been linked to inadequate finance that characterised most of the small businesses, limiting them in procuring modern tools which can facilitate mass production of goods and services (Oyediran et.al., 2018). Since Nigeria is mostly technologically dependent upon foreign nations, this problem has been further compounded by the rising exchange rate witnessed within the economy over time that had reduced the value of naira at the foreign exchange market making the SMEs owners to be at disadvantage in procuring the desired level of factor inputs that would enable them operate at the optimum level (Ikharehon and Briggs, 2016).

It has been noted that most of the SMEs within the economy are continuously deemphasizing the significance to the issue of training and retraining of their personnel; as such this is capable of promoting inefficiency in this sector over time. The cost implication of the exercise might have informed the negative disposition of the SMEs owners towards training and retraining of their personnel. However, the resulting incompetence that is prevalent and aggravating among workers in this sector is attributed to the failure of managers in organising constant training and re-training programmes for their staff to have their efficiency improved upon through acquisition of prerequisite skills to enable them perform their tasks optimally (Aina et.al 2015; Paul, Amarachi, Oyedele et.al., 2018).The tax systems adopted by the Nigerian government are perceived by most SMEs owners as not being favourable rather inimical to the growth of their businesses and often tagged multiple taxation which is growth impeding by its nature and often left business owners with little profit to plough into the business after its imposition, thereby reducing the investment level of the SMEs owners (see Stephen A. 2011, Abiodun and Harry, 2015, Ocheni and Gemade 2015).

Similarly, there are gross inadequate infrastructural facilities to aid the economic activities of these business owners while the available ones are in the state of decay such as poor road network, epileptic power supply and costly communication services. Infrastructural facilities inadequacy has been a perpetual problem that SMEs owners have been grappling with overtime and often translating into high cost of production and decreasing profit level for the entrepreneurs, hence, limiting their growth (Bowale and Akinlo, 2012). Equally, most entrepreneurs work not only in an environment where there is deficient supply of basic infrastructural

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facilities but the available ones are fast decaying due to lack of maintenance culture on the part of the government while the tax systems introduced by the government are killing not to talk more of other bureaucratic registration processes faced by the prospective entrepreneurs in the course of registering their businesses (Endi and Christea, 2016).

Consequently, contrary to the widely acclaimed perception that SMEs activities are capable of increasing the foreign exchange earnings of the nation, improving her balance of payment position and ultimately bringing about economic growth and development of countries, SMEs in Nigeria have rather been the contributing poorly to the economy and the opposite has consistently been witnessed as far as Nigeria is concerned (Muritala et.al., 2012). The situations in which the SMEs owners found themselves are capable of limiting the growth of their businesses, impacting negatively their income generation, with the tendency of keeping them in poverty trap, it may prevent them from generating employment for other factors of production (especially labour), hence, increasing the rate of unemployment which ultimately results in increased rate of social ills such as armed robbery, theft, drug trafficking, kidnapping and other criminal acts that can hamper socio-economic development of the country (Motilewa et.al., 2015). Considering the importance of SMEs in addressing the developmental challenges facing developing countries such as Nigeria and given its poor performance in Nigeria, it therefore becomes imperative to examine the determinants of SMEs growth so as to arrive at a policy direction that would promote SMEs growth in Nigeria. It is in this light that this study intends to identify factors that affect SMEs and examine the degree of influence of each of these factors on growth of SMEs. The specific objectives are to:

i) identify factors that influence the growth of SMEs,

ii) examine the extent to which the identified factors impact SMEs growth.

The rest of the study is organised into four sections. Section 2 presents the literature review. The methodology is captured in section 3. Section 4 is devoted to the presentation, analysis, and discussion of results while section 5 contains the summary, conclusion, and recommendations.

2. LITERATURE REVIEW: CONCEPTUAL, THEORY, AND EMPIRICS

Concept and Definition

Small and medium scale enterprises vary with culture and peculiar circumstances of person attempting the definitions; hence, no uniform definition of SMEs is available in literature. Often, most definitions in use depend on the purposes and policies that govern the SME sector in a particular country. SMEs are conceptualised as sector within the economy that serves as the engine of growth mostly to the developing countries (Amuchie et.al, 2015). This is because of its accelerative efforts in accomplishing macro-objectives such as full employment, income distribution, development of local technology as well as diffusion of management skills and stimulation of indigenous entrepreneurship. This conceptualization, to these authors, is relative and dynamic since there is no universal definition for small and medium enterprises.

Theory

Theoretically, the theory of the growth of the firm by Penrose (1959) provides bases for understanding growth determinants of firms. Penrose studied and identified the causes of growth of the firm and the factors that lead to its limited rate of growth. The author studied for profit corporate, and those that had grown over the years, firms which are endowed with certain resources, managed by the managers. She identified "enterprising managers" as one condition without which a firm's continued growth is precluded. Or more generally speaking, a firm's existing human resources provide both inducement to expand and a limit to the rate of growth. Moreover, from a knowledge perspective, a firm's rate of growth is limited by the growth of knowledge within it, but a firm's size by the extent to which administrative effectiveness can continue to reach its expanding boundaries. Theory of firm answers questions around price determination and resource allocation. Penrose defines a firm as a collection of productive (physical and human) resources. It is "an administrative planning unit, whose activities are interrelated and coordinated by policies which are formed in the light of their effect on the enterprise as a whole. However, areas of coordination and authoritative communication define the boundaries of the firm. Firm is also assumed to be more than an administrative unit rather a collection of productive resources, the disposal of which between different users and over time is determined by administrative decisions. Two types of resources- physical and human are further assumed which are a bundle of potential services. Thus, size of the firm is the present value of the total of its resources used for own productive purposes. Such a firm is interested in profits in order to pay out dividends to its owner, which means that the financial and investment decisions of the firms are controlled by a desire to increase total long-run profit.

The theory assumes that production activities of the firm are governed by the productive opportunities as seen by the entrepreneur, growth gets limited by the fact that the firm does not see opportunities for expansion, or that is either unwilling to act upon them or unable to respond to them. For a firm, decision to search for opportunities is an enterprising decision requiring entrepreneurial intuition and imagination. Managerial competence of a firm is to a large extent a function of entrepreneurial services available to it. Some of the assumed qualities for an entrepreneur are; entrepreneurial versatility, fundraising, ingenuity, entrepreneurial ambition and entrepreneurial judgement. Capacities of the existing managerial personnel of the firm necessarily set a limit to the expansion

of a firm at any given point in time as management cannot be hired in the market place. The managerial attitude towards risk, limit growth of the firm, as the resources have to be shared between operations and planning. Firm's direction of expansion is determined by inducements and obstacles, both internal and external. Penrose further argued that the expansion of firms is largely based on opportunities to use their existing productive resources more efficiently than they are currently being used. She stressed that, a large firm has technological and managerial economies. Technological economies are determined by the cost of technology, cost of capital and raw materials will affect the size of the plant. On the other hand, managerial economies include marketing, financial and research economies of the managers employed by the firm and results into specialisation of human resources. Such economies and resulting cost advantage of large firms, enable firms to expand in only certain directions.

Empirics

Series of surveys on the importance of SMEs in stimulating economic growth, alleviating poverty, generating employment, improving standard of living of entrepreneurs and their workers have been carried out in different parts of the globe and these have formed bulk of the earlier empirical findings on SMEs relationship with other variables as captured above (Sirajo, 2014, Sharafat, 2014 and Oyeniran et.al., 2015). However, little studies have been done on factors impacting SMEs growth in most developing nations, especially Nigeria. These factors vary and extent of their impacts could be diverse as well depending on the factor type, geographical locations, and business environment among others. Possible factors that impact SMEs growth are discussed one after the other in this section. They are however not limited to the following; gender of owner, age of owner, educational attainment and training of owner, age of business, size of business, location of business, access to finance or credit, interest rate, tax, infrastructure, business climate.

In exploring factors influencing investment and productivity of SMEs in Nigeria, five major determinants which include, education of labour force, infrastructural facilities, finance, firm size, and business climate; such as insecurity, bribery and corruption, time spent on dealing with government regulation, and poor power availability were found to be the major elements influencing SMEs. However, bribery and corruption were the most ranked obstacles for business owners followed by electricity and finance (Paul, et.al. 2018). SMEs growth is seen to be hindered by several factors which used to be different from region to region within the country, between the rural and urban areas, between sectors or between industrial enterprises within a sector. It was found that unfair competition from rural sector, cumbersome and costly bureaucratic procedures, burdensome laws, policies and regulations, an inefficient tax system, a lack of access to industrial real estate, a lack of external financing and low human resources capacities are the key environmental factors that influence Algeria SMEs while low entrepreneur characteristics, low managerial capacities, lack of marketing skills among others are the main internal factors responsible for the unstable and limited growth of SMEs in the country (Asma et.al., 2015). While investigating factors that have impeded the growth of SMEs in some selected developing economies(), using the World Bank Enterprise survey for analysis, five most significant obstacles that limit growth of SMEs in developing nations include access to finance, tax rate, competition, electricity, and political instability. Out of these five factors, finance appeared to be limiting the growth of SMEs the most, followed by competition (Yao, 2014).

Factors affecting SMEs growth in Ethiopia have been empirically identified as owners' age, educational attainment of the SMEs owners, SMEs age, infrastructural facilities and market availability among others. It was found that both age and family size of the owner were negatively related with SMEs growth, indicating that younger owners with small family size experience faster growth in their businesses. Similarly, education of the owner has a positive and significant effect on SMEs growth (Hailway, et.al., 2014). Major determinants of small and medium agro-export enterprises in Vietnam were identified as managers' capabilities, product and service quality, finance resources available, export human resource, export marketing strategy, linkage, government support and policies, customer and market. Their findings showed that good number of these factors determine business success of Agro export firms in the area (Thi Loan, 2017). Effect of tax payment on the performance of SMEs in Ghana was studied and submitted that alignment of the tax system to the specific SMEs growth needs should be considered an important agenda for the policy makers. In their explorative of the managers' perception of the tax system in Ghana on the profitability of their businesses, they found that majority of the respondents perceived the adverse impact of tax policies on the growth of SMEs and suggested need for tax reform policies in the country (Evans et.al., 2016). In studying the role of entrepreneurship training and education in enhancing the growth of small and medium enterprises in Kenya, it has been reported that small and medium scale enterprises' growth is substantially influenced by entrepreneurship training (George and Fridah, 2016).The influence of the demographic factors on the growth of SMEs in Tanzania was explored, findings showed that workshop, vocational, industrial and managerial experience alongside family background do influence growth of SMEs. Empirical analysis undertaken to test the three determinants of growth of SMEs which include, individual factors, organisational factors and environmental factors showed that individual factors directly affect the growth of business while the organisational factors have indirect effect (Nsubili, 2015).

Erstie (2021) assessed the influence of some identified socio-economic variables on growth and development of small and medium scale enterprises in some selected communities from two major zones of North Wollo and Waghimira. The results were interesting, as some variables such as: age of owners, access to finance, family business background and interest rate affect enterprises growth more significantly and statistically. However, factors such as entrepreneurship training, experience of the owner, inflation rate and

competition only impact less significantly on SMEs growth but gender of the owners, education background, business age, business types, business location, social responsibility, tax rate and social attitude are not statistically significant in determining the growth of small and medium scale enterprises. Another study examined SMEs growth determinants in BarisshyulGumuz Regional State of Ethiopia. Findings from regression analysis showed that factors such as, initial investment level, access to land and finance, location, sectoral engagement, business experience and market linkage are significant variables that explain SMEs growth. On the contrary, gender, education, ownership, formal recording and financial management practice are found to be insignificant in stimulating SMEs growth (Hayelom, 2022). Furthermore, findings from empirical survey focussing on SMEs growth determinants in Ethiopia using capital accumulation as proxy for SMEs growth indicated that initial capital, export of products, existence of formal accounting records, loans from government and training provision are found to be positively related to and statistically significant in influencing SMEs growth. Nonetheless, prior experience, customer types, and tax incentive are negatively related to SMEs growth and statistically significant in impacting its growth as well (Wondmageng, 2021).

3. METHODOLOGY

3.1 Research Design & Population of Study

A cross-sectional research design and quantitative research method was adopted in this study.

A quantitative research method was adopted in this study because it allowed the researcher to gather numerical and descriptive data in order to quantitatively identify factors influencing the growth of Small and Medium Scale Enterprises in Ado Ekiti Metropolis through the administered questionnaire. For this study, the small and medium scale enterprises in Ado Ekiti Metropolis constitute the population of the study which is infinite. The area is selected because of the heavy presence of small and medium scale enterprises in Ado-Ekiti being a state capital with dense population.

3.2 Sampling Design and Procedure

In this study, the sampling frame constituted of SMEs entrepreneurs and the information obtained from Ado Ekiti Metropolis in November 2023. Purposive or judgemental sampling method, a form of non-probability random sampling which selects sample on the basis of knowledge of a population was adopted in determining numbers of SMEs. In this study, chosen group were SMEs entrepreneurs operating and functioning in Ado Ekiti Metropolis. The sample size was 170 SMEs operating in Ado Ekiti Metropolis.

3.3 Data Collection Instruments

Data used for this study include the use of interviews and questionnaire. The questionnaire was administered to elicit information from the selected respondents of choice. The questionnaire was administered by the researcher and with support of fellow colleagues. The questionnaire mainly focussed on the characteristics of the firm, entrepreneur characteristics and environmental factors that influence small and medium scale enterprises in (SMEs) in Ado-Ekiti Metropolis.

3.4 Method of Data Analysis

Data collected using questionnaire were analysed, summarised, and interpreted accordingly with the aid of descriptive statistical techniques such as total score and simple percentage. Multiple-regression analysis was also used to analyse the impact of the identified influencing variables on the growth of SMEs in Ado-Ekiti Metropolis.

3.5 Model Specification

The model for this study is patterned after but with slight modification (Kransniqi et.al, 2008). Thus, in order to investigate the important determinants of firm growth, an econometric model including three set of factors is built thus;

$$\text{SMEs Growth} = f\{\text{firm, entrepreneur, environment}, \varepsilon\} \dots \dots \dots \dots (1)$$

Where the dependent variable (SMEs Growth) is the percentage of sales growth of the firm. Firm represents the set of firm-related factors such as firm age, size and multiplant firm indicating firms that have their parts or stores in more than one location, and separation of the ownership from management/control of the firm. This is therefore modeled as;

$$\text{Firm} = f\{\text{Age of firm, size, location, management}\} \dots \dots \dots \dots (2)$$

Entrepreneur represents factors related to entrepreneur such as owners' age as at the start of the business, education of the entrepreneur and represented as;

$$\text{Entrepreneur} = \{\text{Age of owner, education attainment}\} \dots \dots \dots \dots \dots (3)$$

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Environment represents business environmental factors such as government taxation, business registration/licensing, technology among others which is given as;

$$\text{Environment} = \{\text{Government tax, business registration or licensing, registration}\} \dots \dots (4)$$

Finally, ε_t represents the error term which captured other factors which are not included in our model.

Substituting (2) to (4) into (1) gives;

$$\text{SMEs Growth} = f \begin{Bmatrix} \text{Age, Size, Location, Management, Age of Owner, Education Attainment,} \\ \text{Government Tax, Business Registration, Technology} \end{Bmatrix} \dots \dots (5)$$

Linearizing equation (5) above produces:

$$\begin{aligned} \text{SMEs Growth}_i = \ & \beta_0 + \beta_1 \text{Firm's Age}_i + \beta_2 \text{Firm's Size}_i + \beta_3 \text{Firm's Location}_i + \beta_4 \text{Firm's Management}_i \\ & + \beta_5 \text{Entrepreneur Education}_i + \beta_6 \text{Entreprenuer's Age}_i + \beta_7 \text{Business Registration}_i + \beta_8 \text{Technology}_i \\ & + \beta_9 \text{Government Tax}_i + \varepsilon_t \dots \dots \dots \dots \dots \dots \dots \dots \dots (6) \end{aligned}$$

Where B_o is the intercept and β_1 to β_9 are the coefficients associated with each of the independent variables, also, ε_t is the stochastic element that captures other independent variables whose effects are negligible, but that impacted on small and medium scale enterprises growth rate in this respect.

Summary of Description of Variables

Variables	Measurement	A Priori Expectation
Firm Age	Continuous	(+)
Firm Size	Continuous	(+)
Firm Location	Continuous	(+)/(-)
Firm Management	Continuous	(+)/(-)
Entrepreneur Age	Continuous	(+)
Entrepreneur Education	Continuous	(+)
Business Registration	Dichotomous	(+)
Technology	Continuous	(+)
Government Tax	Continuous	(-)

Source: Authors' computation, 2023.

In order to determine whether or not the estimates are meaningful and statistically significant, the model was verified under the following major criteria: (i) the a-priori criteria which is based on the signs and magnitudes of the coefficients of the variables under consideration and (ii) statistical criteria which is based on statistical theory usually referred to as the First Order Least Square Test. The following statistical criteria were used: R-square, F-statistic and t-test. The R-square (R^2) is concerned with the overall explanatory power of the regression analysis and the t-test is used to test the significant contribution of each of the independent variables (Koutsoyiannis, 2003; Hill et.al., 2007; Greene, 2008 and Ijaiya, 2011).

4. ANALYSIS AND DISCUSSION OF RESULTS
Summary of Socio-demographic Description of Respondents
This section presents the results obtained from the data analysed using both descriptive statistics and ordinary least square technique. The results are interpreted and subsequently discussed.

Table 4.1 shows the frequency and percentage distribution of the socio-economic and demographic characteristics of the respondents. The gender distribution shows that majority of the respondents are male representing about 67 percent of the total respondents, this high level of involvement of male gender in small business ventures may not be unconnected with the need to meet their responsibility at home as compared to the females that have lesser responsibilities. Also, the marital status distribution of the respondents indicates that majority of the respondents that are married accounts for about 81 percent of the total respondents while those that are single accounts for about 19 percent of the respondents. The high frequency of the married people in SMEs may be because of the responsibilities that culture naturally imposed on them. Similarly, in terms of educational attainment, majority of the respondents are graduates with either Higher National Diploma or Bachelor of Science degrees accounting for 55 percent of the total owners of SMEs in the selected Metropolis, expectedly, this supposed to impact their activities positively. Those with National Diploma Certificates are the least with about 14.12%.

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Table 4.1. Distribution of the Socio-Economic and Demographic Characteristics of the Respondents

Variables	Freq	Percent	Cum
Gender			
Male	114	67.01	67.01
Female	56	32.94	100
Total	**170**	**100**	
Marital Status			
Single	31	18.24	18.24
Married	139	81.76	100
Total	**170**	**100**	
Education Attainment			
Junior school	29	17.06	17.06
Senior School Certificate	35	20.59	37.65
National Diploma Certificate	24	14.12	51.76
Higher National Diploma/B.Sc.	55	32.35	84.12
Masters' and Higher Certificate	27	15.88	100
Total	**170**	**100**	

Source: Authors' computation, 2023.

Table 4.2 above shows the frequency and percentage distribution of the non-demographic characteristics of the respondents. Majority of the respondents claimed that their businesses are registered, representing 71.8 percent of the total respondents. In responding to the competency of the management team, majority of the respondents accounting for 42.94 percent claimed that their management teams are less competent while about 57 percent confirmed that their management teams are competent. Competency of the management team is expected to have positive impact on the growth of the SMEs. However, greater percentage of the respondents about 51 percent explicitly disclosed that the technologies adopted by their firms are obsolete while 48 percent claimed that they used modern technology in their businesses. The use of obsolete technology by majority of the respondent firm owners' may not be unconnected with the reliance on foreign technology and high cost of accessing it often caused by high exchange rate. On the effects of the government tax on the working of the business, about 60 percent of the respondents said that government tax has significant negative impact on the growth of their business while about 40 percent claimed that its negative impact on their business is less significant. However little the effect might be, they have all generally claimed that it inhibits the growth of their business.

In giving description to the location of their various businesses, about 47 percent of the respondents claimed that their businesses are sited in the industrial area, 40 percent of them are situated in the commercial center and less than 12 percent of the respondents claimed that their businesses are located in either remote or residential area. Those in the industrial and commercial centers declared that their businesses have witnessed significant growth over time because of the choice of location with attendant larger market share.

Table 4.2: Frequency and Percentage Distribution of Non-Demographic Variables

Variables	Freq.	Percent	Cum.
Is your Business registered?			
No	49	28.82	28.82
Yes	121	71.18	100
Total	**170**	**100**	
How competent is your management team?			
Very Competent	49	28.82	28.82
Competent	48	28.24	57.06
Less Competent	73	42.94	100
Total	**170**	**100**	
Rating of Technology adopted?			
Very Modern	39	22.94	22.94

Modern	44	25.88	48.82
Obsolete	63	37.06	85.88
Very Obsolete	24	14.12	100
Total	**170**	**100**	
Effect of Government Tax?			
Less Significant	69	40.59	40.59
Significant	56	32.94	73.53
Very Significant	45	26.47	100
Total	**170**	**100**	
Description of your Business Location?			
Remote area	10	5.88	5.88
Residential area	11	6.47	12.35
Industrial area	80	47.06	59.41
Commercial area	69	40.59	100
Total	**170**	**100**	

Source: Authors' computation, 2023.

Tables 4.3 presents the co-linearity diagnostic statistics test results that attempt to ascertain that there is no intercorrelation among the explanatory (independent) variables to be included in our multiple regression model. The co-linearity diagnostic statistics table gave both the tolerance and variance inflation factor values. The decision rule for Tolerance Test is that, any Tolerance value lower than 0.10 suggests/indicates that; multiple correlation with other variables is high, suggesting the possibility of multicollinearity. Meanwhile, as evidenced from the table, tolerance values for each of the variables of interest have their values greater than 0.10. As seen in the table above, the tolerance values for majority of the variables such as Fage, Eedu, Fmgt, Gtax, and Bloc have high tolerance values ranging between 0.504 and 0.791 while others such as Fage, Btec, Breg, and Fsiz lies between 0.227 and 0.464; altogether still higher than 0.10. This presupposes that there is no linear relationship among the chosen explanatory variables or regressors. Hence, as evidenced by tolerance values for each of the independent variables which are not less than 0.10; therefore, we have not violated the multicollinearity assumption. Similarly, the Variance Inflation Factor (VIF) which is the inverse of Tolerance also corroborated/supported/lends credence to the tolerance result, as VIF values for each of the explanatory variables do not exceed 10 indicating absence of multicollinearity among the variables. Majority of the variables such as Eage, Eedu, Fmgt, Gtax and Bloc have their VIF values lying below 2.0 while only Btec and Breg have their values as 2.376 and 2.153 respectively. Meanwhile, others are higher such as; Fsiz with value 3.146 and Fage is 4.409 which is the highest and by far lower than 10.

Table 4.3: Multicollinearity Test

VARIABLES	Eage	Eedu	Fage	Btec	Fmgt	Breg	Gtax	Bloc	Fsiz
VIF	1.549	1.264	4.409	2.376	1.960	2.153	1.835	1.983	3.146
TOLERANCE	0.646	0.791	0.227	0.421	0.510	0.464	0.545	0.504	0.318

Source: Authors' Computation, 2023

Table 4.4 presents the Matrix correlation results. As shown above, all the variables have bi-variate correlation values of less than 0.7. For instance, the correlation values for most of the bi-variate relationships such as; Eedu and Fage, Fage and Fmgt, Eedu and Btec, Gtax and Bloc; all have their values lying between 0.318 and 0.375 which is less than 0.7. However, the correlation values for other bi-variate relationships such as; Eedu and Eage, Fage and Eage, Breg and Gtax, Breg and Bloc, Fmgt and Btec are all lying within the range of 2.00 to 2.96. Ultimately, other variables' correlation values lie above 0.375 but not exceeding 0.680. Hence, it could be submitted that there is no correlation among the variables as evidenced by the bi-variate correlation values.

Summarily, tables 4.4. and 4.5 clearly showed that we have not violated the multicollinearity assumption, hence, multiple regression model built in section 3.5 is suitable for use in determining the nature of relationship between the explanatory variables and the regressand and testing the statistical significance of each of the regressors.

Table 4.4: Correlation Matrix Table

Measures	Sgrth	Eedu	Fage	Btec	Fmgt	Eage	Breg	Gtax	Bloc	Fsiz
Sgrth	1.00	0.270	0.307	0.348	0.190	0.474	-0.071	0.131	0.540	0.321
Eedu		1.00	0.322	0.318	-0.021	0.255	-0.016	0.207	0.087	0.316
Fage			1.00	0.161	-0.375	0.296	-0.513	0.560	0.362	0.680

Btec			1.00	0.200	0.409	0.257	0.399	0.390	0.500
Fmgt				1.00	0.109	-0.438	-0.140	0.270	-0.02
Eage					1.00	-0.065	0.072	0.131	0.327
Breg						1.00	-0.249	-0.214	-0.063
Gtax							1.00	0.341	0.569
Bloc								1.00	0.377
Fsiz									1.00

Source: Authors' Computation, 2023

Table 4.5 presents the regression results obtained from the model specified in the methodology. The R-squared value of 0.5050 indicates that about 50 percent in the variation of SMEs growth is accounted for by the independent variables. Hence, the model is considered good fit. The F-value of 14.66 with its significant value of 0.000 indicates that the overall model is significant at 1 percent.

From the results, entrepreneur education positively influenced SMEs growth, the result shows that with an additional educational experience of the owner, SMEs are expected to experience growth of about 5.91 percent. The p-value was 0.293 which shows that $P > 0.1$, based on the coefficient of P, we conclude that owner's educational status is not a significant determinant of SMEs growth in Ado-Ekiti. As expected and with the nature of businesses that most SMEs owners within the metropolis venture into such as petty trading, basic formal education is required in order to excel in these ventures, hence, educational attainment might not necessarily be a determinant of its growth. The firm's age negatively affected SMEs growth with coefficient 3. 252. This means that a unit increase in the age of SMEs will cause the business to decline by about 3.252 percent. The result does not conform to economic expectation that as the business continues to increase in age so also should it be experiencing growth all other things being equal, but reverse is the case in this study. Intuitively, this may be linked to the nature of business that most of these SMEs are into which mostly goes into extinction with introduction of better technology. This makes their sales volume to be low and hence debase them from continuing in the same business. However, the variable age is statistically insignificant in determining SMEs growth. The study result is different from the earlier studies which found that firms' age is a significant determinant of SMEs growth (Almus and Nerlinger, 1999; Davidson et.al. 2002).

Firm technology is found to be positively influencing SMEs growth with coefficient 42.026 and statistically significant at 1 percent level. This connotes that technology is an important determinant of SMEs growth in Ado-Ekiti. As would be expected, the adoption of better technology by the firm would enhance productivity, improve quality of products and services, enhance competition, bring about better engagement of other factors of production and ultimately translate into firms' growth. This study finding is in line with the results reported by earlier researchers that found that technology is not only positively related to SMEs growth but also determines its growth (Sharmilee and Muhammad, 2016). Firm management positively affects the growth of SMEs in the metropolis with coefficient value of 16.865, this suggests that a unit expansion in firm management will cause the SMEs to experience a growth of about 16.865 percent and it is equally statistically significant at 5 percent level. Intuitively, the quality of the management team has lot to do with the growth of the SMEs, when the management team are lacking in expertise in making meaningful and impacting decisions, this will definitely hinder the progress of the business enterprise. It often brings about mal-allocation of resources both human and physical resources, thus, causing the firm to experience set back rather than progressing. Based on the coefficient of P, we conclude that firms' management is a significant determinant of SMEs growth as the P-value was 0.00 indicating that $P<0.01$. This result conformed to the earlier study findings that revealed that competent management often result into business expansion (Ikharehon and Briggs, 2016).

Business registration is positively related to the SMEs growth with coefficient 12.083 but not statistically significant in determining the growth of SMEs at 10% level of significance; this suggests that for the mere fact that a business is registered might not imply that it will grow better than those that are not registered. Government tax is directly correlated with SMEs growth with coefficient value of 4.650 meaning that a unit increase in the amount paid as tax by business owners will bring about 4.650 percent growth increase of the business. This is in sharp contrast with the a priori expectation and earlier studies, since tax is a payment and would rather inhibit business growth than promoting it (Stephen A. 2011, Abiodun and Harry, 2015, Ocheni and Gemade 2015).In terms of the influence of location on SMEs growth using the residential area as the reference category, the industrial sector will witness growth by 7.469% more than their counterparts in the residential area, this may be attributed to the concentration of firms within this area and the associated economies of scale. Firms located in the commercial area experience 2.928% growth less than those in residential area and this may be because of heavy presence of competitors within the market that reduces the market share of the individual firm's owner. Also, those in the remote area experiences 18.314% growth less than their counterpart in the residential area as this may have been informed by low patronage caused by limited number of customers available. A positive and significant result was found between the size of the business firm and SMEs growth. The result conforms to a priori expectation. Result indicates that a unit expansion of the business will lead to about 1.69 percent growth in SMEs. The result shows that business size impacts

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SMEs growth positively and statistically significant in determining SMEs growth at 10 percent level of significance. The result is not in conformity with other studies such as Caves (1998) whose results showed that business size negatively impacted firms' growth.

Table 4.5. Multiple Regression Results on the Determinants of SMEs Growth

Variables	Coefficients	t-values	p-values
Constant	-87.449	-2.46	0.015
$Eedu_i$	5.910	1.05	0.293
$Fage_i$	-3.252	-1.27	0.204
$Btec_i$	42.026	6.51	0.000
$Fmgt_i$	16.865	1.97	0.050
$Eage_i$	-0.443	-0.66	0.508
$Breg_i$	12.083	1.07	0.286
$Gtax_i$	4.650	0.73	0.463
Location:			
Remote	-18.314	-0.66	0.511
Commercial	-2.928	-0.13	0.893
Industrial Area	7.469	0.34	0.735
$Fsize_i$	1.665	1.83	0.069
R^2	0.5050		
F-Distribution Value	14.66		0.000

Dependent Variable: SMEGR
Source: Authors' Computation, 2023.

5.0 CONCLUSION

The study explored the determinants of SMEs growth in Ado-Ekiti by examining the influence of technology, and management competence on their growth within the metropolis. The regression analysis was used in achieving these objectives while frequency distribution technique of analysis was adopted in showing the socio-economic and demographic characteristics of the respondents. Majority of the SMEs owners are male this may be attributed to the fact they have more financial responsibilities to discharge than the opposite gender both at home and society at large and the married also dominated the distribution; intuitively, for the same reason as earlier raised. However, over 50 percent of the respondents did not have above National Diploma pointing to the fact that minimum qualification is needed for managing SMEs. Over 71 percent of the respondents claimed that their businesses are registered possibly to enable them to take greater risk and formalise their business dealings. Meanwhile, 70 percent of the respondents confirmed the competence of their management team while less than 50 percent declared that the technology adopted by their firms is obsolete. Moreover, about 60 percent claimed that government tax significantly and negatively impacted their business workings as 85 percent of them claimed that they operate in either commercial or industrial areas. The regression results indicated that technology has a significant positive impact on SMEs growth. Similarly, management competence and firm size significantly and positively impacted SMEs growth in Ado-Ekiti Metropolis. Based on the findings of the study, it is recommended that SMEs owners should constantly organise training for their staff to improve their skills. Besides, government should initiate policies in the direction of local technology development and use. Similarly, government should use both the monetary and fiscal policies at her disposal to promote SMEs development through tax reduction on SMEs, granting of subsidies, provision of infrastructures, while low lending interest rate, and exchange rate stability among others should be paramount to the monetary authorities.

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