



## Interrogating the Growth and Survival of Nigerian SMEs in the Digital Technology Era through Personal Entrepreneurial Characteristics of Printing Firms in Somolu, Lagos State, Nigeria

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### Abstract

In this chapter, the personal entrepreneurial characteristics (PECs) of printing entrepreneurs is used to cross-examine the growth and survival of Nigerian SMEs amidst the challenges posed by technological changes in the digital era. It equally assesses the influence of attributes, skills, competences and traits possessed by the entrepreneurs in sustaining businesses in difficult times. A set of questionnaire was administered on 270 entrepreneurs drawn randomly from Somolu, a well-known printing hub situated in Lagos, Nigeria. Descriptive analysis of the demographic variables revealed the sector as fairly technologically-inclined (51.8%) and non-gender discriminatory (59.3% male and 40.7% female). The study further revealed that innovativeness with a mean score of 3.67, ranked 9th out of the 12 PEC variables used in the study, while commitment and determination, and ability to adapt, both with mean scores of 4.85 ranked first among the PECs. In addition, regression analysis ( $R = 0.804$ ,  $R^2 = 0.646$ ,  $F = 5.482$ ,  $p \text{ value} = 0.01$ ) revealed that PECs support the growth and survival of small and medium scale printing business in Nigeria, with a substantial 64.6% predictive effect. It is therefore suggested that SMEs should adequately harness these potentials to accommodate the transformational efforts suggested to government and universities in the era.

**Keywords:** *SMEs, Entrepreneurial characteristics; Business growth and survival; Printing Technology management: Entrepreneurship.*

## 1.0. Introduction

The process of initiating entrepreneurial activities has its foundation basically in individuals and institutions (Morrison, 2000). It is therefore not surprising for enterprises, especially in the small and medium scale category to rely heavily on the shoulders of their owners and other stakeholders for their survival and performance. Entrepreneurs' ventures have a low survival rate as entrepreneurs start businesses but may be unable to turn them into sustainable businesses as studies such as Churchill and Lewis' (1983) and Dempsey's (2018) show that most new small-scale firms find it difficult to move from the first stage (existence) to other stages such as survival, success, take-off and resource maturity. Also, in line with the submissions of Bolton (1971) as cited by Blackburn (2002), businesses in the small and medium scale (SME) category all over the world are more endangered in a dynamic and hostile environment, than those in other categories, such as the firms that evolve from the advent of the 4<sup>th</sup> Industrial Revolution which stresses digital transformation and innovation in all facets of human endeavour. According to OECD (2022), in most countries, more than half of newly created enterprises fail within the first five years, and survival is usually higher in industry than in services or construction. Therefore, in consideration of the generally low survival rate of small and medium scale enterprises (SMEs) amidst the ravaging economic downturns across the globe, and their vantage position in the rebuilding efforts put in place in different quarters, it is necessary to establish an understanding of the entrepreneurial characteristics and its relationship in this manner.

This brings into focus the issue of personal entrepreneurship characteristics (PECs), as failures of these endangered businesses may not be detached from the failure of the entrepreneurs to do the needful in navigating the business terrain. This is in recognition of the fact that except the personal characteristics of the owners handling these small businesses are enabled, the huge global efforts and investment in information and digital technology may become counter-productive. Thus, the need for owners or managers to adequately demonstrate certain characteristics in adapting to technological developments and innovation practices that occur daily, deserves much attention and support at this moment. This is also in realisation of the fact that technological progress has potential future risks (West, 2017), and also brings along with it issues such as disruption and convergence, as well as costs, and social and environmental implications, among others (Jaffe, Newell and Stavins, 2002). According to Jaffe *et al.* (2002), technological change promotes productivity albeit with environmental impacts of social activity and potential market failures relating to innovation and diffusion. Aloko (2021) also observed that the growth of the printing industry in Nigeria was specifically hampered by the industry's global dynamism. Therefore, in consideration of the present challenges posed by technological changes as currently observed in the Nigerian printing industry, the question then arises on whether the personal entrepreneurial characteristics of the operators have impact on its growth and survival. In this regard, any effort at this time to interrogate growth and survival in the work place via personal characteristics possessed by the entrepreneur is in the right direction. The choice of the printing industry is in recognition of its longstanding history, which started in ancient China, as one of the oldest industries receptive to technology globally. It is also more appropriate as a result of its great relevance in economic recovery efforts worldwide. A better understanding of PECs and the growth and survival of SMEs will therefore be beneficial not only to the printing industry but also to other organisations and industries as well as to policy makers in channelling a new course of adapting to the current era of digital technology. It is against this background that the study seeks to examine the personal entrepreneurial characteristics existing among small and medium scale printing firms with the aim of determining its impact on the growth and survival of the industry in Nigeria taking into consideration the challenges posed by technological changes in the industry.

## 2.0. Literature Review

### 2.1. Technological Changes and the Printing Industry in Nigeria.

The history of technology and printing are inseparable. Also known as the printing press, its origin in Nigeria was borne out of missionary activities and nationalist struggles, which took place in mid-nineteen century. It should be noted that the printing press was one of the 1<sup>st</sup> Industrial Revolution inventions that scientifically reformed the operations of the earlier factory system as far back as 1789. Ever since, the global printing industry has never remained the same, and having passed through three revolutions to the current Fourth Industrial Revolution termed 4IR, its landscape has been greatly automated and transformed.

The 4IR, also referred to as Industry 4.0 (now being upgraded to Industry 5.0) which according to Schwab (2016) is about the ongoing digital technological revolution that will fundamentally transform mankind than never before. According to Schwab (2016), this involves the current upgrade of automation, robots in production and data exchange in manufacturing technologies. It is conducted in relation to information technologies and driven by advanced digital technology, with internet accessibility serving as its incredible powerful tool (Floyd and Adhikary, 2021). Its main list of features which according to West (2017) grows every day, include cyber-physical systems, the internet of things (IoT), artificial intelligence, blockchain technology, and smart sensors among others. Its key issues also involve the adoption of light-out manufacturing processes, the development of smart cities, industries, factories, offices, knowledge sharing in built environment, the use of software supply chains, cloud computing, data lakes, hybrid and the non-physical workplace among others. As currently witnessed, the digital technology era is highly innovative and dynamic and uses versatile technology to rapidly enhance and reinforce the global business arena in the nearest future ([www.i-scoop-eu](http://www.i-scoop-eu)).

From the foregoing, the world of printing can also be said to have immensely benefited from technological changes which occurred at various times. According to Jaffe *et al.* (2002), technological change is an overall process that covers new invention, innovations and commercialisation and diffusion of new technologies. In the Research and Market Report (2018), the printing industry is said to be making tremendous technological progress despite the shift towards green and paperless environments. This is attributed to the ongoing digital revolution which is overcoming the challenges of conventional printing practices. Thus, the increasing adoption and use of modern materials and techniques is ensuring the survival and growth of the printing markets in a depressed economy that is even more shrunken by the Covid-19 global pandemic. According to the Report, the traditional offset printing and the existing printing technologies of inkjet or aerosol printing are becoming expensive and discarded for screen and pad printing techniques using digital technologies. Other recent innovations identified range from hybrid, nano-scale, micro dispensing to three-dimensional (3D) printing techniques. The commercial printing market is no more limited to the publishing industry, but now extensively applied to sectors such as electronics, communications, broadcasting, packaging, design, automotive, aerospace, oil and gas, and so on.

However, according to Market Prospects (2021), the printing industry in various countries is observed to be undergoing market declines, although at different dimensions, under the development of internet and digital technology. The report indicated that at the same time, under the influence of COVID-19, its 2020 market size dropped to 74.72 billion US dollars in the US, which accounts for the largest output of the global printing industry. The fact remains that stakeholders must adapt to emerging trends in the midst of these challenges and opportunities that co-exist in the industry.

With respect to Nigeria, until in recent years, the printing business continued to grow lucratively (Aloko, 2021) amidst the oil boom of the 1970s and later in the 1980s, first in Lagos and then to other commercial cities in Nigeria. Several printers and publishers' hubs started developing in certain

quarters to accommodate small and medium scale outfits. Somolu in Lagos gradually emerged as the leading destination for commercial printing in Nigeria (Olafioye, 2016) similar to other leading

printers' in enclaves such as Chicago and New York both in USA, Shanghai in China and Johannesburg in South Africa. Thereafter, the Nigerian printing industry took a vantage position in the Nation's economy by also providing linked and ancillary services to various clients such as publishing, bookselling, library, media, and graphics among others. It also widely enjoyed the patronage of the educational sector, government agencies, the fourth estate of the realm, politicians, activists, freelance authors and others too numerous to mention. However, despite the continuous existence of these printing enclaves dotted all over the country, observations revealed that the sector is also currently experiencing the operational downturn noticed in other countries. It is further confronted with other challenges such as infrastructural deficits, high cost of operations due to reliance on foreign materials, copyright issues, price wars and unhealthy rivalries among others. The printing industry in Nigeria also seemed not to be catching up with modern technological trends and international standards. The fact remains that investors, entrepreneurs and other stakeholders must adapt to the emerging trends in the midst of these challenges and opportunities that co-exist in this ubiquitous industry in order to achieve its huge prospect in Nigeria. They must brace up for greater challenges and responsibilities in the near future. Thus, the need for the individual traits, abilities, capabilities, skills of practitioners to be brought to the fore.

## 2.2. Concept of Business Growth and Survival

Researchers have long considered survival and growth as useful in many models developed in examining business operations. According to Churchill and Lewis (1983), both are part of the 5-stages of small business growth framework which is relevant to the evolution of small and growing businesses. Gillespie as cited by Reinink (2010) considered survival and growth as modes activated by companies especially in tough financial times and periods of economic downturn as currently experienced due to the ravaging pandemic. In times like this, just like critical-care patients, companies, especially the small ones, may be exposed to serious unpredictable conditions, and may go into survival mode needing the experience and skills and the mind-set of reactionary entrepreneurs to stay afloat.

From the foregoing, survival and growth can both be seen as interactive in achieving the goal of the organisation. Survival can be the first main objective for small start-ups and becomes the only objective in times of crisis. Later, survival may be based on achieving other growth criteria and conflicting objectives such as sales growth, profit maximisation and satisficing. According to [www.mbaknol.com](http://www.mbaknol.com), survival is one of the reasons for pursuing business growth. Thus, growth is a means of survival in a competitive and challenging environment. An entrepreneur should understand some of the factors that influence growth and development, and should strive to choose a suitable way for achieving it. Growth is therefore crucial to the long-term survival of a business. It makes it easier to acquire assets, attract new talent and fund investments. Growth also drives business performance and profit ([www.nibusinessinfo.co.uk](http://www.nibusinessinfo.co.uk)).

The issue of growth and survival becomes clearer when compared to the human growth phases of infancy, childhood, adulthood, maturity and death. In a similar vein, many businesses survived to grow big, although at different rates of activities, while others die off. According to <https://www.mbaknol.com>, one of the needs for growth is survival. Others include the need to make higher profit, to take advantage of economies-of-scale, to meet increasing demand, to obtain latest technology, and to be self-sufficient.

Generally speaking, survival activities include cutting costs, laying off employees, maintaining profit margins and saving cash, while growth activities may include reinvesting profits, expanding

operations and implementing growth strategies with long-term payoffs ([www.entrepreneur.com/article/207646](http://www.entrepreneur.com/article/207646)), which may lead to increase in sales and labour force (<https://www.mbaknol.com>). Churchill and Lewis (1983) affirmed that for a business to reach the stage

of survival, it has demonstrated that it is a workable business entity and the focus is no more on mere existence. Key activities include how to keep enough customers and maintain a balanced relationship between revenue and expenses. The enterprise may thereafter breakeven in its cash flows and grow in size and profitability. On the other hand, it may remain on the survival borderline for some time and eventually relapse. Thus, growth to the enterprise, is a necessary stimulant and a precondition for its survival. An enterprise that does not grow may, in the course of time have to be closed down because of its obsolete products ([www.mbaknol.com](http://www.mbaknol.com)).

Also, according to <https://www.mbaknol.com>, business growth activities can take place in many ways and can be broadly categorised into organic and inorganic growth. Organic growth is internal and from within. In this case, an entrepreneur strives to increase production and sales level by ploughing back profits into the business. On the other hand, inorganic growth is external and involves merger and acquisition procedures, which may be initiated to gain competitive advantage. According to Dempsey (2018), the growth phase which is characterised by low employee turnover, high customer retention and cordial client relationship, is where the business solidifies its stance in the marketplace, and dictated by more internal and external funding, support and investment opportunities. This is where the combined university commercialisation and government revitalisation efforts would be meaningful. As argued by Farsi and Talebi (2009), the university entrepreneurial structural capabilities which require the setting up of units such as; technology transfer, intellectual property protection, market research, venture financing, environmental scanning and incubator, should be deployed deeply in transformation processes.

Thus, there is however a limit to the extent a firm may grow. This may, in the first instance be due to the ability, capacity, intention and the readiness of the entrepreneur to grow and continue to grow the business. Also, growth may not be feasible or practical for all businesses ([www.nibusinessinfo.co.uk](http://www.nibusinessinfo.co.uk)), the printing sector in Nigeria inclusive. According to [www.mbaknol.com](http://www.mbaknol.com), business firms cannot grow indefinitely. This may be due to certain limitations such as poor funding, limited size of the market, limited managerial capacities, lack of social acceptance and cultural inclinations. In this wise, seeking universities' entrepreneurship development centres, technology transfer offices (TTOs), science parks and incubation centres to operate within the reach of these various printing hubs scattered all over the country may not be out of place. Also, Fakokunde and Mustapha (2009) reiterated that Nigerian universities like their counterparts abroad need to be successful in spin-offs and new businesses which come out as a result of knowledge that is translated into commercialisable products. Nevertheless, achieving sustainable growth of small businesses demands for greater attention and commitment on the part of the entrepreneur. It may require the entrepreneur demonstrating certain critical personal characteristics in the process.

### 2.3. Entrepreneurial Characteristics and SMEs

The role of the entrepreneur as a leading force in the free-market has been recognised since the times of the pro-capitalist system of ancient Greece (Karayiannis, 2003), and as such, its critical position as an engine of economic progress (Rani, 2013) cannot be underrated especially in periods of recovery. Thus, the consideration of entrepreneurship as a practice of starting new businesses or revitalizing matured business, with more emphasis on new businesses as a response to identified opportunities (Onuoha, 2007), is more relevant in similar circumstances of rebuilding and growing economies.

In respect of small and medium enterprises (SMEs), whose definitions are grounded in different contexts, Abdullahi & Burcin, (2017) simply considered them as enterprises with a minimum number of employees, operating on a small scale. Its important contribution as a vibrant sector in the rebuilding of national economy and social development of a country has been widely recognised. Thus, in view of its increasing importance and challenges, Adegbite *et al.* (2006) confirms that the issue of supporting small businesses has been of interest to stakeholders, with the Bolton report of 1971 serving as a crescendo. The Bolton report set the foundation for a strategy for small business support in the UK.

(Blackburn, 2002), and has become a reference point on the issue of SMEs development in both developed and developing countries.

According to Li and Jia (2015) entrepreneurship is currently becoming a popular term and not all entrepreneurs do succeed in their line of business endeavours, hence the need for specific characteristics to enhance success. Entrepreneurial characteristics are personal traits and skills which constitute competencies needed by the entrepreneur to grow a business into success (Abdulwahab and Al-Damen, 2015). In this respect entrepreneurial characteristics are vital in the administration of small businesses, especially in crisis periods. It is at this point that several studies that attempted to develop a typical personality profile of successful entrepreneurs becomes relevant. In this direction, five main approaches could be identified. These approaches are the economic, trait, demographic, behavioural and human capital approaches. The economic approach to entrepreneurial characteristics is in compliance with Schumpeter's view of the entrepreneur as a risk taker who exploits opportunities through innovation to make profit. The trait approach on the other hand defines the entrepreneur's characteristics from the psychological point of view, which is the most widely represented area in the literature. The trait approach focuses on personal disposition of individuals and their traits. Traits such as being sociable, anxious, and energetic were thought to exist within individuals to whom they were applied as well as distinguishing entrepreneurs from other populations of individuals. According to Krueger (2002), entrepreneurs' and their traits and characteristics are the key to explaining entrepreneurship as a phenomenon. The Demographic approach is based on the assumption that people with similar backgrounds possess similar underlying stable characteristics that can be used to create the profile of an entrepreneur. The behavioural approach deals with the entrepreneurs' actions as against what they are. According to McCarthy (2000), the entrepreneur's interaction with the environment which both shapes, and is shaped by the entrepreneur, is believed to be the focus of the behavioural approach. Looking at the entrepreneur's characteristics from the human capital approach, human capital refers to the knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being.

From the foregoing, it is clear that researchers have looked at entrepreneurial characteristics from diverse angles, nevertheless as asserted by Timmons, Smollen and Dingee (1985), entrepreneurs cannot be adjudged to be successful based on a single set of characteristics, and no entrepreneur will possess all the set of characteristics. For successful operation of a business venture, it is expedient that a mixture of all the entrepreneurial characteristics should be possessed. Therefore, for the purpose of this study, few of the combinations of all the personal characteristics that are commonly used by researchers are considered. These include: (1) Commitment and Determination, (2) Ability to adapt, (3) Creativity, (4) Ability to overcome setbacks when faced with challenges, (5) Need for achievement, (6) Leadership, (7) Self-confidence/Self-reliance, (8) Opportunity obsession, (9) Innovativeness, (10) Tolerance of ambiguity and uncertainty, (11) Risk taking propensity, and (12) Locus of control.

#### 2.4. The Significance of Entrepreneurial Characteristics to Growth/Survival of Businesses

The bulk of certain individual characteristics possessed by entrepreneurs is one of the critical factors that must be examined while interrogating growth and survival of small firms. As affirmed by [www.mbaknol.com](http://www.mbaknol.com), survival and growth of all enterprises may be due to either the nature of the firm or the entrepreneur. Even, some entrepreneurs may decide against their business growth, choosing other objectives such as leisure, humanitarian efforts, family interest and other business ventures instead. More importantly, to survive in this turbulent economic climate, Reinink (2010) reiterated that entrepreneurs should position themselves adequately and shift appropriately as at when necessary. In this wise, the personal characteristics of the entrepreneurs anchored by personal traits and managerial skills, will determine how the storm will be weathered, since it is unlikely that some entrepreneurs will be erratic in decision-making during this period.

Also, as a business grows, entrepreneurial characteristics are key to ultimate success or failure (Churchill and Lewis, 1983). In deciding how to grow according to [www.nibusinessinfo.co.uk](http://www.nibusinessinfo.co.uk), PEC is considered very crucial in realisation of the tasks these perceived major roles play in almost all economies, whether in developed or developing countries. Abdulwahab and Al-Damen (2015) argued for an investigation into the impact of entrepreneurial characteristics on small business success of medical instruments supplies organizations in Jordan. Similarly, Adegbite *et al.* (2006) and Sola (2013) both argued for investigations into the influence of demographic factors and entrepreneurial characteristics on the performance of small-scale manufacturing enterprises in Nigeria. Thus, the understanding of how opportunities and challenges faced by enterprises can be explored and identified through the administration of the entrepreneurial characteristics to achieve growth cannot be underestimated. It goes a long way in demonstrating the abilities of the owners (Dempsey, 2018).

### 3.0. Research Method

The population for this study comprises of all printing outfits categorised as small and medium scale in the study area. The study area is purposely and conveniently chosen as Somolu printing village in Lagos mainland, Nigeria, being the largest commercial printing hub in Nigeria. According to Olafioye (2016), this bustling printers' enclave engages about 10,000 skilled and unskilled categories of labour, with the smallest facility employing no less than 5 staff and an average facility employing as high as 25 people. Although, head counts were conducted to reveal a population of about 1500 printing firms, but due to their unregulated activities and inaccurate records, the study considered that number unreliable for analysis. Thus, for the purpose of this study, a sample of 270 small-scale printing firms was finally randomly selected using the formula considered relevant to choosing a sample size where the population is unknown as suggested by Mensah (2014) and Smith (2020). A closed-end structured questionnaire was used to elicit primary data from the owners of the selected printing firms for the study which spanned between 2019 and 2021. Responses were ranked on a five-point scale (that is; strongly agree, agree, indifferent, disagree and strongly disagree) to give an indication of the degree of the aspect to be measured. The descriptive statistics such as means and percentages were used to present a proper understanding of the relationship with certain demographic characteristics of the respondents as well as to identify the most valuable personal characteristics relevant to growth and survival of businesses in the study area. Also, inferential statistics of linear regression was used to test the hypotheses formulated for the study.

### 4.0. Descriptive Analysis of Data

First, the demographic characteristics of the respondents provided descriptive information on gender, age, marital status, age of business and academic qualifications. This information was necessary to develop an understanding of the operational background of the respondents. The results revealed that there is quite a good variation among the respondents of the study. About 59% of the respondents were males, while the remaining (40.7%) were females indicating that the printing industry is not restricted to any gender. In addition, 66.7% of them were 31 years and above out of which only 3.7% were above 40 years of age. In terms of their academic qualification, 74.0% had a minimum of university degrees while only 7.4% had Ordinary National Diploma (OND). In terms of age of the business, 77.8% of the firms have been in operation for more than four years. Further descriptive analysis of the demographic variables as presented in Tables 1 and 2 revealed that majority (51.8%) of operators in the sector as fairly technologically-inclined. This is also reflected in the overall mean score of 2.56, which when rated across gender revealed that the male gender with a mean score of 2.63 are slightly more technologically inclined than their female counterparts with a mean score of 2.45.

Results in Tables 1 and 2 corroborated the findings of Olafioye (2016) that the industry possesses a crop of vibrant and non-discriminatory generation of experienced and educated entrepreneurs. Also, in identifying the most valuable personal characteristics relevant to the growth and survival of the printing firms in the study area, the mean score (on a scale of 1 to 5) was used to rank each of the characteristics.

**Table 1:** Technological Inclinations of Respondents

Technological Inclinations of Respondents	Gender of Respondents									Gender Ratio of Respondents	
	Male			Female			Total			M	F
	No	%	Rank	No	%	Rank	No	%	Rank		
V. Good	10	6.3	4	2	1.8	5	12	4.4	5	83.3	16.7
Good	21	13.1	3	11	10.0	4	32	11.9	3	65.6	34.4
Average	33	20.6	2	35	31.8	2	68	25.2	2	48.5	51.5
Fair	91	56.9	1	49	44.6	1	140	51.8	1	65.0	35.0
Poor	05	3.1	5	13	11.8	3	18	6.7	4	27.8	72.2
Total	160	100.0		110	100.0		270	100.0			

**Table 2:** Mean of Technological Inclination of Respondents

Technological Inclination of Respondents	Mean
Gender	
Male	2.63
Female	2.45
Overall	2.56

As presented in Table 3, the mean score ranges from 4.85 to 3.44. Commitment and Determination, and Ability to adapt, both with a mean score of 4.85 are revealed as the most important entrepreneurial characteristics for the growth and survival of small and medium-scale printing firms, while, the least ranked based on level of importance is Locus of Control with a mean score of 3.44. Innovativeness ranked very low with a mean score of 3.67 which probably explains the rare use and application of latest technology in the study area. This also supports the below-average descriptive analysis result of technological-inclination presented by majority of operators.

**Table 3:** Personal Entrepreneurial Characteristics

S/N	Personal Entrepreneurial Characteristics	Mean	Rank
1	Commitment and Determination	4.85	1
2	Ability to adapt	4.85	1
3	Creativity	4.78	3
4	Ability to overcome setbacks when faced with challenges	4.74	4
5	Need for achievement	4.52	5
6	Leadership	4.52	5
7	Self-confidence/Self-reliance	4.37	7
8	Opportunity obsession	3.74	8
9	Innovativeness	3.67	9
10	Tolerance of ambiguity and uncertainty	3.59	10
11	Risk taking propensity	3.48	11
12	Locus of control	3.44	12

Scale: 1 to 5

In line with the factors identified as determinants of growth and survival of businesses in the literature, the study goes further to ascertain these factors in the industry by testing the level of importance attached to them by respondents, using the mean score. The factors were posed to respondents and they were asked to indicate how strongly they feel these factors influence the growth and survival of their businesses.

**Table 4:** Determinants of Growth and Survival



Determinants	Mean	Rank
Sales	4.52	1
Net Profit	4.48	2
Inventories Turnover	3.81	3
Number Of Customers	3.26	4
Number Of Employees	3.11	5

Scale: 1 to 5

Table 4 presents the mean score and the rank of each of the factors with the mean values ranging from 4.52 to 3.11. It shows that total amount of sales is ranked the most important determinant of the growth and survival of a small and medium-scale printing business, while number of employees is revealed as the least.

Table 5 presents in a descriptive form of the responses of respondents concerning the perceived effects of personal entrepreneurial characteristics on some certain determinants of growth and survival of their businesses to prepare a ground for its further test in the study.

**Table 5: Personal Characteristics Effect on Business Growth and Survival**

Personal Characteristics and Business Growth and Survival	Mean	Rank
Amounts of sales has increased	3.63	1
The Number of Equipment used by the Organisation has increased	3.26	2
The Number of Employees has increased	3.11	3
The Net Profit of the Organisation has increased	3.00	4
Number of Offices has increased in the Past Year	2.70	5

Scale: 1 to 5

As showed in Table 5, the results of analysis using the mean score as the basis of ranking, indicated that personal entrepreneurial characteristics has the greatest impact on sales than it has on any other determinant of growth in the industry.

#### 4.2. Inferential Analysis

In line with the main issue raised in the course of the study on whether the present challenges posed by technological dynamism can be addressed by investigating the impact of personal entrepreneurial characteristics of the operators on its growth and survival a hypothesis is formulated thus:

The study tests the following null hypothesis:

H<sub>0</sub>: Personal entrepreneurial characteristics do not have a significant impact on the growth and survival of small and medium scale printing firms in Somolu, Nigeria in the digital technology era.

In testing the hypothesis, regression analysis was adopted. To test the stated hypothesis, the means of personal entrepreneurial characteristics was regressed with the mean of business growth and survival at p less than 0.05 level of significance.

**Table 6: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.804 <sup>a</sup>	.646	.528	.23940

a. Predictors: (Constant), Personal Entrepreneurial Characteristics

Table 6 shows that the R value = 0.804 which indicates a positive correlation between personal entrepreneurial characteristics and business growth and survival of small-scale printing firms in the

study area. More so, the R Square value of 0.646 indicates that personal entrepreneurial characteristics has a substantial 64.6% predictive effect on the growth and survival of respondents in the study area.

**Table 7: ANOVA**

Model 1	Sum of Squares	Df	Mean Square	F	Significance
Regression	.314	1	1.314	5.482	.010 <sup>b</sup>
Residual	.172	269	3.057		
Total	.486	270			

- a. Dependent Variable: Business growth and survival
- b. Predictors: (Constant), Personal entrepreneurial characteristics

Table 7 shows that  $p = 0.01$ , which is less than 0.05. This implies that personal entrepreneurial characteristics has a significant effect on small and medium scale printing firms’ business growth and survival in the study area. Thus, the null hypothesis is rejected and the alternate hypothesis is accepted.

**Table 8: Regression Coefficients**

Model	Unstandardized Coefficients		Standard Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	2.070	.338		6.119	.009
Personal Entrepreneurial Characteristics	.415	.177	.804	2.341	.010

Dependent Variable: Business growth and survival

In addition, the effect of personal entrepreneurial characteristics on the growth and survival of small-scale printing firms in the business community can be predicted by the regression formula presented below from the coefficient revealed in Table 8.

$$Y = 2.070 + 0.415X$$

Where Y = Business growth and survival, and  
 X = Personal Entrepreneurial Characteristics

**5.0. Summary of Results, Conclusion and Recommendation**

The descriptive results, in support of Olafioye (2016), showed that the small and medium scale printing sub-sector possesses rich calibre of experienced and vibrant workforce, despite being less technologically-inclined. It revealed that commitment, determination and ability to adapt is prominent amongst the personal entrepreneurial characteristics, while innovativeness is poorly ranked. It further shows that total amount of sales is mostly influenced by PECs and also serves as the major determinant of growth and survival of small-scale printing business in the study area. This contradicts Ogidi and Peterson (2021) who identified the significant contribution of innovativeness to the financial performance of SMEs in Plateau State, Nigeria.

The research thus concludes with the inferential findings that personal entrepreneurial characteristics have positive impact on the growth and survival of small and medium scale printing business in Nigeria. This result corroborated Adegbite *et al.* (2006) and Abdulwahab and Al-Damen (2015) who investigated the impacts of PECs on small-scale manufacturing industries in Nigeria and medical instruments supplies organisations in Jordan respectively. Suffice to say that with reference to the findings of this study in the printing industry, despite the current hard times, there is still room for potential growth to be exploited by SMEs in Nigeria, with the personal entrepreneurial characteristics making the difference. Thus, all identified indicators should be properly harvested and harnessed. Finally, in line with the small but growing body of literature, it is suggested that government revitalisation efforts and university supports would be required.

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