

# SMEs' Wealth Creation Model of an Emerging Economy

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## **Abstract**

*This article synthesizes the evidence on SMEs' wealth creation in an emerging economy, paying particular attention to human resource/expertise, technology adoption, innovation and creativity, unit economies, organizational infrastructure and strategy as determinants of SMEs' wealth creation. A survey of 581 Nigerian SMEs was conducted and the data was analysed and tested using multiple regression and structural equation modelling. The findings revealed Human resource/CEOs expertise as the highest contributory factor to wealth creation within the firm in the industrial and the commercial sectors. The relevant domains were modelled and relevant policy adjustments were suggested.*

**Keywords:** *Wealth creation Model, Commercial sector, Industrial sector, Emerging economy, Nigeria.*

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## 1. Introduction

Studies that aim to investigate the wealth creation capacity of Small and Medium scale Enterprises (SMEs) from the point of view of the Chief Executive Officers (CEO) who are seen as the decision makers have become increasingly important as most governments pursue economic policies that can alleviate poverty in their nations (Alia 2014; Bello & Ivanov 2014; Goedhuys & Sleuwaegen, 2010; Hamilton, 2012). Many of these studies focused on developed and transition economies (Enderle, 2005; Santos-Paulino, 2012, Pitelis & Vasilaros, 2009), with little attention paid to the developing countries where poverty is predominant (Aigbokhan, 2008; Dugguh, 2013; Kiggundu, 2002; Robson & Obehg, 2008; Shaffer, 2008)

Despite strong theoretical foundations used to explain SME performance (i.e. the resource based view, the contingency theory, absorptive capability and organization learning theories as well as entrepreneurial orientations) and findings reported from various research studies on factors that have been associated with SME wealth creation, limited research is available to present empirically tested models that provide an integrated perspective on the relationship between SME performance antecedents and wealth created by SMEs (Asikhia & Jansen van Rensburg, 2015; Barney, 1991; Cohen & Levinthal ,1990; Covin & Stevin, 1991; Enderle, 2005; Grant, 1996a, 1996b; Njanja, Ogutu, & Pellissier, 2012; Mintzberg, 1984; Lawrence & Lorsch, 1967; Lumpkin & Dess, 2001; Penrose, 1959; Pitelis & Vasilaros, 2009; Wernerfelt, 1995; Zahra & George, 2002).

This article reports and makes valuable contributions of the empirical findings of the determinants of SME wealth creation capacity in Nigeria.

## 2. Theoretical Foundations

### 2.1 SMEs Wealth Creation

There is little denial that the study of SMEs' wealth creation has not received enough attention in developing countries in recent years (Asikhia & Jansen van Rensburg 2015; Enderle 2005; Pitelis & Vasilaros 2009). The creation of wealth from individual perspective requires savings, investments and willingness to forgo consumption in the present for the sake of increased well-being in the future. Wealth creation furthermore requires the identification, finance and implementation of socially profitable investments through a continuous learning process (Wilkerson & Williams 2011). At the firm level, wealth creation is seen as a product of technology and innovation (Pitelis & Vasilaros 2009; Enderle 2005). To create wealth is therefore to make something new or better. At an individual level, the Chief Executive Officers of the SMEs are believed to be critical element in the decision making, strategic direction and general management of the firms, this study thus assumed that allocation of the resources of the firm also depend on them hence they form the unit of analysis of the study, the decision of the firm is seen as their decisions. Organizations that have capacity to create and grow wealth

or its values are those who consistently innovate, invest wisely and adapt quickly to the ever-changing social, demographic, technological, economic and political trends and forces bearing on their industry (Pitelis and Vasilaros 2009). Firms that fail to keep up do not always survive whereas firms that succeed provide superior returns for their investors, better jobs for their employees and the best value for their customers.

The study on which this article reports is aimed to empirically test an integrated theoretical model which has been used to explain organizational performance in previous studies. One of the earlier theories that explained wealth was Penrose (1959) resource based view (RBV). This theory noted that wealth could be created through firm growth influenced by the extent of the firm resources. It advanced that the capacity of firms to generate and sustain competitive advantage depend on their unique set of resources and capabilities. While suggesting the usefulness of RBV in entrepreneurship, Alvarez and Busenitz (2001) adopted the RBV to include the cognitive abilities of individual entrepreneurs. Hence, they considered individual-specific resources required to facilitate the recognition of new opportunities and the assembling of resources for the venture. Similarly, it is believed that SMEs mostly build their competitive advantage on internal elements supported by resources and capabilities difficult to imitate by larger competitors. Aragon-Sanchez and Sanchez-Martin (2007) found that SMEs' competitiveness is based on elements such as technological innovation, flexibility and organizational design and human resource management. Additionally, Chetty and Wilson (2003) highlight the need for social ties and external networks to create opportunities for alliances and corporation. Gassmann and Keupp (2007) affirm that SMEs mostly achieve competitive advantage through experimental knowledge in line with the knowledge based view- an outgrowth of the RBV (Gray and Gray 2012; Grant 1996). Such knowledge can be used to identify entrepreneurial opportunities, develop creative or novel internal solutions or external offerings. The knowledge based view theory thus provides a good conceptual analytical framework for SMEs.

### **3. Hypotheses Development**

#### **3.1. Human Resource**

Jansen, Curseu, Vermeulen, Geurts, and Gibcus (2013) affirm that the effectiveness of decision depends on the characteristics of the decision-makers. Supporting this view, Garavan, Watson, Carbery, and O'Brien (2015), establish a positive relationship between the human resource/ leadership expertise of the owner-managers of SMEs with performance. The leadership expertise are said to be positively related to education (Bryan 2006; Jayawarna, Jones, and Macpherson 2014; Devins and Johnson, 2003), skills (Adekunle, 2013; Barbero, Casillas, and Feldman, 2011, Lukic, 2014) and experience (Camelo-Ordaz, Fernandez-Alles, Ruiz-Navarro, and Sousa-Ginel, 2012; O' Cass and Sok, 2014), It is thus hypothesized that:

H1: Chief Executive Officers' expertise comprising education, skills and experience would relate positively with SMEs' wealth creation.

### **3.2 Technology Adoption**

Asikhia and Jansen van Rensburg (2015) posit that technological capability could be measured by information acquisition and information use and relates positively with wealth creation. In affirming this, Zhang, Macpherson and Jones (2006) assert that managerial capabilities and mechanisms for accessing knowledge from external sources are critical for SMEs' technological emancipation and innovation performance. And technology adoption was found to be related to information acquisition which in turn has a positive relationship with business performance (Chirico, 2008; De Clerca and Arenius 2006; Peltier, Zhao, and Schibrowsky 2012) and information use which also related positively with business success (Rice, Liao, Galvin, and Martin, 2015; De Clerca, Dimoy, and Thongpapanl 2015). It is hypothesized that:

H2: Chief Executive Officers' Technology adoption, information acquisition and information use would relate positively with SMEs' wealth creation.

### **3.3 Innovation and Creativity**

Innovation and creativity have been found to be part of the critical activities of the SMEs for enhanced performance (Aslan & Elci, 2009; Hadjimanolis & Dickson 2000; Love and Roper, 2015; Skiltere and Jesilevska, 2013). In a large scale survey of small firms in Scotland and Northern England, a positive relationship between novel product innovation and employment growth was established (Freel & Robson 2004). Also, Spencer, Kirchhoff and White (2008) affirm that innovation is a source of wealth creation. Different studies allude to the fact that licensed intellectual property (Barbero, Casillas, & Feldman, 2011; Gallego, Rubalcaba, & Hipp 2013; Skiltere & Jesilevska, 2013), degree of customers and employees involvement (Batra, Sharma, Dixit, & Vohra, 2015; De Jong & Vermeulen, 2006), Network and Collaboration (Shaw, 2006; Whittaker, Fath, & Fiedler 2014) relate positively with innovation and creativity as well as business performance. It is thus hypothesized that:

H3: SMEs' Innovation and creativity, licensed intellectual property, degree of customers and employees involvement, and Network and Collaboration are positively related with SMEs' Wealth Creation.

### **3.4 Unit Cost Economies**

The unit cost economies comprised the economies of scale and economies of scope. Economies of scale results when an increase in output leads to a reduction in average cost. At a constant capacity, the managerial cost of increasing output can be expected to be low. Moreover, economies of scope may arise from either cost complementary that may be guaranteed between different output categories

or the spreading of common costs over an expanded product mix (Tovar and Wall 2012). Illueca and Lafuente (2003) note that there is a direct correlation between firm size and productivity growth, mainly due to technical change and catching-up effect thus inferring that scale effect has a positive relationship with productivity. It is hypothesized that:

H4: SMEs' unit economies, economies of scale and associate and economies of scope positively relate with SMEs' Wealth creation

### **3.5 Organizational Infrastructure**

Various researchers have identified the major components of organizational infrastructure as structure, routines and processes as well as established the links with performance (Clark 1996; Makadok 2001; Kraus et al. 2011, Ray et al. 2004; Robbins 2000). Others like; Freel and Robson (2004) assert that growing sales and productivity are positively associated with incremental process in service firms; while Messeghem (2003) reveals the relevance of SMEs' organizational structure alignment with strategy. Therefore:

H5: SMEs' organizational Infrastructure, structure, processes and routines, structural flexibility, agility and degree of integration associate positively with SMEs' Wealth creation.

### **3.6 Strategy**

Entrepreneurs of small organizations conduct early search for strategic fit in the market and the environment and persist in their search for better fit in the market (Majumdar, 2008). Several researches expressed the relationship between SMEs' strategic stance and performance. For example: Escriba-Esteve, Sanchez-Peinado and Sanchez-Peinado (2008) establish positive and significant relationship between SMEs' strategic orientation and performance; Maney, Manoloya, Harkins, and Gyoshey (2014) find that strategic intensity is positively related with performance; firms that deviate from pure cost leadership or differentiation and achieve a balance on both dimensions report superior performance; they further report that strategic intensity may act as a mediator of the relationship between strategic type and performance. Asikhia and Jansen van Rensburg (2015) identify the main SMEs' strategies as; product differentiation, strategic entrepreneurship, niche strategy, cost parity, opportunity seeking abilities, advantage seeking abilities and growth orientation. It is thus hypothesized that:

H6: SMEs' strategies, product differentiation, strategic entrepreneurship, niche strategy, cost parity, opportunity seeking abilities and advantage seeking abilities associate positively with SMEs' wealth creation.

The regression model to be evaluated are:

Hence the aggregate model is:

$$WCR=b_0 +b_1 HR + b_2TECH + b_3 IC + b_4 UCE + b_5OIF + b_6STRA + e$$

Each of the six models evaluated are:

$$HR=b_0 +b_1 Ed + b_2Ex + b_3 As+ e \quad (1)$$

$$TECH=b_0 +b_1Ia + b_2Iu + e \quad (2)$$

$$IC=b_0 +b_1Lip + b_2Cei + b_3Nc+ e \quad (3)$$

$$UCE=b_0 +b_1Esc + b_2Eos + e \quad (4)$$

$$OIF=b_0 +b_1Os + b_2Fle + b_3 Agi + b_4 Doi + e \quad (5)$$

$$STRA=b_0 +b_1 Pd + b_2Se+ b_3 Ose + b_4 Ase+ b_5Ns + b_6Cp + e \quad (6)$$

Where:

WCR= Wealth Created, HR= Human Resource, TECH= Technology Adoption, IC= Innovation and Creativity, UCE= Unit Cost Economies, OIF= Organizational Infrastructure, STRA= Strategy, Ed= Educational qualification, Ex= Experience, As=Ability and skills, Ia=Information acquisition, Iu= Information use, Lip=Licensed intellectual property, Cei= degree of customer and employee integration, Nc=Network and collaboration, Esc= Economies of scope, Eos= Economies of Scale, Os=Organizational structure, Fle= structural Flexibility, Agi=structural Agility, Doi= Degree of integration, Pd=Product differentiation, Se=Strategic entrepreneurship, Ose=Opportunity seeking, Ase= Advantage seeking, Ns= Niche strategy and Cp=Cost parity.

## 4. Research Method

### 4.1 Research Context

Successive governments in Nigeria have since independence in 1960, pursued the goal of structural changes without much success. The growth dynamics have been propelled by the exploration and exploitation of natural resources and primary products. Initially, the industrial sector through agricultural activities, driven by the demand for food and cash crops production was at the center of the growth process, contributing 54.7 per cent to the GDP during the 1960s (World Bank Report 1979). The second decade of independence saw the emergence of the oil industry as the main driver of growth. Since then, the economy has gone through series of boom burst cycles of the oil industry. Government expenditure dependent on oil revenues have more or less informed the pace of growth of the economy. Looking back, it is clear that the economy has not actually performed to its full potential particularly in the face of its rising population (Asikhia 2015).

In light of the poor performance of the Nigerian economy and the inability of various policies to provide visible changes in both micro and macro-economic variables of the economy (for example; the recent World Bank Report of 2014 rated the economy as the largest in Africa with a resource base of \$510 Billion), the

country is still the first amongst the tenth poorest nations in the world. Studies by UNIDO-Nigeria, (2012), show that small and medium Enterprises (SMEs) have the propensity to drive the Nigerian Economy. Data also reveals that currently Nigerians' firms employ over 31 million Nigerians. SMEs account for over 80% of enterprises that employ about 75 % of the Nigeria's total workforce.

Over the years, the Nigerian Government has taken various steps (including monetary, fiscal and industrial policy measures) to promote the development of Small and Medium Scale Enterprises (SMEs). Specifically, the Government has been active in the following areas: funding and setting up of industrial estates to reduce overhead costs; establishing specialized financial institutions, including the Small Scale Industry Credit Scheme (SSICs), Nigerian Industrial Development Bank (NIDB), Nigerian Bank for Commerce and Industry (NBCI) to provide long-term credit, facilitating and guaranteeing external finance by the World Bank, African Development Bank and other international financial institutions; facilitating the establishment of the National Directorate of Employment (NDE), which also initiated the setting up of new SMEs, establishment of the National Economic Reconstruction Fund (NERFUND) (to provide medium to long-term local and foreign loans for small, and medium scale businesses) and provision of technical training and advisory services through the Industrial Development Centers (Adejube 2002; Orewa 2002; Emordi 2008).

The present study thus evaluated the wealth creation model of these SMEs and investigated the determinants of the wealth created. Small and Medium scale Enterprises (SMEs) is defined in line with the Central Bank of Nigeria's (2012) definition of SMEs as those firms with fewer than 100 employees and an annual turnover of not less than N500, 000.

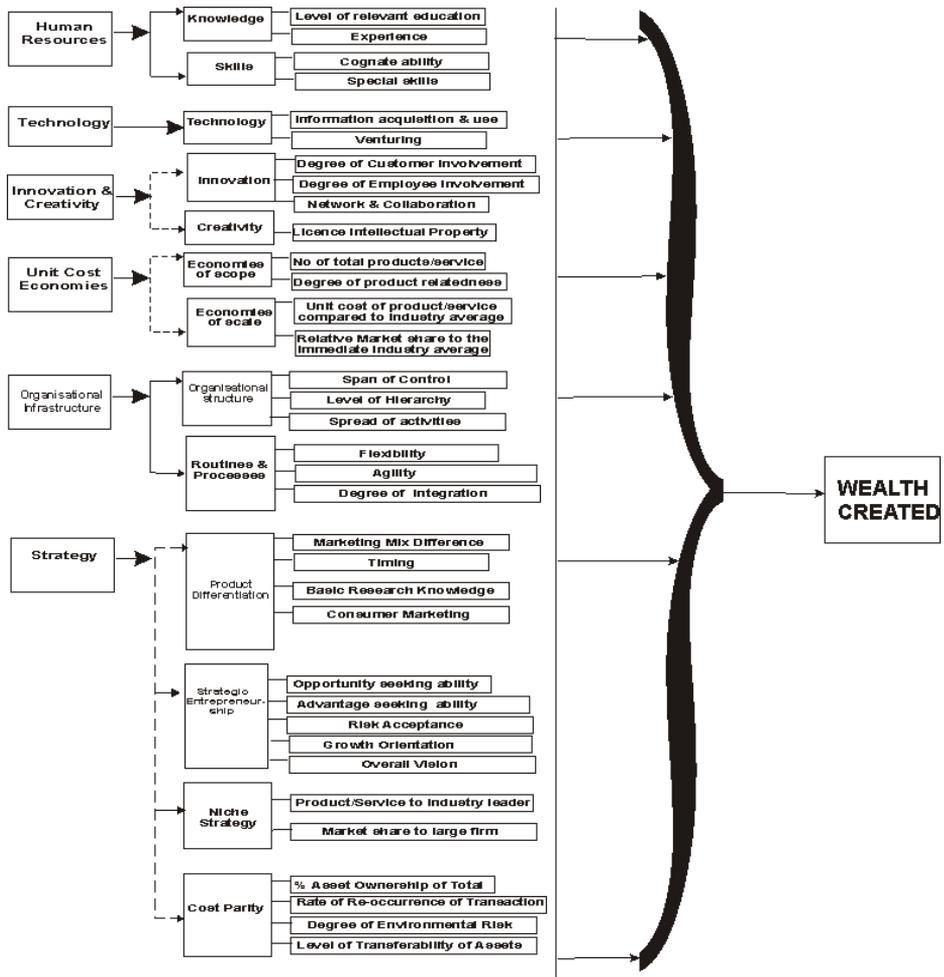
#### **4.2 Sample and Data Collection**

The study is based on survey responses from five hundred and eighty one (581) Nigerian SMEs' CEOs (out of one thousand initially sampled, making 58.1% response rate) who dully completed a questionnaire in face-to-face interviews between February 1 and May 2, 2015. The questionnaires were administered by Babcock University doctoral students in the department of Business Administration and Marketing. Due to lack of single public register of SMEs in Nigeria (Asikhia 2010; Dugguh 2013), the survey population was drawn from multiple sources of business listings (Small and Medium Scale Development Agency of Nigeria (SMEDAN), Nigerian Small and Medium Scale Association (NASMA) and CAC Business directory). The CEOs who completed the questionnaire were located in the three main regions of Nigeria as follows; North (Sokoto and Niger states), East (Ebonyi and Abia states), West (Ogun and Lagos). Two states are purposively selected from each of the regions based on their poverty level, government support and degree of commercial activities. These variables tend to be critical in ensuring uniformity and spread in the selection (Asikhia 2010). Non- response bias

tests were carried out by using core information such as the number employees and business activity from the firms which collected the questionnaire but did not respond. Following Bullock’s (2003) and Obeng, Robson, and Haugh’s (2012) approach there was no evidence of response bias at the 10 percent level.

### 4.3 Measures

The variables and their measures were drawn from the SMEs’ wealth creation model of Asikhia and Jansen van Rensburg (2015) supported by the reviewed theoretical and conceptual underpinnings (as shown in figure 1). Although this is the first time the model would be tested but the five-point likert type scale and items used were drawn from existing works (See table 1).



**Figure 1. SMEs Wealth Creation Model**

Source: Asikhia and Jansen van Rensburg (2015)

**Table 1. Descriptive Information of the developed Instrument**

Scale	No of Items	Measures	Reference
Wealth Created	8	Increase in income, Increase in physical assets, Ability to meet family and other social responsibilities, Investments in business, Other Private investments, Product and service delivery expansion, Increase in working capital and Enhancement of intellectual capability	Chang, Chen, Lin, & Gao (2012); Chiang & Yan, 2011; Enderle, (2005); Obeng et. al (2012), Pender et al. (2012); Pitelis & Vasilaros, (2009).
Human resources	10	Level of relevant education and extent of impact on the business, Measure of related Experience and extent of relationship with the business; Cognate abilities and special skills, a measure of skills before the start of business , current skills and relative importance of the cognate abilities and skills to the business presently.	Barbero et. al. (2011); Garavan et.al. (2015); Jayawarna, et. al. (2014); O' Cass & Sok (2014), Lukic (2014)
Technology	8	Information acquisition that involves knowledge about industry players, new information, rate of use of information .	Chirico (2008); De Clerca & Arenius, 2006; Peltier, et.al.(2012); Rice et.al.(2015) Zhang et. al.(2006)
Innovation and Creativity	10	Venturing; measure of investments in other areas of business, Licensed intellectual property, Degree of customers' participation in decision making, Degree of employee participation in decision making and Extent of Network and collaboration.	Batra et. al. (2015); Bharadwai & Menon (2000);Changet.al. (2012); Gallego et. al. (2013);Hadjimanolis & Dickson (2000); Love & Roper (2015); Spencer et.al. (2008); Thorgren et. al. (2012); Whittaker et.al.(2014), Skiltere & Jesilevska (2013), Aslan & Elci(2009)
Unit cost economies	10	Economies of scale; extent to which bulk purchasing as impacted on the business and cost of operation; and Economies of Scope ; extent to which extended line of product and service delivery has facilitated materials and operational facilities sharing to minimize cost of production or cost of doing business.	Illueca & Lafuente (2003); Nooteboom (2007); Tovar and Wall (2012).

**Table 1 (cont). Descriptive Information of the developed Instrument**

Scale	No of Items	Measures	Reference
Organizational infrastructure	12	Measures of Organizational structure Span of control, Level of hierarchy and Spread of activities; Routines and process: flexibility , agility and Degree of integration,	Alpkan et.al.(2007); Analoni, and Karami (2003); De Clerca et.al. (2015); Hornsby and Kuratko (2003); Kraus et al. (2011); March and Olsen (1976); Teece et al.(1994); Vyakarnam & Handelberg (2005); Weick (1976)
Strategy	18	Measures of Product differentiation; Marketing mix difference, Timing, Basic research knowledge, Consumer marketing; Strategic entrepreneurship: Opportunity seeking abilities, Advantage seeking abilities, Risk acceptance, Growth orientation and Overall vision, Niche strategy: Product/service features compared to industry leader, Market share to large firms Cost parity; percentage of asset ownership of total, rate of re-occurrence of transaction; degree of environmental risk and level of transferability of assets	Barney & Hesterley, 2006; Bello & Ivanov, 2014; Jaquier, 2003; Majumdar, 2008; Maney, et. al., 2014 Minarik, 2007; Porter, 1996 Ireland, Hitt & Sirmon, 2003; Ireland & Webb, 2007; Kalantaridis, 2009; Kraus et.al., 2011; Kyrgidou, 2008; Luke, Kearins & Verreynne, 2011) Bamford et al. 1997) Basco, 2014; Garfamy, 2012).

The details of all constructs are presented in Appendix A. The Cronbach’s alpha was above 0.70.

*Controls:* It has been pointed out that value creation may vary with firm size and age (Pender et al. 2012; Pitelis and Vasilaros 2009). We thus controlled the wealth creation capacity of the firms with firm size and age.

**4.4 Measurement Model and Validity**

Confirmatory factor analysis (CFA) was conducted to test the validity of all constructs individually. All items loaded significantly on their respective latent construct with item loadings greater than 0.5, thus revealing convergent validity

(Liu et al. 2003). The CFA was conducted on a six-factor model comprising human resource components, technology, innovation & creativity, unit cost economies, organizational infrastructure and firm strategy. Overall the model showed good fit indices: chi square (minimum discrepancy)/degrees of freedom (CMIN/DF) = 1.54; Comparative Fit Index (CFI) = 0.91; Root Mean Square Error of Approximation (RMSEA) = 0.60. This model was then compared with other constrained models which restricted each pair of constructs' correlation to 1. Model fit worsened in all models, thus indicating the six-factor model to be the best model.

#### 4.5 Potential Sources of Bias

Some measures were adopted to reduce the biases in the survey method. For instance, we requested the CEOs or the most senior executive to complete the questionnaire. Non-response bias was tested by comparing the early and the late respondents. The key constructs of the instrument were contrasted for those respondents who filled their responses in the earlier visit with those of the later visits. We did not find any significant differences because none of the correlations were more than 0.7. The Durbin-Watson test (2.28) indicated that there was no Multi-collinearity. Harman's single factor test was conducted to test for common method variance. When all items were loaded on different constructs through factor analysis, multiple factors with eigen values above 1 was obtained. Latent factor test using Analysis of Moment Structures (AMOS) was also conducted. When all items were allowed to load on a single latent factor, the model fit did not change significantly (CMIN/DF=1.51; CFI=0.92, RMSEA=0.05).

### 5. Results and Discussions

Table 2 shows the relevant demographic factors of the CEOs and SMEs. There are more males (65.10 %) than females (34.90%).

The age bracket reveal greater percentage of younger CEOs (<50 years= 58.86%) compared to 41.14% that are older than 50years. Majority of the firms are averagely young 70.39% are between 5-15years of operation and about half of the SMEs have <=N15m operational fund. Most of the operators are educated with qualification above School certificate (75.38%) and 64.89% of the CEOs have over 11years of working experience.

Table 3 shows the summary statistics and correlation matrix, and there was no evidence of multi-collinearity.

It was observed that all the variables have relationships ranging from moderate to strong relationships with the wealth created as shown in table 3 and figure 2.

Results in table 4 shows that participations in industrial sector of the economy has been greatly influenced by gender while ages of the firms affect the ability to create wealth in both industrial and commercial sectors of the economy. There are much of less educated CEOs in the industrial sector than the commercial sector.

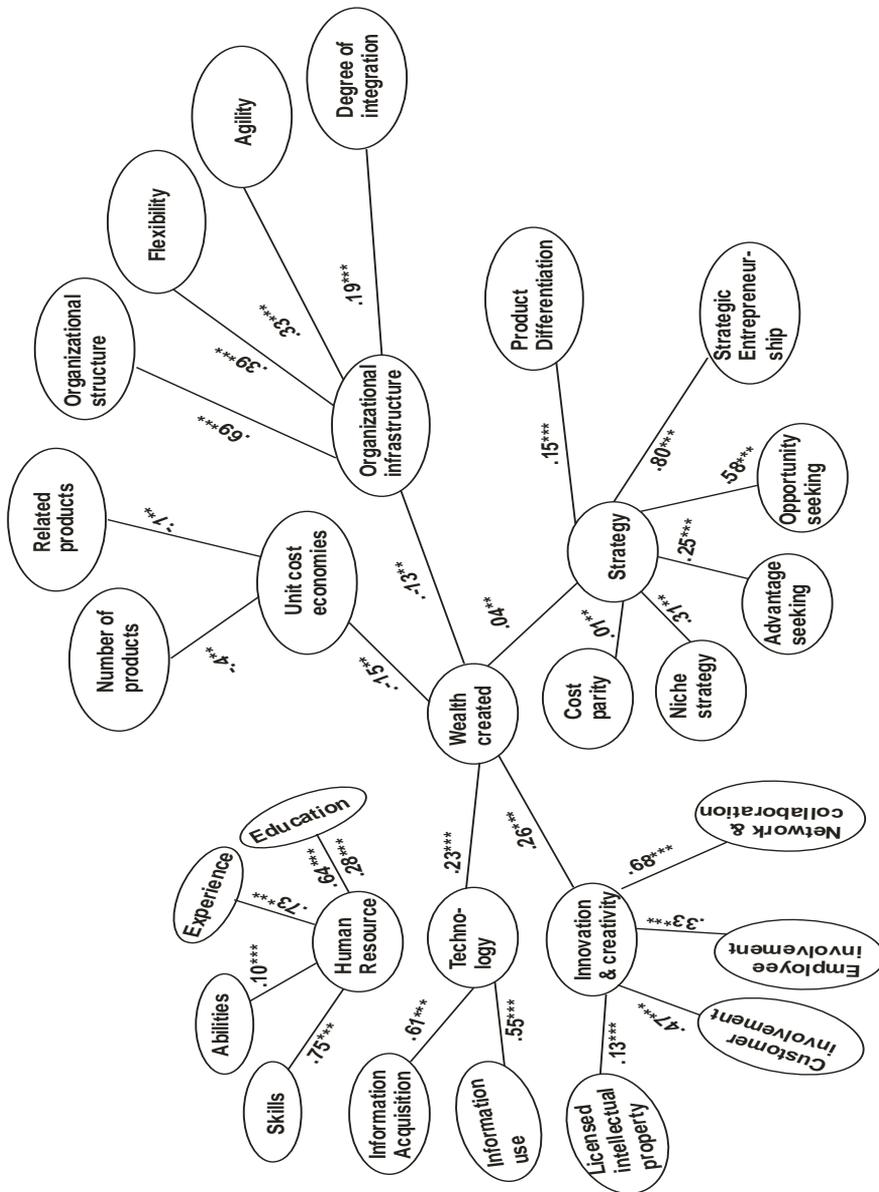
However, more of the educated CEOs contributed to wealth creation in the commercial sector. Holders of University degrees contributed to wealth created in both sectors. This is consistent with the view of Bryan (2006) and Camelo-Ordaz et. al ( 2012).

**Table 2. Analysis of respondents' demographic factor**

Variables	Frequency	Percentage
Gender		
Male	378	65.10
Female	203	34.90
CEO's Age		
Between 20-30years	46	7.91
Between 31-40years	122	21.00
Between 41-50years	174	29.95
Above 50 years	239	41.14
Firm Age		
Between 5-10years	208	35.80
Between 11-15years	201	34.59
Between 16-20years	168	28.91
Above 20 years	4	0.70
Firm Size		
Between N500,00 and N5m	26	4.47
Between N5m-N10m	120	20.66
Between N10m-N15m	134	23.07
Between N15m-N20m	244	41.99
Above N20m	57	9.81
Educational Qualification		
Primary School certificate	22	3.79
SSCE/GCE	121	20.83
NCE	110	18.93
HND	176	30.29
BSC	128	22.03
Others (PGD, MSc, Phd)	24	4.13
CEO's Years of Experience		
Between 0-10years	204	35.11
Between 11-20years	202	34.77
Between 21-30years	170	29.26
Above 30 years	5	0.86
Industry and Sectors		
Industrial	254	43.7
Commercial	327	56.3

**Table 3. Summary Statistics and Correlation Analysis**

S/N	CONSTRUCT	MEAN	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29				
1.	Firm age	12	7	1																																
2.	Firm size	105	72	0.15*	1																															
3.	Human resources	33.6	13.4	0.26	0.34	1																														
4.	Education & previous experience	12.4	7.5	0.14**	0.18*	0.35**	1																													
5.	Cognate abilities & special skills	6.1	5.2	0.12	.16	.52**	.11* 1																													
6.	Technology	26.1	6.9	0.21**	.30**	.25**	.03	.18**	6																											
7.	Acquisition of knowledge	13.1	4.2	0.020*	.31**	.18**	-.05	.15**	.88**	1																										
8.	Use of knowledge	13.0	3.9	0.21**	.34**	.27**	.01	.18**	.84**	.49**	1																									
9.	Innovation & creativity	54.9	18.5	.019*	.31**	.12**	.05	.04	.57**	.49**	.51**	1																								
10.	Intellectual .....	2.6	2.5	0.03	.20	-.03	.25	.26**	-.04	-.05	-.01	-.01	1																							
11.	Customer+employee involvement	21.2	6.6	0.18	.43	.20**	.09*	-.05*	.39**	.43**	.49**	.66**	.17**	1																						
12.	Network and Collaboration	10.0	12.9	0.26	.40	.30**	-.09*	.36**	.47**	.40**	.42**	.72**	-.30**	-.0.7	1																					
13.	Unit economies	39.5	12.0	0.31	.51**	-.28	.14**	.40**	.20**	.00	.18*	.15**	.12**	.44**	-.13**	1																				
14.	Economies of scale	12.1	5.7	0.38	.50*	.30**	.01	.31**	.19**	.136**	.20**	.17**	-.01	-.08	.26**	.04	1																			
15.	Economies of Scope	1.40	1.3	.32	.42*	.057	.13**	.15**	.10**	.07	.11**	.12**	.11**	-.05	.20**	.22**	.02	1																		
16.	Organizational Infrastructure	115.4	31.6	.31**	.36**	-.20**	.16**	-.39**	.15**	.11*	.17**	.30**	0.01	.48*	-.05	.47**	-.13**	.20**	1																	
17.	Organizational Structures	22.3	10.0	.10*	.29*	-.17**	.12**	-.33**	.10*	.10*	.25**	.15*	.52**	-.13**	.39**	-.17**	.01	.37**	1																	
18.	Organizational processes+routine	21.2	9.4	.21	.32*	-.10**	.11**	-.20**	.08*	.05*	.08*	.20*	.10**	.32**	-.10**	.36**	-.10**	.00	.39**	.82**	1															
19.	Flexibility	33.2	10.4	.33*	.21**	-.14**	.20**	-.32**	.13**	.09*	.12**	.25**	-.07	.36**	-.01	.40**	-.15**	.06	.38**	.71**	.80**	1														
20.	Agility	28.2	9.1	.36*	.24**	.20**	.02	.38**	.17**	.02	.14**	.05*	-.16	-.15**	.19**	.17**	-.14**	.96**	-.22**	.20**	.40**	.02	1													
21.	Level of integration	12.5	5.5	.28*	.23*	.06	-.11*	.13**	.13**	.10*	.14*	.19**	-.13**	-.01	.27**	.22*	.05	.09*	-.13**	.67**	.18**	.00	.04	1												
22.	Strategy	168.4	37.3	.35*	.42**	.12**	.18**	.32**	.22*	.16**	.25**	.39**	.30	.50**	.04	.62**	-.01	.96**	.56**	.21**	.03*	.64**	.06	.11**	1											
23.	Product differentiation	12.5	5.5	.22	.41*	.06	-.11**	.13**	.13**	.10*	.14**	.19**	-.13**	-.09	.26**	.22**	.04	-.06	-.13**	.63**	.48**	-.00	.04	.99**	.12**	1										
24.	Strategic entrepreneurship	118.5	29.9	.37*	.31**	-.14**	.19**	-.33**	.20**	.15**	.23**	.35**	.03	.51**	-.01	.61**	-.01	-.02	.58**	.42**	.28**	.58**	.06	.04	.95**	-.04	1									
25.	Niche strategy	38.2	10.5	.38**	.20*	-.02	.14**	-.24**	.14**	.12**	.19**	.32**	.07	.33**	.09*	.34**	-.01	.14**	.34**	-.13**	.18**	.54**	.02	-.01	.71**	-.01	.50**	1								
26.	Cost Parity	50.1	17.5	.26*	.35**	-.27**	.07	-.34**	.16**	.043	.05*	.20**	.09*	.44**	-.18**	.89**	-.60	-.14**	-.12**	.10**	.39**	.38**	-.22**	-.13**	.56**	-.13**	.58**	.34**	1							
27.	Opportunity selling abilities	89.1	19.8	.46**	.40*	.12*	.13**	-.22**	.12**	.10**	.14**	.26**	.02	.30**	-.01	.46**	-.01	.46**	-.01	.33**	.20**	.26**	.04	.03	.60**	-.03	.63**	.42**	1							
28.	Advantage selling abilities	29.2	10.0	.25*	.50*	-.03*	.06**	-.11**	.09**	.07**	.12**	.17**	.11	.23**	-.01	.26**	.00	.00	.26**	.23**	.20**	.29**	.03	.01	.28**	.01	.39**	.17**	.20**	.48*	1					
29.	Wealth created	29.1	10.9	.52**	.51**	.31**	.11**	.35**	.27**	.21**	.28**	.27**	.16**	-.13**	.45	-.15**	.26**	.10*	.13**	.15**	.17**	.16**	.13**	.11**	.47**	.11**	-.01*	-.00	.38**	.30*	.29*	1				



**Figure 2. Structural Equation Modeling: Path Dependencies of the variables**

Notes: \* =  $P < 0.05$  \*\* =  $P < 0.01$  \*\*\* =  $p < 0.001$

**Table 4. Estimates of OLS Models of the association between CEOs' Characteristics, the firms and Wealth Creation by Sectors**

S/N	Indicators	Industrial	Commercial
1	Gender	-8.772**(16.205)	-4.225(3.666)
2	Firm Age	-2.831**(13.717)	-2.94(13.929)
3	School Certificate	3.960**(9.817)	-0.321(2.110)
4	College of Education	-0.182(1.989)	4.266**(5.782)
5	Polytechnic	2.114**(4.629)	-0.192(1.541)
6	University	2.994**(4.148)	3.892**(5.115)
7	Previous Experience	4.120**(6.152)	3.678**(5.253)
8	Turnover (Firm Sales)	5.915**(8.821)	-2.781(7.552)
9	Human Resource	4.523**(9.011)	3.110**(5.153)
10	Technology Adoption	6.001*(7.135)	-1.251(2.001)
11	Innovation and Creativity	5.211*(7.825)	-2.612(2.089)
12	Unit Cost Economies	4.332*(8.342)	-3.315(1.865)
13	Organizational Infrastructure	2.212*(4.668)	-0.112(2.354)
14	Strategy	3.005*(6.882)	-1.586(2.331)
	Constant	19.827*(4.884)	10.771*(3.221)
	R-Square	0.675	0.330
	F	5.655*	4.090*
	N	161	420

\*Significant at 0.05 \*\*Significant at 0.01

As for relevance of education and experience in firm growth, human resource is vital for both sectors in relation to the wealth being created, however, technology adoption, innovation and creativity, unit cost economies, organizational infrastructure and strategy contributed significantly to wealth in the industrial sector than commercial sector. Overall, 67.5% of the wealth created was from the industrial sector.

### 5.1. Human Resource

The first model denotes the human resource model with the human resource element/CEO's expertise being statistically significant at both 0.05 and 0.01 levels of significance.

Wealth created by the firm ( $r = 0.58^{**}$ ) and R-square = .28 indicating that 28% variation in SMEs' wealth created was caused by the CEO's expertise as shown in table 5. This is the highest contributing variable in the wealth creation model of the firms. The sub variables of operators' level of education, previous experience, cognate abilities and special skills related well with wealth creation (0.64\*, 0.73\*\*, 0.75\*\*), all significant at 0.05 level of significance. Hence, hypotheses 1 is supported. These support the findings of the previous studies (Barbero et al., 2011; Jayawarna et al., 2014; Garavan et al., 2015; Rosli & Mahmood 2013) that linked educational qualification and skills to different organizational performance indices and contradicts the Kfindings of Rauch, Frese, and Utsch (2005). Most of the studies which have found positive relationships between educational qualification

and performance indicators did not consider cognate skills and special abilities. The strength of the present study's findings is derived from the inclusion of cognate skills and special abilities.

**Table 5. Regression Analysis (Dependent Variable: Wealth Created)**

Model	1	2	3	4	5	6
Firm Age	0.01	0.01	0.01	0.00	.00	.00
Firm Size	-.04	.03	.02	.02	.03	.02
Human resources						
Education	.64*					
Experience	.73**					
Abilities& skills	.75**					
Technology						
Information acquisition		.61**				
Information use		.55**				
Innovation & creativity						
Licensed intellectual property			.02**			
Customer& Employee Involvement			.09**			
Network & collaboration			.16**			
Unit cost economies						
Economies of Scope				.06**		
Economies of Scale				.01**		
Organizational infrastructure						
Organizational structure					.03**	
Flexibility					.02**	
Agility					.01**	
Degree of integration					.01*	
Strategy						
Product differentiation						.01*
Strategic entrepreneurship						.01*
Opportunity seeking						.01*
Advantage seeking						.01*
Niche strategy						.01*
Cost parity						.01**
Adjusted R-square	.28**	.13**	.14**	.16**	.14*	.13**
Model f	47.47	31.99	40.37	11.62	17.09	13.77

\*=p= 0.05, \*\*=p=.01

## 5.2. Technology Adoption

The second model is of the technology adoption, comprising information acquisition and use. They all have positive and statistical relationship and path dependencies with wealth creation as shown in table 5 and figure 2, thus supporting the hypothesis 2. ( $r= 0.23^{**}$ ,  $0.61^{**}$ ,  $0.55^{**}$ ). SMEs' technology adoption relates positively with wealth creation ( $r=0.23^{**}$ ) and R-square= 0. 13, indicating that 13% of the wealth created variation are traceable to technology. This reveals a lower value of contribution compared to human resource, typical of emerging economy which weakens competitiveness of the firms internationally.

The acquisition and use of technology have significant relation with wealth created. The finding of this study corroborated the outcome of the work of Bako (1991), Rayport and Sviokia (1995), Peltier, Zhao, and Schibrowsky (2012), De Clerca, Dimoy, and Thongpapanl (2015), Hilmersson (2014). While Liu et al (2015) as well as the philosophical underpinnings of RBV of Penrose (1959) sees knowledge as an intangible resource from which organization can build competitive advantage.

### 5.3. Innovation and Creativity

The next model is innovation and creativity. The results in table 5 also show positive but weak association between the licensed intellectual property and wealth creation as well as customer and employee involvement and wealth creation ( $r=0.02^{**}$ ,  $0.09^{**}$ ). While innovation and creativity has a positive and significant association with wealth creation ( $r= 0.18^{**}$ ). The R-square is 0.14 showing that 14% of the variation in wealth created is caused by the innovation and creativity activities of the SMEs. This result supports the conclusion drawn in previous research that innovativeness relates positively with firm performance (Chang, Chen, Lin, and Gao 2012; Casillas and Moreno 2010; Love and Roper 2015; Lumpkin and Dess 2001; Spencer, Kirchoff, and White 2008) but the relationships are weak, indicating that less wealth was created through innovation and creativity. However, hypothesis 3 is supported.

### 5.4 Unit Cost Economies

There is a statistically positive but weak associations between; the Unit cost economies and wealth creation ( $r=0.08^{**}$ ), economies of scope and wealth created ( $r= 0.06^{**}$ ); economies of scale and wealth creation ( $r= 0.01^{**}$ ) thus, supporting hypothesis H4. R-square is 0.16, indicating that 16% of the variation in wealth created is caused by unit cost economies. This result may be premised on the fact that most SMEs rarely take full advantage of economies of scale and scope because of limited resources. The unit cost economies as an aggregate of economies of scale and scope also show that the economy of scale has stronger relationship with wealth creation than economy of scope. This may be due to frequency of use of the method by the operators based on level of operation which was found to affect their level of adoption of cost parity as strategy for competition. This result is supported by Kraus et al (2011), who observed that SMEs hardly achieve cost advantage because they lack some unit cost economies.

### 5.5 Organizational Infrastructure

The fifth model revealed statistically positive but weak association between the organizational infrastructure and wealth creation ( $r=0.05^{**}$ ). Similarly organizational structure ( $r= 0.03^{**}$ ), flexibility ( $r=0.02^{**}$ ), agility ( $r=0.01^{**}$ ) and degree of integration ( $r=.01^{*}$ ) associated positively with wealth creation, so hypotheses H15-H20 were supported. R-square= 0.14 indicating that 14% of the variations in wealth creation of the SMEs were traceable to the organizational

infrastructure. This is consistent with the view of Clark (1996), De Clerca, Dimoy, and Thongpapanl (2015), Messeghem (2003), Ray et al (2004) and Vyakarnam and Handelberg (2005) that capabilities and competencies that are capable of achieving competitive advantage in operations are premised on the organizational infrastructure, but the fact that the association was a weak one is a pointer to the simplicity required of the SMEs' organizational infrastructure.

## 5.6. Strategy

The last model identified the relationship of the different strategies adopted with wealth created by the SMEs. There was positive but weak relationship that was statistically significant between strategy and wealth created ( $r=0.03^{**}$ ). The product differentiation and cost parity were statistically significant ( $r=0.01^*$ ,  $0.01^{**}$ ) and strategic entrepreneurship and niche strategy are ( $r=0.01^*$ ,  $0.01^*$ ). However, most of the strategies record stronger and significant relationships in the path dependencies analysis (figure 2; product differentiation,  $r=0.15^{**}$ , strategic entrepreneurship,  $r=0.80^{***}$ , niche strategy,  $r=0.31^{**}$ ). Thus hypotheses 21-27 are supported. Drawn from the structural equation modeling result, the most important of all the strategies is strategic entrepreneurship ( $r=0.80^{***}$ ), followed by the Niche strategy ( $r=0.31^{**}$ ), then product differentiation strategy ( $r=0.15^{**}$ ) and finally the cost parity ( $r=0.01^{**}$ ). This corroborates the assertion of Engelen, Gupta, Strenger and Brettel (2015) and Gupta and Batra (2015). Overall model result show that 13% of the variation in wealth created was due to the strategy adopted by the SMEs. This result corroborate the finding of Maney, Manoloya, Harkins, and Gyoshey (2014) that strategic intensity is positively related to performance; firms that deviate from pure cost leadership or differentiation and try to achieve a balance on both dimensions. Such balance is observed in the  $r$  values for product differentiation ( $r=0.15^{**}$ ) and cost parity ( $r=0.01^{**}$ ). Escriba-Esteve et al. (2008) establish positive and significant relationship between SMEs' strategic orientation and performance. Also established is the positive and strong relationships between strategic entrepreneurship and two of its components measured (i.e. Opportunity seeking;  $r=0.58^{***}$ ; Advantage seeking,  $r=0.25^{***}$ , results are significant at 0.001, 0.01 and 0.05) this also aligns with the findings of Jain and Ali (2012).

Hence the aggregate model is:

$$WCR=b_0 +b_1 HR + b_2TECH + b_3 IC + b_4 UCE + b_5OIF + b_6STRA + e$$

$$WCR= 56.8 +.28 HR + .13TECH + .14 IC + .16 UCE + .14OIF + .13STRA$$

Each of the six models evaluated are:

$$HR=b_0 +b_1 Ed + b_2Ex + b_3 As+ e \tag{1}$$

$$HR=47.47 +.64 Ed + .73Ex + .75 As$$

$$TECH=b_0 +b_1Ia + b_2Iu + e \tag{2}$$

$$\text{TECH}=31.99 +.61Ia + .55Iu$$

$$\text{IC}=b_0 +b_1\text{Lip} + b_2\text{Cei} + b_3\text{Ns}+ e \quad (3)$$

$$\text{IC}=40.37 +.02\text{Lip} + .09\text{Cei} + .16\text{Ns}$$

$$\text{UCE}=b_0 +b_1\text{Esc} + b_2\text{Eos} + e \quad (4)$$

$$\text{UCE}=11.62 +.06\text{Esc} + .01\text{Eos}$$

$$\text{OIF}=b_0 +b_1\text{Os} + b_2\text{Fle} + b_3 \text{Agi} + b_4 \text{Doi} + e \quad (5)$$

$$\text{OIF}=17.09 +.03\text{Os} + .02\text{Fle} + .01\text{Agi} + .01\text{Doi}$$

$$\text{STRA}=b_0 +b_1 \text{Pd} + b_2\text{Se}+ b_3 \text{Ose} + b_4 \text{Ase}+ b_5\text{Ns} + b_6\text{Cp} + e \quad (6)$$

$$\text{STRA}=13.77+.01 \text{Pd} + .01\text{Se}+ .01 \text{Ose} + .01 \text{Ase}+ .01\text{Ns} + .01\text{Cp}$$

## 6. Policy Implications

It is important to note that the Nigerian government has done a lot to encourage the SMEs in the country and this has been translated to enhanced contribution to the industrial base of the nation as observed in this study. However, a lot needed to be done to further encourage the participation of the SMEs in this sector in the area of facilitation of technological innovation and creativity whose contribution to the wealth created was low comparatively. Enhanced protection of the SMEs to encourage indigenous innovation and creativity to thrive may be one of the ways out because undue exposure to foreign competition at the early stages of new innovation and creativity could kill such adventure.

The fact that the service sector contributed much less to the wealth created and yet has greater presence of the educated CEOs is worrisome. Hence, the need for government to organize workshops that could enlighten them so as to bridge the gap between similar services outside the country apart from providing more enabling environment which serves as the framework for effective service delivery thus providing a level playing ground with similar businesses outside the country.

Finally, government may need to resuscitate Small Medium Enterprises Development Agency of Nigeria (SMEDAN) to help the SMEs in international environmental scanning exercise that would facilitate acquisition of relevant and effective information which could also enhance global positioning and material sourcing that are cost effective.

## 7. Conclusion

This study's analysis of the primary data gathered directly from 581 small and medium scale enterprises of chief executive officers in Nigeria has developed and tested a wealth creation model. An empirical test of the six domains of SMEs' wealth creation was carried out. The results support several statistically significant

relationships between the variables of each domain and wealth created. The data of this study offer encouragement to policy makers by rejecting the notion that SMEs wealth creation could not be explained from firm-level theory. We found that the most important factor that determines SMEs wealth creation was human resource. And each of the variables of measure scored high in contributing to the wealth created by firms: these are education, cognate experience, abilities and special skills. This could also explain why firms' age was an important moderator in the wealth creation model. The study thus contradicts previous studies that found a negative relationship between experience and firm growth. Hence, the results of our study are consistent with Jovanovic's learning perspective of firm growth. In terms of policy implication in Africa, the results suggest that wealth would be more created by firms with highly educated CEOs with special skills. The government may need to encourage more graduate apprenticeship schemes that could birth new firms and would have high propensity of creating wealth.

The firm size is found to relate positively with wealth creation. This result contradicts the theory of a negative relationship between firm size and growth as well as the view that small firms are founded with suboptimal size and therefore, grow quickly to reach efficient size. It confirmed other studies that found that larger firms grow faster than smaller firms (Frazer 2005; Obeng et al. 2012; Teal, 1998) and thereby supports the RBT of firm growth.

Technology, innovation and creativity are associated with wealth creation amongst the SMEs in Nigeria. The adoption of new technology as well as innovation and creativity help SMEs to face competition and achieve competitive advantage. This finding was consistent with earlier studies (Bakos 1991; Casillas and Moreno 2009; Lumpkin and Dess 2001; Rayport and Sviokla 1995). The Unit cost economies associates positively with wealth creation and the path dependencies were negative. It showed that more wealth was created at a lower cost of operations and that cost parity associated positively with wealth creation.

Organizational infrastructure and strategy are important variables to wealth creation. Organizational infrastructure associated positively with wealth creation but the path dependencies showed a negative trend which inferred that simplicity rather than complex structure is needed for effective wealth creation by the SMEs. The different strategies related significantly with wealth created by the firms. However strategic entrepreneurship, Niche strategy and product differentiation are most prominent.

In conclusion, this study investigated the determinants of SMEs wealth creation in Nigeria, after examining 29 variables in regression test, the results show that the size and Age of the firms were significantly associated with wealth creation. The study tested empirically the wealth creation model of human resource, technology, innovation and creativity, unit cost economies, organizational infrastructure and strategy domains. All the domains were found to be relevant as determinants of wealth creation.

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## Appendix

**Table A.1. Factors loadings of the Construct**

S/N	Major Variables	Sub-variables	Internal Consistency	Composite Reliability
1.	Human Resource	education	0.83	0.84
		Education	0.81	0.83
		Experience	0.80	0.83
		Abilities	0.81	0.83
		Skills	0.82	0.84
2.	Technology	Information acquisition	0.80	0.83
			0.81	0.83
		Information use	0.81	0.83
			0.79	0.82
3.	Innovation & Creativity	Licensed intellectual property	0.80	0.83
		Customer Involvement	0.81	0.83
		Employee Involvement	0.80	0.83
		Network & collaboration	0.78	0.82
4.	Unit Cost Economies	Economies scale	0.79	0.82
		Economies scope	0.80	0.83
5.	Organisation Infrastructure	Organization	0.79	0.81
		Flexibility	0.80	0.82
		Agility	0.81	0.83
		Degree of integration	0.80	0.81
6.	Strategy	Product differentiation	0.78	0.80
		Strategic entrepreneurship	0.79	0.83
		Opportunity selling	0.79	0.82
		Advantage seeking	0.78	0.81
		Niche Strategy	0.80	0.82
		Cost parity	0.79	0.81