



Research Paper

Industrialization as a tool for entrepreneurship development in West Africa

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ABSTRACT

The study examines the impact of entrepreneurship development on industrialization in West Africa using the North Central region of Nigeria as a reference point. Survey research designs as well as structured questionnaire were used. The questionnaire was designed in a five point likert scale and was administered across six geopolitical zones in Nigeria. The study used improved productive input such as labour, raw material, capital and domestic consumption as indicants of industrialization. Entrepreneurship Development indicants were risk taking, innovation, entrepreneurship training, finance and creativity. The population of this study was 9580 SMEs owners in North Central Zone of Nigeria according to Small and Medium Enterprises Development Agency of Nigeria Survey, (SMEDAN) 2013 and this was reduced using Taro Yamane formula to 384. The study used test of mean, standard deviation and regression with the aid of statistical software packages of e-view to analysed the data. The results showed that there was significant relationship between industrialization in the form of improve productive input and entrepreneurship development using SMEs in the North Central Zone, Nigeria. This implies that industrialization in the form of improve productive input contribute significantly to entrepreneurship development in North Central Nigeria among SMEs owners. Therefore, it is recommended that North Central, Nigerian should start to embrace industrialization and the practices of industrialization should be properly encouraged to ensure entrepreneurship development. Government should re-strategies on how to expand its industry, ensure that every member of the society are productive by providing them with productive inputs as well as encourage domestic consumptions and made in Nigeria goods.

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Key words: Industrialization, entrepreneurship development, expansion of industry, productive input and domestic consumption.

INTRODUCTION

Industrialization is an important and powerful instrument for stimulating entrepreneurship development in any developing countries such as Nigeria. The substantial and significant progress and advancement due to industrialization in Nigeria from the inception of the Nigeria's independence brought about various ways to improve industrialization in order to aid the development of entrepreneurs by ensuring that they brought out innovation and taking risk. Industrialization has been seen as a veritable channel of attaining the lofty desirable

conception and goals of improved quality of life and the populace. This is because; industrial development involves extensive technology- based development of the productive (manufacturing) system of the economy. Industrialization is a generic name for a set of economic and social processes related to the discovery of more efficient ways for the creation of value in order to ensure the development of entrepreneurs. It is the ensure way to ascertain that entrepreneurs developed new product, assume risk and finance the most profitability business since expansion of

industry, productive input such as labour, raw material, capital and domestic consumption are available to the society through the art of industrialization.

Over the years, Nigerian government implemented policies that bring industrialization in terms of expansion of industry, productive input such as labour, raw material, capital and domestic consumption in order to ensure that entrepreneurs discovered ways to develop their skills such as risk taking, innovation, entrepreneurship training, finance and creativity. Yet, entrepreneurs in Nigeria are still adopting old ways of doing business without taking risk, innovating product or services and providing adequate training that will ensure creativity in order to finance the business properly. From the extant literatures, studies were conducted in United State and other countries but none of the study used North Central Nigeria in examining the impact of entrepreneurship development on industrialization.

The objective of this study is to examine the impact of entrepreneurship development on industrialization in North Central, Nigeria. The specific objective of this study are to: determine the impact of entrepreneurship development on improve productive input in North Central, Nigeria.

The scope of this study is restricted to industrialization and entrepreneurship development only in the North Central region of Nigeria. The study covered a period of 13 years from 2005-2017 and this period is chosen because it involved the period Nigerian Government started encouraging industrialization. However, this period is also chosen because government of Nigeria makes entrepreneurship education compulsory in all institution of learning in 2006.

The study is significant to Nigerian Government because it will assist them to ensure proper industrialization and that production input are available for the entrepreneurs to use and develop new product or innovate new ideas in the market. The study is also beneficiary to entrepreneurs since it will assist them to identify business opportunity through the process of industrialization in Nigeria. The study is also significant because it will fill the research gap in knowledge and help students who want to further carry out research in this area of interest.

The hypothesis of the present study is stated below:

H₀₁: There is no significant relationship between entrepreneurship development and improve productive input in North Central, Nigeria.

Concept of industrialization

Industrialization is an essential aspect of long-run development in that most nations that have achieved socio-economic development, though with some attendant environmental consequences, have also seen structural transformation from primary production towards

industrialization (Aneta, 2006). It increases output using the more mechanized system of production. According to Anyanwu et al. (1997), industrialization is the process of building up a nation's capacity to convert raw materials and other inputs to finished goods for other production or for final consumption.

Industrialisation has been conceptualised as the process of transforming raw materials, with the aid of human resources and capital goods into consumer goods, new capital goods which allows more consumer goods, including food, to be produced with the same human resources and social overhead capital, which together with human resources provides new services to both individuals and businesses (Ekpo, 2005). Industrialisation takes place whenever production is carried out on the basis of machines and fabricated tools. Its process is initially guaranteed when there is a systematic policy measure to steer resources into the productive process, so that eventually growth of output must be generated through the growth of productivity. It involves the application of scientific methods to solve the problems of mechanization and a factory system, the division of labour, the growth of the money economy, and the increase of mobility of the labour force both geographically and socially (Zurekas, 2001). In this study, industrialization is conceptualize as a process of ensuring advance production input such as labour, raw material, capital and domestic consumption into an economy in order to ensure the development of such an economy

Concept of entrepreneurship development

Entrepreneurial development according to Ndechukwu (2001), McOliver (1998) and Ameashi (2006) is the productive transformation of an entrepreneur, a single thread runs through all the following: the ability to identify business opportunities, the ability to harness the necessary resources to use opportunities identified, and the ability and willingness to initiate and sustain appropriate actions towards the actualization of business objectives. Paul (2013) note that entrepreneurship is more than starting a business. It is also a process through which individuals identify opportunities, allocate resources, and create value. Entrepreneurship is the manifestation of ability and willingness of individuals, on their own, in teams, within and outside existing organizations, to: -perceive and create new economic opportunities (new products, new production methods, new organizational schemes and new product-market combinations) and to -introduce their ideas in the market, in the face of uncertainty and other obstacles, by making decisions on location, form and the use of resources and institutions. Entrepreneurship is "at the heart of national advantage" (Porter, 1990). In this study, entrepreneurship development is conceptualized as a process of risk taking, innovation, entrepreneurship

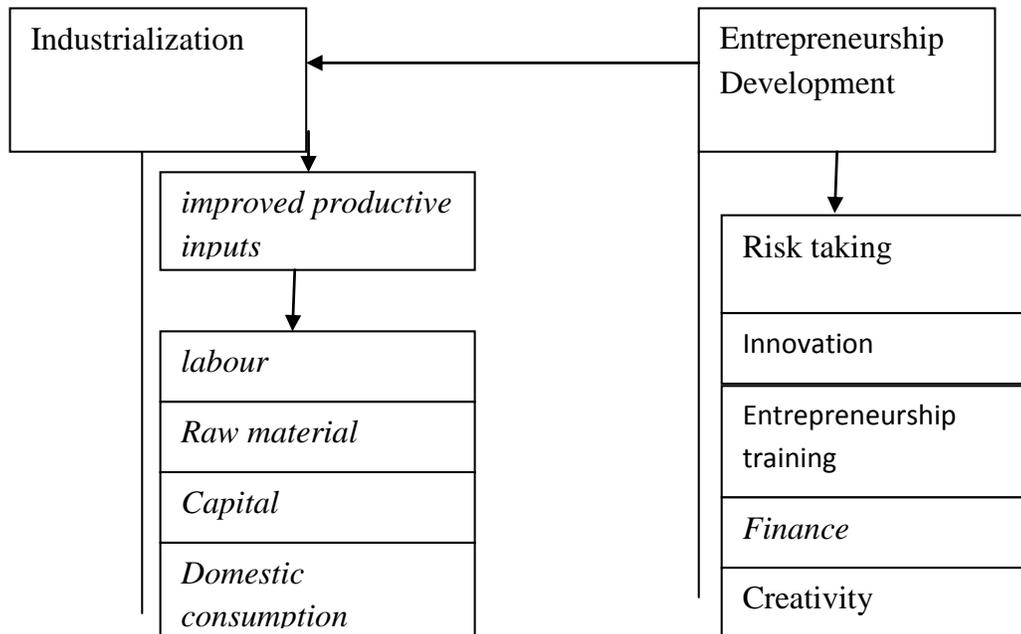


Figure 1: Conceptual model.

training, finance and creativity in order to provide adequate good and services that have not existed before or adding value to the existing products, ideas or goods and services.

Researchers Model, 2018

The researchers conceptualized a model, indicating the concept of industrialization and of entrepreneurship development (Figure 1). The model explain that industrialization contribute to entrepreneurship development. The model further realized that industrialization is a way of ensuring improved production inputs in a country by bringing about effective labour, good raw material, capital and domestic consumption in order help entrepreneurs take risk to invest their capital, innovate products, ideas, goods and services and receive training that make them effective in discovering new business opportunity and finance the new business.

Simple theory of industrialization

The theory states that two general assumptions are necessary to achieve this. First, output is produced both by skilled and unskilled labor. The second is that households derive benefits from both income (generated from both skilled and unskilled labor) and human capital (generated from the education obtained by children) (Acemoglu, 2008). The theory believes that industrialization is a sure ground for economic growth that ensure entrepreneurship development, and makes entrepreneurs to be productive

with new features and quality.

Empirical review

Jackin (2004) examine the impact of industrialization on entrepreneurship development in the United State of America. He used survey research method and administered questionnaire to the small and medium scale enterprises. The population of the study is the entire SMEs owners in United State but the researcher determined the sample size using accidental method of selecting only 300 respondents that participated in the exercise. The study used regression, and the finding showed a significant relationship between industrialization and entrepreneurship development.

Jelilov et al. (2013) studied the impact of Industrialization on Economic Growth: In ten (10) selected Economic Community of West Africa (ECOWAS) Experience members' states (2000-2013) namely; Republic of Nigeria, Benin Republic, Cabo Verde, Cote D'voire, The Gambia, Ghana, Guinea Bissau, Mali, Niger and Senegal. The study set three major objectives which include investigating the effect of fiscal and monetary policy on Gross Domestic Product, determining the relationship between government spending and industrial development and to determine the effect of budget on investment or employment generation. The study only utilized secondary data from National Bureau of Statistics and Central Bank of Nigeria statistical bulletin 2014. It specified a workable model in which GDP was the dependent variable while industrial output, foreign

direct investment, interest rate, foreign exchange rate and inflation rate were independent variables. Ordinary least square (OLS) technique, F-test was used as analytical techniques. The study showed that industrialization has a negative impact on economic growth in Nigeria in the long run. This was confirmed by the F-test value (559.02).

Lukman (2013) studied the rate of industrial development in developing nations, considering a case of Nigerian small and medium scale business enterprises (SMEs) in order to unlock the potentials that are eminent in the manufacturing sector. A total of 600 SMEs owners and managers were administered with questionnaires. The analysis of this research was based on the opinion of the successful 517 respondents. The result obtained from this research suggested that no special techniques were employed by the SMEs other than the fact that they were able to manage the situation and still ensure business profitability despite the huge economic deficiencies present in the economy

RESEARCH METHODOLOGY

Here, a survey research design was used because it is a point in time data and employs qualitative approach. The study relay questionnaire administered to the owners of SMEs and the reason for using qualitative approach in analysing and interpreting data is that the analysis is simple and easy to draw conclusion. However, the population of this study was 9580 SMEs owners in North Central Zone of Nigeria according to Small and Medium Enterprises Development Agency of Nigeria Survey, (SMEDAN) 2013 and this was reduced using Taro Yamane formula as stated:

$$n = \frac{N}{1 + N(e)^2}$$

Where N is the population size
 e is the margin error (assume 5%)
 1= constant=
 e=0.05
 $n = \frac{9580}{1 + 9580(0.05)^2}$
 $n = \frac{9580}{1 + 9580(0.0025)}$
 $n = \frac{9580}{1 + 23.96}$
 $n = \frac{9580}{24.96}$
 n= 384

Simple random sampling is to administer the questionnaire to the respondents and it is used because it allows for equal opportunity of the respondents being selected. The questionnaire was administered to the respondents in each state of the Federation. Besides, it was administered to the respondents across the 6 states including Abuja. The questionnaire was administered on the pro rata basis to 6 states including Abuja making it 7 in number. And each state received 54 copies of questionnaire and Abuja received 60 copies of questionnaire. The reason Abuja

received more copies of questionnaire is that Abuja is the center of Nigeria and the researchers reside in Abuja.

The sources of data used were primary and primary data collected from original source. The data were collected expressly for a specific purpose by the investigator himself. The advantage of this source is that the exact information wanted is obtained, terms are carefully defined and limitations of the data are known. The questionnaire was designed in a five point likert scale such that strongly agreed was represented by 5, agreed by 4, undecided by 3, strongly disagreed by 2 and disagreed by 1. The copies of questionnaire was administered by the researcher assistant in each states of North Central, Nigeria and the completed copies of questionnaire was sent through courier service and the researcher received it after 2 weeks. The software statistical package of e-view was used to analyse the data in this study. The statistical tool regression was used. The regression analysis was used to determine whether there is a relationship between industrialization and entrepreneurship development. The model is stated as:

$$PRII = \alpha + \beta_1 ED + \mu \dots\dots\dots (1)$$

Where:
 PRII= Improve Productive Input
 a = constant
 β_1 = Coefficient
 ED= Entrepreneurship Development
 μ = Error term

The study also conducted reliability test as shown in Table 1. Based on the result shown in the table, the variables have Alpha value above 0.6, which means that all variables in the instrument are deemed reliable.

Data analysis

The Table 2 shows that, 34.53% of the respondents were male owners of SMEs who filled and returned the copies of their questionnaire and 40.48% of the respondents were female owners of SMEs who filled and returned the copies of their questionnaire.

As shown in Table 3, 1 represents that production input of labour improved because of industrialization, 2 represents that Raw material used in production of modern goods improved, 3 represents that capital is available everywhere even in the internet due to industrialization and 4 represents that domestic consumption is encouraged because of industrialization.

Table 4 also shows the acceptability of the variables used in the analysis: production input of labour improved because of industrialization, the raw material used in production of modern goods improved, capital is available everywhere even in the internet due to industrialization and domestic consumption is encouraged because of

Table 1: Scale reliability of variables.

Variables	Items	Cronbach's Alpha
Productive Input		0.87
Entrepreneurship development		0.92

Source: researcher's computation (2018).

Table 2: Return rate of the respondents –customers.

Responses	Questionnaires administered	Questionnaires not returned	Questionnaire returned	Percentage (%)
	119	23	96	34.53
	265	83	182	65.46
Total	384	106	278	100

Source: Field Survey, (2018).

Tables 3: Assessing the improved production input.

Items	SA	%	A	%	U	%	DA	%	SDA	%	Total
1	101	36.33	89	32.01	11	3.95	21	7.55	56	20.14	278
2	118	42.44	77	27.69	5	1.79	19	6.83	59	21.22	278
3	122	43.88	59	21.22	10	3.59	19	6.83	68	24.46	278
4	114	41.00	79	28.41	5	1.79	29	10.43	21	7.55	278

Source: Fieldwork, 2018.

Table 4: Mean of improved productive inputs.

Variables	5	4	3	2	1	FX	N	Mean	X- \bar{X}	(X- \bar{X}) ²	Sectoral Mean	Sectoral SD
Labour	101	89	11	21	56	278	992	3.56	0.01	0.0001		
Raw material	118	77	5	19	59	278	1010	3.63	0.08	0.0064		
Capital	122	59	10	19	68	278	972	3.49	-0.06	0.0036	3.55	0.011
Domestic consumption	114	79	5	29	21	278	980	3.52	-0.03	0.0009		

Author's computation.

industrialization. The analysis confirmed this result, such that a mean value of 3.55 and a standard deviation of 0.011 are indication of improve productive input being unique since the sectoral mean is more than average and also all the mean are within the acceptable level.

As shown in Table 5, 1 represents that SMEs is used to innovate their product by adding values, 2 represents that SMEs create value of the product, 3 represents that SMEs assume greater level of risk in business and 4 represents SMEs finance productivity in new business opportunities in North Central, Nigeria.

Table 6 also shows the acceptability of the variables used in the analysis: SMEs are used to innovate their product by adding values, they create value of the product, they assume greater level of risk in business and SMEs finance productivity of new business opportunities in North Central, Nigeria. The analysis confirmed this, such that a

mean value of 3.55 and a standard deviation of 0.011 are indication of entrepreneurship development being unique since the sectoral mean is more than average and also all the mean are within the acceptable level.

From the regression result (Table 7), improve productive input coefficient is positive and significant in achieving entrepreneurship development in North Central, Nigeria. The $PRII=0.32 +0.44ED$ indicates that entrepreneurship development will increase by 39% for every 1% increase in improve productive input (PRII). The p-value of 0.00 is less than the t-statistic value of 1.29 and the standard error value of 0.03 is less than the t-statistic value. The f-statistic of 4441.155 with a probability of value of 0.00 indicates that the model is a good fit. The R² of 97 showed that about 97% variation in improve productive input can be explained with the significant relationship between improve productive input of industrialization and

Tables 5: Assessing entrepreneurship development.

Items	SA	%	A	%	U	%	DA	%	SDA	%	Total
1	110	39.56	99	35.61	2	0.71	17	6.11	50	17.98	278
2	111	39.92	101	36.33	3	1.07	17	6.11	46	16.54	278
3	107	38.48	74	26.62	10	3.59	19	6.83	68	24.46	278
4	98	35.25	125	44.96	5	1.79	29	10.43	21	7.55	278

Source: Fieldwork, 2018.

Table 6: Mean of entrepreneurship development.

Variables	5	4	3	2	1	FX	N	Mean	X- \bar{X}	(X- \bar{X}) ²	Sectorial Mean	Sectorial SD
	110	99	2	17	50	278	1036	3.72	0.01	0.0001	3.71	0.0926
	111	101	3	17	46	278	1048	3.76	0.05	0.0025		
	107	74	10	19	68	278	967	3.47	-0.24	0.0576		
	98	125	5	29	21	278	1084	3.89	0.18	0.0324		

Author's computation.

Table 7: Regression result.

Dependent Variable: PRII
 Method: Least Squares
 Date: 03/10/18 Time: 22:04
 Sample: 1 278
 Included observations: 278

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.326661	0.031393	0.849288	0.0000
ED	0.444238	0.034259	1.291290	0.0000
R-squared	0.974831	Mean dependent var		2.689655
Adjusted R-squared	0.974611	S.D. dependent var		1.524519
S.E. of regression	0.242915	Akaike info criterion		0.019214
Sum squared resid	20.29858	Schwarz criterion		0.063492
Log likelihood	0.656790	Hannan-Quinn criter.		0.036842
F-statistic	4441.155	Durbin-Watson stat		1.301372
Prob(F-statistic)	0.000000			

Source: Data output using E-view, 2018.
 Decision Rule 5% level of significance.

entrepreneurship development in North Central, Nigeria.

DISCUSSION OF FINDINGS

From the analysis, the study found that there is significant relationship between industrialization in the form of improve productive input and entrepreneurship development using SMEs in North Central Zone, Nigeria. This implies that industrialization in the form of improve

productive input contribute significantly to entrepreneurship development in North Central Nigeria among SMEs owners. The study is in line with the study of Jackin (2004) who found that industrialization significantly leads to entrepreneurship development. The study also in tandem with simple industrialization theory which states that output is produced both by skilled and unskilled labor. And industrialization is a sure ground for economic growth which ensure entrepreneurship development in making them to be productive with new features and quality.

CONCLUSIONS AND RECOMMENDATIONS

The study concluded that there is significant relationship between industrialization in the form of improve productive input and entrepreneurship development using SMEs in North Central Zone, Nigeria. This implies that industrialization in the form of improve productive input contribute significantly to entrepreneurship development in North Central Nigeria among SMEs owners. It is recommended that North Central, Nigerian should start to embrace industrialization and the practices of industrialization should be properly encouraged to ensure entrepreneurship development. Government should re-strategies on how to expand its industry, ensure that every member of the society are productive by providing them with productive inputs as well as encourage domestic consumptions and made in Nigeria goods.

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