SMALL AND MEDIUM-SCALE ENTERPRISE FINANCING AND INDUSTRIAL GROWTH IN AFRICA

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Abstract:
Small and medium-scale enterprises (SMEs) have been identified as the engine and foundation of rapid industrial growth. Unfortunately, the potentials of the SMEs to accelerate the process of industrialization in Africa have been undermined by numerous constraints, prominent among which is lack of access to finance. The study examined the impact of SMEs financing on industrial growth in Africa using panel time-series data from all the 15 ECOWAS countries from 1986 – 2016. In implementing the panel data regression, the study engaged in panel unit root using the LLC, IPM, Fisher-type ADF and PP tests, and co-integration tests using the Kao residual-based and Johansen-Fisher combined tests. The study also placed adequate control for any unobserved heterogeneity among the ECOWAS countries, using a well-specified fixed effect in exploiting the time dimension present in the dataset. The result shows that SMEs output significantly affects industrial growth positively while the Deposit Money Banks' credit to SME's do not have significant impact on industrial performance during the review period. The result further reveals that interest rates have a significant negative impact on industrial growth. Based on these findings, the study recommends that monetary authorities in ECOWAS countries can encourage easy access to finance by making available interest-free loans using microfinance institutions.

Key words: ECOWAS**,** finance, financial intermediation, industrial growth, SMEs

1.   Introduction:

Industrial growth is widely accepted as the key to sustainable rapid growth and development of an economy. The World Development Indicators (WDI) (2016) report shows that the industrial sector accounts for about 60% of the overall growth and development of most advanced countries and has remained the centrepiece of most growth and development strategies of those economies. In Africa, even with the recognition of industries as germane for sustainable growth and development, the continent still suffers poor growth when compared to other developing regions in terms of industrial performance. For instance, the United Nations Industrial Development Organization (UNIDO) (2015) report on the Review of African Sustainable Industrial Development reveals that Africa's share of the world's industrial output has experienced a deterioration over the years from 1986 to 2013, declining from about 0.9% to about 0.6%, with the distribution of industrial activities highly skewed in favour of South Africa.

Small and medium scale enterprises (SMEs) have been identified as the engine and foundation of rapid industrial growth (Metu, 2017). SMEs play vital roles in economic development and the growth of economies especially in the areas of employment creation, innovations and

domestic investment. The economic boom in some Asian countries is obviously not unconnected to SMEs. For instance, in India, the SMEs account for about 39% of manufacturing output and 33% of total exports (Gbandi and Amissah, 2014). For many countries in Africa, the United Nations Economic Commission for Africa (UNECA), in 2005, revealed that SMEs accounted for over 90% of businesses, over 50% of GDP and about 63% of employment. In recognition of the above, the promotion of SMEs has become central to most industrialization strategies in Africa especially in recent times. Unfortunately, the potentials of the SMEs to accelerate the process of industrialization in Africa have been undermined by numerous constraints which include financial constraint, legal obstacles as well as the overall macroeconomic policy environment. These challenges have slowed the growth of SMEs and consequently undermined the growth of the industrial sector in Africa. Nichter and Goldmark (2009) showed that only about 3% of SMEs expanded beyond three employees after start-up. Evidence from literature suggests that, among the aforementioned constraints to SMEs growth in Africa, a lack of access to finance remains the most prominent and has become highly pronounced in recent times (Metu, 2017). Access to finance by SMEs has remained problematic in most African countries and this is usually occasioned by the lending requirements of the financial institutions such as Deposit Money Banks (DMBs) which are not always encouraging to the SMEs. In identifying this as a serious impediment to the industrialization process, most African countries have responded by establishing various policies and programmes primarily to help facilitate greater access to financial resources by the SMEs and consequently setting the pace for industrial growth in the continent.

Despite some achievements recorded through these programmes, SMEs in Africa, especially those in the ECOWAS countries, are yet to attain their full potentials in facilitating the process of industrialization, as virtually all industry-related indices continue to exhibit weak performance. Africa's industrial contribution to the GDP is generally low. In the ECOWAS countries, the share of Manufacturing Value Added (MVA) to GDP in 2015 ranged from as high as 14.1% in Cote d' Ivoire to as low as 1.8% in Sierra Leone, with an average of only about 7.6%. As important as it is, very little research efforts have been made using cross-country data on the contributions of SMEs to growth, especially for Africa. Available studies mainly focus on SMEs in general without paying attention to their financial needs. Against this background, this study investigated the impact of SMEs financing on industrial growth in Africa from 1986 to 2016. Using panel data regression covering all 15 ECOWAS countries, the study adequately controlled any unobserved heterogeneity among the selected countries using a well-specified fixed effect in exploiting the time dimension present in the dataset.

This study is topical especially at this time of increased entrepreneurial activities and innovations, driven by Information and Communication Technology (ICT). Thus, the findings of this study provide both qualitative and quantitative policy frameworks for adequate financing of SMEs for rapid industrial growth in Africa. The findings will further be of keen interest to other researchers in this area who, in their respective case studies, will have a platform for comparative analysis. This is in addition to contributing to knowledge and future researches that are based on panel data regression.

The paper is organized in five sections. Following the introduction in section one (current section) is the review of relevant literature in section two. Section three outlines the research methods while section four presents the empirical results and discussion of findings, and section five concludes the study.

2.   Review of Relevant Literature:

2.1 Conceptualizing SMEs:

There are currently no generally accepted yardsticks for classifying business enterprises as small or medium-scale globally. This is probably because the classification of businesses into large-scale or small-scale is entirely based on subjective judgment (Mukole, 2010). Also, the concept of SMEs varies greatly across countries of the world, depending on the range of activities covered by them as well as the amount of capital needed for their operations. The Central Bank of Nigeria (CBN) (2011) revealed that over 50 definitions of SMEs were identified in 75 different countries. In United Kingdom (UK), United States of America (USA), and Canada, the definition of SMEs is based on the number of employees and turnover, while in Japan and China, it is based mostly on the type of businesses, paid-up capital and the number of paid employees. In UK, an SME is conceived as a business with an annual turnover of £2million or less, with fewer than 200 paid employees, while in USA, an SME is seen as that type of business in the manufacturing sector, with fewer than 500 regular employees or wholesaling and retailing sectors with fewer than 100 regular employees and an average annual operating capital of less than $6million (Kanamori, Lim, & Yang, 2006).

The SME, in Nigeria, is defined as a business enterprise whose annual turnover ranges from ₦25,000 to ₦50,000 (CBN, 2004). Some individual researchers have also conceptualized SMEs in various ways. For instance, Chukwuemeka (2004) defined SMEs as enterprises with total assets in equipment, plant and working capital of less than ₦250,000, while employing fewer than 50 full-time workers. While individuals and institutions have offered varying definitions of SMEs, it could be deduced from the literature that in defining SMEs, reference is usually made to some quantifiable parameters such as, the number of employees; investment outlay; annual turnover and the asset value of the business. These enterprises engage in the production of light consumer goods that are primarily related to food and beverages, clothing, electrical parts, automotive parts, manufacturing, leather products, soap and detergents, woodworks (Kalu & Madichie, 2015).

2.2 An Overview of SMEs Financing in the ECOWAS Countries:

Small and medium-scale enterprises (SMEs) occupy a pivotal position in business activities in most economies of the world, especially developing countries. For many countries in Africa, the United Nations Economic Commission for Africa (UNECA) in 2005 revealed that SMEs accounted for over 90% of businesses (in the private sector), over 50% of the GDP and about 63% of employment. As pointed out by Abor and Quartey, (2010) and Gbandi and Amissah, (2014), SMEs maintain a lion share in businesses in some West African countries like Nigeria and Ghana. In the ECOWAS countries, the SME sector has grown considerably over the years and has reached unprecedented levels in recent years, probably due to the decay of the formal profitable avenues for investment options. Regrettably, the SME sector in the ECOWAS countries is characterized by self-employment and small business outlets that engage in operations that are mostly situated in the urban centers. This is due largely to a lack of access to financial resources required to transform a small business into a large business organization. Collier (2009) pointed out that lack of access to finance by SMEs in Africa is mainly the result of two high-risk characteristics that the provision of financial resources for Africa is generally regarded as riskier than those of other continents, and that the provision of financial resources for small businesses is globally seen as riskier than those of large firms.

Table 1 presents some stylized facts relating to the SMEs in ECOWAS in terms of access to financial resources from the year 2000 to 2016. The data is based on the report of the World Bank's (2016) Enterprise Survey on small, medium and large companies across all countries of the world.

Table 1: Deposit Money Banks' Credit to the Private Sector in the ECOWAS Countries (% of total) (2000-2016)

Country	2000	2005	2010	2014	2015	2016
Benin	11.6	16.3	23.3	25.1	27.2	29.3
Burkina Faso	11.6	16.4	17.3	28.0	31.4	33.2
Cape Verde	38.2	37.7	61.0	62.4	63.5	65.4
Cote d'Ivoire	14.9	13.0	16.5	20.5	22.4	24.3
Gambia, The	6.5	9.5	15.2	13.1	14.2	15.3
Ghana	13.8	15.4	14.6	15.8	14.4	16.2
Guinea	3.9	4.4	5.7	…	6.1	7.4
Guinea –Bissau	4.6	1.1	6.1	12.1	13.2	14.6
Liberia	3.1	6.3	14.4	19.5	20.1	22.8
Mali	16.4	17.2	18.0	24.4	26.3	28.1
Niger	4.8	6.8	12.3	14.2	15.2	16.2
Nigeria	12.3	13.2	15.4	14.5	15.6	17.2
Senegal	18.6	23.2	25.6	33.3	35.2	37.8
Sierra Leone	2.0	3.3	7.8	4.8	5.1	6.4
Togo	16.0	17.5	22.8	34.1	36.4	38.6

Source: World Bank, WDI (2016)

The issue of access to financial resources by the SMEs (which constitute over 90% of the private sector) is clearly depicted in Table 1. It is evident that from 2000 to 2016, the Deposit Money Banks' (DMBs) credit to the private sector was on the increase across the ECOWAS countries. Cape Verde's ratio was more than doubled, while Sierra Leone remained stable at very low levels of less than 7%. Relying on the above data, it is safe to conclude that, in virtually all the ECOWAS countries, averagely, there was an increase in DMBs credit to the private sector over the period. However, on the average, most ECOWAS countries have low access to commercial banks' credit, suggesting that private sector credit is difficult to access. The low access to finance is more pronounced in countries such as Sierra Leone, Niger and Guinea. This fact raises a fundamental question that seeks to unravel the factors that are responsible for the inability of SMEs within ECOWAS to access financial resources.

In the ECOWAS countries, there are generally policies and programmes intended to provide adequate financial resources to the SMEs by the different governments. Some international bodies also have the will to increase the flow of financial resources to the SMEs to enable them increase their operational capacities, productivity and competitiveness in both local and international markets. Also, there are informal sources of finance which could serve as alternatives to the banks such as owner's savings, money lenders, friends and relatives, credit and savings associations, etc (Metu, Nwokoye & Kalu, 2015).

2.3 Theoretical Consideration:
The Solow Growth Theory (SGT) is the centre piece of the traditional neoclassical growth theory and was championed by Robert Solow in 1956. The SGT has been the reference point for virtually all analyses relating to growth. With the addition of a second factor (labour) as well as the introduction of a third independent variable (technology), the SGT is regarded as

an augmented version of the Harrod-Domar formulation. According to the traditional neoclassical growth theory, output growth results from one or more of three factors, either increase in labour quantity and quality, increase in capital stock or improvement in technology. The key assumption of the neoclassical SGT is that capital is subject to diminishing returns in a closed economy. Given a fixed stock of labour, the impact on output of the last unit of capital accumulated will always be less than the one before. For purposes of simplicity, assuming that there is no technological progress or labour growth, diminishing returns implies that, at some point, the amount of new capital produced is only enough to make up for the amount of existing capital lost to depreciation. It should be noted that due to the assumptions of no technological progress and labour growth, the economy ceases to grow.

Schumpeter (1934) established the finance-innovation nexus and argued that the financial system fosters innovation by providing vital financial services such as information acquisition and risk management that lower transaction costs and consequently facilitate investment in risky but potentially profitable long run innovative entrepreneurial activity. This theory is based on the idea that innovative (entrepreneurial) activity is associated with specific market frictions and transaction costs which can be moderated by the activity of financial intermediaries and provision of specific financial services leading to more innovative activity. The assumptions of this theory include: (i) that investment in entrepreneurial activity usually involves information acquisition costs; (ii) that investment decisions by individual savers usually produce costs associated with liquidity and idiosyncratic risks; (iii) that innovative activity usually entails high start-up and operating costs and (iv) that investment projects create additional information problems once they have been financed and launched.

2.4 Some Empirical Pieces of Evidence:
The importance of SMEs in the process of industrialization and consequently, in the process of economic growth and development of a nation, has attracted several research interests towards examining the linkage between SMEs and economic growth in both developed and developing countries. Akugri, Bagah and Wulifan (2015) examined the contributions of SMEs to economic growth in Ghana based on cross-sectional data of Zebilla in the Bawku West District. The study employed a descriptive cross-sectional design using data from April to August 2013 while simple random sampling was used to select one hundred and sixty (160) SME respondents. The findings revealed that SMEs do not play a significant role in the employment of youths in the District while some infrastructural development like road construction could not be associated with the presence of SMEs. The study recommended among other things that entrepreneurs should be encouraged to form cooperatives to enable them access bank credits.

Alese and Alimi (2014) investigated the role of SMEs financing as a catalyst for growth in the Nigerian economy. The study employed the error correction mechanism and Engle-Granger causality tests and found that deposit money banks' loans as a form of SMEs financing option significantly improved growth in the long run but not so in the short run. The study further revealed a bi-directional causality between SMEs financing and growth. Also, Kalu and Madichie (2015) examined the causality between MSMEs financing and productivity growth in Nigeria during the period 1992 – 2013. The study employed ARDL bound test for cointegration, ARDL-based error correction model and the Toda – Yamamoto causality test. The results showed evidence of unidirectional causality running from MSMEs financing to MSMEs output; a bi-directional causality between MSMEs output and economic growth.

Quartey, Turkon, Abor and Iddrisu, (2017) provided some understanding about SMEs' access to finance within the West African sub-region. Using data from the World Bank's Enterprise Survey data set, the study examined the determinants of access to finance both at the sub-regional level and at the country level. The study found that, generally, at the sub-regional level, access to finance is strongly determined by factors such as firm size, ownership, strength of legal rights, and depth of credit information, a firm's export orientation and the experience of the top management.

In a study of Portuguese firms, Silva and Carreira (2010) revealed that the size of a firm and its cash flow are highly significant in influencing the firm's financial constraints whereas the age of the firm has no significant impact. In a cross-country study, Schiffer and Weder (2001) revealed that the size of a firm is negatively related to the risk it poses to the lender.

3.   The Research Method:

3.1 Theoretical Framework and the Model:

The aim of the study is to determine the impact of SMEs financing on industrial growth in Africa with particular reference to the ECOWAS countries. Thus, the theoretical framework of this study is based on the Solow Neoclassical Growth Model with modifications that incorporate the Schumpeter (1934) propositions as discussed in the previous section. The Solow growth model seeks to explain output growth as resulting from the combination of labour, capital and technological progress. The standard neoclassical model relating the above factors to output growth is generically specified as follows:

$$Y(t) = A(t) f[K(t), L(t)] \qquad\qquad 1$$

Where $Y(t)$ represents output in time t, $K(t)$ is capital input in time t and $L(t)$ is labour input in time t. $A(t)$ denotes the technology level of the economy or total factor productivity. With regard to the importance of finance on technological progress, Schumpeter (1934) argued that the financial system fosters innovation by providing vital financial services that lower transaction costs and consequently facilitate investments in risky but potentially profitable long-run innovative entrepreneurial activity. In other words, financially strong entrepreneurs promote change in the economic as well as business environment, and introduce innovations that make for technological breakthroughs. In line with the above, the researchers introduced in equation (1) investments in the SMEs to capture the effects of technological change driven by entrepreneurial innovations. Thus, the model of this study is functionally specified as follows:

$$INDV_{it} = f (SMEO_{it}, DMBC_{it}, INTR_{it}, GFCF_{it}, EMPI_{it}) \qquad\qquad 2$$

Where $INDV_{it}$ = industrial output proxied by industrial value added (annual % growth) for country i at time t; $SMEO_{it}$ = SMEs output (% of GDP) for country i at time t; $DMBC_{it}$ = deposit money banks' credit to SMEs (% of total credit) for country i at time t; $INTR_{it}$ = prime lending rate (%) for country i at time t, $GFCF_{it}$ = gross fixed capital formation (% of GDP) for country i at time t and $EMPI_{it}$ = employment in industrial sector (% of total) for country i at time t. In specifying our model in its full econometric form, we observed country fixed-effects which control for unobserved factors that differ across countries but are time-invariant for each country (e.g. welfare system, geographical and environmental differences). We also observed time fixed-effects which placed control for unobserved factors that are shared by all countries at a specific point in time. The following equation expresses the regression model:

$$INDV_{it} = \beta_0 + \beta_1 SMEO_{it} + \beta_2 DMBC_{it} + \beta_3 INTR_{it} + \beta_4 GFCF_{it}$$

$$+ \beta_5 EMPI_{it} + \lambda_j + \Upsilon_t + \mu_{it} \qquad\qquad 3$$

Where β_0 = common intercept term; $\beta_1 - \beta_5$ = parameters; λ_j = country-specific effects; Υ_t time-specific effects common to all countries, and μ_{it} = error term.

A priori Expectation: $\beta_1, \beta_2, \beta_4, \beta_5 > 0; \beta_3 < 0$

3.2 Nature and Source of Data:
The dataset is a secondary time series obtained from the World Bank's (2016) Enterprise Survey on small, medium and large companies across all countries of the world. This study was based on data from all the 15 ECOWAS countries which include Benin, Burkina Faso, Cape Verde, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra-Leone and Togo. The choice of these 15 ECOWAS countries was based on the availability of data.

3.3 Estimation Procedure:
The study employed panel data OLS regression procedure in examining the impact of SMEs financing on industrial growth in Africa. However, applying the panel data OLS regression without explicitly accounting for the time series properties (stationarity) of the relevant variables usually results in spurious regression (Gujarati & Porter, 2009). Against this background, the study embarked on panel unit root tests as well as panel cointegration tests. In panel unit root tests, we adopted four different types of unit root tests, namely Levin, Lim and Chu's (LLC) test; Im, Pesaran and Shin's (IPS) test; Fisher type ADF test and PP test. The unit root tests generally helped to determine the order of integration of variables which is usually the basis for the panel cointegration tests. For instance, if the variables are integrated of order one, the panel cointegration test is used to address the issue of non-stationarity of variables. For the panel cointegration test, we employed the Kao residual-based panel cointegration and the Johansen-Fisher combined panel cointegration tests. Unlike the Kao residual-based test, the Johansen-Fisher combined test allows for a mixed order of integration that tests the null hypothesis of r-cointegrating relationships against the alternative of (r+1)-cointegrating relationships which allowed us to identify the number of cointegrated variables in the system.

4. The Empirical Results and Discussion of Findings:
Here, the study examined the order of integration of the relevant time series variables based on four panel unit root tests namely: LLC, IPS, Fisher-type ADF and PP tests. The results of these tests are reported in Table 2. The results show that within the framework of the aforementioned tests, all the variables are integrated of order one, I (1).

Table 2: Unit Root Test and Order of Integration

Variable	Level	First Difference	Order of Integration
LLC test			
INDV	-1.291(0.133)	-19.321**(0.000)	I(1)
SMEO	1.132(0.131)	-23.276**(0.000)	I(1)
DMBC	0.4282(0.391)	-17.434**(0.000)	I(1)
INTR	-0.3121(0.383)	-15.105**(0.000)	I(1)
GFCF	0.6310(0.262)	-19.865**(0.000)	I(1)
EMPI	-1.143(0.124)	-21.107**(0.000)	I(1)

IPS test			
INDV	-1.401(0.124)	-21.201**(0.000)	I(1)
SMEO	0.4321(0.635)	-23.431**(0.000)	I(1)
DMBC	1.035(0.151)	-22.231**(0.000)	I(1)
INTR	-1.021(0.174)	-20.165**(0.000)	I(1)
GFCF	-0.4535(0.401)	-24.091**(0.000)	I(1)
EMPI	-1.128(0.134)	-22.603**(0.000)	I(1)
Fisher-ADF test			
INDV	19.201(0.092)	271.040**(0.000)	I(1)
SMEO	12.53(0.476)	253.654**(0.000)	I(1)
DMBC	9.362(0.675)	292.434**(0.000)	I(1)
INTR	10.160(0.602)	193.345**(0.000)	I(1)
GFCF	16.123(0.174)	281.421**(0.000)	I(1)
EMPI	12.702(0.391)	282.605**(0.000)	I(1)
PP test			
INDV	18.133(0.102)	281.140**(0.000)	I(1)
SMEO	11.23(0.506)	273.457**(0.000)	I(1)
DMBC	9.322(0.685)	262.337**(0.000)	I(1)
INTR	10.230(0.562)	293.042**(0.000)	I(1)
GFCF	16.023(0.197)	291.001**(0.000)	I(1)
EMPI	10.732(0.541)	272.102**(0.000)	I(1)

NB: Figures in parentheses are the p-values; ** denotes the rejection of the null of unit root at 1% level.
Source: Computed by the Authors using EVIEWS 10.

Following from the unit root test results, we proceeded to the panel cointegration analysis, utilizing the Kao residual-based cointegration test and the Johansen-Fisher combined cointegration test. The results of these tests are reported in Table 3.

Table 3: Panel Cointegration Test Results

Johansen-Fisher Combined Test

Hypothesized No. of CEs	Fisher stat. (trace test)	p-value	Fisher stat (max-eigen test)	p-value
r = 0	232.6**	0.0000	198.4**	0.0000
r ≤ 1	221.8**	0.0000	176.8**	0.0000
r ≤ 2	38.19*	0.0389	49.65*	0.0456
r ≤ 3	23.32	0.0712	19.84	0.1745
r ≤ 4	18.29	0.4908	15.72	0.2376
r ≤ 5	12.34	0.5982	11.23	0.3812

Kao Residual-Based Test	ADF stat.	p-value	Remark
Null Hypothesis: No Cointegration	-4.224665**	0.0000	Rejected

NB: **(*) denotes rejection of the null hypothesis of no cointegration at the 1%(5%) level. Both trace test and max-eigen test indicate 3 cointegrating equations.
Source: Computed by the Authors utilizing EVIEWS 10.

From Table 3, one can see that the Kao residual-based test rejects the null hypothesis of no cointegration given that the probability of the ADF statistic is less than 0.05. Also, both trace and max-eigen tests for the Johansen-Fisher combined reject the null hypothesis that $r \leq 2$ while indicating 3 cointegrating equations at the 5% level of significance. This implies that a stable long run relationship exists among the chosen variables. Thus, consistent estimates of long run

parameters is evident and this means that we can present the estimated long run coefficients of the panel regression model. The long run coefficients are reported in Table 4.

Table 4: Estimated Long Run Coefficients

Dependent Variable: INDV

Variable	Coefficient	Std. Error	t-statistic
SMEO	0.093843*	0.038129	2.461198
DMBC	0.321456	0.482321	0.666477
INTR	-0.018390*	0.007231	-2.543216
GFCF	0.231409*	0.103987	2.225365
EMPI	0.005671*	0.002136	2.654963

NB: * implies significant at 5% level.
Source: Computed by the Authors utilizing EVIEWS 10.

From Table 4, the SMEs output (SMEO) affects industrial growth (INDV) positively in the 15 ECOWAS countries as depicted by positive coefficient. The coefficient of this variable is positively significant at 5% level. This is quite expected as it is a known fact that SMEs account for over 90% of businesses in most African countries (UNECA, 2005). This is in line with the study by Demirguc-kunt, Beck and Honohan (2008) which stated that the primary line between financial institutions and economic performance is the provision of resources in order to drive expansion and sustainability. This implies that any policy action targeted to increase the output of the small and medium-scale enterprises (SMEs) will most likely facilitate the process of industrialization in Africa. The deposit money banks' credit to SMEs relates positively with industrial performance in ECOWAS countries, but it does not really exert any significant impact on industrial performance. The reason may be due to the inability of the SMEs to access credit from the commercial banks and this has become a major constraint on the SMEs growth in Africa. For this reason, most small and medium-scale businesses in Africa still depend on informal methods of financing such as owner's savings, money lenders, friends and relatives, credit and savings associations, *isusu* (Metu, 2017). The result also shows that the interest rate (prime lending rate) has a negative significant impact on industrial growth in Africa. This is in line with the theory which states that as interest rates rise, borrowing reduces. Thus, the inability of the SMEs to access credit in Africa may be due to high interest rate charges by the commercial banks, among other factors. The World Bank (2008) asserted that the characteristics of a firm alone do not ensure its access to external finance, rather, the institutional environment, existence and effectiveness of intermediaries also help to facilitate financial access. The coefficients of other control variables such as gross fixed capital formation (proxy for capital) and employment in industrial sector (proxy for labour) are as expected (positive) and statistically significant. That is, as labour and/or capital increases, industrial output increases. This implies that labour and capital inputs are among the determinants of industrial performance in Africa.

5. Conclusion/Policy Recommendations:

The study investigated the impact of SMEs financing on industrial growth in Africa. The study was based on panel data regression covering all 15 ECOWAS countries over a period of 31 years from 1986 – 2016. In implementing the panel data regression, the study engaged in panel unit root using the LLC, IPM, Fisher-type ADF and PP tests, and cointegration tests using the Kao residual-based and Johansen-Fisher combined tests. The study also placed adequate control for unobserved heterogeneity among the ECOWAS countries using a well specified

fixed effect in exploiting the time dimension present in the dataset. The results show that SMEs output significantly affects industrial growth positively while the DMBs credits to the SMEs does not have significant impact on industrial performance. The results further reveal that interest rates have a significant negative impact on industrial growth. Based on these findings, the authors recommend that the monetary authorities of the ECOWAS countries could encourage the SMEs by ensuring ease of access to finance available interest-free loans microfinance institutions to make.

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