THE IMPACT OF SMALL AND MEDIUM SCALE ENTERPRISES ON THE GROWTH OF NIGERIAN ECONOMY (1980-2014)

BY

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CERTIFICATION

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DEDICATION

This research work is dedicated to the ALMIGHTY GOD, the maker of heaven and earth, my CREATOR, the lifter of my head, my COMFORTER, my SAVIOUR, my ALL, and also to the most wonderful parents on earth, Mr and Mrs. G.S. Adeniyi for their support spiritually and financially.

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ABSTRACT

There has been a significant growth of small and medium scale enterprises on the growth of Nigerian Economy overtime. The financial system of most developing countries including Nigeria have been under financial stress as a result of the twin oil shocks during the 1970's undermined the mass production. This work examine the impact of Small and Medium Scale Enterprises on the Growth of Nigerian Economy using a time series data for the period of 1980 to 2014. Consequently, the researcher investigate the possibility of short run and long run relationship between Small and Medium Scale Enterprises, the Engle and Granger test was carried out to test the cointegration among the variables, Error Correction Model were adopted to determine the short run relationship among the variables and the discrepancy between the long run and short run value of SMEs credit. The methodology adopted in this project was the secondary data using the E-view econometric package and estimated using the Ordinary Least Square Method (OLS). Stationarity Tests such as Augmented Dickey Fuller Test were also utilized with the use of relevant statistical data from the central Bank of Nigeria, World Development Indicator and journals in the study. The result hence provided little evidence that Small and Medium Scale Enterprises has contributed positively to Nigeria's economic growth though insignificant. It has been therefore recommended that the positive impact of small and medium enterprises (SMEs) to significantly foster economic growth in Nigeria, profitable and productive investments on Small and medium Scale Enterprises (SMEs) should be carried out.

Hence, to enhance the growth of Small and Medium Scale Enterprises in Nigeria, the financial institutions and Small and Medium Industries Equity Investment Scheme (SMIEIS) should reappraise and ease the stringent conditions involved in assessing loans by SMEs operator.

TABLE OF CONTENTS

CHAPTER TWO: LITERATURE REVIEW

CHAPTER THREE: METHODOLOGY

LIST OF TABLES

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Small and Medium Scale Enterprises are sub-sectors of the industrial sector which play crucial roles in industrial development Ahmed, S. (2006). Rapid and persistent productivity growth of the domestic economy of Nigeria has since the political independence in 1960 been of supreme importance to succeeding governments in the country. Consequently, governments have since implemented numerous national improvement plans and programmes aimed at boosting productivity, as well as, diversifying the domestic economic base and emphasizing on the small and medium scale production. In recent years, particularly since the adoption of the structural adjustment programme in Nigeria in 1986, there has been a decisive paradigm from the ostentatious, capital intensive, large scale industrial project based on the philosophy of import substitution and export promotion to small scale industries with immense potentials for developing domestic linkages for rapid, sustainable industrial development. Apart from their potential for ensuring a self-reliant industrialization, in terms of ability to rely largely on local raw materials, small scale enterprises are also in a better position to boost employ of domestic raw materials as input, small and medium enterprise, are also in a better position to boost employment, guarantee a more even distribution of industrial development in the country, including the rural areas, and facilitate the growth of non-oil exports.

Awoniyi (2010) asserted that for any developing country to grow and develop economically, greater attention and concentration must be given to SMEs sector. The SMEs sector is a viable and important means to utilize the locally available resources, develop local technology for production for local consumption and export trade. Small and medium enterprises development in area of agriculture is a means of sustainable food production, improve employment generation and combat food shortage in developing countries.

However, the influential role played by SMEs notwithstanding its development is everywhere constrained by insufficient financial support and poor administration. These factors are possibly useful to make any right thinking leader opine the need for a dedicated financial institution solely for the propagating their (SME) course.

Nevertheless, Finance has been identified in many business surveys as one of the most important factors determining the survival and growth of small and medium enterprises (SME) in both developing and developed countries (UNCTAD,2001). Access to finance allows SME to undertake productive investments to expand their businesses and to acquire the latest technologies, thus ensuring their competitiveness and that of the nation as a whole. Poorly functioning financial systems can seriously undermine the microeconomic fundamentals of a country, resulting in lower growth in income and employment. Despite their dominant numbers and importance in job creation, SMEs traditionally have faced difficulty in obtaining formal credit or equity. This is because the maturities of commercial bank loans extended to SME are often limited to a period far too short to pay off any sizeable investment and poor collateral (Arogundade, 2010).

Accordingly, the SME segment in Nigeria is faced with the problem of ease of access to funds. Even the financial sector reform of the Structural Adjustment Programme (SAP) in 1986, which was meant to correct the structural imbalance in the economy and liberalize the financial systems, did not achieve the expected results. As Edirisuriya (2008) reported, financial sector reforms are expected to promote a more efficient allocation of resources and ensure that financial intermediation occurs as efficiently as possible. This also implies that financial sector liberalization brings competition in the financial markets, raises interest rate to encourage savings, thereby making funds available for investment, and hence lead to economic growth (Asamoah, 2008). Therefore, it is logical to assume that financial liberalization enhances funds mobilization and accessibility, which are required for SMEs' performance.

The vital role of commercial bank credit in generating growth in SMEs within an economy has been widely acknowledge for instance Schumpeter (1932) established that banking sector facilitate technological innovation through their intermediary role. His emphasis was that efficient allocation of savings through identification and funding of entrepreneur with best chances of successfully implementing innovative product and production are tools to achieve real economic performance.

However, acknowledging the role of commercial bank credit in an economy various banking reformed has been established by the monetary authority in Nigeria in enhancing credit accessibility. The overall intentions of these reforms have been to ensure financial stability so as to influence the growth of the economy and also enhance bank to play critical role of financial intermediation in provision and accessibility of credit in the Nigerian economy. These various reforms have led to the improvement in banking services to economic units. However, despite this increase in credit supply to the SMEs the performance of the sector in Nigeria has been dwindling. Therefore, this study examines the impact of small and medium scale enterprises on the growth of Nigerian Economy.

1.2 STATEMENT OF THE PROBLEM

In spite of continuous policy strategies to attract credits to the SMEs, most Nigerian SMEs have remained unattractive for bank credits supply. For instance, as indicated in central Bank of Nigeria (CBN) reports, almost throughout the regulatory era, commercial bank's loans and advances to the SMEs sector deviated persistently from prescribed minimum. Furthermore, the enhanced financial intermediation in the economy following the financial reforms of the 1986, credits to SMEs as a proportion of total banking credits has not improved significantly.

Afolabi (2013) asserted that one of the problems faced by SMEs operators in Nigeria is that government does not give chance or consider them when making policy in which priority is given to large organizations. This makes financing the main constraining factor to SMEs

growth and hinders their potentials for enhancing economic growth in Nigeria. Available information from CBN,2012 shows that, as at 1992 commercial bank loan to SMEs as Percentage of total credit was 27.04% in 1997 and decreases to 8.68%, 0.85% and 0.14% in 2002, 2007 and 2010 while 2012 recorded 0.15%. Consequently, many SMEs in the country have continued to rely heavily on internally generated funds, which have tended to limit their scope of operation.

1.3 OBJECTIVES OF THE STUDY

The main objectives of the study is to examine the impact of SMEs have made on the growth of Nigerian economy. Some other objectives are as follows:

1. To examine the impact of commercial bank credit on the growth of SMEs in Nigeria.
2. To evaluate the relationship Economic Growth and SMEs performance in the Nigerian economy.
3. To examine the short run and long run co-integration among the variables

1.4 RESEARCH QUESTION

In the course of this study, there will be some question that will encountered, some of which are as follows:

1. How do SMEs impact to the growth of the economy?
2. How have SMEs impact to the reduction of unemployment in Nigeria?

1.5 JUSTIFICATION FOR THE STUDY

This project work will help in filling the gap of lack of growth strategies for long-term actualization of their goals and objectives. Business enterprises formulate wrong or short-term goals or strategies without taking into consideration the long-term benefit and future of the firm. Lack of creative and innovative business ideas, underdeveloped entrepreneurship culture and limited understanding to modern production technologies, marketing and business

techniques makes their strategies to failure. The reason why some small and medium scale enterprises lose their customers or remain stagnated is because there is no sound strategy laid down for good customer relationship and firm's image. Some business enterprises have sound strategies but do not know how they can be effectively applied. This is due to the fact that SMEs have created employment, utilized local resources, produces intermediate, expanded output and also create more job opportunities.

Aremu and Adeyemi (2011) claimed that their findings have shown that most SMEs particularly in Nigeria die within their first five years of existence. It was also revealed that smaller percentage goes into extinction between the sixth and tenth year while only about five to ten percent of young companies survive, thrive and grow to maturity. Many factors have been identified as likely contributing factors to the premature death. They include insufficient capital, lack of focus, inadequate market research, overconcentration on one or two markets for finished products, lack of succession plan, inexperience, lack of proper book keeping, irregular power supply, infrastructural inadequacies (water, roads etc), lack of proper records or lack of any records at all, inability to separate business and family or personal finances, lack of business strategy, inability to distinguish between revenue and profit, inability to procure the right plant and machinery, inability to engage or employ the right caliber staff, cut-throat competition (Basil, 2005:34).

Aremu and Adeyemi (2011) examined that small and medium enterprises have been considered as the engine of economic growth and for promoting equitable development. It was noted that the SME sector is the main driving force behind job creation, poverty reduction, wealth creation, income distribution and reduction in income disparities.

Chidi and Shadare (2011) investigated the challenges confronting human capital development in small and medium-sized enterprises (SMEs) in Nigeria. It was found that human capital development in Nigerian SMEs leaves much to be desired. They recommended the need to address the issues of human capital development in SMEs and for SMEs to embrace the investor in people criteria if the desired corporate and national goals are to be realized.

1.6 SCOPE AND LIMITATION OF THE STUDY

The study covers the period of 1980 to 2014. The focus of this study is on how SMEs have impacted on the growth of the Nigerian economy.

1.7 ORGANISATION OF THE STUDY

1. Chapter one introduces the study, the scope, it identify the relevance and set goals and objectives of the studies as well as the organisation of the study.
2. Chapter two reviews of the existing literature by assessing and evaluating the study with the frame work of previous research and the empirical reviews.
3. Chapter three is on the research methodology, which specify the method of data collection and the model specification and the estimation techniques of the research.
4. Chapter four is on the analysis of data, interpretation of results and empirical findings.
5. Gives the summary, conclusion and recommendation; limitation of the study and suggestion for further research.

1.8 DEFINITION OF TERMS

Various bodies, organizations and institutions have defined SMEs differently depending upon their purpose, objective and use. For this research, the following definitions have been adopted:

i. **Micro Enterprise:** A firm, whose total cost including working capital but excluding cost of land is not more than ten million naira (N10,000,000) and/or with a labour size of not more than thirty (30) full-time workers and/or a turnover of less than two million naira (N2,000,000) only.

ii. **Small Enterprise:** An enterprise whose total cost including working capital but excluding cost of land is between ten million naira (N10,000,000) and one hundred million naira (N100,000,000) and/or a workforce between eleven (11) and seventy (70) full-time staff and/or with a turnover of not more than ten million naira (N10,000,000) in a year.

iii. **Medium Enterprise:** A company with total cost including working capital but excluding cost of land of more than one hundred million naira (N100, 000,000) but less than three hundred million naira (N300, 000,000) and/or a staff strength of between seventy-one (71) and two hundred (200) full-time workers and/or with an annual turnover of not more than twenty million naira (N20, 000,000) only.

iv. **Large Enterprise:** Any enterprise whose total cost including working capital but excluding cost of land is above three hundred million naira (N300,000,000) and/or a labour force of over two hundred (200) workers and/or an annual turnover of more than twenty million naira (N20,000,000) only. Other abbreviations, terms and notations used in this study include but are not limited to the following:

ix. **DFIs:** Development Finance Institutions are companies involved in project and development finance such as the Bank of Industry (BOI)

x. **SMEs:** Small and Medium Enterprises are those firms, which satisfy the definitions given above

xi. **SMEDAN:** Small and Medium Enterprises Development Agency of Nigeria

CHAPTER TWO

LITERATURE REVIEW

2.1 CONCEPTUAL ISSUES

SMEs in Nigeria are seen as the backbone of the economy and a key source of economic growth, dynamism and flexibility. A study done by the Federal Office of Statistics shows that 97% of all businesses in Nigeria employs less than 100 employees, implying that 97% of all businesses in Nigeria are "small businesses". The SME sector provides, on average, 50% of Nigeria's employment and 50% of its industrial output. Indeed, there appears to be an agreement that the development of SMEs in Nigeria is a step towards building a vibrant and diversified economy. The definition of SMEs depends mainly on the level of development of the country. In most developed market economies like the United States of America (USA), U.K. and Canada the definition criterion adopted a mixture of annual turnover and employment levels.

In Nigeria, the Small and Medium Industries Enterprises Investment Scheme (SMIEIS) defines SME as any enterprise with a maximum asset base of N200 million excluding land and working capital and with a number of staff employed not less than 10 or more than 300. Nwokoye defines Small and Medium-Scale business as "any enterprise employing between five and one hundred workers with an annual turnover of about four hundred thousand Naira (N400, 000). The Federal Ministry of Commerce and Industry defines SMEs as firms with a total investment (excluding cost of land but including capital) of up to N750, 000, and paid employment of up to fifty (50) persons. SMEs exist in the form of sole proprietorship and partnership, though some could be registered as limited liability companies and characterized by: simple management structure, informal employer/employee relationship, labour intensive operation, and simple technology, fusion of ownership and management and limited access to capital. The

seven major sources of funding available to SMEs in Nigeria include: personal resources, family and friends, partners or business associates, informal financial markets, banks, specialized funding facilities e.g. NERFUND and specialized financial institutions e.g. NBCI, BOI, NIDB etc. Their role in economic development includes: technological/industrial development, employment generation, technology acquisition, capacity building, promotion of economic growth, increased standard of living, industrial dispersal or spread, servicing of large-scale industries, export promotion, structural transformation of rural areas, flexibility and low take-off requirements.

This study therefore, aims at cross-examining various SMEs policies adopted by Nigerian Government to discuss the impact of business environment of SMEs growth, to examine challenges and factors hindering the growth of SMEs and their impact to the economic growth. Hence, the literature review is therefore broadened into three namely, conceptual, theoretical and empirical review.

2.1.1 THE ROLE OF GOVERNMENT ON SMEs IN NIGERIA

The following are the role of government on small and medium scale enterprises

a. **Industrial development centers (IDCs)**

The industrial development centers (IDCs) are established to provide extension service to small scale industries in areas such as technical appraisal of loan application, training of entrepreneurs, management assistance, product development, production planning and control as well as other extension services. The first IDC was established in Owerri in 1962 by the then eastern Nigerian government and was later taken over by the federal government. Subsequently, in the second national development plan (1970-1975), the first government initiated the setting up of more IDCs at Zaria, Oshogbo, Maiduguri, Abeokuta, Sokoto, Benin-city, Uyo, Bauchi, Akure, Ilorin, Port Harcourt, Kano and Ikorodu.

b. **Small scale industries credit schemes (SSICS)**

A basic thrust of government's financial policy with respect to small and medium industries in the provision of credit facilities to ensure their development and sustenance. Accordingly, the federal government set in 1971, a small industries development program to provide technical and financial support for the small scale industry. This led to the setting up of the small industries committee (SICC) to administer the small industries credit fund (SICF) throughout the country. The SICF was formally launched as the small scale industries scheme (SSICS) in the third development plan (1975-1980). The scheme was operated as a matching grant between the federal and state governments and was designed to make credit available in bilateral terms to small scale industries and was managed by the state ministry of industry, trade and cooperatives through the loan management committees (LMCs). However, the SSICS which was meant to be a revolving loan scheme became increasingly starved of funds arising from massive loan requirement default, such that the federal government by 1979 extricated itself from the Nigerian bank of commerce and industries (NBCI) as an apex financial body for funding small scale industry.

c. The Nigerian bank for commerce and industry (NBCI)

The NBCI was set up by the federal government in 1973 (through 22 decree) to provide among other things, financial services to indigenous business community, particularly small scale industries, NBCI has been merged with the NIDB and NERFCN to form the new bank of industry.

d. **The Nigerian industries development Bank (NIDB)**

The NIDB which was set up in 1964, provided credit and other facilities to industrial enterprises especially to the medium and large scale industries. Some small scale industries also have its scope of financing.

e. The Central Bank of Nigeria (CBN)

The central bank of Nigeria has since 1970 been instrumental to the promotion and development of industries particularly in the small scale sub-sector. The CBN credit guidelines required that commercial merchant bank allocate a minimum stipulated credit, to the sector classified as preferred, including the small scale industries. The CBN in 1971-1980 directed that at least 10% of the loans advanced to indigenous borrowers should be allocated to small scale industries. This was subsequently raised to 16% and minimum of 20% of total loans and advances from April 1980 and 1990 respectively.

f. **The small and medium enterprises development of Nigeria (SMEDAN)**

This is the major structure designed to provide institutional support for small and medium scale industries established in Nigeria in 2003.

- **Responsibilities of SMEDAN**

- Initiating and articulating ideas for SME's policy thrust
- Overseeing, monitoring and co-coordinating the development of the SME sector.
- Promoting and providing access to industrial infrastructure such as layouts.
- Policy development.

g. **The Family Economic Advancement Program me (FEAP)**

The FEAP was not successful primarily of because been exclusive government initiatives; beneficiaries were unwilling to repay loans in the belief that it was their share of the "National cake". There was as the problem of lending to poorly packed projects and complete lack of entrepreneurial skills by the promoters.

h. **The National Economic Re-Construction Fund (NERFUND)**

The federal government through decree 2 of the 26th January 1989 established the national re-construction fund (NERFUND). The main focus of NERFUND is the provision of small and medium funds to long term funds to wholly Nigerian owned small scale industries to

manufacturing and agro-allied industries, mining, quarrying, industrial support services, equipment leasing and other projects. The NERFUND decree provides funds for eligible industries under the scheme.

i. The State Governments

State governments, through their ministries of commerce and industries also promote the development of small and medium scale industries. Some state governments promote small scale industries through state-owned finance and investment companies which provide technical and financial assistance to small scale industries. However, owing to numerous constrains, some were less active than others.

j. The national directorate of Employment (NDE)

This was established in 1986, the NDE is another channel through which government has promoted and initiated the development of small scale industries.

In January 1987, NDE launched a number of programmes to generate self-employment. These were:

- Small scale industries (SSI)
- Agriculture
- Youth empowerment and vocational skills development
- Special public works.

k. Other technical training and extension service program

This includes activities of Industrial Training Fund (ITF), raw materials research and development council (RMRDCO), federal institute of research, Oshodi (FIRO), Project Development Agency (PRODA) and Centre for Management Development (CMD).

2.1.2 THE IMPACT OF SMALL AND MEDIUM SCALE ENTERPRISES ON ECONOMIC GROWTH

The benefit of small and medium scale industries in any economy, is easily noticeable, there include:

a. They impacts to the economy in terms of output of goods and services.

b. Creation of jobs at relatively low capital cost; especially in the fast growing service sector.

c. The provision of a vehicle for reducing income disparities.

d. Developing a pool of skilled and semi-skilled workers as a basis for the future industrial expansion. Improving the forward and backward linkages between the economically, social and geographically diverse sectors of the economy.

f. Providing opportunities for developing and adapting appropriate technological approaches.

g. Small and medium scale industries, offer an excellent breeding ground for entrepreneurial and managerial talent.

Below is the socio-economic contribution of small and medium scale enterprises in the growth process of the Nigerian economy.

a. Stimulation of indigenous entrepreneurship

Social benefits of small and medium scale industries are derived from their stimulating influence on indigenous entrepreneurship and technology. Here, there provide opportunities for the expression of the latent entrepreneurial ambition, asides serving as a vehicle for the propagation and diffusion of innovative ideas both indigenous and foreign.

b. Employment creation

A very important rationale for promoting small and medium scale industries is their job creating potentials. This stems mostly from their labour intensive and consequently capital saving methods of operation.

c. Wealth distribution

They achieve this by providing paid employment or remunerative economic activities to a great number of rural and urban people on one hand and supplementing their income from the regular jobs on the other hand, small firms contribute significantly to the reduction of income disparities.

d. Utilization of local resources

Small scale industries can be said to be a greater local resource user than their larger counterparts. Their local resource utilization encompasses the use of local raw materials and discarded by products of large firms or primary output in their production process. Their employment of local resources includes the opportunities afforded people with limited formal training or educating a large number of which can be found in developing nation.

e. Disposal of economic activities.

Small scale business constitute a sector of the industrial sector offering easy entry to prospective entrepreneurs making low demand on capital intensity and not dependent on significant economies of scale of production and marketing for take-off survival. Rather there look for greater demands on the skills and the ingenuity of their owners.

f. Mobilization of Savings

Another important role of small scale and medium scale industries is that there helps in tapping idle financial resources, which ordinarily would not be brought into the banking mechanism.

2.1.3 FEATURES OF SMEs IN NIGERIA

The varying definition of small and medium scale industries not withstanding their characteristics are universally recognized von Katarama, (1984). They relatively small owe largely to limit access to financial resources. The following below are the major feature of Nigerian small and medium scale industries.

a. **Sole proprietorship**

This is a feature of small and medium scale enterprises in Nigeria which is characterized by single management structure which combines ownership and management in one person. Over 50% of business in Nigeria are run as sole proprietorship. This is indicated in a business where a person bears the risk of the business as well as the profit. Most small scale businesses in Nigeria are founded by sole proprietors. The single advantage derived from this feature is the dynamism it offers in terms of decision making and administration. More so, one of the greatest limitation of sole proprietorship is limited access to funds and expertise derived from two or more owners of the business. The small and medium scale industry operates at such a low scale that is unattractive to banks. Banks in Nigeria are interested in investing in month watering opportunities which leads to the neglect of the small and medium scale industries.

b. Partnership

Partnership is another feature of small and medium scale industries. Since partnership spirit in Nigeria is at its infancy, partners in many small and medium scale industries pursues individualistic goals at the expense of the overall interest of the small and medium scale industries. Consequently the mortality among small and medium scale industries is on the rampage as a result mistrust that often develops among the owners (i.e. poor partnership spirit).

c. Over dependence on imported materials

Another major feature of many small and medium scale industries is their over reliance on imported materials and spare parts. In fact, no industrial sub-unit under small scale category is immune from this structural weakness.

Some other characteristics of small and medium scale industries in Nigeria are as follows:

a. They are typically small and are largely limited access to financial resources.

b. There are known by simple management structure, which generally combines ownership with management.

c. There is flexibility in decision making and the prevalence of largely informal employer – employee relationship.

d. They produce their output with less capital and a greater labour input than largely industries. The level of education of the owner/ proprietor is usually low with consequent low level of business management, technical skills and market information.

2.1.4 PROBLEMS OF SMEs

1. **High Interest Rate**: One of the biggest problem confronting SMEs is paucity of funds for growth and expansion. When these funds are sources, the interest rates are prohibitive thereby making goods uncompetitive with the imported ones.

2. **Import Liberalization**: The over generous application of this policy as a result of the World Trade Organization (WTO) code, has made a mess of our infant industries by exposing them to rude and unfair competition to dumped goods from all over the globe. Government must moderate this policy by protecting our local products. Globalization must be approached with reason and protective judgment. Free Trade as a global concept should not be adopted at expense of our domestic economy. Importation of primary goods that can be produced locally by our SMEs should be discontinued and consumers should be educated to buy made in Nigeria goods so as to promote local employment.

3. **Company Income Tax**: SMEs should be exempted from company tax for 10 years to enable them pay off their loans and get established. This will enable them to grow, create employment and produce goods and services for the economy. The products of viable SMEs will discourage frivolous importation which puts pressure on our foreign exchange and over-heats inflation.

2.1.5 CHALLENGES FACED BY SMEs IN NIGERIA

The myriad of problems facing the smooth sail of small business in Nigeria have contributed to the said reality of several entrepreneurs closing shows daily. Despite Nigeria's huge human and natural resources on document, small and medium scale business still lags behind their counterparts in many countries. Also, Nigeria with its huge natural and human resources cannot be compared with the progress of small and medium scale business in countries like: Malaysia, India and South Africa.

However, the challenges of small and medium scale industries in Nigeria are discussed under the following (sub topics):

a. **Infrastructural Inadequacies**

This is due to lack of sufficient infrastructure, inadequate provision of essential services such as; telecommunications, good roads, electricity and water sully which constitute one of the greatest constraint to small business development. Most, all medium scale industries resort to private provision of this infrastructure at great expense.

b. **Poor Management Structure**

Poor management affects small and medium scale industries adversary, most small business are one-man business. This hinders effective control and planning.

c. **Lack of Access to Affordable Financing**

The banking sector tends to be unknown in meeting the credit requirement of small and medium scale industries. A senior banker in Nigeria was once quoted as saying, "the banks are not charity, so why should they take risk with small and medium scale enterprise when they can make good profit elsewhere". The banks also regard many small and medium scale industries as high risk ventures because of absence of succession plan in the event of the death of the proprietor.

More worrisome is the inability of small and medium scale industries to adequately tap available finance from the capital market. Access to finance allows small and medium scale enterprise to undertake productive investments to expand their business and acquire the latest technologies thus ensuring their competitiveness and that of a nation as a whole. Despite their dominant numbers of importance in job creation, small and medium scale industries traditionally have faced difficulty in obtaining formal creditor equity. This is because the maturity of commercial bank loans extended to small and medium scale industries are often limited to a period far too short to pay for any sizeable investment.

d. **Lack of Accounting Records**

Many small businesses do not keep proper records of their transactions. This hinders the activities of the enterprise. This lack of accounting records makes it difficult for credit or investor to assess the credit worthiness of potential small and medium business potentials.

e. **Risky and uncertain business**

The risky uncertain business environment leads to the fear that small firms will not be able to repay debts and this is reinforced by a history of small and medium scale industries non-payment.

f. **Unstable macroeconomic variable**

Another major concern that is very worrisome in Nigeria is lack of stable macroeconomic variables. This has over the years reduced the entrepreneur's confidence in doing business in small and medium scale as they are unable to have stable financial plans and budgets. This has in turn brought inefficiency and technological backwardness. The Nigerian economy suffers distortions by inflation, high interest rates and exchange rate instability culminating in cost escalation. Statistic has it that, the moving average inflation for 2004 was 19.15% whilst the 12 month or period to period inflation was 12% (June 2003 – July 2004) and 13% (August 2005 – August 2004). Bank interest rates has also remained comfortably high as most banks

interest lend at 22.5% apart from about 3% duly charge flat and upfront tagged appraisal and management fee. With the value of naira on the downward trend, it is nearly impossible for a small scale business to make any impact on the Nigerian economy. Government must continue the current reform policies especially the target to reduce inflation and interest rate to a single digit. Government must pursue other policies that would support the entrepreneur for the small scale business operator to make impact in the economy.

g. Taxes and tariffs

Entrepreneurs in Nigeria are saddled with all sort of unimaginable taxes and tariffs due to the absence of a unified and gazette tax regime amongst the 3 tiers of government, each of them especially the state and local government intending to enact all forms of obnoxious and draconian tax laws to raise money at the taxies of the investing entrepreneur.

Amongst these taxes are;

i. Warehouse permit

ii. Radio/Television license fees

iii. Mobile advertisement tax

iv. Water borehole tax

v. Generator tax

vi. Fuel tax

vii. Environmental protection tax

viii. Land use charge

ix. Capital gain tax

Also inclusive are the company income tax, stamp duty charges withholding tax value added tax. The resultant effect of these deductions on the cost of production need not be over emphasized.

The decentralization of tax rolls amongst these three tiers of government, will surely lead to reduced taxes and a more efficient and effective taxing system.

2.1.6 BENEFITS OF SMES

The benefits of SMEs are well documented in the literature and would only be summarized here to put into proper perspective the issues involved. They provide an effective means of stimulating indigenous entrepreneurship, create greater employment opportunities per unit of capital invested and aid the development of local technology. Through their wide dispersal, they provide an effective means of mitigating rural urban migration and resource utilization. By producing intermediate products for use in large-scale enterprises, they contribute to the strengthening of industrial inter-linkages. Small enterprises are known to adapt with greater ease under difficult and changing circumstances because their typically low capital intensity allow products lines and inputs to be changed at relatively low cost. They also retain a competitive advantage over large enterprises by serving dispersed local markets and produce various goods with low scale economies for niche markets. SMEs also serve as veritable means of mobilization and utilization of domestic savings as well as increased efficiency through cost reduction and greater flexibility. They have been very prominent in the manufacture of bakery products, leather manufactures, furniture, textiles and products required for the construction industry. The SMEs in Nigeria have expanded following the adoption of the Structural Adjustment Programme (SAP) to fill the supply gap in industrial consumer goods created by the difficulties faced by large scale firms which have not easily adapted to the policy changes of SAP.

2.1.7 WHAT LED TO THE DECLINE OF SMEs IN NIGERIA

When Structural Adjustment Programme (SAP) came with its abundant devaluation of Naira most of the SMEs collapsed because the quantum of Naira they required to purchase the appropriate amount of foreign exchange for their raw materials had shrunk considerably. Most

of them were forced to close down due to shortage of working capital required to finance constant importation of raw materials. The banks could not help them because most of them were either undercapitalized or about to be distressed as a result of the effects of SAP. This continued until the Naira became totally devalued and both the interest rate and the rate of inflation got out of hand. One can say without any fear of doubt that unemployment escalated when the mechanism for sustaining SMEs were dismantled by SAP. Unemployment is now the greatest problem confronting our country and it is the major cause of urban unrest and escalation in violent crimes. About 48 percent of our population are presently unemployed while over one million students graduate from our tertiary institutions annually to join the army of unemployment people. We must build capacities to develop more SMEs by empowering these unemployed through technical training and financing. In countries where SMEs are given priority attention, they cater for over 65 percent of the national employment and contribute significantly to the GDP. In our country presently, the sector is moribund because of multiplicity of problems. Nigeria presently ranks 140 out of 174 countries on the Human Development Index (HDI) and the official estimates put the poverty level at 70 percent of the population. In 1980, the poverty level was 27.1 percent but in 1992, it deteriorated to 42.8 percent and plummeted to 65.6 percent by 1996. These show that as unemployment deteriorates, the level of poverty in our country also deteriorates. The major demand of poor people is not food but various types of input and facilities that can help them generate income on the bases of their skills and proficiencies.

2.1.8 CONCEPTUALIZING SMEs AS ENGENDERING ECONOMIC GROWTH

SMEs brings about expansion in productivity, increased employment, innovations, creativity, improved skilled, larger output, improved technological development, and integration with larger enterprises. All these attributes could eventually lead to industrialization. And industrialization engenders economic growth. Ogundipe (1988), as cited in Alege (2004)

observes that industrialization has positive impact on economic growth, it results in increased productivity, high per capital income, international flow of resources, urbanization and high rate of structural transformation, industrialization engenders economic diversification, improve balance of payment, rural transformation, greater elasticity higher standard of living. This ultimately could help to reduce poverty level and bring about increase in life expectancy, positive improvement in adult literacy, increase rate of unemployment and causes a more equitable distribution of income.

2.2 THEORETICAL FRAMEWORK

Historical facts show that prior to the 19th century, cottage industries, mostly small scale enterprises controlled the economy of Europe. The industrial revolution changed the status and introduced mass production. The twin oil shocks during the 1970's undermined the mass production model, which triggered the unexpected reappraisal of the role and importance of small sized industries in the global economy. Findings, by economist over the years show that small firms and entrepreneurship play very significant role in economic growth and development. The history of indigenous business in Nigeria is same as that of small scale and medium scale enterprise.

Theoretically, the business we know is said to stem the theory of "Laissez faire" capitalism propounded by Adams Smith in 1776 John (1999). It is an established fact that, the developing nations especially in Africa are faced with the dilemma of choosing appropriate development strategy that could lead to the path of industrialization which would ensure decent living standard in the turning population. Oshinowo, (1997).

The pattern of industrial growth in Nigeria shows that prior to independence, there were little or no manufacturing activities in Nigeria. The predominant economic activity then involved trading imported finished goods both consumer and capital and exportation of primary products

mainly agricultural and mineral goods which are locally available in the regions. Some of these exported products includes, cocoa, cotton, coffee, groundnut, coal, timber, gold, and tin.

The post-independence era was aimed at industrializing the country by producing what we're being exported, thereby conserving foreign exchange. The imported machinery and equipment were financed through the export of domestic raw and semi-processed commodities. The local industries were being protected from foreign competition through high import regimes. Aided by the oil boom of the 1970's government invested in heavy industries such as iron and steel, machine tools, vehicle assembly plants, fertilizer manufacture sugar mills, refineries and petrochemical industries. In addition, the private sector also advocate import substitution industries to be involved in what was term MIXED ECONOMY. However, in order to address the apparent dominance of foreign investment in the Nigerian economy, the indigenization policy was introduced through the indigenization decree 1972 and 1977. The policy was intended to give Nigerians greater opportunities to participate effectively in the productive resources sector of the economy.

There are various theories that explain economic growth with respect to small and medium scale enterprises. These are:

1. The Endogenous growth model
2. The Exogenous Growth Model or Neoclassical Growth model

2.2.1 THE ENDOGENOUS GROWTH THEORY

This theory holds that economic growth is primarily the result of endogenous and not external force. In Endogenous growth theory investment in human capital, innovation and knowledge are significant contributors to economic growth. The theory also focuses on positive externalities and spillover effects of knowledge based economy which will lead to development economies. The endogenous growth rate also holds policy measures can have an impact on the long-run growth rate of the economy. For example, subsidies on research and development or

education increase the growth rate in some endogenous growth models increasing incentive to innovation. According to Brwon, Medott and Hamitton (1990), Many Small firms are created as a last resort rather than as first choice and have therefore invited growth potential. Although, the pro-SMEs view argues that small firms are more innovative than large firms; the micro economic evidence is at best inconclusively.

In order to explain the continuous growth and differences between countries, Romer (1986) and Lucas (1988) developed a model where the rate of technological development defines endogenously the growth of economy. They proposed that economic growth is driven by technological development. Technological development is a result from research and development (R&D) efforts of profit maximizing agents. The investments in technological development and human capital lead to higher economic growth. One implication of this is that because technological development differs between countries, the level of production between different countries does not need to converge.

Endogenous growth theories also provide explanation, why sustainable economic growth is possible. Romer and Lucas explain that technological progress is behind the long-run economic growth. They propose that the economic growth is correlating positively with the level of research and development. The assumed relation between the level of research and development and economic growth has been also the main target of criticism against endogenous theories. This connection would mean that population growth increases research and development activities and this would then increase economic growth. This has been named as scale effect of endogenous growth model. There is however a lot of evidence that population growth actually decreases economic growth. De Long & Summers (1991.)

The prediction of economic growth correlating with the level of research and development has been rejected by Jones (1995). He founds no correlation between the number of scientists and engineers and economic growth in France, Germany, Japan and USA. He defines so called

semi-endogenous model, where he proposes that total factor productivity (TFP) is correlating with research and development growth, not the level of research and development. Small and Medium business constitute the very foundation upon which the large businesses were built, however, small and medium have been identified differently by various individuals and organization such that an enterprise that is considered small and medium in one place is seen differently in another. Even within a country, the definition changes over time. Some common indicators employed in the various definitions include total assets, size of labour employed, values of annual turnover and capital investment Baenol (1994). The small scale industries of Federal Ministry of Industries defined small scale as " enterprises having capital investment in land, building, machinery and equipment and working capital up to N60,000.00 and employing not more than 50 person" as far back as 1979. The Central Bank's monetary and credit guidelines, small-scale industries were regarded as establishment whose annual turnover is less than N6million and capital not exceeding N10million.

2.2.2THE EXOGENOUS OR NEOCLASSICAL MODEL

Exogenous growth models predict that economy grows to a certain level defined by external parameters. Decreasing marginal returns prevent economy to grow continuously. Technology level is taken as a constant multiplier, which defines the production level with a certain set of capital and labour assets. This means that long-run growth is determined by the rate of technical progress. Solow (1956.) Solow does not explain what the rate of technical progress means. The model does not provide explanation for long-run growth. Missing focus in the role of technology has seen as a reason why exogenous theories have been rejected by empirical evidence. Exogenous mode predicts that the level of production should converge between the countries with the same characteristics. However, the growth rates have varied a lot between the countries. This is the area where endogenous growth theories have proposed answers starting from the late 1980's.

The neoclassical growth model is also refers to as the Solow-Swan growth model proposed by Solow and Swan. It is a terms used to sum up the contributions of various authors to a model of long run economic growth within the framework of neoclassical economics. The model consists of a production function, which is as follows:

$Y_t = (L_t K_t)$

Where Y_t represent the total output in the period t;

L_t is the quantity of labour in the period of t; and

K_t refers to the quantity of capital also in the period of t.

The key assumption of the neoclassical growth model is that capital is subject to diminishing returns in a closed economy. The other assumptions states thus:

1. 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.
2. Assuming for simplicity no technological progress or labour force growth, diminishing returns implies that at some point the amount of new capital produced is only just enough to make up for the amount of existing capital lost due to depreciation. At this point, because of the assumptions of no technological progress or labour force growth, the economy ceases to grow.
3. Assuming non-zero rate of labour growth complicates matters somewhat, but the basic logic skill applies in the short-run rate of growth slows as diminishing returns take effect and the economy converges to a constant "steady-state" rate of growth (that is, no economic growth per-capital).
4. Including non-zero technological progress is very similar to the assumption of non-zero workforce, in terms of "effective labour": a new steady state is reached with constant output per worker-hour required for a unit of output. However, in this case per-capita output is growing at the rate of technological progress in the "steady-state", which is the rate of productivity growth.

Economic growth overtime may be viewed from perspective of an improvement in the performance of the given inputs-resources or increase in the economy's factor endowments or as a result of combination of both factors. Vaish (2002) as cited in Alege (2004) defined economic growth as the increase in the real national product or output overtime. Economic growth should be as the increase in the real economic welfare of the people of a country and should be accomplished by distribution of the national product in favour of the poor. To Ekelude and Tollison (1994) economic growth my simply refer to increase in real GDP, the value of the annual output of final goods and services in the economy adjusted for inflation. While the measure certainly tells us much whether overall performance has improved, it does not tell us much about whether the average citizen is better or worse off than the previous time. Consequently, it is an increase in the real per capita income that can accurately capture or measure the economic growth of the nation. Per capital income/GDP measures the portion of the National output/GDP accruable to an average citizen of a given population. As such the work force of a population, (employment level) and its contribution constitute a major variable that affects economic growth.

Accordingly, for an economy to achieve and sustain a long-run growth in real GDP it must experience a steady growth in population in terms of the resulting work force, natural resources, human capital, capital formation, productivity of labour, catalyzed by a free-market environment and liberal trade policies, increase in population affects positively the overall level of demand and supply in an economy which consequently results in increase in national output. Population growth is Achieving Economic Growth and Development through Small and Medium Sized Enterprises (SMEs) therefore one of the necessary requirements for economic growth. On the contrary, increase in population may not lead to a commensurate growth in the economy. On the extreme, the economy could grow without any meaningful development evident in unemployment, low standard of living and poverty.

Economic development involves capital formation, improvement in entrepreneurial and labour skills and growth in economic productivity that causes rates of economic growth to rise (Elelund and Tollison). Nigeria economy in recent times has been growing but still very far behind terms of development. Nigeria presently experiences high level of unemployment, poverty and low standard of living. Thus, a major panacea that can take Nigeria out of this wood is an active promotion of SMEs. This approach will reduce to the nearest minimum the over dependency on the government to focus on its major duty of providing enabling environment for meaningful development.

According to Kahar (2005) as cited Beck et al (2005), SMEs proponent are of the view that SMEs enhance competition and entrepreneurship, and hence have external benefits on economy wide-efficiency, innovation and aggregate productivity growth. SMEs advocates frequently claim that SMEs are more productive than large firms. Some are even the opinion that SMEs have more employment. If this is true, then, these attributes associated with SMEs can bring about industrialization. Most economists are of the opinion that industrialization is synonymous with economic growth and development. And this can bring about the following advantage:

i. Improvement in balance of payment position
ii. It brings about greater economic diversification and stability
iii. Higher material standard of living, and
iv. Stimulates growth in other sector of the economy Ahmed- Ogundipe (1998)

2.3 EMPIRICAL REVIEW

There are several empirical studies conducted in order to find evidence to the endogenous growth theories. Nadiri (1993) finds strong positive relationship between research and development investment and productivity. Innovation and research and development

investment Nadiri finds to have also significant spillover effect to economy. He suggests that it is not just the level of research and development expenditures, which have the effect, but also the composition of research and development spending matters for economic growth. He proposes that research and development investment in the high technological sectors generate higher return as economic growth than research and investment to other sectors. Later Falk (2007) shows the change in composition of research and development investment from low to high technology sectors to lead to higher growth of GDP.

Bassassini, Scarpetta and Hemmings (2001) find that industrial research and development investments are one of the most important factors in explaining the growth of production output and TFP. Zachariadis (2003) studies US industries and finds support for endogenous growth coming from growing intensity of research and development. He finds research and development intensity to affect technological development via patenting technologies and technological development to affect positively to the growth of output per worker.

Zachariadis (2004) finds Research and Development intensity having positive effects on productivity and output in manufacturing sector, but also on aggregate output of the economy. Interestingly he also finds that increasing Research and Development intensity can have positive effects also outside the county borders, in neighbouring countries.

Griffith, Redding and Reenen (2004) also provide evidence on research and development intensity impacting positively to TFP. They propose two possible ways this impact happens. The first is the stimulation of innovation and the second is increasing capabilities to imitate the inventions of others. R&D investment as driving force in technology catch up is supported also by the studies of Ulku (2007). He finds that non-OECD countries can benefit more than OECD countries from increasing innovation in improving economic growth.

Ha and Howitt (2007) study US research and development intensity and find support for Schumpeterian growth theory, but not for semi-endogenous models. Madsen (2008) uses

OECD data from long period of 1870 to 2004 and shows that technology spill overs happen between countries through several channels. He finds imports of intermediate product and geographical proximity as channels for international technology spill over, but also channels, which are independent of import or proximity.

Pahlavani et al. (2011) analyze both OECD data and non-OECD data and find strong support for non-scale endogenous growth models. In addition, they find that countries can have significant returns to their research and development investments and absorb technology spill overs effectively by large investments to research and development. They also show that economic freedom has strong effect to efficient utilization of research and development investments.

CHAPTER THREE

METHODOLOGY

3.1 SOURCES AND METHODS OF DATA COLLECTION

The mode of data is through secondary data and which the sourced from the published book, published journals, National Bureau of Statistics, World Development Indicator (WDI) and the Central Bank of Nigeria and it cover the period of 1980-2014.

3.2 MODEL SPECIFICATION

In this research work we are going to consider two variables: the dependent variable which is the Gross Domestic Variable (GDP) and the independent variable: the output of the small and medium scale enterprises which will be captured by the loan of commercial banks to SMEs, and other explanatory variables considered are lending cost by interest rate, the cost of doing business which will be captured by inflation rate. The model will consider all explanatory variables i.e. (population, inflation rate, lending rate), in order to examine the impact of SMEs on the growth of the economy. Therefore, the regression equation can be formulated as follows:

RGDPG = (POP, SMEs, LNDR, INT, INF)..... (1)

Mathematically, it can be expressed in order to follow the hypothesis formulated above as thus:

$$RGDP = b_0 + b_1POP + b_2SMEs + b_3LNDR + b_4INT + b_5INF + \mu \quad (11)$$

Where RGDP is the real GDP per capital, POP is the population, SMEs is small and medium scale enterprises, LC is lending rate, INF is inflation rate, INT is the interest rate measured by GDP deflator GDP andμ, which is usually the stochastic term. It is important to note that all the variables are for time period, t, and that b_0, b_1, b_2, b_3, b_4 and b_5, are the parameters of the equation.

3.3 STATIONARY TESTING

According to Gujarati (2003), when a data set is stationary, it implies that the mean and variance of the data set are constant over a period of time, and that the time at which the covariance is calculated is not what determines the value of the covariance but the lag that exists between the two time periods. Also an integrated data set denoted as I (d), where d is the order of integration, which is the number of units in the series or the number of differences operations it takes to make a variable stationary.

The relationship that exist between stationary variables is usually dealt with in the classical regression model; virtually all economic indicators usually follows a non-stationary path. Gujarati (2003:806) demonstrate that if the regressand is a function of non-stationary process, we will have a nonsense regression thereby producing meaningless result. By implication, the explained variable will follow the trend of its explanatory variables, which will make spurious results. There is a probability we have significant t-ratios and a high R^2 even when there is no relationship between the trending variables. The various test for stationarity include a unit root test, and those that directly test for stationarity, to mention but a few. In order to perform a confirmatory data analysis, Augumented Dickey-Fuller (ADF) a one unit root test is conducted.

3.3.1 AUGMENTED DICKEY-FULLER TEST

As earlier discussed that a unit root test can be used to directly test for the stationarity of a time series data, the Dickey-Fuller (DF) and the Augmented Dickey-fuller (ADF) are the most frequent used unit root tests and are significantly discussed in the literature. Nevertheless, the one to be applied in this study is the Augmented Dickey-Fuller. The DF test estimates the following equation:

$$\Delta y_t = Ç_1 + Ç_2 t + w y_{t-1} + v_t \quad \text{...} \quad (2)$$

In equation (2), y_t refers to the relevant time series, Δ is a first difference operator, t is a linear trend and v_t is the error term. The error term is expected to fulfill the assumptions of normality,

constant error variance and uncorrelated or independent error terms. DF test result will be biased if the error terms are dependent in equation (2). The DF however has a shortcoming of not being accountable for possible autocorrelation in the error process of term (v_t). Hence, the ADF test can be used to cover for this limitation. Furthermore, the ADF test corrects for high-order serial correlation; this it does by summing up a lagged differenced term on the right hand side of the DF equation (2). The ADF test hitherto applies this equation:

$\Delta y_t = c_1 + c_2 + \omega y_{t-1} + \Sigma \grave{a}_i \Delta y_{t-1} + v_t$ ..... (3)

Equation (2) and (3) can be estimated without including a trend term, which can be done by eliminating the term c_2t in the equation; the equation can also be estimated without a constant, which can be done by deleting c_1 in the equation.

The hypothesis are thus stated as follows:

- Null hypothesis: The time series is non-stationary. That is, a unit root is present in the time series (i.e.H_0: $w = 0$)
- Alternative hypothesis: The time series is stationary, there is no unit root (i.e.H_1: $w < 0$).

The decision rule states that if he computed statistic (in absolute terms) is less than the MacKinnon (1991, 1996) critical values, the null hypothesis is accepted, which simply means that the time series is non stationary. On the other hand, if the computed statistic is greater than the MacKinnon (1991, 1996) critical values, the alternative hypothesis is accepted, while the null hypothesis is rejected meaning that the time series exhibits stationarity.

3.4 ESTIMATION TECHNIQUES

In order to estimate the impact of small and medium scale enterprises on economic growth as expressed in the specific model, there is need of making use of the ordinary least square (OLS) method for the multiple regression. This technique is applied as a result of its BLUE properties, which is the Best Linear Unbiased Estimator. Also it is formed a basis on which other sophisticated techniques limited our scope were built up on. Before employing the OLS, there

would also be a descriptive statistic that would involve the use of central tendency, dispersion and correlation coefficient matrix, the measure of central tendency and measure of dispersion indicates the characteristics of the data variables, while the correlation coefficient matrix is computed so as to have an insight of the nature of linear relationship between variables that exist in the model.

3.5 MEASURMENT OF VARIABLES

Literarily, what determines small and medium scale enterprises include are the domestic market demand, macroeconomics factors like small and medium scale rate, inflation rate, and infrastructure rule of law, efficient government, employment and policy. Well, data on the aforementioned are required for analysis; however, this study is restrained with some of them. The variables are hence described as follows:

1. Small and Medium Scale Enterprises: loans to private sector by the commercial banks to finance resources provided corporations such as loans, purchases of non-equity securities and trade credits and account received that establish claim for repayment.
2. Population Growth: this is aimed at investigating the impact of the growing population on economic growth, which serves as a proxy for GDP through the effect of small and medium scale inflow; it is measured by the change in the population over time.
3. Interest Rate: Real interest rate is the lending interest rate adjusted for inflation as measured by the GDP deflator.
4. Inflation Rate: This is used to measure the overall macroeconomics stability of a country.it is measured as the rate of changes in the price level over time. Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly. The Laspeyres formula is generally used

5. Lending Rate: Lending rate is the bank rate that usually meets the short- and medium-term financing needs of the private sector. This rate is normally differentiated according to creditworthiness of borrowers and objectives of financing. The terms and conditions attached to these rates differ by country, however, limiting their comparability.

3.6 APRIORI EXPECTATIONS

Having test for the stationary of the variables through the use of the Augmented Dickey Fuller test of stationarity; the variables are expected to be stationary at the level. It is therefore expected that b_1, and b_2 will be positive; b_3 is uncertain, if the small and medium scale enterprises enhance economic growth, the sign will be positive; and if otherwise, the sign will be negative. It is futher expected that b_4 and b_5 will carry out negative sign.

3.7 DESCRIPTION AND SOURCES OF DATA

The data used for estimation in this study is secondary data; a time series data that covers an annual 34 observations spanning the period of 1980-2014. RGDP is the dependent variable which is the GDP, measured as the real GDP per capita, while the independent variables includes SMEs, which is measured as the ratio of SMEs flows to GDP, INT, which is measured by the GDP deflator; POP (the population) which represent economically active labour force and inflation rate. The sources Development Indicators database, and other reliable sources

CHAPTER FOUR

DATA PRESNTATION AND DATA ANALYSIS

4.1 INTRODUCTION

In accordance with the scope of this study, relevant have been collected from the publications of Monetary, Regulation and Statistical Authorities responsible for financial and economic related issues. Various economic postulate have been examine in the previous chapters concerning the impact of small and medium scale enterprises on the growth of Nigerian economic. This chapter therefore, introduces a qualitative approach to the study. This approach is expected to reveal through empirical studies whether or not small and medium scale enterprise has an effect on economic growth from 1980-2014.

4.2 DATA ANALYSIS AND PRESENTATION

Time series properties of all variables used in estimation were examined in order to obtain reliable results. Thus, this exercise was carried out through Augmented Dickey Fuller (ADF) test as articulated by Engel and Granger (1987) and Phillip-Perron (PP test). This development arises from the prevalence of substantial co-movements among most economic time series data, which has been argued in the literature as undermining the policy implications that could be inferred from such modelling constructs, Engel and Granger (1987). The ADF and PP tests are used to determine the order of integration. That is, the number of times a variable has to be differenced before it becomes stationary. Before estimating the model specified in the previous chapter, we first test the stationarity properties of our variables. Table 4.2.1 below presents the unit root results of our variables.

Table 4.2.1: Unit Root Test Result (Phillip Peron and Augmented Dickey Fuller unit root tests)

Variables	Phillip Perron (Level)	Phillip Perron(First Difference)	Augmented DF (Level)	Augmented DF (Level)	Order of Integration
SMEs	0.5136	0.0000	0.4942	0.0000	$I(1)$
RGDPG	0.0029		0.0029		$I(0)$
POPG	0.7387	0.0027	0.21165	0.0027	$I(1)$
LNDR	0.1908	0.0000	0.1839	0.0455	$I(1)$
INT	0.0001		0.0001		$I(0)$
INF	0.0770	0.0000	0.0638	0.0000	$I(1)$
Error	0.0004		0.0004		$I(0)$

Source: Author's Computation

Table 4.2.1 Presents the p values for both the Phillip Peron and Augmented Dickey Fuller unit root tests. The unit root table shows that only two of the variables are stationary at level and three of the variables become stationary after first difference. Commercial Banks lending to small and medium scale enterprises (SME), population growth rate (POPG), lending rates (LNDR) and inflation rate (INF) are not stationary at level. However they become stationary at first difference.

Real GDP growth (RGDPG) and interest rate (INT) are stationary at level. Next is to test if there is a long run relationship among the variables. That is, we need to test if all the variables cointegrate in the long run. To achieve this, we resort to the Engle and Granger (EG) conitegration test of long run association. The Engle and Granger test is more suitable because

our variables of interest are integrated of different orders. The EG test is carried out by running a unit root test on the residuals generated from regressing the variables at level.

The last row on Table 4.2.1 one shows that the residual is stationary at level. Thus we reject the null hypothesis of no cointegration and accept the alternative hypothesis. Therefore, the conclusion is that the variables are cointegrated in the long run. This result suggests that we can obtain the short run and long run relationships among the variables.

Table 4.2.2: The Engle and Granger (EG) Co-integration test of Long run Relationship among the Variables

Variables	Coefficients	t-statistic	p-value
SME	1.242224	-2.432766	0.0232
POPG	-29.28424	-0.478418	0.6369
LNDR	2.880835	3.077360	0.0053
INT	-1.150714	-3.492409	0.0020
INF	-0.378150	-1.355437	0.1884
CONSTANT	55.08024	0.333874	0.7415
F- statistic= 3.1163, Durbin Watson = 1.953, R-squared = 0.403.			

Source: Author's Computation

Table 4.2.2, provides the long run relationship among variables. The coefficient of SME is positive and significant at 5 percent level of significance. This implies that there is a positive relationship between inflation and lending rate in the long run. This means that a 1 percent increase in commercial banks' lending to SMEs will lead to 1.24% increase in GDP growth rate. This result supports earlier studies on the subject.

Lending rate is positive and significant at 5 percent. A one percent increase in lending rate will push up real GDP by 2.44 percent. This result contradicts theory because an increase in lending rate is supposed to suppress lending, thereby leading to a fall in GDP growth.

The coefficient of interest rate is negative and significant at all standard levels of significance. The implication of this is that an increase in the interest rate will make credit dearer. This will result to a decline in fund available for investment purposes; therefore GDP will fall.

The coefficients of population growth rate (POPG) and inflation rate (INF) are both negative but insignificant. Based on our sample period, an increase in both variables will reduce real GDP.

Table 4.2.3: Error Correction Model (ECM)

Variables	Coefficient	t- value	p-value
D(SME)	0.208323	-0.366035	0.7180
D(POPG)	108.7113	1.118901	0.2758
D(LNDR)	0.521145	0.496502	0.6247
D(INT)	-0.958827	-5.054797	0.0001
D(INF)	-0.548962	-2.744127	0.0122
Error(-1)	-0.548962	-2.744127	0.0122
Constant	-0.934788	-4.833286	0.0001
F- statistic =9.991, Durbin Watson = 2.085, R-squared = 74%			

Source: Author's Computation

Table 4.2.3 presents the error correction model (ECM) that shows the short run relationship among the variables. The coefficient of is positive but insignificant. This analysis shows that a one percent increase in credit to SMEs will increase GDP by 0.21% in the short run.

The error correction component of the model is Error (-1). Its coefficient is negative and significant as expected. Its coefficient shows that 54.8% of the discrepancy between the long run and short run value of SME credit is corrected in the current period. Alternatively, we can say that the speed of adjustment from the short run value of SME to its long run value is 0.548. This implies that it takes about two years for the error component to be corrected.

The short run coefficient of INT is again negative and significant. This implies that a 1% increase in interest rate will result in a 0.96% decline in GDP growth rate. Also, inflation rate has a negative and significant impact on GDP growth rate in the short run. A one percent increase in inflation rate will reduce GDP growth by 0.55% in the short run. The short run coefficients of population growth and lending rates are positive, but insignificant

As shown in the table, the F statistic is 9.991. This value is significant at all levels of significance. Thus, we can reject the null hypothesis that states that all our coefficients are 0 and accept the alternative. The conclusion is that our coefficients are jointly significant and the model is properly specified.

The computed Durbin Watson statistic is 2.085. Because this value is greater than 2, the implication is that our model is free from autocorrelation. The R-squared is 74%. This implies that 74% variation in the dependent variable (SME) is explained by variations in the independent variables.

4.3 DISCUSSION OF FINDINGS

The Phillip Peron and Augmented Dickey Fuller unit root tests. The unit root table shows that only two of the variables are stationary at level and three of the variables become stationary after first difference. Commercial Banks lending to small and medium scale enterprises (SME), population growth rate (POPG), lending rates (LNDR) and inflation rate (INF) are not stationary at level. However they become stationary at first difference.

The F statistic is 9.991. This value is significant at all levels of significance. Thus, we can reject the null hypothesis that states that all our coefficients are 0 and accept the alternative. The conclusion is that our coefficients are jointly significant and the model is properly specified.

The computed Durbin Watson statistic is 2.085. Because this value is greater than 2, the implication is that our model is free from autocorrelation. The R-squared is 74%. This implies that 74% variation in the dependent variable (SME) is explained by variations in the independent variables.

Small and Medium Scale Enterprises: This analysis shows that a one percent increase in credit to SMEs will increase GDP by 0.21% in the short run. The error correction component of the model is Error (-1). Its coefficient is negative and significant as expected. Its coefficient shows that 54.8% of the discrepancy between the long run and short run value of SME credit is corrected in the current period. Alternatively, we can say that the speed of adjustment from the short run value of SME to its long run value is 0.548. This implies that it takes about two years for the error component to be corrected.

Inflation Rate: The coefficient Inflation rate is negative ad insignificant

Population Growth: The coefficient of population growth is negative and insignificant

Interest rate: The short run coefficient of INT is again negative and significant. This implies that a 1% increase in interest rate will result in a 0.96% decline in GDP growth rate. Also, inflation rate has a negative and significant impact on GDP growth rate in the short run. A one percent increase in inflation rate will reduce GDP growth by 0.55% in the short run. The short run coefficients of population growth and lending rates are positive, but insignificant

Lending Rate: Lending rate is positive and significant at 5 percent. A one percent increase in lending rate will push up real GDP by 2.44 percent. This result contradicts theory because an

increase in lending rate is supposed to suppress lending, thereby leading to a fall in GDP growth.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 SUMMARY OF FINDINGS

This study aim at investigating the impact of small and medium scale enterprises on the growth of Nigerian economy. Various studies were viewed; the research work also assessed the various growth models namely; the endogenous growth model; and the neoclassical growth model, which formed the theoretical model of this work. Secondary data sources from WDI report and CBN statistical bulletin over the sample period of 1980-2014 was employed in the study so as to achieve the stated objective.

Based on the test carried out, it was discovered that small and medium scale enterprises has a positive impact on economic growth. However, the impact is insignificant. This could possibly be as a result of the fact that SMEs in the economy are not expended on real project prevalent in key sectors that could engender significant level of economic growth and also indicate the level of significance. The coefficient of interest rate is negative and significant, also inflation rate is negative and significant impact of the GDP of the economy in the short run. Lastly, the coefficient of population and lending rate indicate a positive and they are insignificant. The F-statistic is 9.991, it shows that the values are significant at all levels of significance, and thus we can now reject the null hypothesis that states that all our coefficient are 0 (zero) and accept the alternative hypothesis. It can then be concluded that our coefficient are jointly significant and the model is properly specified.

5.1 CONCLUSION

A major gap in Nigeria's industrial development process in the past years has been the absence of strong SME sub-sector. With over 165million people, vast productive farmland, rich variety of mineral deposits and other natural resources, Nigeria should have been a haven for SMEs. Unfortunately, SMEs have not played the significant role they are expected to play in Nigeria economic growth and development. Driven by the findings in the study, SMEs in Nigeria have a long way to go for the sector to be productive enough and play the curial role it is expected to be in relation to contributing to the growth and development of the economy of Nigeria. The challenges and problems of the SMEs in Nigeria are hydra-headed and hence can only be effectively tackled by a multi-dimensional and concerted approach by all stakeholders i.e. the government (Federal, State and Local) and other agencies and parastatals, banks, regulatory authorities as well as SMEs (owner and Management), the employees and other donor agencies. This research therefore concludes that the main causative factor as to why Nigerian SMEs are performing below expectation as to having a relationship to our environment.

It can be therefore concluded about the study that in spite of the fact that small and medium scale has a positive impact on economic growth, it is insignificant. This implies that the level of its impact is not strong enough to foster economic growth in the economy. The important role assumed by SMEs as a vehicle for promoting economic growth can hardly be over emphasized. Although successive governments in the country have put in place various reform programmes aimed at promoting SMEs, more efficient and productive SME sector, means more and better products and services to the country. It also means better and more skilled workforce for our nation, ore contribution to our GDP and an improvement in the real sector. The unemployment situation will improve and the frequent migration of our youths to foreign lands as destitute and refugees will reduce, products will become more competitive and can easily be exported to other countries. Also, the notorious emphasis on importation will

relax and the pressure on the Naira will be abated. Inflation will reduce and the real sector will once more become the engine of growth, these are however not adequate when compare Evidence can be draw from the empirical of this work.

5.2 RECOMMENDATION

This study identifies that the positive impact of small and medium scale enterprises on economic growth is not significant, which has been earlier attributed to the way and manner in which SMEs is used. It is therefore important to note that the positive impact of on economic growth. Hence, this study recommends that Government should as matter of urgency assist prospective entrepreneurs to have access to finance and necessary information relating to business opportunities, modern technology, raw materials, market, plant and machinery which would enable them to reduce their operating cost and be more efficient to meet the market competitions. In the light of policy implication, understanding the factors hindering the growth and survival of SMEs in Nigeria will help policy makers - governments (federal, state, and local), NGOs, and other stakeholders to design targeted policies and programs that will actively stimulate innovation, as well as helping those policy makers to support, encourage, and promote SMEs for poverty alleviation in Nigeria.

Therefore the government should ensure that there is a large increase or a large percentage of SMEs should be fund productive and profitable so that it will further promote economic growth of the country. This includes our culture, government, lackluster approach to government policy enunciation and poor implementation among others. The solution to the problems of Nigeria SMEs can only be realized if both the leaders and the citizens concertedly work together. The government has to take the lead by extending their reforms to the educational and industrial sectors especially as regards policy formulation and implementation, port reforms, transportation sector reforms, revamping the infrastructural facilities, value re-orientation and reduction of bribery and corruption to the barest minimum if not totally

eradicated. Given efficient and effective execution of these as well as the political will and good leadership and followership, the SME sector will certainly be an effective tool for rapid industrialization of the Nigerian Economy. For instance if the Government invested in Small and medium scale Enterprises (SMEs), employment increases, per capital income rises, output rises, standard of living increases and hence, economic growth is promoted.

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APPENDIX

TABLES OF VARIABLES

obs	RGDP	SMEs N'000	SMEs %	POP	LN DR	INF	INT
1980	64,201,788,122.6	102.00	1.5	73,698,099.0	8.4	10.0	-3.5
1981	61,076,493,506.5	185.00	2.1	75,729,574.0	8.9	20.8	-8.1
1982	51,397,461,685.8	206.70	2.0	77,729,805.0	9.5	7.7	4.5
1983	35,451,565,749.2	351.30	3.2	79,729,313.0	10.0	23.2	-3.3
1984	28,500,815,241.5	705.70	6.1	81,775,217.0	10.2	17.8	-2.7
1985	28,873,977,228.1	972.20	8.0	83,901,572.0	9.4	7.4	3.7
1986	20,721,499,308.4	3587.30	9.3	86,118,046.0	10.0	5.4	-1.5
1987	24,093,203,444.6	1445.30	20.46	88,412,920.0	14.0	11.3	-31.9
1988	23,272,161,396.9	5,090.00	20.69	90,773,617.0	16.0	54.5	-5.1
1989	24,231,168,858.7	5,789.50	20.60	93,179,760.0	20.4	50.5	-17.0
1990	30,757,075,595.4	5,900.00	22.90	95,617,350.0	25.3	7.4	14.6
1991	27,392,886,872.6	7,572.30	23.80	98,085,373.0	20.0	13.0	2.1
1992	29,300,921,681.2	20,400.00	48.80	100,592,242.0	24.8	44.6	-25.8
1993	15,789,003,752.8	15,462.90	32.20	103,144,749.0	31.7	57.2	4.4
1994	18,086,400,535.6	20,400.00	22.20	105,752,796.0	20.5	57.0	-8.0
1995	28,546,958,641.3	32,374.50	22.90	108,424,827.0	20.2	72.8	-43.6
1996	34,987,951,375.0	42,302.10	25.00	111,166,210.0	19.8	29.3	-9.7
1997	35,822,342,617.7	40,844.30	16.96	113,979,481.0	17.8	8.5	16.6
1998	32,004,613,750.0	42,260.70	15.30	116,867,371.0	18.2	10.0	25.3
1999	35,870,792,987.9	46,824.00	13.30	119,831,888.0	20.3	6.6	2.8
2000	46,385,996,028.9	44,542.30	8.76	122,876,727.0	21.3	6.9	10.8
2001	44,138,014,092.3	52,428.40	6.59	126,004,992.0	23.4	18.9	23.8
2002	59,116,868,251.5	82,368.40	8.63	129,224,641.0	24.8	12.9	-10.8
2003	67,655,840,108.2	90,176..5	7.45	132,550,146.0	20.7	14.0	8.6
2004	87,845,403,978.3	54,981.2	3.62	135,999,250.0	19.2	15.0	19.4
2005	112,248,324,605.5	50,672.7	2.67	139,585,891.0	17.9	17.9	-3.3
2006	145,429,764,861.2	25,713.7	1.02	143,314,909.0	16.9	18.2	-0.4
2007	166,451,213,395.6	41,100.4	0.85	147,187,353.0	16.9	5.4	11.6
2008	208,064,753,766.5	19,141.33	0.28	151,208,080.0	15.5	11.6	4.2
2009	169,481,317,540.4	15,825.18	0.18	155,381,020.0	18.4	11.5	23.4
2010	369,062,464,570.4			159,707,780.0	17.6	13.7	-42.3
2011	411,743,801,711.6			164,192,925.0	16.0	10.8	5.9
2012	460,953,836,444.4			168,833,776.0	16.8	12.2	6.9
2013	514,964,650,436.0			173,615,345.0	16.7	8.5	10.2
2014	568,508,262,377.8			178,516,904.0	16.7	8.1	11.4

AUGMENTED DICKEY-FULLER UNIT ROOT TEST RESULT

Null Hypothesis: SME has a unit root				
Exogenous: Constant				
Bandwidth: 1 (Newey-West automatic) using Bartlett kernel				
			Adj. t-Stat	Prob.*
Phillips-Perron test statistic			-1.511666	0.5136
Test critical values:	1% level		-3.679322	
	5% level		-2.967767	
	10% level		-2.622989	
*MacKinnon (1996) one-sided p-values.				
Residual variance (no correction)				40.29219
HAC corrected variance (Bartlett kernel)				38.18292

Phillips-Perron Test Equation				
Dependent Variable: D(SME)				
Method: Least Squares				
Date: 07/23/15 Time: 11:19				
Sample (adjusted): 1981 2009				
Included observations: 29 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
SME(-1)	-0.167808	0.108206	-1.550819	0.1326
C	2.137024	1.863580	1.146731	0.2616
R-squared	0.081790	Mean dependent var		-0.045517
Adjusted R-squared	0.047782	S.D. dependent var		6.741545
S.E. of regression	6.578510	Akaike info criterion		6.671966
Sum squared resid	1168.473	Schwarz criterion		6.766262
Log likelihood	-94.74350	Hannan-Quinn criter.		6.701498
F-statistic	2.405041	Durbin-Watson stat		2.099180
Prob(F-statistic)	0.132589			

Null Hypothesis: D(SME) has a unit root				
Exogenous: Constant				
Bandwidth: 0 (Newey-West automatic) using Bartlett kernel				
			Adj. t-Stat	Prob.*
Phillips-Perron test statistic			-5.879807	0.0000
Test critical values:	1% level		-3.689194	
	5% level		-2.971853	
	10% level		-2.625121	
*MacKinnon (1996) one-sided p-values.				
Residual variance (no correction)				44.52495
HAC corrected variance (Bartlett kernel)				44.52495

Phillips-Perron Test Equation				
Dependent Variable: D(SME,2)				
Method: Least Squares				
Date: 07/23/15 Time: 11:22				
Sample (adjusted): 1982 2009				
Included observations: 28 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(SME(-1))	-1.141351	0.194114	-5.879807	0.0000
C	-0.074730	1.308652	-0.057105	0.9549
R-squared	0.570760	Mean dependent var		-0.025000
Adjusted R-squared	0.554250	S.D. dependent var		10.37167
S.E. of regression	6.924590	Akaike info criterion		6.776784
Sum squared resid	1246.699	Schwarz criterion		6.871941
Log likelihood	-92.87498	Hannan-Quinn criter.		6.805875
F-statistic	34.57213	Durbin-Watson stat		2.051123
Prob(F-statistic)	0.000003			

Null Hypothesis: RGDPG has a unit root				
Exogenous: Constant				
Bandwidth: 0 (Newey-West automatic) using Bartlett kernel				
			Adj. t-Stat	Prob.*
Phillips-Perron test statistic			-4.169630	0.0029
Test critical values:	1% level		-3.670170	
	5% level		-2.963972	
	10% level		-2.621007	
*MacKinnon (1996) one-sided p-values.				
Residual variance (no correction)				473.4603
HAC corrected variance (Bartlett kernel)				473.4603

Phillips-Perron Test Equation				
Dependent Variable: D(RGDPG)				
Method: Least Squares				
Date: 07/23/15 Time: 11:27				
Sample (adjusted): 1982 2014				
Included observations: 30 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
RGDPG(-1)	-0.783091	0.187808	-4.169630	0.0003
C	5.168941	4.331600	1.193310	0.2428
R-squared	0.383067	Mean dependent var		-0.507671
Adjusted R-squared	0.361034	S.D. dependent var		28.17633
S.E. of regression	22.52285	Akaike info criterion		9.131278
Sum squared resid	14203.81	Schwarz criterion		9.224692
Log likelihood	-134.9692	Hannan-Quinn criter.		9.161162
F-statistic	17.38581	Durbin-Watson stat		2.048944

Prob(F-statistic)	0.000266			

Null Hypothesis: POPG has a unit root				
Exogenous: Constant				
Lag Length: 8 (Automatic - based on SIC, maxlag=8)				
			t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic			-3.502328	0.0165
Test critical values:	1% level		-3.724070	
	5% level		-2.986225	
	10% level		-2.632604	
*MacKinnon (1996) one-sided p-values.				

Augmented Dickey-Fuller Test Equation				
Dependent Variable: D(POPG)				
Method: Least Squares				
Date: 07/23/15 Time: 12:32				
Sample (adjusted): 1990 2014				
Included observations: 25 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
POPG(-1)	-0.063629	0.018168	-3.502328	0.0032
D(POPG(-1))	1.907619	0.194471	9.809290	0.0000
D(POPG(-2))	-1.575966	0.374233	-4.211194	0.0008
D(POPG(-3))	0.855222	0.304744	2.806358	0.0133
D(POPG(-4))	-0.058639	0.238572	-0.245789	0.8092
D(POPG(-5))	-0.316465	0.237976	-1.329819	0.2034
D(POPG(-6))	0.806034	0.248197	3.247557	0.0054
D(POPG(-7))	-0.675981	0.231857	-2.915504	0.0107
D(POPG(-8))	0.316553	0.119498	2.649024	0.0182
C	0.166706	0.047483	3.510877	0.0032
R-squared	0.993577	Mean dependent var		0.006901
Adjusted R-squared	0.989724	S.D. dependent var		0.020645
S.E. of regression	0.002093	Akaike info criterion		-9.211425
Sum squared resid	6.57E-05	Schwarz criterion		-8.723874
Log likelihood	125.1428	Hannan-Quinn criter.		-9.076199
F-statistic	257.8269	Durbin-Watson stat		1.763676
Prob(F-statistic)	0.000000			

Null Hypothesis: POPG has a unit root				
Exogenous: Constant				
Bandwidth: 3 (Newey-West automatic) using Bartlett kernel				
			Adj. t-Stat	Prob.*
Phillips-Perron test statistic			-1.008385	0.7387
Test critical values:	1% level		-3.646342	
	5% level		-2.954021	
	10% level		-2.615817	
*MacKinnon (1996) one-sided p-values.				
Residual variance (no correction)				0.001001
HAC corrected variance (Bartlett kernel)				0.002217

Phillips-Perron Test Equation				
Dependent Variable: D(POPG)				
Method: Least Squares				
Date: 07/23/15 Time: 12:33				
Sample (adjusted): 1982 2014				
Included observations: 33 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
POPG(-1)	-0.020246	0.059862	-0.338201	0.7375
C	0.055281	0.157577	0.350817	0.7281
R-squared	0.003676	Mean dependent var		0.002023
Adjusted R-squared	-0.028463	S.D. dependent var		0.032195
S.E. of regression	0.032650	Akaike info criterion		-3.947249
Sum squared resid	0.033047	Schwarz criterion		-3.856551
Log likelihood	67.12960	Hannan-Quinn criter.		-3.916732
F-statistic	0.114380	Durbin-Watson stat		0.295444
Prob(F-statistic)	0.737491			

Null Hypothesis: D(POPG) has a unit root				
Exogenous: Constant				
Bandwidth: 3 (Newey-West automatic) using Bartlett kernel				
			Adj. t-Stat	Prob.*
Phillips-Perron test statistic			-4.169909	0.0027
Test critical values:	1% level		-3.653730	
	5% level		-2.957110	
	10% level		-2.617434	
*MacKinnon (1996) one-sided p-values.				

Residual variance (no correction)	0.000173
HAC corrected variance (Bartlett kernel)	0.000417

Phillips-Perron Test Equation				
Dependent Variable: D(POPG,2)				
Method: Least Squares				
Date: 07/23/15 Time: 12:35				
Sample (adjusted): 1983 2014				
Included observations: 32 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(POPG(-1))	-0.361902	0.074772	-4.840088	0.0000
C	0.004178	0.002409	1.733973	0.0932
R-squared	0.438480	Mean dependent var		0.003322
Adjusted R-squared	0.419763	S.D. dependent var		0.017844
S.E. of regression	0.013592	Akaike info criterion		-5.698147
Sum squared resid	0.005543	Schwarz criterion		-5.606539
Log likelihood	93.17036	Hannan-Quinn criter.		-5.667782
F-statistic	23.42645	Durbin-Watson stat		0.480866
Prob(F-statistic)	0.000037			

Null Hypothesis: LNDR has a unit root				
Exogenous: Constant				
Bandwidth: 4 (Newey-West automatic) using Bartlett kernel				
			Adj. t-Stat	Prob.*
Phillips-Perron test statistic			-2.258079	0.1908
Test critical values:	1% level		-3.639407	
	5% level		-2.951125	
	10% level		-2.614300	
*MacKinnon (1996) one-sided p-values.				
Residual variance (no correction)				8.592177
HAC corrected variance (Bartlett kernel)				8.197192

Phillips-Perron Test Equation				
Dependent Variable: D(LNDR)				
Method: Least Squares				
Date: 07/23/15 Time: 12:36				
Sample (adjusted): 1981 2014				
Included observations: 34 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNDR(-1)	-0.223293	0.097943	-2.279823	0.0294
C	4.168162	1.797513	2.318849	0.0269
R-squared	0.139729	Mean dependent var		0.244118
Adjusted R-squared	0.112846	S.D. dependent var		3.207868

S.E. of regression	3.021455	Akaike info criterion	5.106376
Sum squared resid	292.1340	Schwarz criterion	5.196162
Log likelihood	-84.80840	Hannan-Quinn criter.	5.136996
F-statistic	5.197593	Durbin-Watson stat	2.119032
Prob(F-statistic)	0.029425		

Null Hypothesis: LNDR has a unit root				
Exogenous: Constant				
Lag Length: 0 (Automatic - based on SIC, maxlag=8)				
			t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic			-2.279823	0.1839
Test critical values:	1% level		-3.639407	
	5% level		-2.951125	
	10% level		-2.614300	
*MacKinnon (1996) one-sided p-values.				

Augmented Dickey-Fuller Test Equation				
Dependent Variable: D(LNDR)				
Method: Least Squares				
Date: 07/23/15 Time: 12:39				
Sample (adjusted): 1981 2014				
Included observations: 34 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNDR(-1)	-0.223293	0.097943	-2.279823	0.0294
C	4.168162	1.797513	2.318849	0.0269
R-squared	0.139729	Mean dependent var		0.244118
Adjusted R-squared	0.112846	S.D. dependent var		3.207868
S.E. of regression	3.021455	Akaike info criterion		5.106376
Sum squared resid	292.1340	Schwarz criterion		5.196162
Log likelihood	-84.80840	Hannan-Quinn criter.		5.136996
F-statistic	5.197593	Durbin-Watson stat		2.119032
Prob(F-statistic)	0.029425			

Null Hypothesis: D(LNDR) has a unit root				
Exogenous: Constant				
Lag Length: 2 (Automatic - based on SIC, maxlag=8)				
			t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic			-2.416957	0.1455
Test critical values:	1% level		-3.661661	
	5% level		-2.960411	
	10% level		-2.619160	
*MacKinnon (1996) one-sided p-values.				

Augmented Dickey-Fuller Test Equation				
Dependent Variable: D(ER)				
Method: Least Squares				
Date: 07/23/15 Time: 13:15				
Sample (adjusted): 1982 2009				
Included observations: 28 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
ER(-1)	-0.989121	0.198322	-4.987457	0.0000
C	0.127034	3.498849	0.036307	0.9713
R-squared	0.488941	Mean dependent var		-0.378683
Adjusted R-squared	0.469285	S.D. dependent var		25.40335
S.E. of regression	18.50639	Akaike info criterion		8.742859
Sum squared resid	8904.650	Schwarz criterion		8.838016
Log likelihood	-120.4000	Hannan-Quinn criter.		8.771949
F-statistic	24.87473	Durbin-Watson stat		1.973782
Prob(F-statistic)	0.000035			

Dependent Variable: D(RGDPG)				
Method: Least Squares				
Date: 07/23/15 Time: 14:25				
Sample (adjusted): 1982 2009				
Included observations: 28 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(SME)	-0.208323	0.569134	-0.366035	0.7180
D(POPG)	108.7113	97.15893	1.118901	0.2758
D(LNDR)	0.521145	1.049631	0.496502	0.6247
D(INT)	-0.958827	0.189686	-5.054797	0.0001
D(INF)	-0.548962	0.200050	-2.744127	0.0122
ER(-1)	-0.934788	0.193406	-4.833286	0.0001
C	0.682130	3.207053	0.212697	0.8336
R-squared	0.740582	Mean dependent var		-0.488430
Adjusted R-squared	0.666462	S.D. dependent var		29.20079
S.E. of regression	16.86426	Akaike info criterion		8.700588
Sum squared resid	5972.465	Schwarz criterion		9.033639
Log likelihood	-114.8082	Hannan-Quinn criter.		8.802405
F-statistic	9.991718	Durbin-Watson stat		2.085840
Prob(F-statistic)	0.000029			