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EFFECT OF UNEMPLOYMENT AND INFLATION ON ECONOMIC GROWTH IN NIGERIA

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Abstract
The instability of unemployment and inflation has attracted the attention of policymakers especially on how to maintain low and stable unemployment as well as relatively stable prices so as to achieve high economic growth. However, it appears that government intervention has not been able to cure the ills in the Nigerian economy. In order words, full potentials of labour-surplus have not been fully exploited. In view of the aforementioned, this study investigates the effect of unemployment and inflation on economic growth in Nigeria using annual time series data covering the period of 1986 to 2020. To examine the model coefficient, ordinary least square technique is employed. Findings indicate that the coefficient of unemployment has a negative and significant effect on economic growth in Nigeria; while inflation exerts a positive effect. The nature of unemployment and inflation characterizing the Nigerian economy are structural and cost-push respectively; hence the need by the government and relevant agencies to formulate policies to encourage self- employment and reduce cost of doing business so as to achieve a high, rapid and sustainable economic growth.

Keywords: Unemployment, Inflation, Economic growth, Ordinary least square

Introduction

The Nigerian economy has remained largely underdeveloped despite the huge human and natural resources. The country is richly endowed with various mineral types all over the country. Huge amount is generated annually from petroleum products. More than 40 types of solid minerals have been identified in over 500 locations in the country Musa (2010). Yet the per capita income is low, unemployment and inflation rates are high. There are many socio- economic challenges. The economy has continued to witness economic recovery which is immediately followed by economic recession and depression. The situation in Nigeria is disturbing. The various macroeconomic policies by government have been unable to achieve sustained price stability, reduction in unemployment and sustained growth cannot be achieved. The poor state of the economy has confirmed the need to manage the economy effectively. The essence of macroeconomic management underlines the rationale for the existence of government as a vital economic agent. However, it appears that government intervention has not been able to cure the ills in the Nigerian economy. The continued economic crisis, with the associated problems of high inflationary pressure, high exchange rate, and debt overhang, adverse balance of payment and high inflation rates is difficult to explain. Against a high rate of unemployment and underemployment, a large public sector, low wages and poor working conditions has been persistent high inflation rates in Nigeria. Also, underemployment and unemployment is a prominent feature of the Nigerian economy. Consequently, the full potentials of labour-surplus economy have not been fully exploited.

In the 1960s and early 1970s, the Nigerian economy provided jobs for most Nigerian and absorbed considerable imported labour while inflation rates were low. The wage rate compared favourably with international standards and there was relative industrial peace in most of the years. Following the oil boom of the late 1970s, there was mass migration of people, especially the youth, to the urban areas seeking for jobs. Following the downturn in the economy in the early 1980s, the problems of unemployment and inflation increased while economic growth remains poor, precipitating the introduction of the Structural Adjustment

Programme (SAP) in 1986. The rapid depreciation of the naira exchange rate since 1986 and the inability of most industries to obtain adequate raw materials required to sustain their output levels fuelled inflation. There was rapid depreciation of the naira which caused sharp rise in the general price level, leading to a significant decline in real wages and increased poverty. The low wages contributed to a weakening of the purchasing power of wage earners and declining aggregate demand. Consequently, industries started to accumulate unintended inventories. Economic growth in Nigeria was not encouraging between 1986 and 2012. The continuous economic crisis reflected in high inflationary pressure, high level of corruption, exchange rates distortions, debt overhang, high rates of unemployment to mention a few. Unemployment and inflation are two twin evils that have eaten deep into the fabric of the Nigerian economy over the years.

The trends in economic growth rates, unemployment and inflation in Nigeria over the years have been puzzling. The data obtained from the Central Bank of Nigeria (CBN) statistical bulletin revealed that by 1986 economic growth rate stood at 3.1 percent, in 1987 the value became negative -0.69 implying retrogression and was the least ever achieved for the period under review; the highest economic growth rates achieved was 11.36 in 1990 after which the rates has been abysmally until in 2003 when the growth rates hits 10.2 percent; from 2003 economic growth rate has been less than 10 percent, in 2012 the growth rate recorded was 6.58. The trend in economic growth has been fluctuating over the years under review. Furthermore, the trend revealed that by 1986 unemployment rate was 5.3 percent while inflation rate was 5.4 percent. Both unemployment rates and inflation rates were not stable but fluctuating over time. The lowest rates of unemployment and inflation recorded were 1.8 percent and 0.2 percent in 1995 and 1990 respectively. Unemployment reaches 24.7 percent by 2012 while inflation reaches the highest in 1999.

The main goals of macroeconomic policies were the achievement of high, rapid and sustained economic growth, stable low unemployment and relative price stability but the aforementioned trends indicate the contrary. Among the major challenges of policy makers were how to achieved and maintain low and stable unemployment rate as well as relatively low prices so as to achieve high economic growth. In lieu of the aforementioned, this study examines the effect of unemployment and inflation on economic growth in Nigeria covering the period of 1986 to 2020. The rest of the study is categorized into sections: section 2 deals with the overview of unemployment, inflation and economic growth in Nigeria; section 3 presents the causes of unemployment and inflation in Nigeria; section 4 highlighted the strategies and policy frameworks for unemployment and inflation reduction in Nigeria; section 5 review empirical literature; section 6 deals with the materials and technique of analysis; section 7 presents the empirical results; section 8 provides the conclusion and recommendations.

Overview of Unemployment, Inflation and Economic growth in Nigeria

The unemployment, inflation and economic growth in Nigeria had been unstable for the period under review. The highest growth rate of GDP was recorded in 1990 follow by 2003 with the growth rate of 11.6 percent and 10.2percent respectively; while the least rate was recorded in 1987 with the growth rate of -0.69percent, which shows negative growth rate of GDP in Nigeria. The growth rate of the GDP was positive from 1986, negative in 1987, positive again from 1988-2012.

Unemployment has been fluctuating over the years. The highest unemployment rate recorded in Nigeria during the period under review was 24.7percent in 2012, and the least value of unemployment recorded was 1.8percent in 1995. Inflation rate in Nigeria also exhibit a volatile trend. The highest inflation rate recorded in Nigeria was 76.8percent in 1994 and the least value of inflation recorded is 0.2percent in 1999. Over the years, government have been agitating for single digit inflation, but only 1987, 1990,1999,2006 and 2007 were found to be one-digit inflation in Nigeria i.e. less than 10percent. For the remaining years under review inflation was found to be more than one digit. According to Emeka (2013) Nigeria’s economy is churning along after the problems of liquidity and banking sector meltdown that nearly crushed the financial market. The economy is progressively in recovery and it looks like the confidence of Nigerian consumer is gradually rebounding. The increasing inflationary pressure which subsided from 12.5% to 11% year-one-year is a good response and these recent indices were documented by Nigeria's National Bureau of Statistics (NBS). The food price inflation also came down in the second quarter from 14.3% into 12.3, a sign that the gripping hands of inflation around the economy is waning.

In previous years, the monetary policy coming from Sansui's Central Bank of Nigeria (CBN) has a positive outlook on the economy which has been growing at the rate 7.3% and attracting investments mostly in petroleum sector. The revised estimate for real Gross Domestic Product (GDP) by the National Bureau of Statistics (NBS) indicates that the economy grew by 7.23 percent first quarter of 2010 as against 6.7percent it had earlier projected for the quarter; at the end of 2010 the economy was growing at the rate of 7.6percent. This is impressive compares to the world economy that has been expected to be growing at the rate 3.9% in 2010 as result of the global recession.

Nigerian economy dip from 7.44 percent recorded in the fourth quarter of 2009 however, it is an increase from 4.50 percent in the corresponding quarter of last year. NBS attributes the 2.73 percentage point increase in real GDP to expansion in oil production following relative peace in the Niger Delta region, although the non-oil sector remained key driver of growth. The Bureau in the latest report on GDP estimates that the economy on nominal basis expanded to N6,399,716.09 first quarter of 2010 up from N5,004,850.00 recorded during the corresponding quarter 2009, indicating an increase of N994, 866.09. Nigerian government can greatly strengthen the impressive growth by provision of social infrastructures particularly social security and steady electric power.

The economy growing at 7.3% in the second quarter of the year is beyond the projected expectation from the Nigerian reserve bank and economic forecasters. The experts did not anticipate the economy to be growing at a pace with the lingering effects of the credit crunch and failed banks. Sansui's central bank of Nigeria (CBN) easing of the credit crunch by lowering the interest rate benchmark was a pragmatic move that ameliorated the dryness of the credits, together with recapitalization of financial market with over $3.9 billion that refurbished the failed banks. The confidence generated by the CBN policy was apparent for it strengthened the confidence of the lenders and borrowers in the financial market. The infusion of fund and lower interest rate were impressive which brought about the stimulating of the economy and became the turning point for the economy.

CBN was not worried about the danger of over liquefying the capital market with cheap money and by the lowering of the interest rate bench mark which could trigger higher inflation. Executive Governor Lamido Sanusi of Central Bank of Nigeria was reported saying that he can live with slightly increased inflation than with a depressed market. But in such a scenario the watchdogs at the CBN must be in constant watch of the economy to make sure that inflation will not get out of control. They can control the situation by tinkering with monetary policy and control of cheap money. Even the executive arm of the government might intervene with a well thought fiscal policy in order to cool the economy in case of escalating inflationary trends.
The structural imbalance of Nigerian economy is still a major concern. Nigeria's economy is wholly one commodity based economy which is based on the export of crude oil. The lack of diversification of the economy hampers the flourishing of domestic economy, together with enhance specialization can transformed an economy to arrays of commodities exporting economy other than oil. The export of crude of provides foreign reserve that has become a war chest in the maintenance of fairly and relatively strong naira. With diversified economy the problem of unemployment in Nigeria can be ameliorated. The greatest threat to Nigeria standard of living other than inflation is unemployment; even with progressively growing economy at the rate of 7.3% the economy is not producing enough jobs to make a reasonable impact on employment. The finance Minister Olusegun Aganga stated that unemployment in Nigerian was about 19.7% but financial and economic experts at Afripol Organization quantified that the real unemployment figure might be higher when rural and urban joblessness among the Nigerian youths are factored into equation. The collecting of data on employment will be probably cumbersome, if not difficult in rural areas where modern technology is

care and out of reach (Emeka, 2013).

Causes of Unemployment and Inflation in Nigeria

a. Causes of Unemployment

The yearbook of labour statistics (1984, 1985, 1986) reports that unemployment rate was generally rising due to the worldwide recession of the1980s and 1990s. Fajana (1987) argued that the presence of expatriates in Nigerian labour market did not cause unemployment, adding that the specific causes of unemployment in Nigeria were: - techniques of production used which was capital intensive, automation, rising cost of labour, poor and inadequate planning, high growth of the population, immobility of labour, rural urban migration, monoculture nature of the economy which led to the neglect of agriculture, low labour productivity and mergers of industries. Garba (2010) argues that the increasing rate of unemployment and graduate unemployment in Nigeria was as a result of the lack of collaboration between the entrepreneurs and the institutions (universities, polytechnic and any other academic institutions community). He maintained that the lack ofthis kind of synergy showed the weaknesses, inadequacies and fallacies of the educational policies in Nigeria in attainment of its educational objectives. Dabalen *et al.* (2000) also stressed that there was a serious disconnect between university training and the needs of the labour market arguing that the mismatch has been and continues to be socially costly to Nigeria without any mechanisms in place to address it.
Akintoye (2008) attributes the high rate of unemployment observed in 1980 to the depression in the Nigerian economy during the late 1970s. He explained that the economic downturn led to the implementation of stabilization measures which included restriction on exports, which caused import dependency of most Nigerian manufacturing enterprises, which in turn resulted in many companies operating below their installed capacity and the collapse of many industries which made workers became jobless. Emunemu (2008) traces unemployment in Nigeria to the privatization processes and the poor performance of the public sector due to the fact that employment in the country had been public sector driven. He also noted that there was the problem of mismatch between the skills with which students graduate from tertiary institutions and those required for the healthy development of the economy. Dabalen *et al*. (2000) also notes that there was rising share of graduate employment in the private sector as well as in the public sector which is traditionally a strong employer of graduates.

Okojie (2003) opines that demand for labour had been low and was declining, resulting in high levels of unemployment in most African countries due to stagnant economies and low economic growth rates in these countries. He further attributed the rising urban unemployment rate in African countries to the high degree of geographical mobility of youth in the form of rapid rural-urban migration, early marriage among young women leaving them to end up with less education and fewer skills thus increasing discrimination against them in the labour market. Todaro (1992) was of the opinion that the high rate of urban unemployment was as a result of continuous transfer of economic activities and youths from rural to urban areas. He observed that Nigeria was plagued by a unique combination of massive rural to urban population movement, stagnating agricultural productivities and growing urban youth unemployment. This is as a result of unbalanced development.

One of the causes of unemployment according to Fadayomi (1992) was the inability to develop and utilize the nation‟s manpower resources effectively, especially in the rural sector. This, resulted in a high rate of urbanisation and an increasing number of youths migrating to urban areas seeking to participate in the booming commercial and other activities, thereby leaving agriculture to the aged (Usoro, 1997). Akomolafe and Adegun (2009) attributes the increasing rate of graduate unemployment to the downturn in the economy, closure of many companies and parastatalsand the great down-turn in the provision of services being witnessed in the banking sector, which had always been absorbing many Nigerian graduates. Dabalen, et al. (2000) argued that the employment prospects of recent Nigeria graduates had deteriorated and attributed the poor employment conditions to the weak performance of the Nigerian economy. Kakwagh and Ikwuba

(2010) attributes the causes of youth unemployment in Nigeria to several factors, which include: increasing population growth which outstripped the supply of jobs; massive rural-urban migration by the young people to scrabble for limited job opportunities; lack of employable and entrepreneurship skills by Nigeria graduates due to inappropriate school curricula.

Ajao (2004) opines that the neglect of technical and vocational education may have contributed to the high unemployment and rising poverty among the youth because many of them lack the basic job skills. He argues that they are struggling with the challenge of acquiring “employability” skills because the society is focused mostly on formal university education. He argues that investment in skill training and trade schools is a worthwhile social investment. The graduates would become small business owners and employer of labour; this is the case in many societies where small businesses are the highest employers of labour. He advised that high school students in Nigeria should be made to gain knowledge of workplace culture and values along with general education competency. This would provide them a variety of skills to manage small-scale businesses and to gain employment after graduation, he noted.

Dauda (2010) argues that the Nigerian educational system tended to produce more of those who lack job skills for employment than the economy requires remaining vibrant due to the fact that the educational system is accompanied by structural defects, inefficiency and ineffectiveness which today place the country at its lowest ebb in human capital development and utilization. She lamented that the result of this inadequate educational system include decreasing industrial capacity utilization, rising unemployment, rising poverty, threats by social insecurity by ebullient jobless youths, and structural imbalance and system configuration. Akomolafe and Adegun (2009) notes that the growing rate of unemployment was due to the fact that the Nigerian education system was expanding much faster than the economy, which has resulted in many graduates, who did not have marketable skills, not being able to be employed.

b. Causes of Inflation

According to the classical and neoclassical economists, inflation is caused by increase in the volume or quantity of money in circulation assuming that velocity of circulation and output level is constant and given the equation of exchange MV=PQ. To the Keynesians inflation is caused by persistent increase in the demand for goods and service assuming that velocity of circulation and output level is not constant and that when quantity of money increases the first noticeable thing is increase in interest rate and not increase in price level. The monetarist position is in sharp contrast to the structuralist school, which sees financial factors as forces propagating inflation rather than causing it. According to structuralist school inflation can result from a number of special problems in developing countries, and not just from excessive money growth. Their explanations of inflation usually centres around “structural” problems such as supply bottlenecks or high dependency on imported intermediate goods. Inflation could also arise from the cost side. Costs could change through a supply shock, an increase in local earning power arising from a boom in export earnings, (for instance, Nigeria oil boom), or devaluation. Any of these could result in a push for higher nominal wages, which drive up production costs and increases final goods prices (Layi, 1999).
In a study of OECD countries, Maynard and van Ryckeghem (1975) found that the long-run trend of rising price levels can be attributed to differences in the rates of growth and productivity in the industrial and service sectors. Other causes of rising prices are differences in the prices and elasticities between the two sectors, a uniform growth in nominal wages in both sectors, and price and wage rigidities. The result of these problems is cost-push inflation. Post-Keynesian perspectives on the causes of inflation take a conflict theory approach, which is generally consistent with a structuralist framework. The conflict theory regards inflation as an outcome of struggles by economic groups over income shares according to Rowthorn, (1977), Rosenberg and Weisskopf, (1981). They assumed that capitalists and workers each have target real incomes, which may or may not be consistent with each other. If total claims for real income by all groups are not greater than the actual real output produced, then price stability is possible. But if total claims exceed real output available, then inflation arises. The main cause of inflation is then the rate at which the money wage rises in excess of the growth of average labour productivity.

For both structuralists and post-Keynesians, an endogenous money supply is assumed. However, while the monetarists believe that excess aggregate demand caused by excess supply of money causes inflation, the structuralists hold that the inflation rate can increase regardless of aggregate demand, making stagflation possible. Inflation also occurs because of cost-push factors. Since the increase in money supply follows a prior price increase, structuralists believe in the endogeneity of money. According Layi (1999) and Aminu and Anono (2012) the causes of inflation in Nigeria are: the degree of openness of the Nigerian economy which may lead to the importation of inflated goods and services into the country (inflation is therefore determined also by forces outside the country (imported inflation), announcement of salary increment, such as the recent eighteen naira minimum wage increase, shortage of supply of goods and services, excess demand for goods and services, high price elasticity of demand for foreign made goods and services, high cost of production, for instance the recent removal of subsidy by federal government of Nigeria fuel inflation though it lasted just for short period.

In another study of inflation in Nigeria, Fakiyesi (1996) argues that inflation is dependent on growth in broad money, the rate of exchange of the naira visa-vis the dollar, the growth of real income, the level of rainfall, and the level of anticipated inflation which is based on the previous year's level of inflation he gave a functional form that assumes that the lagged value of broad money and prices were the relevant series for consideration. The lagged value of prices and money were estimated. Buhari (1987) opines that inflationary pressure in Nigeria since independence, could be traced to a number of factors such as the neglect of agricultural sector, civil war the country was involved between 1967-1970 which increased government expenditure especially in the area of weapon, massive wage increases granted to the Nigerian workers as a result the Udoji recommendations, the oil boom of the seventies increased the revenues at the disposal of the Nigerian government. In a study by Moser (1995) he identifies the main determinants of inflation in Nigeria. He presented both a long run model and a dynamic error correction model. All the coefficient estimates had their expected signs. The monetary effect was quite large and significant at the one percent level, while real income and the exchange rate were also significant at that level. Rainfall, on the other hand, had no significance in the long run.

According to Batini (2004), the implementation of monetary policy in Nigeria has been complicated by a number of factors, including fiscal largesse, lack of operational autonomy of the central bank, insufficient and low-quality statistics, a weak transmission mechanism, and a weak financial system. His analysis revealed that neither the stable prices/free float nor the fixed exchange rate solutions were particularly appealing for Nigeria in the long run. He argued that inflation targeting with a free float still seemed to be a superior option for various reasons. Adamson (2000) was of the opinion that the high rate of inflation, which Nigeria has been experiencing since the 1970‟s, has its origin in the economic measures and controls that were first put in place during the Nigerian Civil War of 1967-1970. He explained that such economic measures and control related, among others, to the fixing of prices for certain consumer goods, the determination of the volume of imports and its distribution among consumer and capital goods, the direct participation in the production and the marketing of goods, the determination of the share of wages in income and the control of profit; and the stricter control of foreign investment within the Nigerian economy. He stressed that reckless increases in the supply of money without due regard for the absorptive capacity of the economy would always lead to inflation. Balami (2006) opines that inflation was cause by decline in productivity in an economy, application of outdated techniques, and poor harvest.

Strategies and policy frameworks for unemployment and inflation reduction in Nigeria

i. Unemployment Reduction Strategies

According to Aminu *et al*. (2013) Government in Nigeria over the years has been pursuing various policies aiming at reducing unemployment and achieving price stability but these two twin evils keep on increasing day by day. Government and private groups tried over many years to create employment opportunities for the teeming youths. The National Directorate of Employment and school to land Skill Acquisition programmes have youth employment as the primary goal. The National Employment Policy, approved in 2002, aimed at achieving full youth employment and encouraging more private job creation. The policy emphasized linking education to the needs of the labour market. Entrepreneurship was compulsory on the curriculum of all Nigerian Universities. But youth unemployment continues to rise. There remains a skills-mismatch for the labour market, including for university and college graduates. The Central Bank started Entrepreneurship Development Centres (EDCs) in the country's six main geographical zones. There is entrepreneurship training for unemployed university, polytechnics, college and secondary school leavers. By January 2011, EDCs had trained and counselled over 34,000 graduates, created about 2,800 jobs and enable about 1,000 graduates to access N171million for their activities.

President Jonathan introduced the Youth Enterprise with Innovation in Nigeria (YouWin) programme in 2010 aiming to encourage and support youth business ideas. The Nigerian Youth Entrepreneurship Development Programme, launched by the ministry of Youth Development, also seeks to enhance skills and experience and provide access to finance for youth entrepreneurs. The programme is expected to benefit 10,000 people aged between 18 and 35.

According to Wikipedia, the free encyclopaedia (2013), Oil companies have also helped employment efforts. In 2004, Shell Petroleum Development Company (SPDC) launched a youth development programme to provide skills for self-employment. It trained more than 1,900 people in entrepreneurship, leadership development, conflict management and industrial vocational skills. Nigerian Liquefied Natural Gas (NLNG) launched the Youth Empowerment Scheme (NLNG YES) in 2004 targeted at youths from over 100 rural communities. By 2011, more than 660 people had been trained. Several agencies and schemes were established to tackle poverty and unemployment, including the National Poverty Eradication programme, the small and Medium Enterprises Development Agency and Microcredit and Entrepreneurship Development schemes. In some local government in the country especially Lau LGA Palliative staffs were also employed to reduce unemployment in the country.

ii. Inflation Reduction Strategies

According to CBN communiqué No. 78 (2011), by 1993, it was clear that the macroeconomic policies pursued were no longer sustainable and needed drastic change. In response to the ensuing macroeconomic instability, government reverted to a guided de-regulation in 1994. Interest rate again was administratively fixed. The exchange rate regime was changed and the autonomous foreign exchange market (AFEM) was introduced in 1995, while fiscal measures were introduced to curtail deficits. However, because these measures were taken at a time when there were excess money supply, scarce foreign exchange, severe shortages in commodity supply, as well as continual labour and political unrest following annulment of the June elections of 1993, there was remarkable rise in the rate of inflation. However, government has mounted an elaborate food programme that would promote food crop production and export as well as pay more attention to the development of small and medium scale enterprises to promote wealth creation and increase output. The exchange rate has also been relatively stable, with significant real appreciation. In response to the global economic crises, the Central Bank of Nigeria (CBN) pursued measures in 2009 and 2010 to promote growth and financial stability. However, in 2011, the central bank tightened monetary policy to mop-up excess liquidity in the banking system and ward off inflationary pressures stemming from high fiscal spending, the implementation of a new minimum wage, and injection of funds into the bank system through the purchase of non-performing loans through bonds issued by asset management corporation of Nigeria (AMCON). The monetary policy rate, which was 6.25 present in September 2010, increased six times in 2011, to reach 12 percent in December, 2011. Similarly, the cash reserve ratio was increased steadily from 1 percent in March to 8 percent in December 2011. With these measures, also inflation fell from 13.7 percent in 2010 to 10.2 percent at the end of 2011 and is expected to decline to 10.1 percent in 2012 and 8.4 percent in 2013 due to the central bank monetary policy tightening and easing food prices. (see, CBN communiqué No. 78 (2011)). With these developments, inflation inertia has been curtailed and high inflation may be a thing of the past, if sustained. Another strategy put in place to stabilize the economy was privatization and commercialization of public enterprises

2. Review of Empirical Literature

Here empirical literature on the relationship between economic growth, unemployment and inflation were reviewed. Obadan (1992) conducted empirical study on direct investment in Nigeria and found a positive and statistical significant relationship between economic growth and FDI inflow. Ekpo (1995) regresses the disaggregated components of government capital expenditures on private investment, using ordinary least squares approach with annual data for 1960-90. The findings showed that capital expenditures on transport and communication, agriculture, health and education positively influence private investments in Nigeria, which invariably enhances the growth of the overall economy. Ogiogio (1995) examines the growth impact of recurrent, capital and sectoral expenditures over the period 1970-93. He observed the existence of long-run relationship between economic growth and government expenditures. The study also indicated that government investment programmes in socio-economic infrastructure provided a conducive environment for private-sector-led growth.

Omoke and Ugwuanyi (2010) test the relationship between money, inflation and output by employing cointegration and Granger-causality test analysis. The findings revealed no existence of a cointegrating vector in the series used. Money supply was seen to Granger cause both output and inflation. The results suggest that monetary policy can contribute towards price stability in Nigerian economy since the variation in price level is mainly caused by money supply. This shows that inflation in Nigeria is too much extent a monetary phenomenon. They find empirical support in context of the money-price-output hypotheses for Nigerian economy. M2 appears to have a strong causal effect on the real output as well as prices. Adofu (2010) conduct a study on the role of FDI in accelerating the rate of economic growth in Nigeria. He employed OLS regression techniques and found a positive relationship between FDI inflow and GDP.
Bakere (2012) conduct a study on stabilization policy, unemployment crises and economic growth in Nigeria. He used OLS and found that the nexus between inflation, unemployment and economic growth in Nigeria were negative. Rafindadi (2012) conducts a study on the relationship between output and unemployment dynamics in Nigeria; and used OLS and Threshold model. He found a negative nonlinear relationship between output and unemployment. Innocent et‟al (2012) conduct a study on Economic growth and foreign direct investment in Nigeria; they used OLS and Granger causality techniques and found that foreign direct investment (FDI) impacted positively and insignificantly on economic growth proxy by GDP. The causality result indicated bidirectional causality between FDI and GDP.

Aminu, Manu and Salihu (2013) investigate the effect of unemployment and inflation on economic growth in Nigeria. The study covers 1986-2010. They used OLS, Augmented Dickey-Fuller technique, Granger causality and Johansen co-integration technique and found that both unemployment and inflation impacted positively on the economic growth in Nigeria. Aminu and Anono (2012) investigate the effect of inflation on economic growth and development in Nigeria. They employed OLS, ADF and Granger causality and found that there is a positive correlation between inflation and economic growth in Nigeria, though the results revealed that the coefficient of inflation is not statistically significant, but is consistence with the theoretical expectation, causation runs from GDP to inflation implying that inflation does not Granger cause GDP but GDP does. Odusola (1996) adopts a simultaneous equations model to capture the interrelationship between military expenditures and economic growth in Nigeria. He observed that aggregate military expenditure was negatively related to growth at 10 per cent significant level. And when decomposed into recurrent and capital military expenditures, the former was more growth retarding than the latter.
Very recently, economists have also considered the effects of fiscal policies on aggregate output. Attempts

have been made to investigate the extent to which government activities affect economic growth. For instance, Ratner (1983), Aschauer (1989) and Munnell (1990) found that government investments were positively related to growth. Other studies such as Evans and Karas (1994), on the other hand, produced a mixed result. The adoption of ordinary least squares reveals a positive correlation between the two proxies of government spending (services and capital spending) and economic growth. But when a two-stage least squares techniques were used, a positive relationship could not be established in most cases, especially in public capital. Amin (1998) examined the effects of public investment expenditures on growth of Cameroon's economic activities. Using an aggregate production function, he discovered a positive relationship between the two, even though the relationship could not be statistically established.

Joao and Francisco (2001) conduct research on does high inflation affect growth in the long and short-run in Brazil?. They used Vector Autoregressive technique. They found a zero long-run response of output to a permanent inflation shock in the context of a high inflation country, and that inflation and output are reliably related in the long-run. The results indicated that in the short-run, there is a negative impact of inflation on output. Mohsin and Abdelhak (2001) conduct research on threshold effects in the relationship between inflation and growth (a comparative study of industrial and developing countries) and found that the threshold is lower for industrialzed countries than it is for developing countries. They also found negative and significant relationship between inflation and growth above the threshold level. They suggested low inflation for sustainable growth.

Vikesh and Subrina (2004) conduct research on the relationship between inflation and economic growth in Fiji, they used simple correlation and causality techniques and found that there was a weak negative correlation between inflation and growth, while a change in output bears significant bearing on inflation. The causality between the two variables ran one-way from GDP growth to inflation.
Williams and Adedeji (2004) examine price dynamics in the Dominican Republic by exploring the joint effects of distortions in the money and traded-goods markets on inflation, holding other potential influences constant. They captured the remarkable macroeconomic stability and growth for period 1991 to 2002. Using a parsimonious and empirically stable error-correction model, they found that the major determinants of inflation were changes in monetary aggregates, real output, foreign inflation, and the exchange rate. However, there was an incomplete pass-through of depreciation from the exchange rate to inflation. They also established a long-run relationship in the money and traded-goods markets, observing that inflation was influenced only by disequilibrium in the money market.

Ayesha and Rukhsana (2010) investigate the impact of inflation and economic growth on unemployment in Pakistan. They used Augmented Dickey Fuller test and Johansen- Juselius Maximum Likelihood techniques. They found that inflation significantly increased unemployment in the long term; economic growth had a significantly adverse impact on unemployment in the long run and short run respectively. Fakhri (2011) conducts research on the relationship between inflation and economic growth in Azerbaijan, he used Threshold model and found that there is a nonlinear relationship between inflation and economic growth with the threshold level of 13%.

Faraji and Kenani (2011) investigate the impact of inflation on economic growth in Tanzania. They used correlation coefficient and cointegration techniques. They found that inflation impacted negatively on economic growth, and no cointegration between inflation and economic growth during the period of study. Chang-Shuai Li and ZI-Juan Liu (2012) conduct a study on the relationship among Chinese unemployment rate, economic growth and inflation; they employed Granger causality test, unit root, cointegration, VAR and VEC model. The study revealed that unemployment impacted negatively on growth while inflation impacted positively on growth in China. The study also revealed no causation between unemployment and inflation, but there is causation between unemployment and growth, while two-way causation existed between inflation and growth. Mahmoud (2013) conducts study on the impact of inflation and unemployment on Jordanian GDP. He used simple correlation coefficient and ANOVA and found that inflation impacted positively on Jordanian GDP, while unemployment impacted negatively on Jordanian GDP. Much of the studies were from developed countries with few studies on developing countries like Nigeria.

Materials and Method

Data for this study is sourced mainly from the statistical bulletin of Central Bank of Nigeria (CBN) as well as archive of the National Bureau of Statistic (NBS) spanning 1986 to 2020 are utilized. The variables for which data are sourced include inflation rate, unemployment rate, and the growth rate of the economy. Methodologically, this study employs a multi-dimensional econometric procedure in estimating the effect of unemployment and inflation on economic growth in Nigeria. The Ordinary Least Squares (OLS) technique is used to obtain the coefficients of the equation, where the rate of growth (ECGR) serves as the dependent variable, while unemployment rates (UN), inflation rates (INF), serve as the explanatory variables. Augmented Dickey-Fuller and Phillips-Perron tests are employed to test the presence of unit root in the series. The functional expression of the model is given as:

$$ECGR = f(UN, INF) \tag{1}$$

Where
ECGR = rate of growth (ECGR)
UN = unemployment rates (UN)
INF = inflation rate.
The model (equation 1) is further specified as follows:

$$ECGR = \beta_0 + \beta_1 UN + \beta_2 INF + \mu \tag{2}$$

Empirical Results

This sub-section presents the estimated results of the unit root test based on the Augmented Dickey Fuller (ADF) test and the Phillip Perrons (PP) test. In addition, the OLS technique based on the growth model as specified in equation 1 is also highlighted.

Table 1: Unit root tests

Variable	ADF 1(0)	CRITICAL (5%)	ADF 1(1)	CRITICAL (5%)	PP 1(1)	CRITICAL (5%)	REMARK	PROB. (ADF)	PROB. (PP)
ECGR	-2.662	-2.99	-5.174	-3.005	-7.536	-2.998	1 (1)	0.0004*	0.0000*
UN	-0.733	-2.992	-6.186	-3.753	-4.991	-2.998	1 (1)	0.0000*	0.0006*
INF	-2.988	-2.998	-4.684	-3.77	-6.133	-2.998	1 (1)	0.0001*	0.0000*

Note: *denotes stationary at 1 percent

Table 4.1 presents the results of unit root test based on the ADF and the PP tests, respectively. The results of both ADF and PP revealed that all the variables of the model were stationary at 1 percent as indicated by their probability values. The result further indicated that economic growth rate (ECGR), unemployment rate (UN) and inflation rate (INF) were stationary at first difference 1(1). This further provides the evidence for estimating the coefficient using ordinary least square technique.

Table 2: Regression results

Variables	Coefficients	Std. errors	P-value
Constant	6.9352	8.1196	0.0000
UN	-13.0541	3.0888	0.0050
INF	0.0176	0.5713	0.0471
R^2 0.3292 R^2 adjusted 0.2733 F-stat 5.8900 Prob(F-stat) 0.00083			

Source: Author's computation using Eviews 9.0

Table 2 presents a multiple regression results for the growth model. The result is for measuring the growth effect of both unemployment rates and inflation rates in Nigeria. The constant, inflation and the coefficient of unemployment were found statistically significant at 1 per cent as indicated by their probability values of 0.0000; 0.0050 and 0.0471. The coefficient of unemployment significantly and negatively affected economic growth rate in Nigeria. This also confirm the Okun"s law and consistent with the theoretical expectation of this study. The coefficient of inflation was found statistically significant as indicated by its high probability value of 0.0471. The coefficient of inflation is significantly and positively affecting economic growth rate in Nigeria. This is consistent with the theoretical expectation of this study. This result, therefore, implied that as unemployment rates increases by 1 per cent economic growth rate decreases by 13.0541 per cent and increase in inflation rates by 1 per cent increases economic growth rate by 0.0176 per cent as shown in table 1. The F-statistics 5.8900, which measured the joint significance of the parameter estimates, was found statistically significant at 1 per cent level as indicated by the corresponding probability value of 0.0083. This implies that all the variables of the model were statistically and jointly significant affected economic growth rate in Nigeria. This result further indicated that both unemployment rates and inflation rates affects economic growth rate in Nigeria which if properly control may translate to improvement in economic growth rate.
The R^2 value of 0.3292 (32.92%) implied that 32.92 per cent of the total variation in economic growth rate is explained jointly by unemployment rates and inflation rates in Nigeria. This further indicated that economic growth rate was not significantly explained by unemployment rates and inflation rates. Coincidently, the goodness of fit of the regression remained very low after adjusting for the degree of freedom as indicated by the adjusted R^2 (R^2 = 0.2733 or 27%). The Durbin-Watson statistic of 1.7511 is observed to be greater than R^2 0.3292 indicating that the model is non-spurious (meaningful) and can be used for policy. Durbin- Watson statistics 1.7511 showed there was negligible positive serial correlation among the error value thus making it possible to conduct a unit root test. As shown in Table 1, all coefficients indicate stationary among the variables.

3. Conclusion and Policy Recommendations

The results of OLS revealed that increase in inflation rates raised economic growth rates; while increase in unemployment rates reduced economic growth rates in Nigeria. The coefficient of both unemployment and inflation are statistically significant and consistent with the theoretical expectation in determining economic growth rates in Nigeria. The F-statistic value indicate that unemployment and inflation rates are jointly and significantly affecting economic growth rates in the Nigeria at 1 percent and 5 per cent significant level. However, both structural rigidity and unstable monetary policy have been identified as the major causes of inflation and unemployment in Nigeria. For this study, the major cause of unemployment in Nigeria is the method of production adopted by the public sector which is capital intensive (labour savings) and is capable of increasing unemployment rates thereby reducing economic growth rates. Moreover, the nature of inflation in the Nigeria is cost-push attributed to the method of technology adopted and the level of poverty in the country. This will make it possible for inflation rates if regressed along to behave abnormally to growth rates of output in the country. A historical analysis of monetary policy in Nigeria within this framework suggests that monetary conditions might have been less accommodative and, hence, inflation in Nigeria might have been lower and less volatile than what was observed in the past had Nigeria followed prescriptions based on a rule consistent with price stability. The study suggests the need for public sector to provide adequate basic infrastructure, functional legal system, security of lives and property, etc. All these would boost employment by making goods and services readily available to meet the ever increasing demand in order to prevent inflation and subsequently lead to industrial expansion and improvement in growth rates of the economy which would provide employment opportunities for the people. Since the type of unemployment and inflation characterized the Nigerian economy was structural and cost-push respectively; hence the need by the government and relevant agencies to formulate policies to encourage self- employment and reduce cost of doing business in the country so as to achieve a high, rapid and sustained economic growth.

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