

## The Determinants of Urban Unemployment Crisis in Nigeria: An Econometric Analysis

Bakare A.S

Department of Economics, Adekunle Ajasin University  
P.M.B 001 Akungba- Akoko, Ondo State, Nigeria.

---

### Abstract

*In Nigeria, since the early eighties, urban unemployment has assumed an alarming dimension and a crisis proportion with millions of able-bodied persons who are willing to accept jobs at the prevailing wage rates are unable to find placements. Thus urban unemployment has been regarded as one of the most challenging economic problems facing the Nigerian policy makers. This study however examined the determinants of the urban unemployment in Nigeria. The choice is to enable us identify the major factor responsible for the crisis. This study however made use of time series secondary data and parsimonious error correction mechanism to test the significant relationship between the level of unemployment and demand for labour, supply of labour, population, inflation, capacity utilization, gross capital formation and nominal wage rate. Empirical investigations showed that the rising nominal wages and the accelerated growth of population which affected the supply side through a high and rapid increase in labour force relative to the absorptive capacity of the economy appear to be the main determinant of high unemployment in Nigeria. The econometric results suggested the need for the government to embark on direct measures capable of creating jobs through industrialization and mechanization of agriculture. It also recommended that programmes of integrated rural development and re-orientation of economic activity and social investments towards the rural areas need to be embarked upon to create an appropriate rural -urban economic balance.*

---

**Keywords:** unemployment, labour force, rural-urban drift, population growth, wage rate

---

### INTRODUCTION

Nigeria today is 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. According to the Labour Force Survey conducted by the Federal Office of Statistics in December 1997, Nigeria had a composite unemployment rate which stood at 3.2% compared with 3.4% in the corresponding period of 1996 (F.O.S., 2001). Similarly, the urban and rural unemployment rates declined from 6.1% and 2.8% in December 1996 to 6.0% and 2.6% in December 1997. The composite registered unemployment rate for December 1998 stood at 3.2% but declined to 3.1% in 1999, whereas the urban unemployment rate in December 1998 was 4.9% but increased to 5.8% in 1999. The rural unemployment rate declined from 2.8% in December 1996 to 2.5% in 1999 December. In December 2000, the composite unemployment rate increased to 4.7% and similarly the urban and rural unemployment rates increased to 7.2% and 3.7% respectively compare with previous years.

Comparatively, the survey results show clearly that urban unemployment is higher than rural unemployment. One of the causes according to Fadayomi (1992) was the inability to develop and utilize the nation's manpower resources effectively, especially in the rural sector. This, however, resulted

in a high rate of urbanization 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). Several Scholars and commentators on social and economic issues have canvassed a host of factors responsible for the high and ever-rising levels of urban unemployment. They have severally agreed that rural to urban migration of young and educated people is at the very root of it (Okonjo, 1974; Adepoju, 1986; Yotopoulos, 1991; Sarr, 2000, Onah, 2001, Otaki, 2003). This is an aversion response to the prevalent poor socio-economic conditions in rural areas. Most rural areas are characterized by gross inadequacy and often total lack of basic social and physical infrastructures, very low net returns to labour and capital, low life expectancy and various poverty linked characteristics that tend to have deep-rooted cultural underpinnings. (Okonjo, 1974; Adepoju, 1986;). Many research reports have given indications that this trend is worsened by the shortage of physical and financial productive assets and economic opportunities on one hand, and lack of human capital development facilities in many rural settings. Apart from rural to urban migration, several other factors responsible for high urban unemployment have been identified. They include economic reform programmes that result to closure of companies and public establishments and

staff retrenchment, as well as poor job attitude among the youth (Manning and Junankar, 1998). Urban unemployment in Nigeria has affected youths from a broad spectrum of socioeconomic groups, both the well and less well educated, although it has particularly stricken a substantial fraction of youths from low income backgrounds and limited education (McGrath and King, 1995). Youth employment is a crucial issue in Nigeria because the youth constitute a major part of the labour force and they have innovative ideas, which among other factors are important in the development process of the country. A large proportion of the youths however are unemployed. The negative consequences include psychological problems of frustration, depression, hostility and gradual drift of some visible unemployed youths into all manner of criminal behaviour (Adebayo, 1999; Egbuna, 2001).

In generally, it is believed that much of the 'open' urban unemployment observed in this country is due to structural factors such as the nature of the educational system and its interface with the labor market (i.e., the mismatch problem), technological change, permanent shifts in the demand for goods and services and the skill content of the labor force. Cyclical factors such as the fluctuations in aggregate local and foreign demand for goods and services and institutional factors such as the presence of strong labor unions and labor legislation also determine the underlying changes in the unemployment rate. In addition to open urban unemployment, there is evidence of a high level of 'disguised unemployment' in the form of 'discouraged workers' who are not in employment and not actively looking for work, even though they would like to work. This category is excluded from the labor force statistics, but it is estimated that in 1995, over 30 percent of all unemployed persons were 'discouraged workers'.

Early analysis of the unemployment situation in Nigeria pointed to the role of a 'wage gap'. The wage gap model of unemployment has its roots in the work of Lewis (1958) and Tidrick (1975) and indicates that, as the 'high wage' (e.g., petroleum) sector grows relative to the 'low wage' sector (e.g., agriculture), the former draws labor from the latter, thus leading to increased 'open' unemployment as the 'high wage' sector is unable to absorb the available supply due to its high capital to labor ratios. Labor queues up for jobs in the 'high wage' sector (that is, wait unemployment) as the unemployed have a high reservation wage rate.

#### **The Problem**

In Nigeria, since the early eighties, urban unemployment has assumed an alarming dimension and a crisis proportion with millions of able-bodied persons who are willing to accept jobs at the prevailing wage rates are unable to find placements

(Onah, 2001). Thus urban unemployment has been regarded as one of the most challenging economic problems facing the economy of Nigeria. In a context of a stagnant economy with low economic growth rates, the demand for labour has been declining resulting in high levels of urban youth unemployment (Okojie, 2003). This high rate of 'open' and 'disguised' unemployment in Nigeria has a serious implication on the economy and therefore becomes a problem which requires thorough examination. Therefore the objective of this study is to examine the determinants of the unemployment problem in Nigeria.

The rest of the paper is organized as follows: in section 2, a brief review of the literature is provided while the methodology of the study is presented in section 3. This methodology provides the basis for the estimation of a simple model of unemployment for Nigeria. Section 4 presents the results of the estimated model over the period 1970-2008. The summary and conclusion of the paper, including suggestions for tackling the unemployment problem in Nigeria are made in section 5.

#### **LITERATURE REVIEW**

The literature is fairly in agreement on the meaning, causes and the impact of urban unemployment on the growth and development of any nation. What differ from nation to nation is the extent and magnitude of the impact.

In defining unemployment; authors like Adebayo (1999.) Dantwala (1971), Falae (1971), Encyclopedia Americana (1995), Englama (2001), Adebayo (1999), Onah (2001) share different but related views. For instance, Adebayo (1999) defined unemployment as a state in which people who can work are without jobs and are seeking for pay or profit. This definition gives rise to the problem of measurement, especially when we are interested in knowing the average rate of unemployment in the economy over a period of time. Falae (1971) considered such a definition too broad because some categories of people who are without work should not really be regarded as unemployed in any meaningful sense. Falae (1971) therefore pointed to the labour code prescription of lower and upper limits for the labour force in Nigeria and submitted that anyone who is unable to work is not counted as unemployed, even though he or she would love to work. According to the Encyclopedia Americana (1995) unemployment literally applies to all persons without work and actively looking for work. Englama (2001) points out that the unemployment rate in an economy is the number of people unemployed expressed as a percentage of the total labour force. The total labour force is defined as the number of people employed plus the number of people unemployed within the age bracket of 18-60 years. Adebayo (1999),

Turning to the causes of urban unemployment, Simelane (1995) canvassed an opinion. According to Simelane (1995), the location of more service points supplying a variety of services to the urban areas attracts rural dwellers to the urban areas thereby contributing to rural-urban migration and leading to urban unemployment. The location of such service supply points for agricultural inputs and consumer goods in the rural areas will play a crucial role in rural development and thereby reduce rural urban migration which is the main cause of urban youth unemployment. In Collaborating this argument, Echebiri (2005) observed that developing countries today face greater urbanization challenges than developed countries faced. Developed countries urbanized at a comparatively leisurely pace. The United States was 40 percent urbanized in 1900, 70 percent in 1960 and 75+ percent in 1990. This gradual pace is in marked contrast with that in many developing countries. For example, the Republic of Korea was 40 percent urbanized in 1970 and 78 percent by 1990. What took the United States 90 years to accomplish took Korea 20 years and Brazil 30 years.

Urban youth unemployment according to Onah (2001) stands for the conglomerate of youths with diverse background, willing and able to work in urban areas. This results in pressures of supply of labour over the demand for labour, thus causing joblessness. Given the lack of sufficient employment opportunities in the formal sector, young people are compelled to engage in casual work and other unorthodox livelihood sources, often of a criminal nature (Gibb and George, 1990). In absolute terms, it is estimated that there are presently about 122 million unemployed youths in the African continent (Chigunta, 2002). Therefore projections of population growth into the 21st century indicate that the proportion of youths in relation to the overall population will continue to grow over the next twenty years. Todaro (1992) points out that the high rate of urban unemployment is as a result of continuous transfer of economic activities and youths from rural to urban areas.

Causes of unemployment can therefore be analyzed from both the supply and the demand sides of the labour market in Nigeria. According Adebayo (1999) unemployment arises whenever the supply of labour exceeds the demand for it at the prevailing wage rate. On the supply side, there is the rapidly growing urban labour force arising from rural-urban migration. He further stated that rural-urban migration is usually explained in terms of push-pull factors. The push factors include the pressure resulting from man-land ratio in the rural areas, and the existence of serious underemployment arising from seasonal cycle of climate. These factors are further strengthened in Nigeria by lack of infrastructural facilities, which

makes rural life unattractive. According to Sarr (2000), the United Nations report (1999), noted that youth migrants in Africa are three times more in number than other migrants. The report also added that the urbanization rate of the youth was 32 per cent in 1990, compared to less than 25 percent for the non-youth population. It is estimated that by the year 2010, over 50 percent of the youths in Africa will be residing in urban areas where job opportunities are limited to few modern sectors and establishments. Another supply factor causing unemployment in Nigeria is rapid population growth. Going by the 1991 census, projections for the future indicate that the population could reach about 135 million by the year 2015 given the annual growth rate of 2.8 per cent Echebiri (2005). Goldstein and Hollister (1994) argued that the high population growth rate has resulted in rapid growth of the labour force which is far outstripping the supply of jobs. They pointed out that the effect of the accelerated growth of population on Nigeria's unemployment problem is multifaceted.

Firstly, it affects the supply side through a high and rapid increase in labour force relative to the absorptive capacity of the economy. Secondly, the increase in the number of children in the population presently implies a serious burden. Other supply-side factors are what some experts describe as inappropriate school curricula and lack of employable skills. Several analysts argue that in so far as the formal sector is concerned, the skills that job seekers possess do not match the needs and demands of employers in Nigeria (McGraith and King, 1995). It is argued that Nigeria's education system, with its liberal bias, does not produce the type of skills demanded in formal employment. According to Manning and Junankar (1998), the total graduates out-turn by higher institutions in Nigeria which was 73,339 in 1986/87 rose to 131,016 in 1996/97. This substantial growth of higher education has been accompanied by increasing difficulties in finding suitable employment by graduates in a variety of courses. This shows that there are imbalances between the supply and demand for these different categories of highly educated manpower. Therefore rapid expansion of our educational system first acts directly to increase the supply of educated manpower above the corresponding demand for them and consequently contributes its quota to the problem of urban youth unemployment in Nigeria. In collaborating this opinion, Oni (1994) observed that high unemployment incidence of secondary school-leavers is a reflection of improper coordination of the educational system. To substantiate this opinion, Lambo (1987), criticized the government expenditure policy whereby most of government projects (industries and public utilities) were concentrated in urban areas at the utter neglect of the rural areas because of its tendency to encourage mass exodus of

rural skilled and unskilled labour from villages into the urban centers thus causing urban unemployment.

Youth urban unemployment has major implication on the economy of any nation. Primarily it encourages the development of street youths in Nigeria. According to Echebiri (2005), the street youths who were, denied of legitimate means of livelihood would grow up in a culture that encourages criminal behaviors. This argument was supported by Chigunta, (2002). The unemployed youths survive by engaging in various activities such as petty trading, casual work, borrowing, stealing, pick pocketing, prostitution, touting and other illegal activities. Some have become drunkards others are on drugs such as cocaine and Indian-hemp. Bennel (2000) argued that urban society is becoming increasingly criminalized, especially with the proliferation of youth gangs. Several studies have shown that majority of prison inmates are youth aged 30 years and below. Also, delinquency, crime and drug abuse are on the increase among youths (Igbinovia, 1988).

**THE METHOD AND THE MATERIALS**

**Research Design and Strategies**

The study uses quasi-experimental research design approach for the data analysis. This approach combines theoretical consideration (*a priori* criterion) with the empirical observation and extracts maximum information from the available data. It enables us therefore to observe the effects of explanatory variables on the dependent variables.

**The Data**

The study focused on the determinants of urban unemployment in Nigerian economy from 1978 – 2008 which is a period of thirty (30) years. Time series secondary data were used for the analysis. The secondary data were obtained from such publications as World Bank Digest of Statistics, Central Bank of Nigeria statistical bulletin and International Financial Statistics. The data on public and private investment were obtained from the African Development Indicators. Data were also obtained from website, Journals and Newspapers.

Since the study make use of time series secondary data, our data analysis involves: (i) checking the temporal properties of the variables in the model via unit root tests in order to determine the stationarity of the variables(e.g. Augmented Dickey-Fuller (ADF) or Phillips-Perron (PP) tests; (ii) determination of a meaningful long-run equilibrium relationship among the variables, that is, determine if the variables in the equation are co integrated (e.g., Engle-Granger’s single equation or Johansen’s multi-equation methods)test; (iii) estimation of the dynamic (short-run and long run) regression equation for the model (i.e., the error correction model estimated by OLS, Instrumental Variables test, etc.) and (iv) the

application of a series of diagnostic tests to determine the sturdiness and significance of the empirical model.(i.e standard error test, correlation coefficient test, t-statistics test, F-test and serial autocorrelation test.)

The secondary data used for the study were processed using E-view for windows econometric packages. The E-view is preferred to the SSPS because it enables us to have data corrected, that is, the serial correlation in the data will be corrected. It involves the use of Error Correction Mechanism (ECM) to overcome the problem of spurious regression. The ECM reveals that the change in a variable at time *t* is not only dependent on lagged changes in its independent variables, but also on its own lagged changes. It is appealing due to its ability to induce flexibility by combining the short –run and long run dynamics in a unified system. Also, the estimates of the parameters of the ECM are generally consistent and efficient

**Model Specification**

Stochastic model was used to investigate determinants of youths urban Unemployment in Nigeria. This is called the Unemployment Trend Model. This model combines the structuralist, monetarist and fiscalist approaches.

**The Unemployment Trend Model**

In Nigeria, Unemployment is majorly determined by demand for labour, supply of labour, Population, inflation, Capacity Utilization, Gross Capital Formation, Wage Rate and Private Domestic Investment. Thus, unemployment trend model for Nigeria can be specified in a function form as:

$$UMP = f(DDL, LSUPL, POP, INF, CU, GCF, EDST, WR, PI) \tag{1}$$

Where:

- DDL = Demand for labour
- LSUPL, = Supply of labour
- POP = Population growth rate
- INF = Inflation Rate
- CU =Capacity Utilization
- EDST=Education status
- GCF=Gross Capital Formation
- WR=Wage Rate
- PI=Private Domestic Investment

Equation 1 could be expressed in a log linear form as:

$$UEMP = \beta_0 + \beta_1 DLB + \beta_2 LSUPL + \beta_3 POP + \beta_4 INF + \beta_5 CU + \beta_6 GCF + \beta_7 WR + \beta_8 PI + \beta_9 EDSt \tag{2}$$

Econometrically, to include the random term, the model is expressed as:

$$UEMP_t = \beta_0 + \beta_1 DDL_t + \beta_2 LSUPL_t + \beta_3 POP_t + \beta_4 INF_t + \beta_5 CU_t + \beta_6 GCF_t + \beta_7 WR_t + \beta_8 PI_t + \beta_9 EDSt_t + U_{it} \tag{3}$$

Where *t* is the time trend and *U<sub>i</sub>* is the Error term (Stochastic term) which is assumed according to Ordinary Least Square to be normally distributed in zero mean and constant variance. The parameters for

estimation from equation 3 are  $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7$  and  $\beta_8$ . In consonance with economic theory, it is expected that,  $\beta_1 < 0, \beta_2 > 0, \beta_3 > 0, \beta_4 < 0, \beta_5 < 0, \beta_6 < 0, \beta_7 < 0, \beta_8 < 0$  and  $\beta_9 < 0$

**The Theoretical Analysis of the model/A priori Expectations.**

Theoretically demand for labour represents the utilization of manpower resources. Thus, DLB is expected to have a positive impact on unemployment. The greater the utilization of manpower resources, the smaller is the level of unemployment. Unemployment usually occurs as result of capacity underutilization in the real sector. Capacity underutilization can sometimes come as a result of capital intensive method of production or drop in foreign direct investment and domestic investment. In competitive market economy, the demand for labour is an invisible force that controls employment such that when foreign direct investment and domestic investment increase unemployment will be minimized. In theoretical terms, gross capital formation including private domestic investment is expected to have a positive impact on unemployment. The greater the gross capital formation and private domestic investment, the smaller is the level of unemployment. The effect of the supply of labour on unemployment would be an opposite of demand for labour effects. According to theory of competitive market economy supply of labour and demand for labour are two invisible hands that determine employment in the labour market. Thus when the supply of labour is greater than the demand for labour, there would be excess labour. The excess labour represents unemployment. A number of factors determine the supply of labour in an economy. The chief among them is the rate of population growth. Other factors are what some experts describe as educational system, school curricula and employable skills. High rate of population growth is expected to increase the supply of labour and put pressure on the labour market.

Rapid expansion of educational system first acts directly to increase the supply of educated manpower above the corresponding demand for them and consequently contributes its quota to the problem of unemployment. If the school curricula are not appropriate, there will be imbalances between the supply and demand for these different categories of highly educated manpower. Several analysts argue that in so far as the formal sector is concerned, the skills that job seekers possess do not match the needs and demands of employers. In that circumstance a lots labour will become redundant and constitute unemployment. Therefore the more appropriate the school curricula are, the lesser the rate of unemployment. Thus a negative relationship is expected between education system and unemployment.

Theoretically, the effect of inflation on unemployment is ambiguous. Inflation rate is expected to affect unemployment negatively particularly if the inflation is hyperinflation type. However a creeping inflation of 2% per annum will stimulate investment and consequently reduce unemployment. This is in consonance with Philip’s curve which explains a trade-off between inflation and the rate of unemployment. Capacity Utilization represents the extent to which the economic resources in the real sector are put into active use. Capacity underutilization would mean resources are not fully employed. However when resources are fully utilized, unemployment will be reduced hence a negative relationship is expected between capacity utilization and unemployment. The level of minimum wage and wage increase contribute to unemployment rate. When the wage rate increases, there is tendency to substitute machine for labour. When this occurs, it will increase the unemployment rate. Hence a positive relationship is expected between wage rate and unemployment.

**DATA ANALYSIS AND INTERPRETATION OF RESULTS.**

This section focused on the data analysis, interpretation of results and discussions. The results show the econometric effect of some explanatory variables such as demand for labour, supply of labour, population, inflation, capacity utilization, gross capital formation and nominal wage rate on the unemployment rate in Nigeria.

The regression analysis is explained in this chapter with a test for ordinary least square (OLS). Furthermore, this chapter also examines the problem of social correlation (Auto correlation) and the first of the serial correlation. Various statistical tests such as standard error, t-test statistics, adjusted R-square, Durbin Watson and F-statistics were used to validate the hypothesis earlier stated.

**STATIONARITY AND CO INTEGRATION TEST**

Table1: Analysis of Stationarity Test

| Variable | Test statistics | Critical Value | Level of significance | Level |
|----------|-----------------|----------------|-----------------------|-------|
| UNEMP    | -3.7069         | -2.9969        | 5%                    | 1(1)  |
| LSUPL    | -5.4710         | -3.7497        | 1%                    | 1(1)  |
| GCF      | -6.1584         | -3.7667        | 1%                    | 1(0)  |
| WR       | -6.3873         | -3.7667        | 1%                    | 1(0)  |
| PI       | -5.5506         | -3.7667        | 1%                    | 1(0)  |
| INFL     | -4.2322         | -3.7856        | 1%                    | 1(0)  |
| CU       | -3.1901         | -3.0038        | 5%                    | 1(0)  |
| EDST     | -3.0687         | -3.0038        | 5%                    | 1(0)  |
| DDL      | 5.4475          | -3.7667        | 1%                    | 1(0)  |

Source: Computed by the Author, 2011

Table1 shows the summary of the unit root test of the variable used for empirical study. The test shows

that; Private domestic investment(PI) ,Wage Rate(WR), Education status (EDST); Capacity Utilization(CU); Gross Capital Formation (GFC), Inflation rate (INFL),Demand for labour (DDL) were stationary in levels at 1 percent, 1 percent, 5 percent, 5 percent, 1 percent, 1 percent, 1 percent level of significance respectively. Unemployment Level (UNEMPL) and supply of Labour (SUPL) were stationary in the first difference at 5 percent and 1 percent level of significance. A variable is stationary where the value of the test statistic is greater than the critical value. The next step after finding out the order of integration was to establish whether the non-stationary variables are co-integrated. Differencing of variables to achieve stationarity leads to loss of long run properties. The concept of co-integration implies that if there is a long run relationship between two or more non-stationary variables, deviations from this long run part are stationary.

To establish this, Engel Granger’s two-step procedure was used. This was done by generating residuals from the long run equation of the non-stationary variables, using DF and ADF tests. The residuals were found to be stationary for the model which proved that the variables were co-integrated.

Table2: Regression Results.  
Dependent Variable: UNEPL  
Method: Least Squares  
Date: 05/05/11 Time: 20:07  
Sample(adjusted): 1989 2010  
Included observations: 22 after adjusting endpoints

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.    |
|--------------------|-------------|-----------------------|-------------|----------|
| C                  | 74123.15    | 17508.26              | 4.233610    | 0.0515   |
| SUPL               | 13.47570    | 1.379732              | 9.766903    | 0.0103   |
| SUPL(-1)           | 13.74645    | 1.439261              | 9.551048    | 0.0108   |
| SUPL(-2)           | 3.586474    | 0.454294              | 7.894605    | 0.0157   |
| DDL                | 4.252303    | 0.639910              | 6.645162    | 0.0219   |
| DDL(-3)            | -0.360776   | 0.423029              | -0.852839   | 0.4836   |
| EDSY               | 0.007834    | 0.001175              | 6.667768    | 0.0218   |
| EDSY(-1)           | 0.003521    | 0.000699              | 5.038012    | 0.0372   |
| CU                 | -2721.677   | 482.5202              | -5.640545   | 0.0300   |
| CU(-1)             | -1864.234   | 246.4931              | -7.563029   | 0.0170   |
| GCF                | -389.4232   | 49.94517              | -7.797014   | 0.0161   |
| GCF(-1)            | -913.5703   | 93.94781              | -9.724232   | 0.0104   |
| INF                | -485.3905   | 76.86715              | -6.314667   | 0.0242   |
| INF(-1)            | -376.6005   | 87.97742              | -4.280650   | 0.0505   |
| POP                | 1480.410    | 215.1854              | 6.879694    | 0.0205   |
| POP(-1)            | -1106.486   | 191.3120              | -5.783672   | 0.0286   |
| PI(-1)             | 3882.137    | 963.4418              | 4.029446    | 0.0564   |
| PI(-2)             | -11372.15   | 1311.475              | -8.671268   | 0.0130   |
| WR                 | 6337.157    | 867.3983              | 7.305936    | 0.0182   |
| ECM(-1)            | 0.149747    | 0.157530              | 0.950593    | 0.4421   |
| R-squared          | 0.999265    | Mean dependent var    |             | 79941.41 |
| Adjusted R-squared | 0.992279    | S.D. dependent var    |             | 27198.63 |
| S.E. of regression | 2389.989    | Akaike info criterion |             | 17.81625 |
| Sum squared resid  | 11424097    | Schwarz criterion     |             | 18.80811 |
| Log likelihood     | -175.9788   | F-statistic           |             | 143.0370 |
| Durbin-Watson stat | 2.180458    | Prob(F-statistic)     |             | 0.006964 |

Source: Computed by the Author 2011

### The Statistical Significance of the Parameter Estimate

The statistical significance of the parameter estimate can be verified by standard error test; the adjusted R squared and the Durbin-Watson statistics.

- For the model, when compared half of each coefficient with its standard error, it was found that the standard errors are less than half of the values of the coefficients of the variables. This shows that the estimated values are all statistically significant.
- The value of the adjusted R-squared ( $R^2$ ) for the model is very high, pegged at 99%. It implies that demand for labour, the supply of labour, population, inflation, the level of gross capital formation, private domestic investment, capacity utilization, education system and wage rate explained about 99% systematic variations in the level of unemployment over the observed years in the Nigeria economy while the remaining 1% variation is explained by other determining variables outside the model.
- The value of Durbin Watson is 2.1 for the model. This falls within the determinate region and implies that there is a negative first order serial autocorrelation among the explanatory variables in the model.
- In summary, since all the econometric test applied in this study show a statistically significant relationship between the dependent and independent variables from the model in both the long and short runs thus, we accept the alternative hypothesis which states that: demand for labour, the supply of labour, population, inflation, the level of gross capital formation, private domestic investment, capacity utilization, education system and wage rate has significant implications on the level of unemployment in Nigeria.

### The Theoretical Significance of the Parameter Estimate

Table 2 reported the long run Parsimonious Error Correction Results.

- According to the results, the supply of labour has positive coefficients at both short and long run periods and is significant at the 1% level. This indicates that the high level of unemployment in Nigeria arise as a result of increase in the supply side of the labour over and above the demand side. The result is in agreement with our a priori expectations which suggest that when the supply of labour is greater than the demand for labour, there would be excess labour. In line with this theory, the counterpart variable; that is the demand for labour though manifests a correct sign especially in

- the long run but it is not statistically significant. It shows that what determines the high level of unemployment is the net effect of excess supply of labour.
- The coefficient of education status has a positive sign at both short and long run periods and is statistically significant. The positive sign of years of formal education shows that there was a direct causal relationship between years of education and unemployment. The higher the educational status the higher the rate of unemployment in the country. The education and training system has inadequately prepared the youth for the world of work' (i.e., youth have few skills, are inexperienced and display a poor attitude to work). The basic reason for this in the literature is that the highly educated status are conscious and choosy, and hence become more prone to search unemployment.
  - Inflation has a negative signs at both short and long run periods and is significant at 1% level. This result supported the Philip's curve which indicates a trade-off between inflation and the level of unemployment. In the late 1950s, A.W. Philips an economist at the London school of Economics published a paper that disclosed that the low unemployment rates were associated with high inflation rate and that those periods with high unemployment were associated with low inflation. In the same vein, inflation has its implication on the level of unemployment situation in Nigerian economy from the stand view of the fact that higher inflation reduced the rate of unemployment. Theoretically when inflation rises, unemployment falls, (employment increases) *ceteris paribus*. Since inflation and unemployment rates have a negative relationship, if there should be employment, there is going to be inflation. Therefore, the growth of inflation is a necessary concomitant to reduction in the level of unemployment.
  - The regression result demonstrates that capacity utilization and gross capital formation are highly significant and negatively related to unemployment rates both in the short and long run. The negative signs of the capacity utilization and gross capital formation are in consonance with *a priori* expectation. One explanation for the high level of unemployment since 1986 in Nigeria is the low degree of capacity utilization and capital formation. In theoretical terms the lower the degree of capacity utilization and capital formation, the higher the level of unemployment.
  - The overall measure of wage rate acts as a major determinant of unemployment in Nigeria. The variable has a positive sign and is highly significant at 1% level. The rising nominal wages since 1980s appear to be the main contributor to high unemployment in Nigeria. The public sector played a leading role in the episode of increasing nominal wages. This was buttressed by the actions of the strong labor union movement. Whereas the nominal wages were increasing since 1986, real wages have been falling while unemployment has remained high (i.e., a possible 'wage-curve' relationship). The wage gap model of unemployment has its roots in the work of Lewis (1958) and Tidrick (1975) and indicates that, as the 'high wage' (e.g., petroleum) sector grows relative to the 'low wage' sector (e.g., agriculture), the former draws labor from the latter, thus leading to increased 'open' unemployment as the 'high wage' sector is unable to absorb the available supply due to its high capital to labor ratios. Labor queues up for jobs in the 'high wage' sector (that is, wait unemployment) as the unemployed have a high reservation wage rate [see Hilaire, 1992].
  - Likewise from our result, population is seen to have a positive relationship with the level of unemployment. This indicates that an increase in population lead to an increase in unemployment in Nigeria. This finding is in agreement with our *a priori* expectations. Economists usually argued that high population growth rate would normally result in rapid growth of the labour force which may outstrip the supply of jobs. This finding is similar to the findings of Goldstein and Hollister (1994) who pointed out the effect of accelerated growth of population on Nigeria's unemployment problem. According to his findings the accelerated growth of population affected the supply side through a high and rapid increase in labour force relative to the absorptive capacity of the economy.
- Finally especially in the long runs, changes in private domestic investment (PI) have a statistically significant impact on changes in the unemployment rate. The negative sign of private domestic investment shows that there was an inverse causal relationship between private domestic investment and unemployment. This indicates that when private domestic investment increases unemployment will be reduced.

### **SUMMARY CONCLUSION AND POLICY RECOMMENDATION:**

Specifically, this study examined the determinants of unemployment in Nigeria. In trying to achieve this objective, a parsimonious error correction mechanism was used. From the previous arguments in this paper and from the empirical results, it is clear that there is a significant relationship between unemployment and demand for labour, supply of labour, population, inflation, capacity utilization, gross capital formation, nominal wage rate and private domestic investment in Nigeria. With 99 percent of the changes in economic growth being explained by the model, it is only logical to summarize that other factors, for which a major share are qualitative factors, explain the minor 1percent of the variability in economic growth in Nigeria. The study has therefore brought out in clear terms the reason for high level of unemployment in Nigeria. Our findings highlighted five reasons for the high level of unemployment in Nigeria namely:

- Increase in the size of labour market as a result of increase in the supply side of the labour over and above the demand side.
- The 'stickiness' of wages at levels higher than labour productivity;
- The education and training system which inadequately prepared the youths for the world of work' (i.e., youth have few skills, are inexperienced and display a poor potentials to be self employed.
- High population growth rate which resulted in rapid growth of the labour force that outstripped the supply of jobs.
- Rural-urban migration that resulted to urban overpopulation and urban unemployment

From these findings it can be concluded that unemployment has become a major socio-economic problem in Nigeria and that it has reached a crisis proportion. The results indicated that unemployment is a serious problem especially among the young cohorts of the labour force. There is no doubt from the results that youth unemployment in Nigeria shares common characteristics with that existing in several places as shown in the literature especially the rural-urban drift. In this respect, it is recommended that programmes of integrated rural development and re-orientation of economic activity and social investments towards the rural areas need to be embarked upon to create an appropriate rural urban economic balance. In addition to this our findings suggest that private domestic investment is a necessary condition for reducing the rate of unemployment. Policy measures which enhance private domestic investment including full capacity utilization, capital formation, export promotion and general business development (e.g., small business development) will reduce youth unemployment in Nigeria.

The government's approach to the unemployment problem in Nigeria has been largely indirect. A direct approach that create job through industrialization and mechanized agricultural system is required. Furthermore expansion in the private sector is the key to a lower and sustainable level of unemployment in Nigeria. The Government must also maintain a stable macroeconomic environment within which local and foreign private sector companies can operate. In effect, it must keep its fiscal deficit at a manageable level and ensure that its exchange rate policy does not engender speculation and uncertainty.

Finally the mismatching that arises from the incompatibility of job-seekers' qualifications and practical skills with the expectations of firms is a major problem that requires serious long-term planning. Education must cease to be seen as an end. Education should create employment and equally enhance the quality, employability and practical capacity of the labour force. It is therefore very important that the education system in Nigeria should be restructured to take cognizance of the current emphasis on self employment and self-reliance. This will entail an educational system that de-emphasizes paper qualification and lays much premium on technical know-know and intellectual property.

### **References**

- Adebayo, A. (1999): "Youth unemployment and National Directorate of Employment and selfemployment programmes". *Nigerian Journal of Economics and Social Studies* 41 (1), 81-102.
- Adepoju, A. (1986). *Rural Migration and Development in Nigeria*. Department of Geography and Social Statistics, University of Ife, Nigeria.
- Bennel, P, (2000): *Improving Youth Livelihood in SSA Report to the International Development Center*.
- Chigunta, F. (2002): "The Socio-economic Situation of Youths in Africa: Problems, Prospects and Options". A Paper Presented at the Youth Employment Summit, Alexandria, Egypt, pp. 1-13
- Dantwala, M. (1971): *The Definition and Measurement of Unemployment in Developing Countries*. pp 29-39
- Echibiri, R.N. (2001). "Youth Unemployment and Job Perceptions among Youths in Rural Southeastern Nigeria". Paper presented at the 2001 conference of Agricultural Society of Nigeria.
- Egbuna, E.N. (2001) "Food Production: An African Challenge". *Central Bank of Nigeria Economic and Financial Review* 39 (1) 13.

- Englama, A. (2001) "Unemployment: Concepts and Issues." Bullion Publication of the Central Bank of Nigeria 25 (4), 1-6.
- Fadayomi, T.O. (1992) Migration Development and Urbanization Policies in Sub-Saharan Africa, CODESRIA Books Series, Ibadan pp. 27-30.
- Falae, S.O. (1971) "Unemployment in Nigeria". Nigerian Journal of Economics and Social Studies 13 (1) 65.
- Gibb, A.A. and George, M. (1990). "The Design of Extension and Related Support Services for Small-scale Enterprise Development". International Small Business Development Journal 8 (3) 10-12.
- Holister, R. and Goldstein, M. (1994). "Reforming Labour Markets in the Near East". International Center for Economic Growth.
- Hilaire A. (1992). "The effects of Trinidad and Tobago's oil boom on relative prices, wages and labour Flows". Social and Economic Studies. 41 ( 2) 45-82.
- Igbinovia, P. (1998). "Perspectives on Juvenile Delinquency in Africa". International Journal of Adolescence and Youth 1(2) 131-156.
- Junankar P.N. and J.B. Madsen (1996). "Unemployment in the OECD: Models and mysteries". Discussion Papers in Economics and Econometrics, No. 9648 (Department of Economics, University of Southampton, UK).
- Lewis W. A. (1958). "Employment policy in an underdeveloped area". Social and Economic Studies, 7, ( 3,) 42-54.
- McGrath, S. and King, K. (1995). "Education and Training for the Informal Sector." A Report Prepared for the Department of International Development 1(2) 35-50.
- Okojie, C.E.E. (2003). "Employment Creation for the Youths in Africa." International Journal of Adolescence and Youth 1(131),1-13.
- Okonjo, C. (1974). "Some Demographic Characteristics of Urbanization in Nigeria" Journal of African Studies. 1(1) 73.
- Onah, F.O. (2010). "Urban Unemployment Situation in Nigeria". In: Ezeani, E.O. and Otaki, O.A. (2003). Youth Unemployment in Nigeria: Some Implication for the Third Millennium Global Journal of Social Sciences 2 (1) 21-26.
- Oni, B. (1994). SAP and the Informal Sector in Nigeria: A Case of Increasing Employment, Lagos Nigeria
- Sarr, M.D. (2000). Youth Employment in Africa. UN Secretariat, New York, August 25th.
- Simelane, H.S. (1995). Labour Migration and Rural Transformation in Post Colonial Swaziland. Journal of Contemporary African Studies 13 (2) 206-207.
- The Encyclopedia Americana International 1995. 27, 316.
- Todaró, M. (1992). Economics for a Developing World. 2nd Ed. England: Longman Group, U.K. Limited.
- Tidrick G (1975). "Wage spillover and unemployment in a wage gap economy: The Jamaican case". Economic Development and Cultural Change, 23 (2) 308-324.
- Usoro, U.(1977). Observed Disparity in Nigeria Rural Poverty. University of Ibadan.
- Yotopoulos, P.A. and Lau, L.T. (1991). "A Test for Relative Economic Efficiency and Application to Indian Agriculture". American Economic Review, 61.