Youth Labour Market outcomes in Nigeria: Evidence from National Labour Market Survey

Olurinola, Isaiah Oluranti (PhD)
Department of Economics and Development Studies
Covenant University, Ota Nigeria
olu.ogunrinola@covenantuniversity.edu.ng
&

Fadayomi, Theophilus. O. (PhD)
Department of Economics and Development Studies
Elizade University, Ilara-Mokin, Nigeria
olo_oye2005@yahoo.com

Abstract: *This study examines the determinants of youth unemployment in the Nigerian labour market. The data for this study were obtained from the Labour Force Sample Survey of 2005, carried out by the defunct National Manpower Board. In addition to the descriptive statistics used in the analyses, the binary logistic regression model was employed. The study has empirically confirmed the magnitude of unemployment among the youths in Nigeria and that in 2005 when the data for this study was collected, the youths were more than three times as likely as the adults to be unemployed. The data analysis also enabled the study to identify the basic determinants of youth unemployment. Some of these factors are the formal educational attainment of respondents, region of origin, household status, and household size, among others. Several policy prescriptions to reduce unemployment rate and increase both the participation rate and employment-to-population ratio among the youths in Nigeria were put forward in the paper.*

***Keywords*:** Unemployment, youth, labour market, employment-population ratio, participation rate.

1. Introduction

In line with the definition of the United Nations, the youths are those in the age group 15-24 years. All over the world, the youths are known to be hardest hit by the scourge of unemployment as an estimated 75 million of them around the world are unable to find desired employment (ILO, 2012). While the general global unemployment rate is 6%, youth unemployment rate is more than double the total unemployment rate at 12.7 per cent. In contrast, the adult (age cohort 25+) unemployment rate is 4.7% in 2012. In several other regions with high labour force growth, (as defined by the United Nations) and/or macroeconomic instability which

negatively affected employment rate is as high as 25 per cent (e.g. Middle East and North Africa) while the adult-to-youth unemployment ratio is as high as four (ILO, 2012).

The Nigerian economy is similarly experiencing high rate of unemployment which rose from 11.9% in 2005 to 14.9% in 2008, and increased to 21.7% and 24% in 2010 and 2011 respectively (Table 1a). In the year 2003, both the aggregate unemployment rate as well as the youth unemployment rate are almost the same, standing at 14;8% and 14.2% respectively. By 2005, the unemployment rate for the youths had risen to 27.8% while the aggregate rate of unemployment was 11.9%; thus making the youths unemployment rate to be more than twice as high as the aggregate rate. A disaggregation of the unemployment data by age and gender (in Table 1b) shows that in 2010, the youths (15-24 years age cohort) suffer the highest unemployment rate (35.9%) than all age groups (21.7%) while the female youths experience higher unemployment rate of (36.1%) compared with their male counterparts (35.6%). Disaggregated by geographical location, the youths in the rural areas suffer higher unemployment rate (37.3%) compared to those in the urban areas (31.5%) in 2010. In all respects, it is quite evident from Table (1b) that the youth unemployment rate is far higher than the national rate (NBS 2011, 2012).

Given the labour market experience of youths in Nigeria, the questions that arise are numerous and some of them are as follow. What is the magnitude of the unemployment rate and how does this compare with adult rate of unemployment? What are the factors that determine youth unemployment in Nigeria? In spite of the current high rate of unemployment among the youths, what is the level of underemployment among them? What is the magnitude of other labour market outcomes such as labour force participation rate and employment to population ratio in Nigeria? Several studies (Adebayo & Ogunrinola, 2006; Onwioduokit, 2006) trying to provide answers to these questions rely on aggregated time series data. Furthermore, due to lack of regular data collection and dissemination on youth labour market experiences by the relevant authorities, most studies focus on youth unemployment rates alone. With the use of country-wide cross-section data of the Nigerian labour market, this study is attempting to bridge this gap by examining some issues relating to the youth labour market in Nigeria, using micro-data collected from all parts of the country. Therefore. this study presents detailed analyses of youth participation rates, unemployment rates, employment-to-population ratio as well as the determinants of

youth unemployment in the Nigerian economy.

This paper is divided into five sections. Section one deals with the Introduction, the second section of this paper briefly discusses the theoretical review regarding youth labour market, section three gives the research method while the fourth section is the detailed analysis of data and the discussion of the results. Section five reports the summary of findings and the policy implications of the study.

2.0 Brief Review of Theoretical and Empirical Literature

2.1 Review of Theoretical Literature

An understanding of the various theories of unemployment is expected to throw some light into the employment experience of young people globally. The ILO report on Global Employment Trends for Youth maintains that the duo of youth open unemployment and the engagement of youths in not too decent type of employment are not only increasing but they both have social and economic costs (ILO, 2012). The problem of youth unemployment has been exacerbated in Nigeria by the global financial crisis and this, among other factors, has discouraged many of them from participating in the labour market activities either through extended stay in the educational institutions or by giving up job search altogether thus enlarging the pool of youths not in employment, education and training (NEET). The question then is: why is this situation persisting and what are the predictions of theories to the unemployment situation in general and youth unemployment in particular?

The Classical Economists see unemployment as an aberration since it is believed that a well-functioning labour market is self-adjusting through the actions of the invisible forces of demand and supply of labour. In such market, any unemployment beyond the frictional type is considered voluntary while any form of involuntary unemployment arises from market imperfection like the legal minimum wage laws. The Keynesian theory on the other hand, postulates that real wages are sticky downwards and as such disequilibrium between the demand and supply of labour could result in involuntary unemployment. It is to be noted however, that the Keynesians do admit that wages do adjust in the long run to bring about equilibrium in the demand and supply of labour but this is not the case for the short and medium runs. The theoretical and conceptual divergence between the Classicals and the Keynesians has led to the differences in policy prescription for mitigating the scourge of unemployment. For instance, while the Classical economists believe that business cycles are movements of states of equilibria subject to shocks, the Keynesians are of the view that

disequilibria in different markets should be countered by stabilization policies in order to influence the volume of aggregate demand (Cahuc and Zylberberg, 2004). Instead of relying on wage flexibility, Keynes recommended fiscal policy measures in form of government deficit budgeting spent on public works. This has the potentials of increasing aggregate demand and hence, removing the incidence of involuntary unemployment. For a developed economy, Keynes remedial policy for removing involuntary unemployment might be applicable but its potency for solving unemployment problem in developing countries are rather very doubtful as argued by Ogunrinola (1991). Thus, in the Nigerian economy, the youths as well as the adults experience both the open and disguised types of unemployment.

2.2 Review of Empirical Literature

In most developing and transitional economies of the world, the youths in the age-bracket 15-24 years are going through a considerable hardship in securing employment in the labour market. According to the Global Employment Trends 2012 published by the ILO, young people worldwide are nearly three times as likely as adults to be unemployed, while millions have given up the hope of securing a job and have thus given up job search. Among those that are in employment, many end up in low-paying informal sector jobs while another majority lack decent employment leading to high percentage of youths among the working poor (ILO, 2012). According to the report of the African Economic Outlook, low income countries have 41% of their youth in employment, 25% are NEETs while the remaining 34% are in education. Of those in employment, only 17% (representing 7% of all youth) are in full-time wage employment while the rest are in vulnerable employment, either as self-employed, unpaid family workers, part-time employed and under-employed. However, the NEET rate is higher in better off countries while the youths in vulnerable employment are lower compared with those in low income nations. (African Economic Outlook, 2013).

The study of the Pakistan youth labour market (Hou, 2010) reveals that the youth, like their adults counterpart, experience a lot of hardships in the labour market. Some of these problems relate to the difficulty of school-to-work transition for young school leavers, higher unemployment rate compared to those of the adults, preponderance of youths having to make do with jobs of low quality and experience relatively higher unemployment rates among female youths relative to the males. The study recommended broad labour market policy thrusts as well as youth-specific policies that are capable of improving employment

opportunities and hence poverty reduction in Pakistan. According to Tekeste & Van der Deiji (2005), the labour market of Ethiopia exhibits similar characteristics with that of Pakistan. Majority of the youths are located in the rural areas, exhibit high participation rates with the bulk of employment in the informal sector, illiteracy rate among the youths is as high as 62% (in 1999) with the female experiencing a disproportionately higher rate (71%) than the male (51%); while the scourge of unemployment affects the youths disproportionately in Ethiopia.

Amankrah (2012) using the Ghana Living Standards Survey (GLSS-4) found out that the youth unemployment rate was about 16%, with the females having a higher rate of 18.7% compared with 12.7% for the males. In contradistinction to the situation in Ethiopia, youth unemployment in Ghana is largely concentrated in the urban areas with Accra having a rate as high as about 32%. The causes of youth unemployment have been attributed to 'a more than threefold increase in the youthful population over the last forty years, and … failure of the economy go generate sufficient employment rates'. A more comprehensive study of youth labour market which encompasses many countries in Africa was carried out by DIAL (2007). For the countries studied, youth unemployment remains a burning issue that requires urgent attention. This study is one of the attempts to understand the youth labour market issues in Nigeria.

3.0 Methodology

3.1 Research Design

The data for this study were obtained from the nation-wide Labour Market Survey conducted by the National Manpower Board (now merged with the Nigerian Institute for Social and Economic Research, NISER) in the year 2005. The study, which covered the thirty-six states of Nigeria and the Federal Capital Territory, Abuja spanned the 774 local government areas from which designated enumeration areas were selected. Both urban and rural locations were covered in the study. The study made use of Sampling Frame designed by the National Population Commission in 1991. Out of the 209,501 Enumeration Areas in the country, a sample of 1,130 were selected for the study in such a way that at least one EA was selected in each of the 774 LGAs in the country, thus ensuring the coverage of every LGA in Nigeria.

From the listed households in each of the EAs, ten households were selected from each using a systematic random sampling technique. In total, 1,129 EAs and 11,281 households were successfully interviewed for the study. In terms of the EAs and households, the achievement rate for the survey was 99.9% and 99.8% respectively. For the survey, the instrument used for data collection was a comprehensive interview

administered by well-trained enumerators to willing members of the household selected for the study. A total of 57,372 individuals were interviewed out of which 12,544 of them are youths in the age range of 15-24 years.

3.2 Model Specification

3.2.1 Determinants of Youth Unemployment

Two basic micro-econometric models were specified and analysed in this study. The first model examined the determinants of youth unemployment while the second examined the factors affecting the duration of unemployment among the youths in Nigeria. Rather than the aggregative approach which focuses on the overall youth unemployment and its basic determinants, this study made use of the individual characteristics of respondents within the available data to examine those factors that are responsible for youth unemployment. With respect to the relative advantage of micro-econometric analysis in empirical analysis generally, Alessie et al. (1992) raised two strong points. "First, the microeconomic approach provides more units of observations and therefore permits the separate identification of the effects of a greater number of determinants. Second, the approach utilizes heterogeneity in the population rather than aggregating across groups, so that empirical results are richer".

Thus, the model explaining the observed rate of unemployment among the sampled youths in Nigeria is a binary response regression model specified as:

$$Y_i = f(\boldsymbol{X}) \dots\dots\dots\dots\dots\dots\dots\dots (1)$$

Where Y_i is the measure of youth employment status, captured with a binary variable (0,1). Thus, when a particular youth is unemployed, $Y_i = 1$, and zero, otherwise. $\boldsymbol{X}$ is a vector of the personal, geographical location (whether rural or urban) and other characteristics that influence the independent variable Y_i. Since the dependent variable is qualitative in nature, the study has adopted the use of logit model. As such, following Gujarati and Porter (2009), the model is specified explicitly as:

$$Y_i = \alpha_0 + \alpha_1 X_1 + \alpha_2 X_2 + \cdots + \alpha_k X_k + \mu_k \dots\dots\dots\dots (2)$$

Where:

Y_i is a binary variable (0,1) as earlier defined; X_k measures the value of attribute for the k^{th} individual; α_k is the measure of change in the measure of probability; and μ_k is the independently distributed random term.

Equation (2) is the one estimated and interpreted in this study.

4. Results and Discussion

4.1 Socio-Economic Characteristics of the Sampled Youths

The national labour force sample survey carried out by the National Manpower Board in 2005 covered 57,372 respondents across all the States of the Federation of Nigeria. Out of all the respondents in the Survey, 52% are male and 48% are female. The age distribution shows that those less than 15 years are 36.5%, the youths in the age group 15-24 years are 21.8% while the adults in the age range of at least 25 years are 41.7%. In terms of rural urban distribution of the respondents, 77% are located in the rural areas while 23% are in the urban areas. Three-fifths of the respondents are married, while the remaining 40% are either married (36%) or are in the 'others' category (4%), and this latter group is made up of those that are separated, divorced and widowed. The rest of this section deals with the youths, which is the main sub-group that this paper addresses.

Table 2 gives detailed characteristics of the sampled youths in the National Manpower Survey.

The entire youths are disaggregated into two and they are made up of (i) the teenage youths in the age range 15-19 years, and (ii) the mature youths made up of 20-24 years. The total number of youths interviewed in the national survey was 12,544 made up of 6,606 teenagers representing 53% of all the youths; while the mature youths are 5,938 representing 47 per cent of all the youths in the sample. The entire youths are composed of 51% male and 49% female. The teenagers are made up of 52% male and 48% female; while the mature youths are 49% male and 51% female. In terms of marital status, 80% of all the youths have never married, 19% are married while the remaining 1% are in the separated/ divorced/ widowed category. The 'Never Married' category among the teenagers are 88.4% while they are 70% among the young adults.

Classified by formal educational, about 19% of the entire youths had no formal education. Twenty-five per cent had primary education, 47.7% had secondary education while the remaining 8.8% had gone through tertiary education. This trend shows a rather high literacy rate among the Nigerian youths. In addition to the observed high formal educational attainment among youths, about 10% of them (made up of 1,203 out of the entire 12,544 youths) have acquired special education such as Technical/ Vocational education (35.5%), Commercial/Secretarial Training (41.9%) and apprenticeship (22.6%). The mature youths (20-24 year age group) predominate among the recipients of special education (61%) as compared to the teenagers (39%).

Disaggregated by region of residence of the sampled youths, the

South West has the highest share of 21.5% and this is closely followed by the North-West (20.5%). Youths from the South East are about 17%; while those from the South South and North Central have the same percentage representation of youths of 14.9% each. The remaining 11.3% are from the North-Eastern part of Nigeria. In total, 53.3% of the sampled youths reside in the Southern part of the country, while the remaining 46.7% are in the Northern part of Nigeria.

4.2 Youths and Labour Market in Nigeria

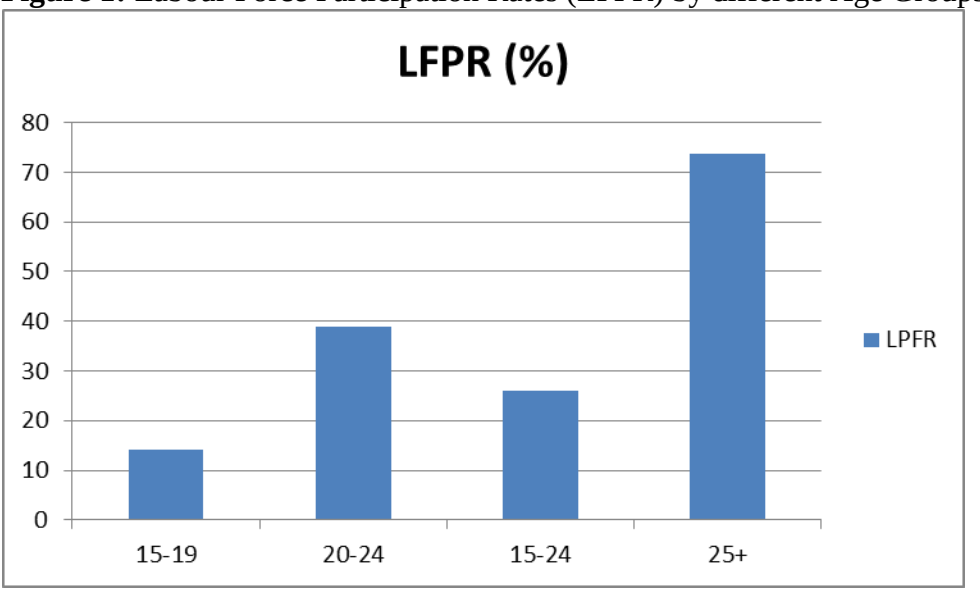
The youths in Nigeria are confronted with a myriad of difficulties in the labour market. Despite the fact that literacy rate among them is over 80%, yet many of them face difficulties with respect to their integration into the labour market in terms of securing decent jobs in line with their previous sanguine labour market expectations (Ogunrinola, 2011). Table 3 gives a general picture of the labour force participation rate, unemployment rate and employment to population ratio of youths (15-19 and 20-24 years) as compared to those of adults in the age range of 25 years and over. The total number of sampled youths is 12,544 compared with 23,914 adults in the age range of at least 25 years. The youths are therefore a little over 50% of the adult population. Of the total youths, those in the 15-19 years are more than those in the 20-24 age cohort. However in terms of labour market participation, only a few of those in the 15-19 years are in the labour force as compared to the mature youths. This situation is expected as most of the teenagers are expected to be in training and skill development institutions for manpower development purposes. Moreover, the high level of unemployment might constrain the youths to remain longer in schools to acquire further education in order to enable them jump the unemployment queue on graduation.

4.2.1 Youth Labour Force Participation

The labour market participation rates of the teenagers (14.2%) and the mature youths (38.9%) are found to be lower than the adult participation rate (73.6%). Many of the teenagers are more often than not in educational institutions, skill development centres and in apprenticeships and as such exhibit low labour force participation rate. In contrast, the mature youths exhibit a relatively higher participation rate of 38.9%. Relative to the adults in the age group 25 years and over, the youths are experiencing low participation rate which is probably due to the high unemployment rate within the national economy. It can thus be inferred that it is either the inability of the young adults to find employment that matches their education or skills or that they lack the required skills needed by the employers that account for their rather low participation rate as

compared to the adult population. For all the youths, participation rate is as low as 25.9% while the adults have a participation rate of 73.6%.

Figure 1: Labour Force Participation Rates (LFPR) by different Age Groups



Source: Computed by the authors from survey data

The chart in Figure 1 shows the labour force participation rates for different age groups in Nigeria.

Table 4, shows the distribution of labour force participation rates by some selected characteristics of the respondents. In terms of gender, female youths exhibit higher participation rate (26.74%) in the labour market than the males (25.09%). This runs contrary to the participation rates of adult respondents that exhibit higher participation rates among males (83.76%) compared to the females (62.24%). Disaggregated by formal educational attainment, the youths with no formal education recorded the highest participation rate of 31.84%, followed by youths with tertiary education (31.70%), while those with primary and secondary education have participation rates of 26.29% and 22.32% respectively. In terms of geographical location, youths in the rural areas participate more in the labour market activities (26.74%) than those in the urban areas (21.88%).

This contrasts the pattern of participation of adults where the urban rate (75.80%) is higher than the rural rate (62.24%). In terms of region of residence of the respondents, participation rate is higher in the Northern Nigeria (27.52%) as compared to the Southern Nigeria (23.94). For the

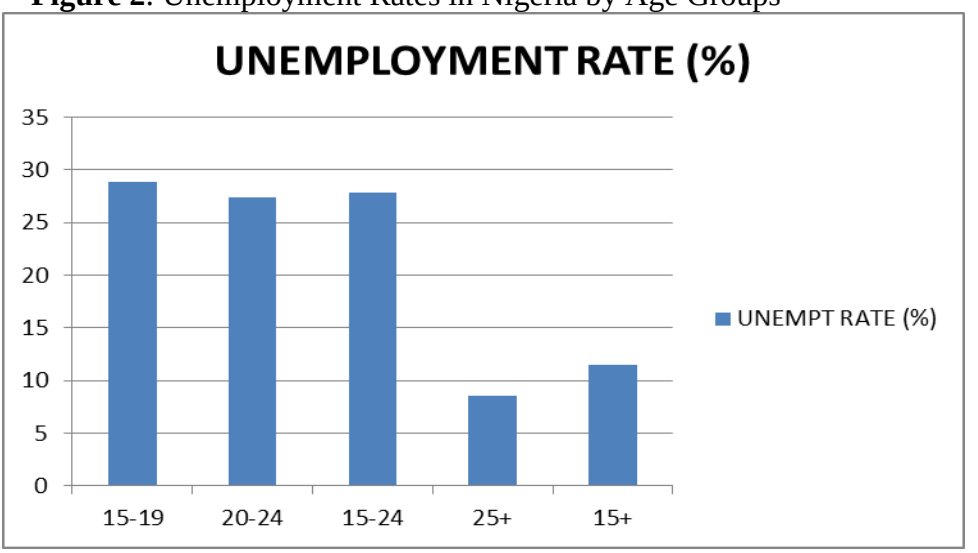
adults, the reverse is the case as the South has almost 80% participation rate as compared to 68% in the Northern part of Nigeria. In general therefore, the youths exhibit lower participation rates (25.9% on the average) compared with the adults (73.6% on the average).

4.2.2 Youth Unemployment Rates

The distribution of respondents by different age groups and their respective unemployment rate in Nigeria show large variations from 8.5% for the adults in the 25 years and above age group, to 27.4% and 28.9% for those in age cohorts 20-24 years and 15-19 years respectively. For the entire labour force (15+ years), the unemployment rate was 11.50%, while for all the youths (15-24 years), it is 27.8%. (See Figure 2 and Table 5).

The bar chart in Figure 2 shows the variations in unemployment rates among different age groups in the year of survey. Among the youths, the teenagers face the most difficult labour market situation with the highest unemployment rate of about 28.9%. All the youths (15-24 years) experienced an unemployment rate of 27.8%, while the same figure for the adults is 11.50%. The youth to adult unemployment rate is 3.3, which means that in comparison with the adults, the youths in the Nigerian labour market are more than three times as likely to be unemployed, while a rise in unemployment rate affects them disproportionately.

Figure 2: Unemployment Rates in Nigeria by Age Groups



Source: Computed by the authors from survey data

Table 5 shows the distribution of the respondents by the unemployment rate and other selected characteristics. The table reveals some salient facts about youth unemployment. First, the

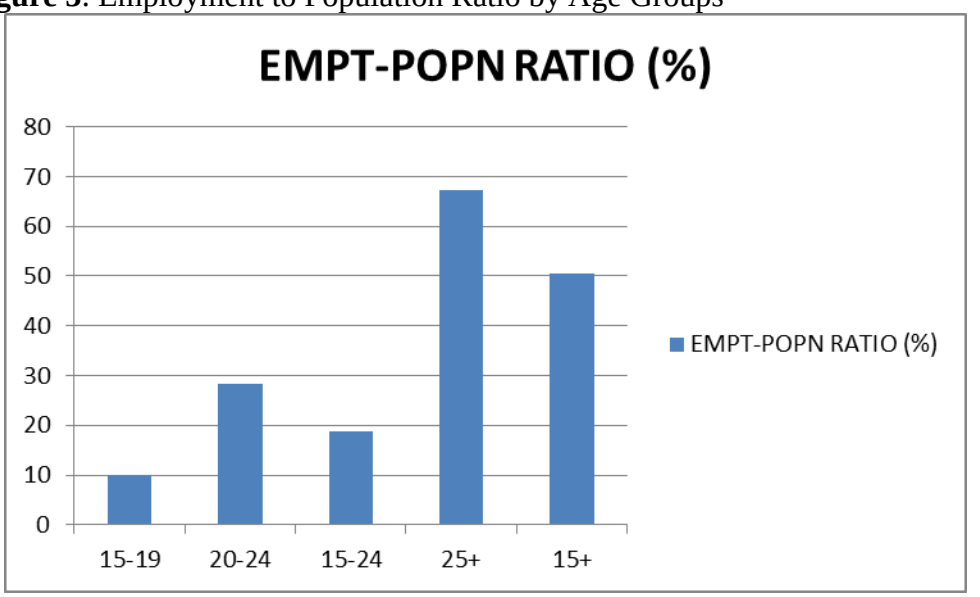
unemployment rates for teenagers and mature youths are consistently higher than the overall unemployment rate with very high variation among age groups.

Second, the youth unemployment rate varies directly with the level of formal educational attainment. In other words, the higher the level of education attained by the youth the higher is the extent of unemployment experienced. Third, the urban youths suffer higher rate of unemployment than the youths in the rural areas. Fourth, youth unemployment in the Southern part of Nigeria is higher than that in the Northern part of Nigeria.

4.2.3 Employment-to-Population Ratio (EPR)

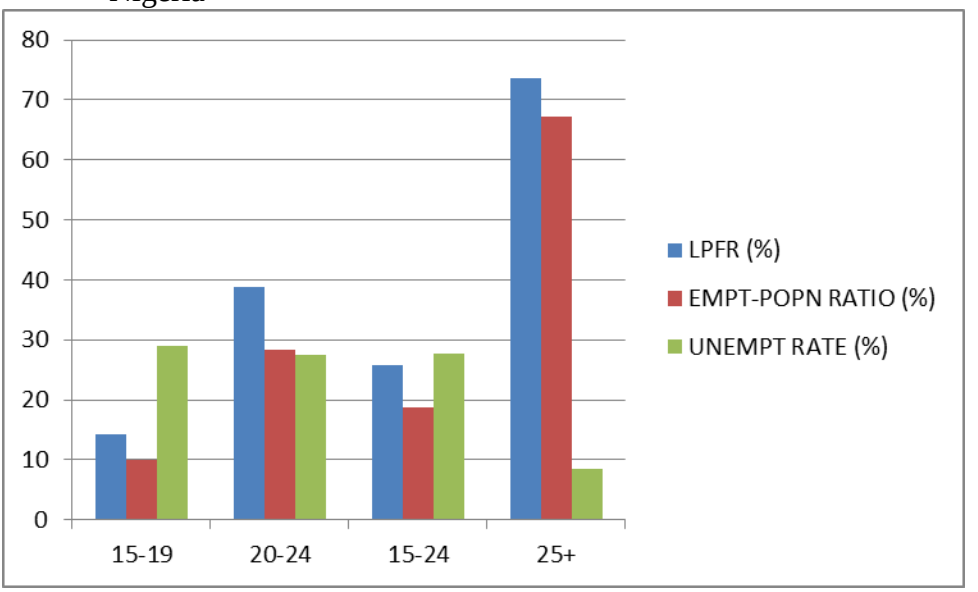
Employment-to-population ratio is a statistical ratio that measures the country's working age population that is employed. The ratio is used to measure the ability of the economy to create jobs. In conjunction with the unemployment rate, EPR helps to evaluate the general performance of the labour market. In addition to having an EPR for the total working population, the statistic is computed for different age cohorts as shown in Figure 3 and Table 6. It has been shown in the literature that there is a mathematical relationship between the Participation rates (P),

Figure 3: Employment to Population Ratio by Age Groups



Source: Computed from the NMB data.

Figure 4: Participation Rate, Employment Rate and Unemployment Rate in Nigeria



Source: Computed from the NMB data

Unemployment rate (U) and the Employment-to-Population ratio (EPR) and it is of the form: $EPR = P(1-U)$. Thus, EPR varies positively with P and negatively with U, as shown in Figure 4.

In general, a high EPR may be considered good as it ordinarily shows that the economy is generating high number of jobs for the working population, yet the indicator alone does not provide information on several other labour market problems such as low earnings, underemployment, poor working conditions or the size of the informal sector (OECD, 2012). Though the EPR for the youths in general is relatively high, yet many of them are engaged in self- or other precarious employments in the informal economy (DIAL, 2007). The bar chart in Figure 4 shows that the adult has the highest EPR of 67%, while similar figure for the entire working population is 50.6% (Fig. 3). The EPR for the youths is the lowest with 18.69%. Disaggregating the youths into teenagers and mature youths shows that the teenagers has the lower EPR of 10% while similar figure for the young adults is 28.3%. For the teenagers, the very low EPR is expected as a greater percentage of them are expected to be in institutions of learning for the purpose of education and skill development.

Table 6 shows the percentage distribution of the respondents by EPR by some other selected characteristics. Disaggregated by

gender, the female youths have higher EPR (20.62%) than their male counterparts (16.83%). In contrast, the male adult workers have higher EPR (76.04%) than the female ones (57.64%). Classified by formal educational attainment, EPR falls with educational attainment up to secondary education level while it rises at the tertiary level except for age-group 20-24 years when it drops. In other words, for educational attainment of up to the secondary school level, EPR moves inversely with educational attainment, giving rise to high incidence of educated unemployment in Nigeria. In terms of urban/rural location of the respondents, the youths in the rural setting have higher employment ratio (20.62%) compared to those in the urban area (16.35%). Similar pattern is recorded for the teenagers and the young adults. However, for the adults (25+ years) and the entire working age population (15+ years), the reverse is the case as the EPR in the rural area are higher compared to similar figure in the urban area. The comparatively low youth EPR in the urban area may not be unconnected with high rural-urban migration of youths who are seeking urban formal sector jobs which are not there. In contrast, most of the remaining rural youths may be content to be engaged in agricultural and off-farm informal sector activities. With respect to region of residence, the Northern part of Nigeria enjoys higher youth EPR compared to their Southern counterparts. This suggests the presence of regional restrictiveness either in job search (the demand side) or employment opportunities (supply side) resulting in relatively low labour mobility across regions in Nigeria (Oladeji, 1992).

As shown in Table7, the rate of youth unemployment varies widely across State of the Federation of Nigeria from the highest figure of 69% in Imo State in Southern Nigeria, to 1% in Nasarawa State in the North. States experiencing over 50% youth unemployment rate are three in number (Imo, Rivers, Kwara); six states experience youth unemployment rate of between 40-49% while those between 28-39% are twelve States. The remaining fifteen states have at most 28% (which is the aggregate youth unemployment rate, as shown in Figure 2 and Table 5), while only six States experience single-digit rate. The employment rate is highest in Borno State with a little over 54% and lowest in Gombe State with about 7%. In addition to Gombe State, other parts of the country that is worst hit by very low youth employment rates are Imo 7.43%; Ekiti 7.74%; Rivers, 8.38; Enugu, 8.85% among several others. With a national employment-population ratio of 18.8%; the Northern part as usual records a higher than the national average figure of 21.88% while the South has a figure of 15.42%. This reveals a North-South dichotomy in labour market outcomes for youths. With respect to labour force participation rate of

the youths, Borno State has the highest rate of about 59.6%, Gombe State has the lowest of 9.9% while the average for the entire nation is about 26%. Youth employment rate appears better in the Northern part of Nigeria which has a rate of 27.9% compared with the Southern Nigeria which has an EPR of 15.4%.

4.2.4 Determinants of Youth Unemployment: Empirical Result from Logistic Regression.

In this study, the model described in the basic equation 2 in Section 3 of this paper was estimated and reported in Table 9. The categorical variables used and their coding are as listed in Table 8.

In the first logistic regression result (Table 9), seven basic variables were entered into the equation. These are: age of the responding youths, years of formal education, gender (male = 1), marital status (single=1), location of the respondents in the country, whether urban or rural (urban = 1), region of residence and region of origin (South=1). Four of these variables are statistically significant at the indicated critical levels, and these are: Education (1%), Location (1%), Marital Status (1%) and Region of Residence (10%). The remaining three variables (age, gender and region of origin) are not significantly different from zero. Education is positively related to youth unemployment meaning that the more the years of education attained by the youths the greater is the odds of being unemployed. Residing in the urban areas expose the youths to lower level of unemployment compared to those living in the rural areas.

In terms of marital status, the 'never married' or the single experiences higher unemployment situation than the other marital groups, that is, the married and the separated/divorced categories. Also, the youths resident in the Southern part of Nigeria are prone to more severe unemployment scourge than their Northern counterparts. The gender of the respondents does not matter in the labour market, as the coefficient of the gender variable is not statistically different from zero. Similarly, the region of origin variable is not statistically significant on its influence on youth unemployment. These suggest the absence of gender and tribal bias in the Nigerian youth labour market. The fact that majority of the youths are employed in the informal sector might be the explanation for this result. Employment in the formal sector might not be this free of gender and tribal discrimination since the number of jobs related to applicants desiring such jobs are few. The seven independent variables in the model have succeeded in explaining between 25% (Cox and Snell R^2) and 36% (Nagelkerke R^2) of the variations in the dependent variable.

To examine the differential effects of the categories of some of the main variables (Age, education, marital status, household size) as well as the effects of some interactive variables (e.g. urban males compared with

rural females, urban literates compared with rural illiterates and literate females compared with illiterate males), we ran and reported the logistic regression 2 in Table 10. The inclusion of more variables improved the coefficient of multiple determination which increased to 27% for Cox and Snell R^2, while the Negalkerke R^2 increased to 39%. The age variable remained statistically insignificant when dichotomized into the teens (15-19 years) and mature youths (20-24 years). Education variables are all statistically significant at 1% level and it confirms that the odds of unemployment increases with formal educational attainment.

Another important variable in the model is the household heads dummy. The result shows that household heads suffer less unemployment than non-heads. This appears reasonable since those who are responsible for providing for other family members might not be able to afford being unemployed in a situation where unemployment insurance is not available.

5. Summary of Findings and Policy Implications

This study examined the youth labour market in Nigeria and its various outcomes in terms of the labour force participation rate, unemployment rate and the employment-population ratio. The study also examined the determinants of the rate of unemployment among the youths using the binary logistic regression. Two important findings have emanated from this study. First, the study has empirically confirmed the magnitude of unemployment among the youths in Nigeria and that indeed as at 2005 when the data for this study was collected, the youths are more than three times as likely as adults to be unemployed. Second, the study has identified the basic determinants of youth unemployment using the binary logit approach. Factors identified include formal educational attainment, marital status, region of residence, household size, status in the household (whether head or non-head) and stratum of location (as to whether the respondent lives in the urban or rural location) among others.

Several implications for policy formulation can be gleaned from this study. The findings of this study reveal the enormous human resource wastage being incurred nationally through youth unemployment, since youths in Nigeria are more than three times as likely as adults to be unemployed. This becomes more serious when it is recalled that unemployment scourge increases with the level of formal education attained. Another implication for policy is the fact that the incidence of youth unemployment is greater in the Southern part of Nigeria compared to the North. This then raises the question of whether Nigeria can be said to have national labour market or that each region operates as local labour market

having no interrelationships. To address these issues, the Government should be committed to policy measures that will remove impediments to the smooth functioning of the labour market in Nigeria. Also, the creation of conducive investment climate for local and foreign entrepreneurs will go a long way towards providing job opportunities for youths in Nigeria.

References

Adebayo, A.A & Ogunrinola, I.O. (2006): *Contemporary Dimensions of Unemployment in Nigeria: A Special Challenge under the NEEDS;* Nigerian Economic Society.

African Economic Outlook (2013): *"Youth in African Labour Market: Too many bad jobs in poor countries, too few jobs in Middle Income countries."* Downloaded from: http://www.africaneconomicoutlook.org/en/in-depth/youth_employment/youth-in-african-labour-markets/ Accessed April 6, 2013.

Alessie, R.; Baker, P.; Blundell, R.; Heady, C.; and C. Meghir (1992): "The Working Behaviour

of Young People in rural Cote d'Ivoire" The World Bank Review, Vol. 6, pp. 139-155.

Amankrah, J. Y. (2012): *"Youth Unemployment in Ghana: Prospects and Challenges"* Downloaded from: www.cepa.org.gh/research/researchpapers/Youth73.pdf. Accessed April 6, 2013.

Cahuc Pierre and Andre Zylberberg (2004): *"Labor Economics"* PHI Learning Private Limited.

New Delhi, India.

Denu, B.; Tekeste, A.; and H. Van der Deiji (2005): *"Characteristics and Determinants of Youth Unemployment, Underemployment and Inadequate Employment in Ethiopia".* Employment Strategy Paper no. 2005/07; Employment Policies Unit, Employment Strategy Department I.L.O., Geneva.

DIAL (2007): *"Youth and Labour Markets in Africa: A Critical Review of Literature"*.

Document De Travail DT/2007-02. Institut de recherché pour le developpement. Downloaded from www.dialprd.fr. Accessed March 10, 2013.

Hou, Xiaohui (2010): Challenges for Youth Employment in Pakistan: Are They Youth-Specific? *The Pakistan Development Review*; Vol. 49, No. 3, pp. 193-212.

I.L.O. (2012): *"Global Employment Trends 2012: Preventing a Deeper Jobs Crisis"* International Labour Office, Geneva.

NBS (2012): "Statistical News, 2012". National Bureau of Statistics, Abuja, Nigeria.

OECD (2012) Glossary of Statistical Terms: "Employment to

Population Ratio". http://Stats.oecd.org/glossary/detail.asp?ID=4848; accessed on August 29, 2012.

Ogunrinola, I.O. (1991*):* *"Employment and Earnings in the Urban Informal Sector of Ibadan*". An unpublished PhD thesis submitted to the Department of Economics, Obafemi Awolowo university, Ile-Ife, Nigeria.

Ogunrinola, I.O. (2010): "Labour Market Expectations of Final Year Students in Selected Nigerian Universities" African Journal of Economics and Management studies, Vol. 2 No. 1. Pp 94-113.

Oladeji, S.I. (1992): *"Politicisation of University Planning and Unemployment in Nigeria"* Evi- Coleman & Co., Ibadan Nigeria.

Onwioduokit, E.A. (2006): *Character of Unemployment in Nigeria and its Links with the Macroeconomy.* The Nigerian Economic Society

Appendix

Table 1a: Unemployment Rate in Nigeria (2000 - 2011)

Year	Aggregate Unemployment Rate (%)	Youth Unemployment Rate (%)			Youth-to-Aggregate Unemployment Ratio
		Male	Female	Total	
2003	14.8			14.2	0.95
2004	13.4			28.9	2.2
2005	11.9	33	23	27.8	2.3
2006	12.3				
2007	12.7				
2008	14.9				
2009	19.7			32.0	1.6
2010	21.7	35.6	36.1	35.9	1.6
2011	24.0			38.0	

Source: NBS (2010 & 2011)

Table 1b: Trend in Youth Unemployment Rate: 2005 To 2010

MAIN VARIABLES	DISAGGREGATED VARIABLES	YEAR	
		2005	**2010**
GENDER	MALE	32.9	35.6
	FEMALE	22.9	36.1
	BOTH SEXES	***27.8***	***35.9***
LOCATION	URBAN	25.3	31.5
	RURAL	28.5	37.3
	BOTH LOCATIONS	***27.8***	***35.9***

Source: NBS (2011) and NMB's data set.

Table 2: Percentage Distribution of Sampled Youths by Selected Personal Characteristics

MAIN CHARACTE-RISTICS	DERIVED CHARACTER-ISTICS	TEENAGER	YOUNG ADULTS	ALL YOUTHS (15-24 YEARS)	
		15-19 YRS	**20-24 YRS**	**%**	**No.**
FORMAL EDUCATION	None	17.8	19.2	18.5	2321
	Primary	30.6	18.6	25.0	3130
	Secondary	47.6	47.9	47.7	5989
	Tertiary	3.9	14.3	8.8	1104
	ALL	52.7 (6606)	47.3 (5938)	100	12544
SPECIAL EDUCATION	Tech/Vocational	24.2	42.7	35.5	427
	Comm/Sec. Training	54.9	33.6	41.9	504
	Apprenticeship	20.9	23.7	22.6	272
	ALL	38.9 (468)	61.1 (735)	100	1203
GENDER	Male	52.2	49.2	50.8	6369
	Female	47.8	50.8	49.2	6175
MARITAL STATUS	Never Married	88.4	70.2	79.8	10011
	Married	10.6	28.1	18.9	2368
	Sep./Div./Widowed	1.0	1.7	1.3	165
LOCATION	Urban	23.9	24.2	24.1	3021
	Rural	76.1	75.8	75.9	9523
LITERACY	Yes	83.5	82.8	83.2	10434
	No	16.5	17.2	16.8	2110
HOUSEHOLD STATUS	Head	2.0	5.4	3.6	456
	Non-head	98.0	94.6	96.4	12088
REGION OF ORIGIN	South West	19.2	18.5	18.9	2318
	South South	15.4	16.8	16.1	1974
	South East	18.7	17.2	18.0	2211
	ALL SOUTH	**53.3**	**52.5**	**53.0**	**6503**
	North West	20.9	20.5	20.7	2537
	North East	11.3	11.1	11.2	1371
	North Central	14.5	15.8	15.1	1855
	ALL NORTH	**46.7**	**47.4**	**47.0**	**5763**
	ALL NIGERIA	52.7 (6467)	47.3 (5799)	100	12266
REGION OF RESIDENCE	South West	21.8	21.1	21.5	2637
	South South	14.4	15.5	14.9	1831

	South East	17.5	16.3	16.9	2082
	ALL SOUTH	**53.7**	**52.9**	**53.3**	**6550**
	North West	20.8	20.2	20.5	2519
	North East	11.3	11.3	11.3	1384
	North Central	14.3	15.7	14.9	1832
	ALL NORTH	**46.4**	**47.2**	**46.7**	**5735**
	ALL NIGERIA	52.7 (6477)	47.3 (5808)	100	12285

Source: Computed by the authors from the NMB data

Table 3: Distribution of Sampled Youths by some Labour Market Indicators

MAIN INDICATOR	DETAILS	DISTRIBUTION OF SAMPLED YOUTHS			ADULTS	
		15-19	20-24	15-24	25+	Youth/Adult Ratio
Participation Rate	Working Age	6,606	5,938	12,544	23,914	0.52
	In the L.F	937	2,312	3,249	17,593	0.18
	Not in the LF	5,669	3,626	9,295	6,321	1.47
	Participation Rate (%)	14.2	38.9	25.9	73.6	0.35
Employment and Unemployment.	Employed	666	1,679	2,345	16,100	0.15
	Unemployed	271	633	904	1,493	0.61
	Empt-Popn. Ratio (%)	10.1	28.3	18.7	67.3	0.28
	Unemployment Rate (%)	28.9	27.4	27.8	8.5	3.3
	Duration of Unempt. (Mths)	22.03	27.06	25.89	67.13	

Source: Computed by the authors from survey data.

Table 4: Distribution of Respondents by Participation Rate and other Selected Characteristics of the Respondents

MAIN CHARACTERISTICS	DERIVED CHARACTERISTICS	15-19	20-24	15-24	25+	Total (15+)
GENDER	MALE	14.68	37.36	25.09	83.76	64.05
	FEMALE	13.64	40.46	26.74	62.24	49.72
	MF	14.18	38.94	25.90	73.57	57.17
EDUCATION	No formal Education	26.21	37.65	31.84	64.13	57.80
	Primary	12.50	51.54	26.29	79.15	58.06
	Secondary	10.58	35.33	22.32	76.63	48.50
	Tertiary	16.41	36.32	31.70	85.13	73.79
RURAL/URBAN	Urban	10.37	34.54	21.88	75.80	57.22

LOCATION	Rural	13.64	40.46	26.74	62.24	49.72
LITERACY	Literate	11.13	38.62	23.96	78.35	56.20
	Non-Literate	28.65	40.45	34.36	65.03	58.98
REGION OR RESIDENCE	South West	11.54	36.60	23.17	78.24	59.69
	South South	9.99	43.00	26.22	81.22	61.90
	south East	11.27	36.89	22.91	80.52	60.66
	SOUTHERN NIGERIA	**11.03**	**38.57**	**23.94**	**79.77**	60.60
	North West	13.47	36.60	24.26	62.98	49.44
	North East	24.79	38.07	31.07	66.23	54.23
	North Central	17.66	41.14	29.31	73.61	58.49
	NORTHERN NIGERIA	**17.52**	**38.46**	**27.52**	**68.46**	67.23
	ALL NIGERIA	**14.18**	**38.94**	**25.90**	**73.57**	**57.17**

Source: Computed by the authors from the NMB Data

Table 5: Percentage Distribution of the Unemployed by some Selected Characteristics

MAIN CHARACTERISTICS	DERIVED CHARACTERISTICS	15-19	20-24	15-24	25+	Total (15+)
GENDER	MALE	34.19	32.33	32.92	9.22	12.34
	FEMALE	22.74	22.95	22.90	7.39	10.33
	ALL RESPONDENTS	***28.92***	***27.38***	***27.82***	***8.49***	***11.50***
EDUCATION	No formal Education	4.85	3.49	4.13	1.13	1.45
	Primary	***28.85***	***13.51***	***18.23***	3.11	5.84
	Secondary	47.15	36.85	39.42	16.98	22.33
	Tertiary	61.90	55.52	56.29	16.72	20.33
RURAL/URBAN LOCATION	Urban	26.22	24.95	25.26	8.33	10.36
	Rural	22.74	22.95	22.90	7.39	10.33
LITERACY	Literate	38.88	32.65	34.19	11.88	15.57
	Non-Literate	8.97	3.15	5.66	1.81	2.12
REGION OF RESIDENCE	South West	21.47	22.99	22.59	7.21	9.22
	South South	53.76	34.63	38.33	14.47	17.63
	South East	69.53	42.12	49.48	9.76	14.93
	S. Nigeria	**45.31**	**32.43**	**35.59**	**9.89**	**13.38**
	North West	21.0	25.8	24.4	8.16	10.95

	North East	16.02	18.07	17.21	4.99	7.23
	North Central	12.27	21.39	18.62	6.37	8.31
	N. NIGERIA	**16.57**	**22.41**	**20.47**	**8.01**	**10.22**
	ALL NIGERIA	28.92	27.38	27.82	8.49	11.50

Source: Computed by the authors from the NMB Data

Table 6: Percentage Distribution of Employment-Population Ratio by some Selected Characteristics of the Respondents

		15-19	20-24	15-24	25+	Total (15+)
GENDER	MALE	9.66	25.28	16.83	76.04	56.14
	FEMALE	10.54	31.18	20.62	57.64	44.58
	MF	10.08	28.28	18.69	67.32	50.59
EDUCATION	No Formal Educ	24.94	36.34	30.55	63.41	56.96
	Primary	8.89	44.58	21.50	76.69	54.67
	Secondary	5.59	22.31	13.52	63.62	37.67
	Tertiary	6.25	16.16	13.86	70.90	58.79
RURAL/URBAN LOCATION	Urban	7.65	25.92	16.35	69.66	51.29
	Rural	10.54	31.18	20.62	57.64	44.58
LITERACY	Literate	6.80	26.01	15.77	69.22	47.45
	Non-Literate	26.08	39.18	32.42	63.95	57.73
REGION OF RESIDENCE	South West	9.06	28.19	17.94	72.60	54.19
	South South	4.62	28.11	16.17	69.84	50.99
	South East	3.43	21.35	11.58	72.66	51.61
	SOUTHERN NIGERIA	**6.03**	**26.06**	**15.42**	**71.87**	**52.50**
	North West	10.64	27.15	18.34	55.71	42.65
	North East	20.82	31.19	25.72	63.05	50.31
	North Central	15.49	32.34	23.85	69.06	53.63
	NORTHERN NIGERIA	**14.61**	**29.84**	**21.88**	**61.84**	**48.06**

Source: Computed by the authors from NMB Data

Table 7: Distribution of Youth Unemployment Rate, Labour Force Participation Rate and Employment-Population Ratio by States

S/No.	STATE	Unempt Rate	LFPR	Empt Rate
1	Abia	38.96	23.99	14.64
2	Abuja	7.69	37.68	34.78
3	Adamawa	5.52	42.40	40.06
4	Akwa Ibom	30.00	30.11	21.08
5	Anambra	34.00	16.61	10.96
6	Bauchi	29.27	22.97	16.25
7	Bayelsa	44.00	20.49	11.48
8	Benue	21.64	36.31	28.46
9	Borno	8.93	59.57	54.26
10	Cross Rivers	27.78	26.57	19.19
11	Delta	42.86	26.01	14.86
12	Ebonyi	47.52	35.52	18.64
13	Edo	22.22	33.49	26.05
14	Ekiti	43.48	13.69	7.74
15	Enugu	43.82	15.75	8.85
16	Gombe	31.58	9.90	6.77
17	Imo	69.17	24.10	7.43
18	Jigawa	28.41	19.95	14.29
19	Kaduna	8.16	23.33	21.43
20	Kano	30.73	22.52	15.60
21	Katsina	28.13	31.30	22.49
22	Kebbi	30.00	17.32	12.12
23	Kobi	20.00	26.88	21.51
24	Kwara	54.24	19.34	8.85
25	Lagos	28.69	17.50	12.48
26	Nasarawa	1.22	42.93	42.41
27	Niger	13.73	23.72	20.47
28	Ogun	6.98	26.71	24.84
29	Ondo	28.24	24.43	17.53
30	Osun	32.28	25.25	17.10
31	Oyo	11.90	27.63	24.34
32	Plateau	12.61	26.81	23.43

33	Rivers	65.96	24.61	8.38
34	Sokoto	16.67	34.98	29.15
35	Taraba	44.23	31.14	17.37
36	Yobe	15.00	14.49	12.32
37	Zamfara	22.33	39.77	30.89
	NIGERIA	27.82	26.05	18.80

Source: Computed from NMB Data

Table 8: Categorical Variables Codings for Logit Model (1)

		Frequency	Parameter coding
Region of Residence dummy, South=1, zero otherwise	North	1576	.000
	South	1561	1.000
Never Married	Others	1116	.000
	Never Married	2021	1.000
Region of origin dummy; South=1	North	1582	.000
	South	1555	1.000
Gender of respondents; Male=1	Otherwise	1585	.000
	Male	1552	1.000
stratum in dummy; 1=urban	Rural	2483	.000
	Urban	654	1.000

Source: Computed from NMB Data

Table 9: Determinants of Youth Unemployment: Logistic Regression Result 1.

VARIABLES	B-Estimate	S.E.	Wald	Sig.	Exp(B)
Age (Actual in Yrs.)	-.008	.019	.181	.671	.992
Education (Yrs)	.178*	.012	209.749	.000	1.195
Gender: Male	-.052	.098	.283	.594	.949
Location: Urban	-.537*	.118	20.841	.000	.585
Marstat1: Single	2.303*	.158	212.407	.000	10.002
Region of Origin: South	-.030	.358	.007	.932	.970
Region of Residence: South	.599***	.358	2.802	.094	1.820
CONSTANT	-4.477	.421	113.299	.000	.011

N			3,137		
-2 Log Likelihood			2818.8		
Chi-Square: Value			904.5		
d.f.			7		
Sig.			.000		
Pseudo R-Squared:					
Cox & Snell			.250		
Negalkerke			.360		

Dependent Variable: Unemployed=1; zero Otherwise
*Significant at 1%; ** Significant at 5% level; *** Significant at 10% level

Table 10: Determinants of Youth Unemployment: Logistic Regression Result 2.

VARIABLES	B-Estimate	S.E.	Wald	Sig.	Exp(B)
Age1: 15-19 Years	(a)				
Age2: 20-24yrs	-.170	.108	2.489	.115	.844
Education1: None	-2.476*	.327	57.474	.000	.084
Education2_Primary	-1.492*	.166	80.411	.000	.225
Education3_Secondary	-.775*	.142	29.970	.000	.461
Education4_Tertiary	(a)				
Gender1: Male	.569	.408	1.949	.163	1.767
Stratum_ Urban	-598*	.182	10.820	.001	.550
Marstat1: Single	.985**	.435	5.125	.024	2.678
Marstart2: Married	-1.275*	.461	7.642	.006	.279
Marstat3_Div/Sep	(a)				
Region_origin-South	.141	.381	.137	.711	1.152
Region_resid-North	-.466	.381	1.495	.221	.628
Literacy_Literate	.376	.286	1.732	.188	1.457
HHSize(1) 1 -3	-.506*	.174	8.451	.004	.603
HHSize(2) 4-6	.294*	.104	7.980	.005	1.342
HHSize(3): 7+	(a)				
HH_Head_d	-.676*	.254	7.068	.008	.509
Literate*female	.664	.417	2.538	.111	1.942
Literate*male	.242	.236	1.054	.305	1.274
Constant	.944	.712	1.757	.185	.389
-2 Log Likelihood			2854.732		
Chi-Square: Value			876.357		
d.f.			13		

Sig.			.000		
Pseudo R-Squared:					
Cox & Snell			.267		
Negalkerke			.386		

Dependent Variable: Unemployed=1; zero Otherwise
*Significant at 1%; ** Significant at 5% level; *** Significant at 10% level
(a) Reference category.