

# **LABOUR FORCE PARTICIPATION, EARNINGS AND INEQUALITY IN NIGERIA**

By

**Fidelis O. Ogwumike**

**Department of Economics, University of Ibadan, Nigeria**

**Olufunke A. Alaba**

**Department of Economics, University of Ibadan, Nigeria**

**Olumuyiwa B. Alaba**

**Department of Economics, BOWEN University, Iwo, Nigeria**

**Babatunde A. Alayande**

**Department of Economics, Olabisi Onabanjo University, Ago Iwoye, Nigeria**

**Christiana.E.E Okojie**

**Department of Economics and Statistics, University of Benin**

## **ABSTRACT**

*The labour market is a very important source that offers explanation for earnings and income inequality. The structure of the labour market has a significant consequence on employment status and it serves as an important determinant of household income and welfare. Like most labour markets in developing countries, the Nigerian labour market represents one of the major sources of risk through which people fall into poverty. Thus, it is important to identify some of the factors that affect earnings and entry into the labour market. This paper analyses, among other things, the distribution and structure of main job earnings, determinants and income inequality in the Nigerian labour market. The study uses tabular presentations, Gini Coefficient, Theil's Entropy Index, Ordinary Least Squares technique, Heckman's two-stage selectivity bias correction procedure, Tobit analytical technique as well as descriptive statistics for analyses.*

*The results show that inequality is more pronounced in paid employment than in self-employed segment of the Nigerian labour force; it is higher among women involved in paid employment than men in the same employment segment; it is higher among self-employed men than their female counterparts; it is generally higher in the rural areas than in the urban areas; and within group inequality mainly explains income inequality in Nigeria.*

*The labour market in Nigeria presents opportunities for participants to earn incomes and determine their welfare. The government should in line with its reform programmes take necessary and adequate steps to optimally address the various sources of labour market and earnings inequality in Nigeria. This will pave the way for the opportunities in the Nigerian labour market to be optimally utilised by all participants irrespective of gender or location of residence.*

## **1. INTRODUCTION**

The importance of labour market in explaining earnings and income inequality cannot be overemphasised. The structure of the market itself has a significant impact on the employment status and serves as an important determinant of household income and welfare. The labour market consists of several sources of income, including direct remuneration in the form of cash income, and non-cash income (fringe benefits). While these different forms of income sources contribute significantly to dimensions of inequality, income security has relied to a relatively large extent upon the direct remuneration from the labour market (Liebrandt, Bhorat and Woolard, 2001). This suggests that access to employment as well as remuneration attached to such labour market opportunity is important to solving problems relating to inequality and welfare in Nigeria.

The Nigerian labour market like in most other developing countries is characterised by large scale heterogeneity as a consequence of differences in factors affecting earnings and entry into the market. The distinction comes in different forms. Labour markets are mostly distinguished by whether they are formal or informal; or between private sector and public sector. There are three key labour market features that affect the links between income differences and inequality. First, is the extent to which factors affecting inequality is permanent or transitory. Second, is the level of earnings and the degree of income disparities among different groups. The third issue relates to the labour market perception, including type of jobs and hours of labour offered in the market.

Various labour market segmentations exist in the literature, all of which often depend on the purpose for which the classification is made and limitations imposed by survey designs and available data. There have been various classifications of the structure of the Nigerian labour market. For example, in a study of selected metropolitan areas in Nigeria, the National Manpower Board (1998) came up with seven classified forms of the Nigeria labour market, namely; employer, self-employed (farmer), self-employed (trader), self-employed (others), employed wage and salary earners (private), employed wages and salary earners (public) and paid apprentice. Apart from some differences, this classification is in line with the FOS(2001) study that classified the Nigerian labour market into five major forms namely; employer, employees of public companies, employees of private companies, employees of ministries and

parastatals, informal employment (unpaid family worker, own account worker and household enterprises).

The Nigerian labour market represents one of the sources of risk through which people fall into poverty. As shown by Ogwumike, Adubi and Agba (2002), people on paid employment and those without adequate skills are most at risk in the events of labour market shocks. It is therefore important to identify some of the factors that affect earnings and entry into the labour market, which more often than not put people at the risk of poverty and inequality across various sectors of employment. This is essential in order to facilitate the formulation of policies targeted at reducing poverty and inequality in Nigeria. Unfortunately, there is virtually no detailed study of the relationship between wage income and inequality in Nigeria despite the relevance of such link to many contemporary growth and development policy debates.

The purpose of this study, therefore, is to examine the distribution and structure of main job earnings, determinants of earnings and income inequality in the labour market. In particular, the study intends to examine the effects of education, work experience, nature of employment, and gender on the wage structure in the country. The import of this study for economic analysis and policy making cannot be overemphasised. Apart from filling the gap in the literature on economic development, it is capable of offering essential guide to labour market policies in Nigeria. This is in view of various reforms that are being implemented in Nigeria, some of which relates to rightsizing of the public sector and the repositioning of the private sector as the engine of growth of the economy. The consequences of these reforms for economic growth and equity will depend largely on how they affect the functioning of the labour market. This depends on the access of both men and women to wage and self-employment in the private sector and on the returns to schooling and experience in private sector employment. Also, by including gender dimension into the analysis of labour market, earnings and inequality, the current study will be filling the gap on gender differences in earnings. Apart from providing policy makers with useful assistance on how labour market outcomes can affect women, it will also identify some constraints on women's participation in the labour force.

## 1.2 LABOUR MARKET SITUATION IN NIGERIA

The Nigerian labour market is dominated by self-employed persons, followed by wage and salary earners (Table 1.2). Self-employed persons (farmers, traders and others) accounted for 54.9 per cent and wages and salaries (private and public) component for 38.7 per cent of the 5,213 employed persons. Together, these two sectors of employment accounted for 93.6 per cent of employment in all the seven sectors. While employers of labour constituted only about 4 per cent of total employment, traders were most prominent among self-employed workers. They accounted for 29.1 per cent of total employment. Other groups of the self-employed accounted for a sizeable percentage of approximately 19 per cent. The farmers accounted for as low as 6.5 per cent of total employment. Wage and salary earners by sectors show that the public and private sectors accounted for 20.1 per cent and 18.6 per cent respectively. The paid apprentice however accounted for only 2.1 per cent of total employment.

**Table 1.12: Labour Market Structure in Nigeria According to National Manpower Board**

Structure	Both Sexes		Males		Females		Females as % of both sexes
	No	%	No	%	No	%	
Employer	223	4.3	167	5.3	56	2.7	25.1
Self Employed (Farmer)	337	6.5	221	7.0	116	5.7	34.4
Self Employed (Trader)	1,516	29.1	655	20.7	861	42.0	56.8
Self Employed (others)	1,006	19.3	710	22.4	296	14.4	29.4
Emp. Wages & Sal. (Private)	969	18.6	695	22.0	274	13.4	28.3
Emp. Wages & Sal. (Public)	1,052	20.1	642	20.3	410	20.0	39.0
Paid Apprentice	110	2.1	73	2.3	37	1.8	33.6
Total	5213	100	3163	100	2050	100	39.3

*Source:* National Manpower Board (1998).

A further breakdown of the labour market by gender shows that female employment was notable among self-employed traders, where they constituted almost three-fifths, that is, 57 per cent of employment in this subsector. Their contributions in other areas are very minimal and far below those of their male counterparts. For example, they made up 39 per cent of total workers in the public sector, notably in the wages and salaries area and 28.3 per cent of the

private sector workers. Their shares of employment were respectively 29.4 per cent and 34.4 per cent for others unspecified self-employed and self-employed farmers.

## **2.0 LABOUR MARKET ISSUES**

### **2.1 Labour Market Features**

The labour market represents the avenue where human labour is traded and rewarded. Labour market sources of income are mainly through wages and self-employment earnings. The extent to which an individual or a household participates in the labour market and the way in which the market remunerates its labour can determine both the status of the individual or household, as well as the risk of poverty. This suggests that labour market outcomes play a key role in determining the socio-economic status of individuals and households and could help in tackling the seemingly intractable problems of inequality and poverty in a developing economy like Nigeria. Labour markets in developing countries including Nigeria are characterised by high unemployment rates, high informal sector employment with its associated low productivity, relatively high level of employment in the government sector (including public enterprise), as well as low female participation rate in the labour force.

As noted by the World Bank (1995), poverty and inequality in many developing countries can be linked to events in the labour market. Similarly, changes in poverty over time are linked to changing labour market position of household members. Quite a substantial volume of literature suggests that poor people are often relegated to the unorganised informal labour markets with inherent barriers to movements. Barriers to outward movement from informal to formal labour market take the form of outright discrimination against specific groups, as well as recruitment practices that emphasise skill, experience and stable work histories and prerequisites that poor job seekers can rarely satisfy (Schiller, 1989). Therefore, the structure of labour markets in the developing countries is an important factor in explaining the dichotomy which exists across the markets and the extent of poverty and inequality across different groups in such countries.

Self-employment is characterised by unstable working conditions and vulnerability; the informal labour market is usually associated with low wages, low productivity jobs, temporary activities, sometimes clandestine employment, unsafe labour conditions, and no protection under labour legislation (World Bank, 1997). Unlike the informal labour market, the formal labour

market is usually regulated and characterised by higher wages, an organised workforce, higher skill requirement and opportunities for upward mobility.

## **2.2 Urban/Rural Labour Markets**

Analysis of labour market outcomes suggests that apart from social stratification (such as age, sex and level of education) location tends to play a major role in differences in earnings among people (Hsueh and Tienda, 1994). Thus, individuals tend to participate in a geographically limited labour market, with boundaries quite often determined by proximity to residence. This is the basis of the postulate of the “dualistic” structure of labour market in developing countries, typified by division into “urban” and “rural” labour markets.

McLaughlin and Perman (1991) argue that the rural areas are more likely to provide low-paying, part-time, seasonal and non-unionised jobs. Typically, rural places are sparsely settled, and employment is largely agricultural; the towns are densely populated, and employment is mainly non-agricultural (Binswanger and McIntire, 1987; and Lipton and Ravallion, 1995).

The foregoing suggests that supply side factors (e.g. individual characteristics) tend to influence employment hardship among rural dwellers and could act as one of the major sources of differences in rural-urban underemployment problems. Labour supply factors include both demographic and human capital characteristics of individuals within a local setting. On the other hand, demand side factors in terms of quality and quantity of jobs available in the rural areas may also affect the differences between rural-urban employment problems. The quantity and quality of jobs reflect the employment opportunities and options in the rural labour market and ultimately affect the economic well-being of the rural people.

The urban sector can be categorised into formal and informal sectors. The urban informal sector is traditionally perceived as a residual category, made up of those who have not obtained employment in the “formal” urban sector, and their fortunes are linked to those of both the rural sector and urban formal sector through migration and remittances. In contrast to the urban formal sector, the stylised view of the urban informal sector is of a subsector with easy entry, little unionisation, no legal minimum wage, weak safety standard at work, low physical capital input, low returns to labour, and mainly small (often family based) enterprise

units, typically producing non-traded goods, disproportionately consumed by the poor (Lipton and Ravallion, 1995).

### **2.3 Labour Force Participation**

In any economy, livelihoods of people are greatly affected by the opportunities available to participate in the labour market. Studies have shown that poor households depend heavily on labour income. While the size of labour income depends on age-structure, sex, prospects of employment (or self-employment), and wage-rates (or net daily rewards on own account) worker. As Lipton (1983) had observed, the age-structure of poor households shows high dependency ratios which adversely affects their overall participation in work.

Moreover, given the heavy dependence of the poor on unskilled labour, one expects the real wage rate for such labour to be an important determinant of poverty, in addition to factors like sectoral shifts, increased real yields, rising employment, and remittance incomes. One of the most frequently considered issues in labour force participation is the inherent gender differences, especially for developing economies. The number of females employed includes those who are in paid employment and the unpaid family labourers.

### **2.4 Labour Market Segmentation**

The theory of labour market segmentation emerged in response to persistent inequalities in labour market competition. The theory segmented the labour market into two sectors. First are the better paid and the high valued jobs, which can be found in the primary sector and second are the low wages, poor conditions, lack of job security and low status, which can be found in the secondary sector (Edwards *et. al.*, 1973; Gordon and Edwards, 1973). However, given the complexity of contemporary labour markets, the dual segmentation has come under serious criticism in which Baron and Bielby (1984) argue that most industrial sectors are represented by enterprises in both sectors, thereby casting doubt on the authenticity of the dual segmentation of labour market along industrial lines.

## 2.5 Income Inequality: Measurement and Determinants

### 2.5.1 Measurement

Measures of poverty focus on the situation of individuals or households who find themselves at the bottom of the income distribution. Typically, this requires information about both the mean level of income and its distribution at the lower end. Inequality, on the other hand, is a broader concept in that it is defined over the *entire* population, and not just for the population below a certain poverty line (World Bank, 2002). Inequality is a phenomenon associated with economic and social segregation, usually prompted by the existence of barriers to movement (usually upward movement) between different social classes; income and wealth crystallisation, which gives advantage to specific groups in term of access to greater share of the societal resources. In the literature, trends in inequality are usually analysed based on the Gini Coefficient, the Lorenz Curve and Theil's Index

#### *The Lorenz Curve*

A popular graphical tool for examining inequality is the Lorenz curve. It is a plot of the cumulative fraction of the population on the X-axis starting from the poorest, against the cumulative fraction of resources (income/expenditure) on the Y-axis. The Lorenz curve thus gives the shares of total "income" (or per capita expenditure) held (consumed) by the corresponding fraction of the population. If resources are equally distributed, every one will be on the 45<sup>0</sup> line (diagonal), the greater the level of inequality, the farther away the Lorenz curve is from the diagonal.

#### *The Gini Coefficient*

Another measure of the degree of inequality is the Gini coefficient which can be obtained by calculating the ratio of the area between the diagonal and the Lorenz curve divided by the total area of the triangle under the diagonal. The Gini coefficient varies from zero (perfect equality) to one (perfect inequality). Gini coefficients for countries with high inequality typically lie between 0.5 and 0.7 ( UNDP, 1992).

If there are  $N(N-1)/2$  distinct pairs, the Gini coefficient is:

$$\gamma = \frac{1}{\mu N(N-1)} \sum_{i>j} \sum_j |x_i - x_j|$$

If everyone has the same  $\mu$ , the Gini coefficient is zero, while if one person has  $N\mu$ , and everyone else has zero, then there are  $N-1$  distinct absolute differences each of which is  $N\mu$ , the Gini coefficient will be one (Deaton, 1997). An equivalent and computationally more convenient form is:

$$\gamma = \frac{N+1}{N-1} - \frac{2}{N(N-1)\mu} \sum_{i=1}^{N-1} \rho_i x_i$$

where  $\rho_i$  is the rank of individual  $i$  in the  $x$  distribution, counting from the top, so that the richest will have rank one (Deaton, 1997). With this formula, the Gini can be calculated after sorting the observations.

### ***Theil's Entropy Index***

Another inequality index often used in the literature is Theil's entropy index defined as:

$$T = \sum_{i=1}^N (y_i / Y) \ln \frac{y_i / Y}{1/N}$$

where:  $T$  = Theil index,

$Y$  = Total income/expenditure, and

$y_i$  = group income/expenditure

The measure varies between zero (complete equality) and  $\ln N$  (complete inequality). Some authors prefer a transformed Theil index  $T^* = 1 - e^{-T}$ , which varies from 0 to  $-1/N$  and therefore from 0 to 1 when  $N \rightarrow \infty$ . The Theil index can be decomposed into between-group and within-group components. Thus, if there are several groups  $k$  with populations  $N_k$ , and group income  $y_k$ , and Theil index  $T_k$ , then the inequality index  $T$  can be written as the sum  $T = T_w + T_b$ , which is the sum of the within-group inequality index

$$T_w = \sum_{k=1}^K (y_k / Y) T_k,$$

and the between- group inequality index,

$$T_b = \sum_k (y_k / Y) \ln \frac{y_k / Y}{N_k / N}$$

where  $T_w$  is a weighted average of the within-group inequality indices  $T_k$ , and  $T_b$  is inequality between the groups, and  $y_k/Y$  and  $N_k/N$  are the income and population shares of each group. In order to identify the various sources of inequalities in the Nigerian labour market, we computed the Gini coefficients and the Theil index for the various categories of labour such as gender, rural/urban sector and nature of employment sector.

### **2.5.2 Determinants of Income Inequality**

The literature recognises the dominance of wage income in driving inequality (Leibbrandt, Borat and Woolard, 2001). The determinants can be organised into demographic, economic and social characteristics (Feridhanusetyawan, Aswicahyono and Perdana, 2001). The dependent variables are the log earnings across sectors, location and gender. The independent variables are the same for all divides. They include: place of residence of households (urban or rural), household size, the number of babies, children, and adults; age of household head, gender, family structure, such as a head with a spouse, a head without a spouse but nevertheless married, a head without a spouse and single, or a head without a spouse and divorced or widowed, level of education of head of household and occupation variables using main occupation and primary jobs.

## **3.1 MODEL SPECIFICATION**

Since income inequality remains mainly a consequence of earnings (or wage) in the labour market, both issues may be addressed through a similar framework. Such a framework will allow for a switch between earnings and index of inequality under the estimation of these two dependent variables. Wage equation has a long tradition in labour economics and has provided a framework within which earnings and income inequality can be analysed. The more recent modifications of earnings equation exploit richer specifications than the traditional Mincerian functional forms. Expansion of Mincerian function to accommodate more explanatory variables offers explanations to more labour market problems than the traditional earnings functions. In this study, we will use a regression-based approach, which allows the contribution of each regressor to the level of earnings inequality to be quantified and isolated. It is relatively simple to implement and complications do not arise as the number of explanatory variables included in the earnings or wage equation increases. This is because the

wage equation is simply consistent with the traditional vectors of variables, in which earnings remain a function of personal characteristics, local and employment characteristics similar to the classical specifications by Mincer and Polacheck (1974) and Mincer (1974). The authors suggest that earnings is a function of education, experience, and other personal characteristics such as gender, marital status and the number of dependent children. It also includes job and local characteristics. This functional form addresses determinants of earnings differential across gender and location. The standard Mincerian form starts by assuming a wage determining function of the following form:

$$\ln W_{ij} = \gamma Z_i + \varepsilon_j \quad (3.1)$$

Where  $\ln W_{ij}$  is the natural log of wages or earnings of individual  $i$  in sector  $j$ ;  $Z_i$  is a vector of explanatory variables identified earlier; and  $\varepsilon_{ij}$  is a disturbance term. Explanation of inequality relating to earnings is done by substituting wage by inequality calculated based on individual's income largely determined by wage rate.

$$inq_{ij} = \gamma Z_i + \varepsilon_j \quad (3.2)$$

$inq_{ij}$  in this respect is inequality by employment-type, gender and location;  $Z_i$  is a vector of explanatory variables identified earlier; and  $\varepsilon_{ij}$  is a disturbance term. The literature suggests that a set of similar factors that determines earnings equally affects the decisions to participate in the labour market. The method of analysis is however different in this respect.

The Tobit model is specified for the labour supply function. This model consists of a preferred labour supply function as given in equation 3.3, a threshold equation 3.4 which links preferred and observed hours with the stochastic specification as given in equation 3.5. From these equations the likelihood function was derived, and presented as equation 3.6.

$$y_i^* = x_{1i}\beta_1 + \varepsilon_i \quad \dots\dots\dots (3.3)$$

$$d_i^* = x_{2i}\beta_2 + v_i \quad \dots\dots\dots (3.4)$$

$$y_i = \begin{cases} y_i^* & \text{if } y_i^* > 0 \\ 0 & \text{else} \end{cases} \quad \dots\dots\dots (3.5)$$

$$\varepsilon_i, v_i \sim N(0,0,\sigma^2, 1,p) \quad \dots\dots\dots (3.6)$$

where:

$y_i^*$  = preferred hours of work

$y_i$  = measured hours of work

$x_{1i}$  and  $x_{2i}$  = vectors of explanatory variables( education, age, literacy etc)

$\beta_1$  and  $\beta_2$  = vectors of parameters

$d_i^*$  = latent variable representing binary censoring

$\epsilon_i$  and  $v_i$  = error terms

In order to obtain interpretable results we explore the analysis of marginal effects, based on the following expectation in equation 3.7.

$$L = \Pi_{y=0} \Phi(-X_2\beta_2) \Pi_{y>0} \left\{ \Phi\left[\frac{x_{2i}\beta_2 + p/\sigma(y - X_1\beta_1)}{\sqrt{1-p^2}}\right] \frac{1}{\sigma} \varphi\left(\frac{y - X_1\beta_1}{\sigma}\right) \right\} \dots (3.7)$$

Where:  $y=0$  denotes individuals with zero working hours

And  $y>0$  denotes individuals with positive hours

$\Phi$  and  $\varphi$  denotes the univariate function

$$E(Y) = \Phi(h) [ X_1\beta_1 + \sigma \{ \varphi(h) / \Phi(h) \} ] \dots (3.8)$$

### 3.2 Methods and Data

Our methods of analysis range from qualitative to Tobit procedure, including the analysis of the Micerian earnings function for the Nigerian labour market. The procedure for estimating the earnings function in other to control for this bias follows the Heckman (1979) two-stage selectivity-bias correction procedure though we equally estimated OLS for the purpose of comparison. However, we adopted OLS procedure to estimate the determinants of inequality in Nigeria.

In the case of labour force participation, we estimated a probit equation for the working population. We develop selection bias variable lambda, calculated as  $f(X\beta)/F(X\beta)$  for each wage workers.  $X$  and  $\beta$  are matrix of explanatory variables and parameters in probit equation, in which  $f(X\beta)$  and  $F(X\beta)$  are explained by the normal density equation. However, since the determination of participation in a given sector is unlikely to be random, the familiar problem arises from selectivity bias in the earnings equation estimates. With the presence of this bias the usage of the OLS estimation may lead to biased and inconsistent parameter estimate.

The data used in this study is from the General Household Survey (GHS) conducted in 1999 by the Federal Office of Statistics (FOS), Nigeria. The data comprises 7,980 households out of which 2,138 were from the urban areas and 5,842 rural areas. These households are made up of 36,695 individuals. These consist of 9,407 individuals in urban and 27,288 individuals in rural areas. For the purpose of this study, the sample size is reduced because only individuals of age 15 years and above who are part of the labour force are included. Individuals with missing values were also omitted. This reduced the data to 20,904 individuals, 10,182 males and 10,722 females, out of which 6,937 males and 3,450 females, reported positive earnings. The labour market has been structured into the following; own account, paid employees and unpaid workers. In the analysis, the individuals are segmented by gender. The data contain information on household composition, educational level of individual household members, employment status of the household members, main job, and secondary job, and occupation.

## **4.0 RESULTS**

### **4.1 Distribution of Households by Employment Status and Sectors**

Table 4.1 indicates that 59.3 per cent of persons within working age actually participated in the labour market, while 40.7 per cent were regarded as economically inactive at the time of the survey. It is instructive to state that this economically inactive included those who kept home, voluntary community work, students and the unemployed. Further, 75.3 per cent of males were economically active compared to 44.4 per cent of females. This implies that 55.6 per cent of females that are eligible to work did not work at the time of the survey as against 24.7 per cent of male. Hence, male labour force participation remained higher than that of female. The difference in labour force participation between urban and rural is very insignificant. The trend is however consistent with rates obtained in previous studies.

**Table 4.1: Labour Market and Activities of the Population**

	Male		Female		Urban		Rural		Total	
	Number	Per cent	Number	per cent	Number	per cent	Number	per cent	Number	Per cent
<b>TOTAL POPULATION</b>	<b>18655</b>	<b>50.8</b>	<b>18040</b>	<b>49.2</b>	<b>9407</b>	<b>25.6</b>	<b>27288</b>	<b>74.4</b>	<b>36695</b>	<b>100</b>
Children under 15	8473	23.1	7318	20.0	3935	10.7	11856	32.3	15791	43.0
Adults 15 years to 64	9521	25.9	10328	28.1	5233	14.3	14616	39.8	19849	54.1
Adults above 65	661	1.8	394	1.1	239	0.7	816	2.2	1055	2.9
<b>ECONOMICALLY INACTIVE</b>	<b>2347</b>	<b>24.6</b>	<b>5738</b>	<b>55.6</b>	<b>2214</b>	<b>42.3</b>	<b>5871</b>	<b>40.2</b>	<b>8085</b>	<b>40.7</b>
Kept home	118	5.03	4140	72.15	913	4.24	3345	56.97	4258	52.67
Community voluntary worker	34	1.45	13	0.23	1094	0.36	2241	0.66	47	0.58
Student	1962	83.60	1373	29.93	199	49.41	246	38.17	3335	41.25
Unemployed	233	9.93	212	3.69	2214	8.99	5871	4.19	445	5.50
<b>ECONOMICALLY ACTIVE</b>	<b>7174</b>	<b>75.3</b>	<b>4590</b>	<b>44.4</b>	<b>3019</b>	<b>57.7</b>	<b>8745</b>	<b>59.8</b>	<b>11764</b>	<b>59.3</b>
Paid Employee	1054	14.69	468	10.20	683	22.62	839	9.59	1522	12.94
Own Account Worker	5750	80.15	3881	84.55	2249	74.49	7382	84.41	9631	81.87
Unpaid worker	370	5.16	241	5.25	87	2.88	524	5.99	611	5.19

Source: Authors' calculation from FOS General Household Survey (GHS), 1999.

## 4.2 Income Distribution

The average income per worker per month is about N4,134 in the Nigerian labour market. Per capita monthly cash income for the survey population is about N1,235. Table 4.2 presents average income by gender, sector of residence and nature of employment. Further, average income of paid employees are generally higher than those of own account workers or the self-employed. Gender differences in the labour earnings reveal that male workers earn higher income compared to their female counterparts in the same mode of employment. Males in paid employment earn an average wage of N8,133.88, which is 25 per cent higher than average labour earnings of females in the labour market. Similar trend was recorded in the self-employed group though the difference is significantly higher (females income is about 43 per cent lower than average male income).

**Table 4.2 Income Distribution in the Labour Market**

	Paid Employees			Own Account Worker		
	Mean Income	Median Income	Mean/capita income	Mean Income	Median Income	Mean/capita income
<b>SEX</b>						
Male	8133.88	5000	2344.70	3936	3000	1178.78
Female	6485.51	4000	2229	2745.85	2000	817
<b>Urban/rural residence</b>						
Urban	7385.82	6000	2408.40	4567.85	3500	1500.29
Rural	7078.06	4000	2196	3150.28	2000	893.56

Income distribution by place of residence (urban/rural) shows that mean income for rural paid employees is lower than those in paid employment in the urban areas (Table 4.2). This suggests that income of paid employees is more unevenly distributed in the rural areas compared to the urban dwellings. A plausible explanation for this finding is that urban work force may have been concentrated at the lower quintiles of the labour markets. The own account workers in the urban areas earn substantial higher income than their rural counterparts. The rural self-employed earn an average of N3,150.28, about 31 per cent lower than the same group of workers in the urban labour market.

### **4.3 Dimensions of Income Inequality in the Nigerian Labour Market**

Income inequality is used based on Gini coefficient and Theil's entropy measures. The Gini coefficients and Theil measures obtained in the analysis of our data suggest that inequality is considerably high among employed households in Nigeria. Table 4.3 shows on the aggregate, inequality is still high as represented by Gini coefficient of 0.47 and Theil measure of 0.56.

Gender analysis of inequality based on Gini index shows that inequality was about the same between male and female (male 0.459 and female 0.466). The Theil measure is 0.633 and 0.524 respectively for female and male workers. Further, the result reveals that within-group inequality accounts for close to 98 per cent of inequality analysed by gender of the workers. Only about 2 per cent of inequality happens between the groups.

Analysis by location of the workers, determined by whether the participants in the labour market reside in the rural or urban sectors, shows that inequality is considerably high in both sectors. However, inequality is higher in rural labour market than the urban job market. While Gini index for the rural is 0.476, that of the urban stood at 0.415. Theil index for the rural sector was 0.672, and that of urban was 0.334. Further, the result confirms the dominance of within-groups inequality, at over 97per cent, when compared to between-groups inequality which explains only 2.5per cent of the total inequality by location.

**Table 4.3: Inequality by Gender and Urban-Rural Dimensions**

Sector/Gender/Inequality Indices	GE(0)	GE(1)	GE(2)	Gini Coefficient	Income share	Population share
<i>Aggregate</i>	0.376	0.564	4.356	0.470		
<i>Male</i>	0.360	0.524	3.631	0.459	0.740	0.668
<i>Female</i>	0.367	0.633	6.720	0.466	0.259	0.332
Within Inequality	0.363 (96.5)	0.552 (97.8)	4.343 (99.7)			
Between Inequality	0.013 (3.5)	0.012 (2.2)	0.012 (0.3)			
<i>Urban</i>	0.300	0.334	0.713	0.415	0.360	0.282
<i>Rural</i>	0.387	0.672	7.023	0.476	0.640	0.717
Within Inequality	0.362 (96.4)	0.550 (97.5)	4.341 (99.6)			
Between Inequality	0.013 (3.6)	0.014 (2.5)	0.015 (0.4)			

#### 4.4 Inequality by Primary Employment Groups

Table 4.4 presents results of income inequality by primary employment groups of individuals in the Nigerian labour market. This is disaggregated into paid employment and self-employment, with further disaggregation within the two groups into gender and sector of residence. Further, the result shows that inequality seems more pronounced among paid employed workers, when compared with their counterparts engaged in the other sector. The general picture by primary employment shows that inequalities given by Gini coefficient and Theil index were 0.426 and 0.346 respectively for self-employed and 0.511 and 0.892 respectively for the paid employed. Similarly, significantly high proportion of inequality in the two groupings accounted for within-group rather than between-groups inequality.

**Table 4.4 : Inequality by Primary Employment Groups: Gender and Urban-Rural Dimensions**

<b>Sector/Gender/Inequality Indices</b>	<b>GE(0)</b>	<b>GE(1)</b>	<b>GE(2)</b>	<b>Gini Coefficient</b>	<b>Income share</b>	<b>Population share</b>
<b>Self-employed</b>	0.303	0.346	0.625	0.426	0.73	0.852
<b>Paid employed</b>	0.478	0.892	7.203	0.511	0.27	0.147
Within Inequality	0.333 (88.6)	0.515 (91.2)	4.296 (98.6)			
Between Inequality	0.043 (11.4)	0.050 (8.8)	0.060 (1.4)			
<b>Self-employed</b>						
<i>Male</i>	0.293	0.339	0.615	0.421	0.66	0.73
<i>Female</i>	0.284	0.407	2.111	0.415	0.34	0.26
Within Inequality	0.290 (95.3)	0.357 (96.3)	0.936 (98.6)			
Between Inequality	0.014 (4.7)	0.014 (3.7)	0.013 (1.4)			
<i>Urban</i>	0.280	0.296	0.469	0.406	0.25	0.33
<i>Rural</i>	0.294	0.385	1.217	0.422	0.75	0.67
Within Inequality	0.290 (95.4)	0.357 (96.0)	0.953 (98.4)			
Between Inequality	0.014 (4.6)	0.015 (4.0)	0.016 (1.6)			
<b>Paid Employee</b>						
<i>Male</i>	0.476	0.855	6.704	0.510	0.750	0.451
<i>Female</i>	0.528	1.033	10.094	0.537	0.251	0.549
Within Inequality	0.491 (99.2)	0.899 (99.6)	7.488 (99.95)			
Between Inequality	0.004 (0.8)	0.004 (0.4)	0.004 (0.05)			
<i>Urban</i>	0.274	0.343	0.893	0.391	0.44	0.451
<i>Rural</i>	0.677	1.342	12.418	0.605	0.56	0.549
Within Inequality	0.495 (99.94)	0.903 (99.97)	7.492 (100)			
Between Inequality	0.0003 (0.06)	0.0003 (0.03)	0.0003 (0.0)			

Further disaggregation of the employment groups indicate that inequality is slightly more in self-employed male compared to their female counterparts. Gini index for self employed male is 0.42 and female is 0.41. Theil indices are 0.34 and 0.41 for male and female workers respectively. Gender within-group inequality accounts for about 96 per cent and between group for 4 per cent. Inequality by paid employees and gender reveals that inequality is higher in female paid employees contrary to the trend obtained in the analysis of self-employed by gender of workers. In the paid employment case, Gini indices are 0.54 for female workers and 0.51 for male workers, while Theil indices are 1.03 and 0.85 respectively. Within and between groups analyses show consistencies with the earlier trends.

Inequality by locations of workers shows that the trend is higher in rural areas for both self-employed and paid employed workers. However, inequality is far higher in paid employed rural compared with self-employed rural. Inequality in rural self-employed measured by Gini coefficient is 0.42 while Theil is 0.38, and in urban sector, Gini coefficient is 0.406 and Theil measure is 0.296. However, Gini index for paid employees in the Nigerian rural labour market is as high at 0.61 and the associated Theil index is 1.34. Urban segment of the same labour group recorded relatively low inequality of Gini coefficient of 0.39 and Theil measure of 0.34. The analysis further shows that within-group inequality accounted for about 100 per cent of inequality in this case (Table 4.4).

#### **4.5 Analysis of Earnings Equations**

The results on Table 4.5 show that most of the variables in the extended earnings equations exhibit expected signs. Both the OLS and the Heckman estimates show nearly similar results. Almost all the primary variables of the earnings equation are significant in explaining earnings in Nigeria. The Table shows that age, experience, sex and education are very significant in explaining differences in earnings in the Nigerian labour market. Experience is significant at 1per cent with positive sign. In conformity with *a-priori* expectation, the result suggests that the higher the years of experience on a job, the higher the earnings. Square of experience is also consistent with *a-priori* expectation and equally significant at 1 per cent. All age ranges in the labour market are also significant at 1 per cent, except age 60 which shows 5per cent level of significance. Ages are all positive, suggesting that skills and experiences are consistent with ages as a determinant of changes in earnings across the labour market in Nigeria.

Analysis by gender of individuals gave an indication of the remuneration system in the labour market being biased against women. The variable relating to gender is significant at 1per cent and displayed a negative sign. This outcome relating to gender suggests that being a female in the labour market negatively affects earnings on the same job with male counterparts. Further analysis by gender shows that the number of under-six children affects earnings of female (the variable is significant at 5 per cent). The variable also carries a negative sign which implies that the more the number of under-six children in the care of female individuals the less the income of such individuals in the labour market in Nigeria.

**Table 4.5: Earnings Equation Using Heckman Procedure and OLS by Sex (Log of Earnings as Dependent Variable) Total Population**

Variables	Heckman	OLS
	Exp	0.0140559* (4.45)
Expsq	-0.0001186* (-3.90)	-0.0000898 (-2.16)**
Age_30	0.1299208* (2.88)	0.052611 (1.36)
Age_40	0.2121872* (3.63)	0.0082433 (0.13)
Age_50	0.235724* (3.16)	-0.933546 (-1.05)
Age_60	0.2260089** (2.52)	-0.1999485 (-1.79)**
Age_61	0.2932944* (2.70)	3.756421 (26.76)*
Female	-0.3340517* (-24.20)	-0.0917452 (-2.65)*
Rural	-0.2917857* (-19.50)	-0.2846826 (-18.73)*
Lab_force_1	0.2375358* (10.67)	0.5589204 (15.10)*
Lab_force_2	-0.0249607 (-0.43)	7.070403 (278.71)*
Pyeduc	0.0053274 (0.56)	0.0426097 (3.56)*
Pyeducsq	0.0014995* (4.78)	-0.0003422 (-0.87)*
Lit	0.1449121** (2.37)	0.0410154 (0.54)
Num_und6	-0.0612209 (-1.13)	-0.0115334 (-0.99)
Fem_und6	-0.0156081 (-0.23)**	-0.002283 (-0.15)
Constant	7.539672 (-12.56)	-0.3833955 (-7.55)
Rho	-0.2389143	
Sigma	0.6456999	
Lamba	-0.1542669	

Note: t -statistics are given in parentheses

(\*) significant at 1per cent, (\*\*) significant at 5per cent

Another important variable which explains labour market earnings is literacy, the Heckman procedure shows that whether one is literate or not is important in explaining changes or differences in earnings. Table 4.5 indicates that literacy significantly and positively affect income. Levels of individual's education is however not significant under the same procedure, although the square of education shows significance at 1per cent. The OLS technique on the other hand shows that both education and its square are significant at 1per cent and that increase in level of education boost labour earnings. However, literacy is not

significant in the OLS technique, unlike the Heckman procedure. These results also corroborated the locational differences in earning between rural and urban areas. Being employed in the rural areas is significant at 1 per cent and carries negative sign. This may be responsible for average rural wage falling below the national average as given by our data.

#### **4.6 Determinants of Income Inequality in the Nigerian Labour Market**

This section attempts an explanation of the causes of income inequality among the Nigeria workers. The Nigerian labour market was divided into two employment groups, that is, the wage earners and the self-employed or the own account workers. The section explores both aggregate and disaggregated analysis of the market. The disaggregation considers both locational (rural and urban) and gender analysis. The primary variables of the models are age, gender, marital status, education, literacy, area of residence, and number of young dependants per worker. Income inequality is represented by the deviation from mean income and is used as the dependent variable in this analysis.

##### **Self-Employed**

Analysis of the aggregate self-employed or own account workers suggests that education, literacy, presence of young dependants, gender and location are important factors driving inequality in the self-employed group of the Nigerian labour market. A closer look at the results on Table 4.6 shows that the number of years of education is significant at 1 per cent and displays a positive sign. This suggests that differences in educational attainment determine income inequality among self-employed or own account workers with different levels of educational attainment. Also, literacy is significant at 5 per cent. The number of under-6 children contributes very significantly to income inequality in the Nigeria labour market. This is significant at 1per cent, with positive sign. The positive sign indicates that the higher the number of under-6 children the higher the inequality among workers. The simple explanation for this is sharing of time between the labour market and caregiving to the child or children belonging to or living with the workers.

**Table 4.6 Analysis of Inequality by Employment Group: Self-employed**

Variables	Total Population	Rural	Urban	Female	Male
Age	.0055262 (1.39)	0005319 (0.11)	.0183935 (2.83)*	.0063648 (0.80)	.0054887 (1.26)
Age squared	-.000047 (-1.36)	-.0000218 (-0.52)	-.0000983 (-1.70)***	-.0000696 (-0.96)	-.0000405 (-1.08)
Education	.0148159 (8.83)*	.0121717 (5.24)*	.0174757 (7.66)*	.0100695 (2.93)*	.0175758 (9.62)*
Literacy	-.0436743 (-2.10)**	-.0321179 (-1.19)	-.0265749 (-0.81)	-.0007344 (-0.02)	-.0741703 (-3.23)*
age_40	.0216958 (0.97)	.0390711 (1.41)	-.0310356 (-0.86)	.0201166 (0.45)	.0192153 (0.78)
age_50	.0402962 (1.13)	.0891788 (2.04)**	-.1043806 (-1.76)***	.0777286 (1.09)	.0190642 (0.48)
Age_60	.0535059 (1.14)	.1172565 (2.06)**	-.1354168 (-1.72)***	.0228639 (0.24)	.0628344 (1.22)
Age_61	.0689332 (1.18)	.1546884 (2.20)**	-.1974749 (-1.95)***	.0474239 (0.39)	.0666736 (1.05)
Married	.0250102 (1.20)	.0358721 (1.32)	.0025886 (0.08)	-.0039676 (-0.09)	.0288398 (1.49)
Divorced	-.0146407 (-0.46)	-.0130812 (-0.33)	.0026202 (0.05)	.0704899 (1.32)	-.0092695 (-0.32)
Widowed	-.0117959 (-0.26)	.0002588 (0.00)	-.0326141 (-0.35)	.0871674 (1.73)***	-.0142125 (-0.36)
Number under 6 dependants	.0211927 (4.01)*	.0183057 (2.95)*	.0322667 (3.27)*	-.0025923 (-0.26)	.0228958 (4.89)
Married female	-.0243325 (-0.63)	-.0413888 (-0.81)	-.0116531 (-0.21)		
Divorced female	.0879602 (1.69)***	.0482906 (0.73)	.1163942 (1.45)		
Widowed female	.0829191 (1.47)	.0658544 (0.96)	.051294 (0.48)		
Females with under 6 child(ren)	-.0218128 (-2.26)*	-.0193083 (-1.61)	-.0293331 (-1.86)***		
Female	-.0894309 (-2.44)**	-.0524076 (-1.08)	-.1476387 (-2.89)*		
Rural	-.0958716 (-9.08)*			-.0503319 (-2.44)**	-.1273295 (-10.79)*
Constant	-.1163305 (-1.21)	-.1795201 (-1.74)***	-.5464538 (-3.95)*	-.3126855 (-1.88)***	-.1942467 (-2.09)**
R-squared	0.0662	0.0316	0.1398	0.0263	0.0862
No of Obs	8115	6020	2095	2736	5379
Prob > F	0.0000	0.0000	0.0000	0.0000	0.0000

Note: t -statistics are given in parentheses

(\*) significant at 1per cent, (\*\*) significant at 5per cent, (\*\*\*) significant at 10per cent

The presence of under-6 children has particular impact on female workers. This is consistent with expectations, specifically, because mothers are usually zoned primarily to caregiving in this part of the world. All these gender specific factors may have accounted for

the significance of gender as an explanation of income inequality in the Nigerian working class. The aggregate analysis further reveals that the place of residence in terms of rural and urban areas is a significant factor in explaining income inequality in Nigeria.

Next, we consider location and gender disaggregation of the self-employed sample. Education and number of under-6 children are very significant in explaining inequality among the rural self-employed. Other significant determinants are age ranges between 41 and above 60. Similarly in urban areas, education and presence of under-6 and age ranges between 41 and above 60 are significant determinants of income inequality. Added to these factors, inequality in urban self-employed are influenced by age and gender. Particularly being a female and with under-6 children specifically affects income inequality.

Gender specific analysis shows that education, loss of spouse and place of residence (rural/urban) are important determinants of inequality among women. The same set of variables explain income inequality among the self-employed males in the labour market. However, loss of spouse and presence of under-6 children does not matter in the explanation of inequality among the latter.

### **Wage Earners**

The result of inequality among wage earners suggests that income inequality among this group is mainly explained by education and divorce (specifically in respect of women). Education is significant at 10 per cent, while being divorced female is significant at 10per cent. Analysis by location shows that education is the main determinant of income inequality among wage earners in the rural labour market in Nigeria. However, in the case of urban labour market, a combination of education, literacy, married female, and presence of under-6 children are significant in explaining income inequality among paid employees in the urban sector of the Nigeria labour market.

**Table 4.7 Inequality by Employment Group: Wage Earners**

Variables	Total Population	Rural	Urban	Female	Male
Age	-.0363274 (-0.52)	-.0961427 (-0.70)	.0161489 (1.13)	-.0678615 (-1.25)	-.0270599 (-0.27)
Age squared	.0003386 (0.64)	.000895 (0.84)	-.0000925 (-0.70)	.0008184 (1.33)	.0002101 (0.28)
Education	.0378677 (4.44)*	.0368327 (2.37)**	.0376374 (5.60)*	.0573843 (1.91)***	.0312336 (5.98)*
Literacy	-.3638865 (-1.84)	-.3670812 (-1.27)	-.2678312 (-3.72)*	-.3562495 (-1.16)	-.3940372 (-1.53)
age_40	.4953512 (1.25)	1.013719 (1.25)	-.0055519 (-0.08)	.4991795 (1.18)	.5075458 (0.94)
age_50	.2938734 (0.54)	.6565659 (0.62)	-.0405974 (-0.28)	.2079656 (0.91)	.3167373 (0.41)
Age_60	.4122669 (0.57)	.7399778 (0.53)	.0718879 (0.34)	.0416856 (0.14)	.5127166 (0.49)
Age_61	.2060951 (0.26)	.5207148 (0.35)	-.227414 (-0.91)	-.3022051 (-0.65)	.3044674 (0.27)
Married	.127672 (1.31)	.1005486 (0.53)	.164606 (2.72)*	.4124187 (1.06)	.103209 (0.81)
Divorced	-.158667 (-1.72)***	-.1167476 (-0.72)	-.0559007 (-0.79)	.2991869 (1.19)	-.183534 (-1.47)
Widowed	.0742441 (0.55)	.0907299 (0.44)	.0137503 (0.11)	.4265174 (1.15)	.0255725 (0.14)
Number of under 6 dependant	.0801421 (1.10)	.1705831 (1.36)	-.0418076 (-1.70)***	-.16892 (-0.88)	.0797116 (1.13)
Married female	.1576392 (0.55)	.1705831 (1.36)	-.2001567 (-2.30)**		
Divorced female	.2854338 (1.88)***	.1886171 (0.80)	.1114908 (1.06)		
Widowed female	.1219763 (0.81)	.2876971 (0.96)	.0248923 (0.15)		
Female with under 6 child(ren)	-.2273353 (-1.36)	.2876971 (0.96)	.0725485 (1.67)		
Female	-.0936073 (-1.29)	-.1218287 (-0.93)	-.0608854 (-0.95)		
Rural	.153919 (1.16)			.3400582 (0.96)	.0910923 (0.68)
Constant	.447426 (0.34)	1.661235 (0.63)	-.5900309 (-1.84)	.4001662 (0.57)	.4378989 (0.22)
R-squared	0.0159	0.0186	0.1060	0.0285	0.0127
No of Obs	1513	827	686	438	1075
Prob > F	0.0000	0.0000	0.0000	0.0000	0.0000

Note: t -statistics are given in parentheses

(\*) significant at 1per cent, (\*\*) significant at 5per cent, (\*\*\*) significant at 10per cent

The result by gender of wage earners shows that only education is an important factor, which explains income inequality among both male and female workers. Education is most significant for male workers at 1per cent and 10per cent for female wage earners.

#### 4.4 Analysis of Labour Market Participation

Table 4.8 presents the results of labour supply equation estimated in Tobit forms for the total population, gender and location. The outcomes of our empirical analysis reveal that all of age, education, marital status, dependency and area of residence are important factors in explaining labour market participation in Nigeria.

**Table 4.8: Labour Supply Equation Using Tobit Procedure (Hours supplied as dependent variable)**

Variables	Tot.Population	Rural	Urban	Female	Male
Page	1.83(22.10)*	2.29(13.74)*	1.64(17.29)*	1.11(14.13)*	2.96(16.87)*
Pagesq	-0.02(-20.40)*	-0.02(-13.13)*	-0.02(-15.74)*	-0.01(-14.93)*	-0.03(-13.84)*
Pyeduc	2.05(0.33)*	4.19(7.03)*	0.35(0.87)	0.89(2.96)*	4.40(6.27)*
Pyeducsq	-0.09(-8.43)*	-0.17(-9.03)*	-0.03(-1.98)**	-0.06(-5.59)*	-0.16(-6.39)*
Lit	4.02(1.84)***	-3.38(-0.79)	11.90(4.55)*	0.75(0.36)	3.98(0.87)
Married	19.31(19.88)*	17.50(9.60)*	19.49(16.80)*	17.15(23.37)*	6.31(3.31)*
Divorced	17.77(9.91)*	15.48(4.10)*	17.87(8.75)*	15.18(11.91)*	28.64(10.17)*
Widowed	14.01(5.52)*	8.65(1.45)	14.39(5.14)*	12.06(6.73)*	25.55(10.00)*
Num-und6	0.19(0.64)	1.07(1.65)***	-0.04(-0.11)	-0.16(-0.76)	-4.54(-10.44)*
Fem-marr	-18.49(-12.43)*	-11.10(-4.06)*	-21.40(-11.96)*		
Fem-div	4.40(1.72)***	9.23(1.86)***	2.40(0.80)		
Fem-wid	4.39(1.53)	13.63(2.07)**	1.85(0.58)		
Fem-und6	-4.98(-11.88)*	-7.18(-7.94)*	-4.34(-9.24)*		
Female	-7.76(-5.66)*	-10.01(-4.13)*	-6.34(-3.83)*		
Rural	-1.76(-3.29)*			-3.29(-6.42)	1.24(1.13)
Constant	-20.23(-10.42)*	-33.49(-8.82)*	-16.77(-7.72)*	8.16(4.59)*	-76.60(-18.64)*
Log Likelihood	-58114.119	-15124.96	-42923.47	-31501.67	-25077.86
LR chi2	6091.30+	1591.95+++	4588.24+++	1527.34++	1866.51++
Prob>chi2	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R2	0.0498	0.0500	0.0507	0.0237	0.0359
No. of Obs.	16139	4170	11969	7732	8407

Note: t -statistics are given in parentheses

(\*) significant at 1per cent, (\*\*) significant at 5per cent, (\*\*\*) significant at 10per cent

(+) LR chi2=15, (++) LR chi2= 10, (+++)LR chi2= 14

The aggregate data variables relating to age and education are all significant at 1per cent. Age and education carry positive sign, which suggests that hours of labour offered in the market increases with age and education of workers. All of marriage, divorce and loss of spouse through death are all very significant and positive determinants of labour force participation in the Nigerian job market. For married female, marriage affected participation in

the labour market significantly, but negatively, suggesting that marriage constitutes a source of restriction to female participation in the labour market in Nigeria. Table 4.8 shows that the presence of children under-six also has significant negative impact on the ability of women to participate in the labour market. Most of the variables considered in disaggregated analyses in this empirical process are significant in explaining time offered in the labour market in Nigeria.

## **POLICY IMPLICATIONS AND RECOMMENDATION**

- Labour force participation rate is higher among males than females. There is the need to improve opportunities for females to engage more in income earning activities. In the short run, this can include emphasis on skill acquisition and credit facilities to enhance participation of females in labour market. Also, focus could be on female-child education. On the long run, emphasis could be on improved access of women to ownership of assets and property rights. Currently, both National Poverty Eradication Programme (NAPEP) and National Directorate of Employment (NDE) have a number of skills acquisition programmes. Though some of these have suffered from elite-capture, there is need to make them more pro-poor and ensure improved access of beneficiaries of skill acquisition programmes to credit facilities to start their own business.
- There is need for social security for children under-six to take care of lower mother participation in labour market. In particular, day care provision for children to encourage mothers to work on income earning activities. A pilot programme on this is currently in place in Kwara State for women working in the formal public sector. This programme should be extended to women in both public and private sectors.
- Income inequality is more pronounced among the paid employees than self-employed. The government should continue to address issues of disparity in cash and fringe benefits among the paid employees given the reform as it affects monetisation. The wage gap between private and public paid employee should also be addressed.
- On the average, the self-employed earn less than paid employee. The working environment for the self-employed should be improved. This could be in form of infrastructure provision (e.g electricity, transportation etc.) and enhanced market

- opportunities. Government should put in place institutions to coordinate commodities and services provided mainly by the self-employed. This can enhance quality, ensure access to markets and improve earnings.
- Male workers earn higher average income than female workers. Although the study did not control for age and education. The disparity in earnings might be mainly from private informal activities where wage differences exist due to the nature of job.
  - Rural and informal urban workers need incentives to enhance their earnings and thus their welfare. Creating appropriate institutions to complement market forces would go a long way in improving quality of products and market opportunities.

## **CONCLUSIONS**

Labour market in Nigeria presents opportunities for participants to earn incomes and determine their welfare. It presents different earnings opportunities to participants based on gender of the workers, sector of employment, location and institutions of employment. Labour force participation rate is higher among males than females. In terms of earnings, on the average, the self-employed earn less than paid employee. Male workers earn higher average income than female workers.

The outcome of the inequality analysis in this study shows that income inequality is more pronounced among the paid employed compared to their self-employed counterparts. Inequality is higher among women involved in paid employment compared to men in the same employment segment. Contrary to the latter, income inequality is higher among male own account workers compared to their female counterparts. Inequality by location of workers reveals that income inequality is generally higher in rural areas than the urban. Within-group inequality mainly explains income inequality in Nigeria.

Labour market is a primary area where inequality can be effectively addressed. The literature points out that the largest proportion of individual and household income is generated by labour market earnings. Disparity in labour earnings is a specific factor, which explains inequality among Nigerian workers. The primary variables, which explain labour market earnings and its differences in the Nigerian labour market are age, education, literacy, gender and experience. Some factors such as whether women are married, divorced and presence of

under-six children as dependants exert specific influence on labour market participation and earnings in the Nigerian labour market. Income inequality in Nigeria is mainly explained by education and literacy. Gender specific factors affecting earning and inequality include marriage, loss of spouse and dependency given by presence of children.

In conclusion, policies directed at these specific factors via human capital development and creation of incentive would go a long way to enhance female gender participation and earnings in the labour market. In addition, rural areas and informal urban sector participants need similar incentives to enhance their welfare and benefits from labour market activities in the country.

## References

- Bhorat, H; M. Leibrandt; M. Maziya; S. Van der Berg and I. Woolard (2000). The poverty challenge in a post-apartheid South Africa: Labour market, poverty and inequality in South Africa – *mimeo*.
- Central Bank of Nigeria (2000). *Annual report and statement of accounts*. Central Bank of Nigeria, Abuja.
- Deaton, Angus (1997). *The analysis of household survey: A microeconomic approach to development policy*. Baltimore: John Hopkins Press.
- Feridhanusetyawan, T, H. Aswicahyono and A. Perdana (2001). Some determinants of the female and male labour force's participation in Indonesia. *The Indonesian Quarterly*, Vol. XXIX, No. 4. 2001.
- Fields, G.S., (1997). Poverty, inequality, and economic well-being: African economic growth in comparative perspective. Paper presented at the AERC Poverty Training Workshop, Kampala.
- Federal Office of Statistics (1999). *Poverty profile for Nigeria*, Federal Office of Statistics, Lagos, Nigeria.
- Federal Office of Statistics (2001). *General household survey, 1999*, FOS, Lagos.
- Heckman, J. J. (1979), Sample Selection Bias as a Specification Error, *Econometrica*, 47, 153-61
- Liebrandt, M., Bhorat, H. and Woolard, I., (2001). Household inequality and the labour market in South Africa. *Contemporary Economic Policy*, Vol. 19, No. 1
- Lipton, M., (1983). Labour and poverty. *World Bank Staff Working Paper* No. 616, The World Bank, Washington, DC.
- Lipton, M. and M. Ravallion, (1995). Wage premia for education and location by gender and race in South Africa, (processed).
- Mincer, J. (1974). *Schooling, experience, and earnings*, New York: Columbia University Press for the National Bureau of Economic Research.
- \_\_\_\_\_ and Solomon Polachek (1974). Family investment in human capital: Earning of women. *Journal of Political Economy*, 82(2).
- National Manpower Board (1998). The study of the Nigerian labour market: Selected metropolitan areas, *Manpower Study* No.33
- Ogwumike, F. O. Adubi A. A. and Agba V.A (2002). Major sources and levels of risks in Nigeria. A report prepared for the World Bank.
- Schiller, B. R. (1989). *The Economics of Poverty and Discrimination*. Prentice-Hall, 5<sup>th</sup> ed.
- World Bank, (1995) Country assistance strategy for workers in an integrating world. *World Bank Development Report*. Washington, D.C.
- World Bank, (1997): Development in Practice, Taking Action to Reduce Poverty in Sub-Saharan Africa, A World Bank Publication.
- World Bank, (2000). *World Development Report: Attacking Poverty*. New York, Oxford.
- World Bank (2002). *Globalisation, Growth and Poverty*. World Bank, Washington, D.C.