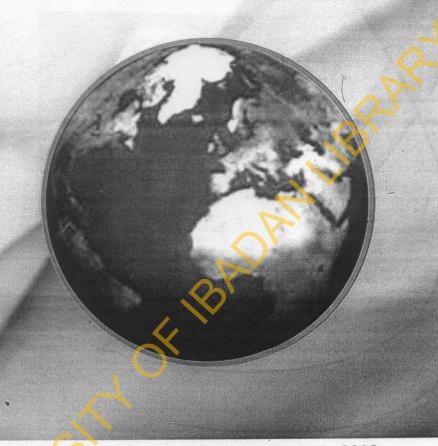
JOURNAL OF PEDAGOGICAL THOUGHT



ISSN 1821-8180

VOLUME 9, NOVEMBER, 2012

JOURNAL OF PEDAGOGICAL THOUGHT



ISSN 1821-8180

VOLUME 9, NOVEMBER, 2012

A PUBLICATION OF THE FACULTY OF EDUCATION
KAMPALA INTERNATIONAL UNIVERSITY COLLEGE
DAR ES SALAAM, TANZANIA

CONTENTS

Analysis of Differences in Private Returns to Education among Nigerian Workers
Beatrice Ayodeji Fabunmi & Joel Babatunde Babalola 1 – 19
Teacher Quality in Nigeria: Challenges and Options for Improvement
Options for Improvement Ibukun W. Olusola & Alimi, Olatunji Sabitu21 – 31
Educator's Instructional Delivery Strategy: A Global
Challenge to Learners' Academic Performance Gabriel Job
Students' Assessment of the Quality of Instructional
Materials in a Distance Learning Institution Bolupe Awe & Obhajajie Juliet Inegbedion43 – 60
Teachers' Knowledge, Attitude and Perception of Online
Guidance and Counselling Services: Implications for Mid-Childhood Education in Nigeria
Victoria I. Iroegbu
Small-Scale Entrepreneurs' Success in Nakawa Division Kampala District Uganda
Kibuuka Muhammad & Kiweewa Emmanuel75 – 91
The Effect of ICT Based Instructions on Students' Attitude towards Biology in Selected Secondary Schools
In Ikenne Local Government Area of Ogun State.
Alice Morenike Olagunju, Augustinah Nireti Duyilemi & Idowu, S.O
2
Interactive and Reflective Learning Using Multimedia: Insight from Pre-Service Teachers' Microteaching
Experience in Nigeria
G. O. Esiobu & A. N. Maduekwe

JANIVERSITA

Disposition of Selected Primary Schools Mathematics Teachers to the Modalities of the State Universal Basic Education Board Organised In-Service Training In Osun State Of South-Western Nigeria M. A. Adeleke	- 145
Cost Implication of Quality Assurance and Control of Distance Learning In the Production of Teachers in Nigeria Oyetakin, Akinrotimi Iyiomo	- 167
Ensuring Quality Assurance Of The Teaching-Learning Process In African Universities Akorede, S.F	-180
Leadership and Political Parties Re-Branding In Nigeria Ogunbiyi Joseph Olukayode & Odulaja, Ayorinde Lateef	- 187

ANALYSIS OF DIFFERENCES IN PRIVATE RETURNS TO EDUCATION AMONG NIGERIAN WORKERS

Beatrice Ayodeji Fabunmi

University Library Kampala International University College, Dar es Salaam.Tanzania.

Joel Babatunde Babalola

Department of Educational Management
University of Ibadan
Ibadan, Nigeria.

Abstract

This study investigated the extent to which demographic factors were responsible for the variations in private returns to education among Nigerian workers. Data were collected using the 2005 Labour Market Survey of the National Manpower Board covering 19,888 Nigerian workers: 7,032 were with no formal education, 4,910 with primary school certificate, 4,873 with secondary school certificate and 3,073 with first degree. Occupations were categorised into agriculture, information management, commerce and industry, education, health and safety, science and technology, legal and security, and others. Sectors of employment were grouped into private and public. 2 research questions were answered. Data were analysed using multiple regression at 0.05 level of significant. The findings revealed that all the independent variables significantly correlated with workers' earnings. They also accounted for the variance in workers' earnings. Work experience, level of education and sector of employment predicted earning differentials. Based on these findings, it was recommended that employers of labour should ensure that workers' remunerations are commensurate with their level of education so as to minimise earning differentials.

Introduction

The private returns to investments in education have been of interest to scholars all over the world. The rise in earnings inequality and the subsequent increase in the returns to schooling experienced during the 1980s and 1990s in many countries, led to renewed interest in estimates of returns to educational investment. Private returns refer to the additional income earned as a result of attaining a particular level of education. Private returns are used to explain people's behaviour in seeking different educational levels and types and as distributive measures of the use of public resources. According to Todaro, 1982, private returns are the gains that accrue to an individual as a result of attaining a particular level of education.

There is a strong consensus among economists that formal education is an important determinant of individual earnings as well as economic growth (Schultz, 1961; Becker, 1964; Joint Economic Committee of the United States Congress, 2000; and Card, 2001). Many consider human capital to be the engine for growth of an economy, while others who do not necessarily share this view accept that human capital plays a significant role in the economic growth of a nation. Since the beginning of the industrial revolution, literacy and knowledge have become increasingly valuable relative to basic manual skills. This increasing value has led to wage premiums for educated workers as an educated workforce is the dominant factor in explaining differences in regional growth and prosperity. As a result economists have extensively researched education's importance in determining individual differences in wages and regional differences in economic growth. It is clear that better educated people typically are better paid, have access to more information, and enjoy greater economic success. Educational attainment serves as a signal of productivity in the labour market and suggests that a person has broader knowledge in a particular area. Educational attainment also implies that an individual is more productive than persons without a completed education. Education also implies that an individual has enough self-motivation and persistence to complete studies and to achieve goals.

Individuals acquire skills and knowledge to increase their value in labour markets. According to Psacharopoulos (1994) private returns to investments in education is an important factor in determining educational attainment, participation and ultimately

income. This can equally be used to explain people's behaviour in striving for different educational levels. Social returns can be used to set order in future investments in education. Blaug (1972) opines that education and earnings are positively linked. The universality of this positive association between education and earnings is one of the most striking findings of modern social science. Education is critical in income distribution and economic development. This has led many countries including Cameroon to make public spending on education a priority.

Manda and Bigsten (1998) find that private returns to secondary and tertiary education are high, while it is close to zero for primary education in Kenya. However, Kifle (2007) discovered that for countries in Africa, it is commonly asserted that the private returns to investment in education are highest at primary level and thus primary education should be the number one investment priority. Edokat-Tafah (1998) reveals that returns to education are positive and in some cases higher than returns to investment in other sectors of the economy in Cameroon with primary education having the highest returns followed by secondary and tertiary education. Other demographic factors that determine private returns to in education include work experience, year of schooling, gender, sector of employment, occupation and age. Topel (1991) reported that work experience was a major determinant of wage. He finds out that 10 years of work experience will raise the wage of a typical worker by over 25%, while Williams (1991) has found that work experience increases wages only in the first several years of employment.) The strong long term employer-employee relationship conditioned by promotion provisions was mentioned by Theodossiou (1996) to specify the significant effect of work experience on earnings. Firms, in order to discourage labour turnover and inter-firm mobility, establish long-term employment relationships with their most highly valued employees. Thus, employees with longer years of work experience with their current employer have higher earnings than other employees with the same total work experience but relatively shorter tenure.

Altonji and Shakotko (1987) disagree with positive relationship between experience and wages. They are of the view that the partial effect of experience on wages was small because the strong relationship between tenure and wages was due primarily to heterogeneity bias across individuals and across job matches. Similarly, Jacobson, Lalonde, and Sullivan (1993) have found that high tenure workers separating from distressed firms suffer long term losses averaging 25% per year.

The occupation in which a worker is employed goes a long way in determining the inequality in earnings. Disparities in earnings between different occupations are noticeable in less developed countries than in developed countries (Kothari 1970). Earning differentials would not indicate compensating differentials but rather signal enlarged inequalities because some individuals not only are denied the possibility of working at high and satisfied job levels but also have to accept lower wages (Hartog, 1986). For this reason the reward for education differs substantially by the type of occupation an individual is engaged in.

Returns to investment in education based on human capital theory have been estimated since the late 1950s. The human capital theory puts forward the idea that investment in education increases future productivity. The theory suggests that individuals and the society derive economic benefits from investing in people. There have been thousands of estimates, from a wide variety of countries; some based on studies done over time and some based on new econometric techniques. All the studies reaffirm the importance of human capital theory that lay emphasis on how education increases the productivity and efficiency of workers by increasing the level of cognitive skills possessed by the workforce. Although types of human capital investment generally include health and nutrition (Schultz, 1981), education consistently emerges as the prime human capital investment for empirical analysis.

Human capital development is an integral part of capacity building, which encompasses both human and institutional capacity building. According to Obadan and Adubi (1998), human capital development refers to the process by which a nation develops and increases its human resources capabilities through the inculcation of the relevant general and technical knowledge, skills and effectiveness to realize set goals efficiently. Unfortunately, the quality of education at all levels is on decline. This calls for a serious attention because of its deleterious effects on national development.

Most countries place a lot of emphasis on education, perhaps because the beneficiaries are needed for the management of the different sectors of the economy. According to Abdulkareem (2001), a nation's growth and development is determined by its human resources. The belief in the efficacy of education as a powerful instrument of development has led many nations to commit much of their wealth to the establishment of educational institutions at various levels. The same reason might have informed the commissioning of a high-level commission to investigate the post-independence manpower needs of Nigeria for a period of twenty years, 1960-1980. This commission was led by Sir Eric Ashby and it was reported that there was inequality between one level of education and the other; limited admission opportunities for primary school leavers; small number of school teachers were qualified and certificated; that the Nigerian education was narrow and literary; and that there was imbalance in the development of education between the North and South. The commission recommended that primary and secondary education should be expanded and improved; the University College at Ibadan should be upgraded to a full-fledged university; three additional universities should be established at Nsukka, Ife and Zaria; the University commission should be established in Nigeria in order to maintain uniform academic standard in all the universities; and that the post-secondary school system should produce the postindependence high-level manpower needs of Nigeria. There was a shortfall in the projection and the Federal Government had to establish additional universities to produce additional manpower needs of the country.

Most governments and even individuals continue to devote increasing proportions of their annual income to education, because of the belief that, a positive relationship exists between investment in education to an individual, national productivity and development. It is for this same reason that education requires adequate financial provision from all tiers of government for successful implementation of education programmes (Federal Republic of Nigeria, 2004). According to Amin and Awung (2005), African governments invested heavily in education, immediately after the early 1960s with the conviction that education would generate rapid economic growth. In fact, education with investment in human capital was expected to contribute to

growth by improving the productivity of the labour force, reduce income inequality and poverty.

Education plays a central role in modern labour markets. Hundreds of studies in different countries have confirmed that better educated individuals earn higher wages, experience less unemployment, and work in more prestigious occupations than their less educated counterparts. Despite the overwhelming evidence of a positive correlation between education and labour market status, social scientists have been cautious to draw strong inferences about the causal effect of schooling. In the absence of experimental evidence, it is very difficult to know whether the higher earnings observed among the better-educated workers are caused by their higher education, or whether individuals with greater earning capacity have chosen to acquire more schooling.

Level of education attained by an individual affects his/her earnings. Cosca (2000) confirms the finding of many economists that, in general, bachelor, master, doctoral, or professional degrees have higher average incomes and lower unemployment rates than do employees with less education. Her study also points out that, although earnings typically vary by occupation, it can be concluded that investing in a college degree pays off.

Gender influences returns to investment in education. Psacharopoulos and Patrinos (2002) found that the returns to an additional year of education is marginally higher for girls (12.4 percent) than for boys (11.1 percent). Neuman (1991), using Israeli data, found that the returns to female education are higher than those for males. It should be remembered that such calculations are based on the observed wages of women who are working in the labour market. Several other women have chosen to work at home, tacitly placing a higher value on their household activities time than on market wages. According to Aslam (2007), there is a wide gender gap in labour market returns to education in Pakistan. Differential labour market returns to male and female education is one possible reason for large gender gaps in education in Pakistan. Onphanhdala and Suruga (2006) also discovered that gender differences determine returns to schooling. They found out that on the average, a female earn more than a man. Gender is another factor that may affect employment and earnings. While equal access to education for both men and women

can be justified on human right and equality grounds, since resources are limited, the choice policy makers are facing everyday is really between investing in girl's education versus investing in boy's education. Investment choice is not the only reason why a comparison of returns to education for men and women is necessary.

Aslam (2007) finds out that in Pakistan, there is a wide gender gap in labour market returns to education. Differential labour market returns to male and female education is one possible reason for large gender gaps in education in Pakistan. Earnings function estimates reveal a sizeable gender irregularity in economic returns to education, with returns to women's education being substantially and statistically significantly higher than men's. However, a breakdown of the gender wage gap suggests that there is highly differentiated treatment by employers. He however concludes that the total labour market returns are much higher for men, despite returns to education being higher for women. This suggests that parents may have an investment motive in allocating more resources to boys than to girls within households.

Another study carried out on the relationship between wages and experience shows that initial wages rise with experience and then begin to fall because the data were based on a cross-section. Earnings rise during the early working years of employment. It was also observed that individuals with more experience are generally older and less educated than younger people. Again, skills depreciate over an individual's lifespan. Opposing the significant effect of tenure on wages, Altonji and Shakotko (1987) argued that the partial effect of tenure on wages was small because the strong relationship between tenure and wages was due primarily to heterogeneity bias across individuals and across job matches, Similarly, Jacobson, Lalonde, and Sullivan (1993) have found that high tenure workers separating from distressed firms suffer long term losses averaging 25% per year. Reexamining the wage-tenure relationship, Williams (1991) has found that tenure increases wages only in the first several years of employment

The occupation in which a worker is employed has an important effect on the level of his/her wages and salaries. According to Kothari (1970), earning disparities on account of occupations is more pronounced in less developed countries than in developed countries. Hartog (1986) reveals that earnings differentials would not

indicate compensating differentials but rather signal enlarged inequalities because some individuals not only are denied the possibility of working at high and satisfied job levels but also have to accept lower wages, which makes the reward for education differs substantially by the job level at which an individual is occupied.

Another determinant of earnings differentials is sector of employment. Mann and Kapoor (1988) have explored that, on the average, public sector workers are paid much higher wages than the private and joint sector workers. Rees and Shah (1995) are of the opinion that the private wage determination is subject to profit constraint, whereas the public sector wage determination is subject to an ultimate political constraint. Thus, wages in the public sector are higher than in the private sector. In some other studies, it was discovered that private sector workers earn more than the public sector workers (Okuwa, 2004; Onphanhdala and Suruga, 2006). It was also discovered that salaries in state-owned enterprises and the private sector are substantially above those in the government, and that these salaries increased substantially faster than those in the public sector. The salary scale in the government is quite flat, with the salary of top officials about twice that of the low paid individuals. A top government official might earn only one tenth of the salary paid for a similar position in a private enterprise. This means that there are earnings differentials in public and private sectors. It than imply that sector of employment is an important factor that determines earnings. Arrow (1973) and Spence (1973) put forward the theory that it is not education in isolation which yields higher wages, but rather that education is used by employers as a screening device to identify better workers and likewise by workers to signal their potential high productivity. A worker's level of education is thus correlated with, but not the cause of high productivity.

Years of schooling increase the return to education. According to Altonji (1998), the wage level rises by 8 percent in response to each additional year of academic postsecondary education. Ashenfelter and Krueger (1994) find that each year of school increases wage rate by 12 –16 percent. Card and Krueger (1992) find that being educated in a higher-quality school positively affects the return to additional years of schooling. Linear returns to the individual suggest that extra years of schooling increase wages, but at a constant rate. Increasing returns

suggests that wages increase an increasing rate. This matters because income inequality in the present generations may be affected by increasing returns. Increasing returns potentially indicate a widening income gap, while decreasing returns would imply a declining income gap as education levels increase.

Even though, there is a wide and growing literature on the empirical estimation of returns to schooling in both developing and advanced countries, empirical studies on the returns to education are still scanty in Nigeria. On the whole, even if it is widely accepted that level of formal education is positively correlated with level of earnings, observations show that workers' earnings do not depend on the level of education alone. The higher earnings observed among the better-educated workers may not be as a result of their higher education alone. This type of study is necessary in order to justify the variations in workers earnings and also to solve the problem of dearth of literature on private returns to education among workers in Nigeria.

There is a need to improve on previous studies by looking at the extent to which work experience, years of schooling, level of education, gender, sector of employment, occupation and age determine private returns to education in Nigeria by using labour market survey data that covered the whole country. It is against this background that the study investigated the extent to which work experience, years of schooling, level of education, gender, sector of employment, occupation, and age jointly and relatively contribute to differences in private returns to education among Nigerian workers.

Statement of the Problem

It is widely accepted that level of schooling is positively correlated with level of earnings. However, observations showed that workers' earnings do not depend on the level of education alone. There are variations in earnings of workers who have the same educational qualifications working in the different sectors of the economy. There is a need to analyse differentials in earnings by investigating variables responsible for these disparities. This type of study is necessary in order to justify the variations in workers earnings and also to solve the problem of dearth of literature on private returns to education in Nigeria.

If this phenomenon is not addressed, the role of education as an instrument for promoting the socio-economic, political, and cultural development of Nigeria may never be achieved. Investment in education can be a driving factor for economic growth. Increased education of the labour force explains a substantial part of the growth of output. There is a need to address the situation in other to provide and utilise the much needed manpower to accelerate the growth and development on the economy. It was in the light of the above that this study was carried out to investigate the joint and relative contributions of work experience, year of schooling, level of education, gender, sector of employment, occupation and age to inequality in earnings.

Research Questions

- 1. What are the composite contributions of level of education, years of schooling, occupation, gender, age, work experience and sector of employment to private earnings in Nigeria?
- 2. What are the relative contributions of level of education, years of schooling, occupation, gender, age, work experience and sector of employment to private earnings in Nigeria?

Research Methodology

This study used descriptive survey research design. The survey made it possible to establish the sex, age, educational background, experience and earnings among workers in Nigeria. The population of this study comprised 36,458 workers in the 2005 National Manpower Board Labour Market Survey which covered all the 36 states including the Federal Capital Territory, Abuja, by the defunct National Manpower Board survey in 2005. Purposive sampling technique was used to select from the population of 36,458 workers who participated in the study. The purposive sampling technique was used to select 7,032 workers with no formal educational qualification, the 4,910 workers with primary school certificate, 4,873 workers with secondary school certificate and 3,073 workers with university first degrees; thus making a total of 19,888. The data collected were analyzed using multiple regressions to determine the direction and magnitude of relationships among age, experience, gender, occupation, level of education and years of schooling on private returns.

Results

Research Question 1: What are the composite contributions of level of education, years of schooling, occupation, gender, age, work experience and sector of employment to private earnings in Nigeria?

Table 1: Regression summary of composite contributions of independent variables to private earnings in Nigeria

Multiple R	= (0.635	Carrie and a		
R Square	= 0	.403			
Adjusted R	Square = 0	.403			
Source of Variance	Sum of Squares	df	Mean Square	F	Sig.
Regressio	1.74317E+1	7	2.49024E+1	774.80	0.000
n	2		1	4	*
Residual	2.57797E+1 2	802	321403038. 5		8
Total	4.32114E+1 2	802	9.00		

^{*}Significant at P< 0.05 alpha level

The result presented in Table 1 reveals that the independent variables have a multiple correlation of 0.635 with workers' private earnings. Equally, the combination of these variables also accounted for 40.3% of the variance in workers' private earnings as shown by the coefficient of determination of $R^2 = 0.403$. Further verification using the ANOVA component of multiple regression produced F $_{(7,\ 8021)}$ value of 774.804 which is significant at 0.05 level of confidence. This implies that there is significant joint contribution of level of education, years of schooling, occupation, gender, age, work experience and sector of employment to private return to investment in education among Nigerian workers. This means that all the independent variables predicted the private returns to education among Nigerian workers.

Research Question 2: What are the relative contributions of level of education, years of schooling, occupation, gender, age, work experience and sector of employment to private earnings in Nigeria?

Table 2: Estimate of the relative contributions of the independent variables to private earnings in Nigeria

Model	Unstandardized Coefficients		Standardized Coefficients		
	В	Std. Error	Beta	T	Sig.
Constant	-27783.743	1320.991		-21.033	0.000
Level of Education	13219.914	2843.382	0.372	4.649	0.000*
Years of Schooling	-332.563	541.026	-0.049	-0.615	0.539
Occupation	-0.07	0.065	-0.009	-1.078	0.281
Gender	551.831	424.047	0.012	1.301	0.193
Age	25.405	16.173	0.014	1.571	0.116
Work Experience	2909.932	42.768	0.611	68.039	0.000*
Sector of employment	-1290.022	590.494	-0.02	-2.185	0.029*

^{*}Significant at 0.05 alpha level

Table 2 gives a summary of the degree of relative contributions of the independent variables which are level of education, years of schooling, occupation, gender, age, work experience, and sector of employment to the prediction of dependent variable. The result presented in Table 2 is a presentation of the individual contribution of each independent variable relative to all other variables. Work experience contributed most ($\beta \le 0.611$; t = 68.039; p< 0.05) with 61.1% contribution private earnings, followed by level of education (β = 0.372; t = 4.649; p< 0.05) contributing 37.2% to private earnings, while the sector of employment contributed the least to private earnings with $\beta = -0.02$ and t = -2.185; p< 0.05. However, years of schooling, occupation, gender, and age did not relatively contribute to earning differentials because they are not significant. The multiple regression analysis therefore clearly shows that work experience has the highest prediction of 61.1% on earnings of workers. This means that 61.1% of worker's earning is due to work experience. Next is the

influence level of education on earnings which is 37.2%. Sector of employment though significant, contributed 2% negatively to earnings.

Level of education, years of schooling, occupation, gender, age, work experience, and sector of employment will not significantly predict private earnings in Nigeria.

```
X_1 = Level of Education (\beta_1 = 13219.914)
```

$$X_2$$
 = Years of Schooling (β_2 = -332.563)

$$X_3$$
 = Occupation ($\beta_3 = -0.07$)

$$X_4 = Gender(\beta_4 = 551.831)$$

$$X_5 = Age (\beta_5 = 25.405)$$

$$X_6$$
 = Work experience (β_6 =2909.932)

$$X_7$$
 = Sector of employment (β_7 = -1290.022)

Constant = $(\beta_o = -27783.743)$

Hypothesised model of private earnings:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + e$$

$$Y = -27783.743 + 13219.914X1 -332.563X_2 - 0.07X_3 + 551.831X_4 +25.405X_5 +2909.932X_6 -1290.022X_7$$

Hence predictive model of private earnings becomes:

```
Y = -27783.743 + 13219.914x_1 + 2909.932x_6 - 1290.022x_7
```

Where:
$$x_1$$
 = Level of education; x_6 = Work experience and x_7 =

Sector of employment

X₁, X₆ and X₇ are predictors of Y.

Discussion of Findings

The findings of the study are presented under the following subheadings:

- 1) Composite contributions of factors determining differences in private
- 2) Relative contributions of factors determining differences in private returns

Composite contributions of factors determining differences in private returns

The findings revealed that level of education, years of schooling, occupation, gender, age, work experience, and sector of employment jointly made significant contribution to private return to education among Nigerian workers. A major fact arising from the findings of this study is that variation in private returns to education is a function of many factors and not the education alone. Even though, no earlier study has taken all these independent variables together, a few studies have investigated the contributions of some of these factors to private returns to investment in education. The finding of this study corroborates the findings of some of the earlier studies that have investigated the contributions of some of these independent variables examined in this study. Among them are the findings of Schultz, (1961) Becker, (1964), Blaug (1972) and Joint Economic Committee of the United States Congress, (2000) who discovered that formal education is a strong determinant of individual earnings as well as economic growth and that experience, training, and education are the three main mechanisms for most individuals. This implies that level of education and experience are determinants of private returns to investment in education.

This finding equally agrees with the findings of Neuman (1991), Psacharopoulos and Patrinos (2002), Aslam (2007) and Sackey, (2008) that discovered that there is a wide gender gap in labour market returns to education. Differential labour market returns to male and female education are observed. This means that there is disparity in earnings on account of gender. In support of this finding is the work of Okuwa (2004) who observed that there is earning disparity based on years of labour market experience and sector of employment. Also in agreement with this finding are those of Topel (1991), Williams (1991) Theodossiou (1996), and Altonji and Williams (1997) who discovered that work experience increases earnings only in the initial years of employment, due to promotion provisions, and also through the establishment of long-term employment relationships of the employers with their most highly valued employees etc. These are done in order to discourage labour turnover and inter-firm mobility. Thus, employees with longer years of experience with their current employer have higher earnings than other employees with the same

total work experience but relatively shorter years with their present employee.

In consonance with the findings of this study, are the findings of Kothari (1970), Hartog (1986), Cosca (2000) and Onphanhdala and Suruga (2006) who discovered that there are disparities in earnings on account of occupation. This has made the reward for education to differ substantially by the job level at which an individual is occupying. This implies that the type of occupation one engages in determines private return to investment in education.

In the same vein, the finding of this study is in agreement with the finding of Card (2001) who opines that the higher earnings observed among the better-educated workers may not be determined by their higher education alone. It then implies that there are other factors apart from level of education that determine private returns to investment in education. Equally in agreement with this study's finding is that of Arrow (1973) and Spence (1973) who put forward the theory that, it is not education in isolation which yields higher wages, but rather that education is used by employers as a screening device to identify better workers and likewise by workers to signal their potential high productivity. A worker's level of education is thus correlated with, but not the cause of high productivity. This means that level of education is not the only determinant of private returns to investment in education.

Relative contributions of factors determining differences in private returns

The findings showed that level of education, work experience and sector of employment made significant relative contributions to private returns to education. It then implies that level of education, work experience and sector of employment are relative predictors of private returns to education among Nigerian workers. While, years of schooling, occupation, gender and age made no significant relative contributions to private returns to education among Nigerian workers.

This finding agrees with the findings of Topel (1991) who reported that work experience is a major determinant of wages. However, this disagrees with the finding of Altonji and Shakotko (1987) who are of the opinion that there is no positive relationship between experience and wages. Level of education contributed more relatively

to private earnings. This implies that, the higher the level of education, the higher the earnings. This finding agrees with Blaug (1972), Cosca (2000), Palacios (2004) and Kifle (2007) who discovered that education and earnings are positively linked and that investment in education has an economic value. This means that the level of education attained by an individual affects the earnings. Sector of employment made significant relative contributions to earnings. This implies that, there are variations in earnings on account of sector of employment. The finding of this study corroborates the findings of Mann and Kapoor (1988), Rees and Shah (1995) and Pritchett (1999) who asserted that public sector workers are paid much higher wages than the private sector workers. Even though, the finding of Okuwa (2004) and Onphanhdala and Suruga (2006), who discovered that private sector workers are paid higher than the public sector workers disagrees with some of the earlier studies, the most important fact emerging from the finding is that disparity occur in earnings as a result of the sector of employment. The implication of this is that private return to investment in education is being determined by sector of employment. While years of schooling, occupation, gender and age made no significant relative contributions to private returns to education among Nigerian workers. These findings imply that years of schooling, occupation, gender and age made no significant relative contributions to disparities in earnings.

Conclusion and Recommendations

The study investigated the extent to which work experience, years of schooling, level of education, gender, sector of employment, occupation, and age jointly and relatively contribute to differences in private returns to education among Nigerian workers. The findings revealed that level of education, years of schooling, occupation, gender, age, work experience, and sector of employment jointly made significant contribution to private return to education among Nigerian workers. While level of education, work experience and sector of employment made significant relative contributions to private returns to education among Nigerian workers, implying that these three variables are are relative predictors of earnings.

Based on the findings of this study, the following recommendations are made:

- O Policy makers should take note of the factors which contribute to the variations in private returns to education among Nigerian workers and use them as a guide to formulate policies and craft incentives that will promote investment in education.
- Government should try to share part of the total cost at the university level by introducing a loan scheme, the outcome will be a cost effective increase in stock of human capital.
- O The salary for both public and private sectors should be harmonized. Government should encourage more private investors in the economy by providing an enabling environment and good policies for private investors to invest in the country. This will go a long way in improving private sector earnings through increase in salary and attractive remuneration, which will in turn induce workers in this sector to be more productive, thereby increasing the productivity and efficiency of the sector.
- O Public and private sector employers of labour should ensure that workers' remunerations are commensurate with their level of education in order to make acquiring education a worthwhile investment since education facilitates the acquisition of new skills and knowledge that increase productivity. This increase in productivity frees up resources to create new technologies, new businesses, and new wealth which will eventually result in increased economic growth.

References

- Abdulkareem, A. Y. 2001. Nigerian Universities and the Development of Human Resources. In N. A. Nwagwu; E. T. Ehiametalor; M. A. Ogunu and Mon Nwachiani (eds) Current Issues in Educational Management in Nigeria. NAEAP Publications. Benin City, Nigeria: Isiohor
- Altonji, J. 1998. Effects of personal and school characteristics on estimates of the return to education, *Economic Perspectives* 22:65-80.
- Altonji, J. and Shakotko, R. 1987. Do wages rise with job seniority? Review of Economic Studies. 54.179: 437-459.

- Altonji, J. and Williams, N.1997. Do wages rise with job seniority? a reassessment. Working Paper Series, National Bureau of Economic Research; inc., Working Paper 6010.
- Amin, A.A. and Awung, W. J. 2005. Economic analysis of private returns to Investment in education in Cameroon. *Proceedings of the Regional Conference on Education in West Africa. Organized by Cornell/CREA/INRA/Ministry of Education-Senegal. 25-26 November 2005.* Dakar, Senegal. Retrieved July 20, 2007, from www.saga.cornell.edu/saga/educconf/amin
- Arrow, K.J. 1973. Higher education as a filter. *Journal of Public Economics*. Vol. 2.
- Ashenfelter, O. and Krueger, A.1994. Estimates of the economic return to schooling from a new sample of twins. *American Economic Review* 84:1157-1174.
- Aslam, M. 2007. Rates of return to education by gender in Pakistan Retrieved
 July30, 2011,
 http://academicresearch.microsoft.com/paper/5301104
- Babalola, J.B. 2000. Fundamentals of economics of education. Ibadan:
 Educational Planning Unit, Department of Educational
 Management, University of Ibadan, Ibadan.
- Barro, R. 1991. Economic growth in a cross-section of countries.

 Quarterly Journal of Economics 106.
- Barro, R. and Lee, J. 2000. International data on educational attainment: updates and implications. CID Working Paper No. 42. Retrieved August 19 2009, from www.cid.havard.edu/cidwp/042.htm
- Becker, G. S. 1964. *Human Capital*. New York: National Bureau of Economic Research.
- Blaug, M. 1972. Educational policy and the economics of education: some practical lessons for educational planners in developing countries In Education and Development Reconsidered. pp. 22-32.
- Card, D. and Krueger, A.B. 1992. Does school quality matter? returns to education and the characteristics of public schools in the United States. *The Journal of Political Economy* 100: 1-40.
- Card, D. 2001. Estimating the return to schooling: progress on some persistent econometric problems. Econometrica, Vol. 69 (5):

- 1127-1160. Retrieved April 19, 2008, from http://www.istor.org/stable/2692217
- Cosca, T. 2000. Earnings of college graduates in 1996. Occupational Outlook Quarterly 42: 20-29.
- Edokat-Tafah, E.O. 1998. Rates of return to education: a case of Cameroon.Unpublished paper. Department of Economics. University of Yaounde II. Soa.
- Federal Republic of Nigeria. 2004. *National Policy on Education*. 4th ed. Harmon, C. and Walker, I. 1995. Estimates of the economic return to schooling for the United Kingdom. *American Economic Review*, 85(5): 1278-86.
- Hartog, J. 1986. Earnings functions: beyond human capital. *Applied Economics*. 18.12: 1291-1309.
- Jacobson, L., Lalonde, R., and Sullivan, D. 1993. Earnings losses of displaced workers. *The American Economic Review.* 83.2: 685-709.
- Joint Economic Committee of the United States Congress. 2000.

 Investment in education: private and public returns
 Retrieved October 6, 2008, from
 http://www.house.gov/jec/educ.pdf
- Kifle, T. 2007. The private rate of return to schooling: evidence from Eritrea. Essays in Education. Vol.21. Retrieved April 5, 2010, from http://www.usca.edu/essays/vol212007/kifle.pdf?ref=Sex%C5%9EhopCo.
 - Kiker, B.F. 1971. Investment in human capital. Columbia: University of South Carolina Press.
 - Kothari, V. 1970. Disparities in relative earnings among different countries. *The Economic Journal*. 80.319: 605-616.
- Manda, D. and Bigsten, A.1998. Changes to returns to education overtime in Kenya. Mimeo CSAE, Oxford University.
- Mann, P. and Kapoor, B. 1988. Earnings differentials between public, private and joint sector in Punjab (India). The Journal of Development Studies.25.1: 7-111.
- Neuman, S. 1991. Parental background, educational attainments and returns to schooling and to marriage: the case of Israel. *Applied Economics*. 23: 1325-34.

- Obadan, M.I. and Adubi, A.A. 1998. Capacity building for economic management in Nigeria: the role of NCEMA. Occasional Papers Series No 1, NCEMA.
- Okuwa, O.B. 2004. Private returns to higher education in Nigeria. African Economic Research Consortium Research Paper 139.
- Onphanhdala, P. and Suruga, T. 2006. Education and earnings in Lao PDR: regional and gender differences. Graduate School of International Cooperation Studies, Kobe University (GSICS) Working Paper Series No. 4.
- Palacios, M. 2004. *Investing in human capital: a capital markets approach to student funding.* Cambridge University Press.
- Pritchett, L. 1999. Where has all the education gone? World Bank Research paper 21.
- Psacharopoulos, G. 1994. Returns to investment in education: a global update. World Development 22: 1325-1343.
- Psacharopoulos, G. and Patrinos, H. 2002. Returns to investment in education: a further update. World Bank Policy Research Working Paper No. 2881.
- Rees, H. And Shah A. 1995. Public-private sector wage differential in the UK. *The Manchester School of Economics and Social Studies*. 64.1: 52-68
- Romer, P. M. 1990. Endogenous technological change. *Journal of Political Economy* 98.5: S71–S102.
- Sackey, H.A.2008. Private returns to education in Ghana: implications for investments in schooling and migration. African Economic Research Consortium Research Paper 174. Retrieved October 6, 2008, from
 - http://www.aercafrica.org/documents/RP174.pdf
- Schultz, T.W. 1961. Education and economic growth in social forces influencing American education. N.B. Henry, Chicago. National Society for the Study of Education. University of Chicago Press.
- Schultz, T.W. 1981. *Investing in people: the economics of population quality*. Los Angeles: University of California Press.
- Spence, A.M. 1973. Job market signaling: Quarterly Journal of Economics. 87.3: 355-373.
- Tallman, E.W. and Wang P. 1994. Human capital and endogenous growth: evidence from Taiwan. *Journal of Monetary Economics*. 34: 101-124.

- Theodossiou, I.1996. Promotions, job seniority and product demand effects on earnings. Oxford Economic Papers. 4.3: 456-472.
- Todaro, M.P. 1982. *Economic Development in the Third World*. New York: Longman Publishers.
- Topel, R. 1991. Specific capital, mobility and wages: wages rise with job seniority. *Journal of Political Economy*. 99.1: 145-176.
- Williams, N. 1991. Re-examining the wage tenure and experience relationship. *The Review of Economics and Statistics*. 73.3: 512-517.