



THE RELATIONSHIP BETWEEN COURSE DURATION, AGE, COST, PROGRAMME TYPE, UNIVERSITY TYPE AND ECONOMIC BENEFIT OF POSTGRADUATE EDUCATION

Chukujindu J. Okaforⁱ

Dr., Department of Education,
Faculty of Arts and Education,
Benson Idahosa University,
Benin City, Nigeria

Abstract:

This paper investigated the relationship between course duration, age at completion of programme, total cost of programme, university type and economic benefit of postgraduate education of university lecturers in Edo and Delta states. The hypothesis was tested using the least square linear regression model. The findings showed that: the age at completing, total cost and course duration of postgraduate education significantly affect economic benefits; and university type does not significantly affect economic benefit of university lecturers in Edo and Delta states. The results of this study have serious implications for continued investment in this type of educational programme. It is therefore, recommended that Individuals intending to invest in postgraduate education should be encouraged to do so at an earlier age to enable them reap optimal benefits from their investments in education. Course duration affects economic benefit. Individuals are encouraged to keep improving themselves as the higher one goes academically the more economic benefit the individual will derive.

Keywords: cost; economic benefits; postgraduate education

1. Introduction

Education has numerous benefits for the individuals and the society. For some persons, there is some "consumption benefit" while others receive direct benefit from the

ⁱ Correspondence: email cokafor@biu.edu.ng

educational process. Human beings are curious creatures, so some enjoy learning and acquiring new knowledge for the fun of it. Education also has considerable "investment value or benefit." Therefore some persons acquire additional education (for example postgraduate education) to earn more over their lifetimes; achieve higher levels of employment; and enjoy more satisfying careers.

In education, there are social and private benefits. It is important to make a distinction between private and social benefits (returns) to education. Private returns are those based on the costs incurred by and benefits received by the individual acquiring the education and they are used to explain the behaviour of individuals (schooling decisions) in seeking different levels and types of education. These benefits include both the consumption and investment consequences of education. Social returns are based on the costs incurred by and benefits received by society as a whole. Social rates are used to formulate educational policies regarding the expansion, or contraction of different levels and types of education. A 'social' rate is simply a private rate adjusted for the full cost of schooling, rather than just what the individual pays for his or her education. There may be differences between private costs and social costs, as well as between private and social benefits. This distinction is important because individuals can be expected to base their education decisions on the private costs and benefits, whereas it is in the interest of society as a whole to have educational decisions based on the social costs and benefits (Craig, 2004). Furthermore, Craig states that there are benefits (possibly also costs) that are not taken into account by the decision-maker. If such "external benefits" are substantial, they could result in significant under-investment in education in the absence of government intervention.

The earnings of educated individuals do not reflect the external benefits that affect society as a whole. Such benefits are regarded as externalities or spill over benefits, since they spill over to other members of the society. Externalities are social or public benefits from the education of each individual that benefit others in the society in both current and future generations. They are over and above the private benefits that the individual decision maker takes into account in making his or her private decision to invest in education. They include education's impacts on economic development goals that are part of the quality of life that also benefit future generations (Mcmahon, 2004).

These external benefits of education are taken for granted and do not affect private decisions but they are the main rationale on efficiency ground for government investment on education. Based on the analysis of all the returns to education, including externalities in relation to all investment costs, if there is under- or over investment, the result is not efficient and an optimal rate of economic development is not achieved.

Better estimates of education externalities and impacts on development goals are therefore very important to obtain (McMahon, 2004). Education supports significantly differential role in one's earnings.

Studies on education and earnings in several countries support a positive relationship between education and earnings. The positive and significant impact of education on earnings is considered to encourage the younger generation to continue their studies beyond the compulsory level of education. More educated workers get, on average, more returns than their less educated counterparts because they can perform a wider range of tasks and they can easily be trained in new skills. Educated workers get higher wages, more respect and dignity, stable and sustained employment and higher horizontal and vertical mobility.

Education may also enable people to fully enjoy life, appreciate literature and culture, counselling services, spread of new techniques in agriculture practices and be more informed and socially involved citizens these are some of the non-pecuniary benefits of education (Nwadiani, 2010). Nwadiani (2010) further stated that, the monetary benefit results from the improvement in productivity by an educated person over time through an increase in earnings. This is done by comparing the earnings of the different groups with varied levels of schooling but of similar age group. The income differential is attributed to the level of educational investment.

In the studies on Organisation for Economic Co-operation and Development (OECD) countries between 1998 and 2000 which focused on public funding and private returns to education (PRE), it was found that relative earnings differentials of the highly educated had increased rather than diminished over time despite substantial increase in the supply of such workers, suggesting that demand for the highly educated labour has expanded faster than supply (Woodhall, 2004).

Education according to Cohn and Geske (1990) is best categorised as both investment and consumption because it yields satisfaction to the student at the time the education is given, and it also provides increased utility over time in the form of increased productivity and income. Benefits derived from education are futuristic in nature, that is, benefits are acquired after successful completion of education and training. Additionally, one may also assume that the benefit that accrues to the individual will be contingent on the level and or depth of training and education that is experienced. Thus, it may be inferred that benefits that accrue to a fresh school-leaver will be less than that of a postgraduate degree holder (Olakulehin and Panda 2012)

It is important to note that the cost of postgraduate education is dependent on the programme or course of study, earning expectations, and high programme demand amongst others (Akinwumi, 2011). For example, the average annual social cost per

postgraduate student at the University of Ibadan in 1978/79 was N8,291 and it ranged from N7,441 in education to N8,767 in agriculture and forestry. With regards to the individual, the annual postgraduate cost, was on the average, about N5,000 with a range from N4,884 in education to N5,162 in Technology (Akangbou1986). Furthermore, NUC (2004) study on the unit cost of university education showed that unit cost ranges from a minimum of N172,620 for social sciences to a maximum of N603,082 for veterinary medicine.

Private return to education is higher than social returns. This is because of the public [subsidization](#) of education and the fact that typical social rate of return estimates are not able to include social benefits. Nevertheless, the degree of public subsidization increases with the level of education, which has [regressive](#) policy. Higher education remains a profitable investment for individuals in high-income countries, as represented by the private rate of return. There is an even greater private [incentive](#) to invest in education in middle- and low-income countries. In these countries the social returns on education are particularly high, signalling a priority investment for society Retrieved from <http://www.answers.com/topic/economic-benefits-of-education-investment>.

Postgraduate education plays a significant role in one's earnings. In the studies of Rugar, Ayodo and Agak (2010), Psycharopoulous and Patrimos (2004) education and earnings show a positive relationship. This positive impact of education on earnings has encouraged the younger generation to pursue their studies beyond the compulsory level of education. More educated workers get, on average, more returns than their less educated counterparts because they can perform a wider range of tasks and they can easily be trained in new skills. Educated workers get higher wages, more respect and dignity, stable and sustained employment and higher horizontal and vertical mobility.

It is on this premise that this study is aimed at determining if course duration, age at completion of programme, total cost of programme, programme type and university type, have significant relationship with economic benefits of postgraduate education of lecturers in Federal and state universities in Edo and Delta states.

2. Research Questions

- 1 Does course duration have significant relationship with economic benefits of postgraduate education of university lecturers in Edo and Delta States?
- 2 Does age at completion of programme have significant relationship with economic benefits of postgraduate education of university lecturers in Edo and Delta States?

- 3 Does total cost of programme have significant relationship with economic benefits of postgraduate education of university lecturers in Edo and Delta States?
- 4 Does university type have significant relationship with economic benefits of postgraduate education of university lecturers in Edo and Delta States?

2.1 Hypothesis

1. There is no significant relationship between course duration and the economic benefits of postgraduate education of university lecturers in Edo and Delta States.
2. There is no significant relationship between age at completion of programme and the economic benefits of postgraduate education of university lecturers in Edo and Delta States.
3. There is no significant relationship between total cost of programme and the economic benefits of postgraduate education of university lecturers in Edo and Delta States.
4. There is no significant relationship between university type and the economic benefits of postgraduate education of university lecturers in Edo and Delta States.

3. Methodology

The study was a descriptive survey using *ex-post facto* design. "Ex-post facto" is Latin word meaning "after the fact". The study population comprised all lecturers in the federal and state universities in Edo and Delta states. The lecturers in the federal and states universities in Edo and Delta states were two thousand, seven hundred and ninety seven (2,797) (Main Report of Committee on needs Assessment of Nigerian Public Universities, 2012) and they were located in various disciplines in the federal and state universities in Edo and Delta states. They formed the subjects for data collection.

The sample size was 300 lecturers with either master's or doctoral degree from Universities in Nigeria in the federal and state universities in Edo and Delta states in Nigeria. Purposive sampling technique method was used to obtain the respondents. A checklist on the direct private economic benefit (monetary) of masters' and doctoral degrees (DPEBMDE) – was used to elicit information on the economic benefits (salary and other monetary income) from postgraduate education.

4. Findings and Discussion of Findings

Table 1: Least Square test of significant relationship between course duration, age at Completion of programme, total cost of programme and university type, and the economic benefits of postgraduate education of universities lecturers in Edo and Delta States

Dependent Variable: TOTBEN				
Method: Least Squares				
Sample: 1 195				
Included observations: 195				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1404737.	374846.1	3.747503	0.0002
AGEAC	39307.81	9030.202	4.352927	0.0000
TOTCOST	1.805439	0.435589	4.144820	0.0001
UNIVERSITY	-262685.6	157969.8	-1.662885	0.0980
DURATION	110364.0	47817.36	2.308033	0.0221
R-squared	0.411205	Mean dependent var		3500156.
Adjusted R-squared	0.398810	S.D. dependent var		1156699.
S.E. of regression	896863.4	Akaike info criterion		30.27650
Sum squared resid	1.53E+14	Schwarz criterion		30.36042
Log likelihood	-2946.959	Hannan-Quinn criter.		30.31048
F-statistic	33.17328	Durbin-Watson stat		1.807618
Prob(F-statistic)	0.000000			

TOTBEN =1404737+110364DUR +39307 AGEAC+ 1.854TOTC -262685UNI (3.74)

(2.30)*(4.35)*(4.14)*(-1.66)

t-values are in parenthesis

*= significant at $p \leq 0.05$

DURATION (2.308033) is positive and has a significant relationship with TOTBEN at $p \leq 0.05$. AGEAC (4.352927) is positively and significantly related to TOTBEN at $p \leq 0.05$. TOTCOST (4.144820) is positive and significantly related to TOTBEN at $p \leq 0.05$. UNIVERSITY TYPE (-1.662885) type is negatively and not significantly related to TOTBEN.

The pooled regression result showed that age at completion is positively and significantly related to the total benefit of postgraduate education at $p \leq 0.05$. This result agrees with the findings of the studies of Schultz (1988, 1993 & 2001) that economic returns (earnings) are significantly higher for younger workers (age group 25-34 years) than for the older workers (45-64 years). The explanation being that the younger person

has many years to work and that gives the younger person more income increasing his economic benefit far more than that of an older person.

Total cost and course duration showed a positive and significant relationship to total benefits. It means that the more money one spends in acquiring education (level of education) the more benefits he or she gets. The studies of Jaeger and Page (1996), in the United States using the U.S. Population Survey data, found that postgraduate degrees are valued more by the labour market. Specifically, masters' degree holders earn between 5.5% to 15.5% more than B.Sc. holders and Ph.D. degree holders earn between 8.3% to 10.3% more than holders of bachelor's degrees. To further support this, the studies of Deere and Vesovic (2006) found that the hourly salary for workers with postgraduate educations was 30% higher than the salary for workers with only college educations in 2000. These studies showed that the higher the degree which also means the individual must have spent more time and money in acquiring the degree amounting to high total cost of education and as a result a higher economic benefits as shown by previous studies.

University type is negatively and not significantly related to total benefits. In other words the university one attends has no bearing with one's economic benefit. This is so because it is the degree that matters not the university where it was obtained. An examination of the ordinary least square regression result showed that the coefficient of determination R^2 (R. squared) stood at 0.41 indicating that about 41% of the systematic variations in TOTBEN is explained by the variations in the explanatory variables in the model.

The calculated F-statistic of (33.17328) is significant at $p \leq 0.01$ and at $p \leq 0.05$ levels of significance. This means that the model has a good fit. The Durbin – Watson statistics value of (1.807618) indicates the absent of serial or auto – correlation which implies that the findings of the model is reliable

5. Conclusion and Recommendations

The study has shown that age of completing; total cost and cost duration of postgraduate education affect economic benefits of university lecturers in Edo and Delta states. Therefore, Individuals intending to invest in postgraduate education should be encouraged to do so at an earlier age to enable them reap optimal benefits from their investments in education. Course duration affects economic benefit. Individuals are encouraged to keep improving themselves as the higher one goes academically the more economic benefit the individual will derive.

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