

Educational Cost and Efficiency of Public Secondary Schools in Ondo State, Nigeria

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Abstract

Educational cost is a key factor that determines the level of efficiency in public secondary schools. This study therefore examined the relationship between educational cost and efficiency of public secondary schools in Ondo state, Nigeria. The descriptive research design of the survey type and ex- post-facto design were adopted for the study. Multi- stage sampling techniques was used to select the 45 schools involved in the investigation. The respondents comprised of 45 principals and 450 students. Two self developed instruments titled "Pro forma of Educational Cost and Efficiency of Public Secondary Schools" (PECEPSS), and "Educational Cost and Efficiency of Public Secondary Schools" (ECEPSS) were used to collect data. Three research questions were answered and two hypotheses were tested. Percentage, mean and standard deviation were employed to answer the research questions, while Pearson product moment correlation statistics (PPMC) was used to test the hypotheses at 0.05 level of significance. Findings from the study revealed that, there was a negative relationship between educational cost and efficiency [$r(424) = 0.434, p < 0.05$]. Also, negative relationship occurs between private cost and efficiency [$r(424) = -0.169, p < 0.05$] It was concluded that as the private cost increases there was also an increase in the efficiency level in public secondary schools in Ondo state. Based on the findings, it was recommended that Government should pay more attention on funding public secondary schools. Also, parents should be encouraged to improve on spending on their children so as to improve the students' academic performance.

Keywords: Educational cost, private cost, efficiency, Public Secondary Schools

Introduction

Education as an engine of growth rests on the quantity and quality of its supply in any country. The National Policy on Education in Nigeria explicitly stated that education is a government affair and free education is to be provided by government at all level when and where practicable (Federal Republic of Nigeria, FGN, 2013)

Owolabi (2006) defines educational cost as all forms of resources used up in the process of providing education for an individual or for a group of individual. Cost in education can be conceptualized from two-related perspectives direct and indirect. The direct costs include the cost of all items purchased or used for the educational system. Direct cost is the monetary value of all tangible and intangible resources invested in education. It is necessary to define educational costs in terms of the total opportunity costs. The real cost of education is the alternative opportunities that have to be sacrificed or forgone in the process of providing education services. For instance, the opportunity cost or true cost of construction of a new secondary school building is the alternative projects that are foregone, such as road project or agricultural development.

Educational cost is one of debatable issue in Nigeria educational system today, a country where so much importance is placed on academic qualification and the contribution of education to national development cannot be underestimated. Adewumi, (2002), Ibukun, (2003) and Brock-Utne (2006) agreed that investment in education is vital to human capacity building such capacity denoted the foundation needed to increase the efficiency of education. The extent at which education can perform its stated roles in Ondo State depend on level at which the system is invested into by the government and the general public. Akinyemi (2012) has however suggested that no matter the pattern of classification, three main types of education costs that exist, namely: Institutional Cost, Private Cost, and Social Cost. Adedeji, (2002) in Akinbulumo (2019) defines educational cost as the monetary and non – monetary value used up in the process of educating an individual or a group of individual.

Private cost of education is an economic burden to the household and could be measured by a ratio to household income (Levin, 1995, cited in Ismail, Awang and Noor, 2016). Otherwise known as household cost, private cost could be referred to be the amount of money incurred in the education of a child. It entails payments for items and services such as tuition, school wears, certificates, results, transportation, hostel charges, and so on. Institutional Cost [capital and recurrent] is borne by the provider through expenditures on furniture, equipment, buildings, salaries of staff, subsidies to students and other consumables while social cost of education are those costs that individual student do not bear personally. They are the costs borne by the society, represented by the cost incurred by the federal, state and local governments in the process of providing education for citizens (Efanga& Idante 2014).

Efficiency refers to the ratio between the output of an organization and the inputs used in producing the output. In efficiency, the attempt is to see how output produced could be kept at the same level even when input level reduced (Famade & Abass, 2006). Efficiency involves the maximization of output if inputs are considered as fixed; and on the other hand, the minimization of inputs, if output are considered as fixed, it is concerned with the maintenance of a positive balanced of output over input (Durosaro, 1985) in Akinbulumo (2019). In economics, efficiency is the optimal relations between inputs and outputs. The input here are educational cost and the output are students that graduated successfully. It had been observed that, despite the increase in educational cost, some of the students in public secondary schools in Ondo state, cannot transit into higher education because they

cannot successfully sit and pass their Senior Secondary School Certificate Examination (SSCE) such students may later turn to political thugs and some may constitute nuisance in their environment. This had been a great challenge in the secondary education in Ondo state. An activity is being performed efficiently if a given quantity of outputs is obtained with a minimum of inputs or alternatively, if a given quantity of inputs yield maximum outputs.

Efficiency could be measure in two ways, these are external efficiency and internal efficiency. External efficiency means the extent at which educational system meets the broad social, economic, cultural and political objectives of the community of which it is a part. Internal efficiency is the relationship between the outputs and inputs of an education system. The internally efficient educational system is one, which turns out graduates without wasting any student year or without dropout and repeaters (Famade, 2003). Internal efficiency is the relationship between outputs and inputs of an educational system. Output and educational system is the number of successful completers of the course of study while and input while an input to an educational system is the number of students years used by all students who pass through the system. Internal efficiency is the extent to which cost made available to the educational system are being used to achieve the objectives for which educational has been set up.

Akinyemi (2012) defines efficiency in education as the capacity of an educational institution to turn its product (students) out with the minimum wastage. In other words, efficiency in education means the ability of an educational system to achieve the desired results (outputs) with the minimum application of resources (inputs). The external efficiency of education is improved when more education outcomes are produced at given education resources or fewer education resources are used in producing the same amount of education outcomes (Oyetakin, 2011). Ondo State had accorded desired attention to secondary education in her yearly budget, anticipating that what was invested would match up with quality of outputs from sub sector towards overall developments of the state. Aiyejunsile *et al* (2006) noted that secondary school education seems to be consuming the largest share of the total money allocated for education in Ondo state, see Table 1 below. Consequently, several intervention programs of capacity building of teacher, procurement of text books, science equipment, constructions, renovations of classrooms, and establishment of quality Education Assurance Agency are being implemented to revamp the education sector for increase in the level of efficiency.

The increase in educational cost has resulted to greater awareness in quality of public secondary education that may show level of efficiency. As important as secondary education is to the government of a nation, increase in cost of education could make government's expenditure to shoot up, it is apparent that no government, parents or individual would cross their fingers and continue to watch the cost of education to be increasing without a good increase in efficiency level. The government and other stakeholders in education will want to know the efficiency of educational cost and a particular attention would be paid to Ondo State, Nigeria.

Table1
Ondo State Total Budgetary Allocation to Education by Percentage

Year	Total budget allocation(billion#)	Allocation to education(million#)	Percentage of total allocation
2006	60.4	512.48	0.48%
2007	63	547.28	0.59%
2008	82.3	713.48	0.67%
2009	84.98	720.8	0.47%
2010	124.37	7.7(billion)	6.19%
2011	138.5	12.4(billion)	8.95%
2012	150	12.198(billion)	8.13%

Research Questions

To guide this study, the following questions were raised.

1. What was the private cost of education in public secondary schools, Ondo State Nigeria from 2017 to 2019?
2. What was the social cost of education in public secondary schools, Ondo State Nigeria from 2017 to 2019?
3. What is the level of contribution of private cost to the efficiency of public secondary schools, Ondo State Nigeria?

Hypotheses

The following hypotheses were formulated to guide the study:

Ho1. There is no significant relationship between educational cost and efficiency of public secondary schools in Ondo State

Ho2. There is no significant relationship between private cost and efficiency of public secondary schools, Ondo State between 2015 and 2017

Methodology

The descriptive research design of the survey type and *ex- post facto* was adopted for this study. The population of the study consisted all public secondary school students, and principals in the existing 304 public secondary schools in Ondo State as at the time the study was carried out. Multi stage sampling procedure was used to select the sample of 45 Public Secondary Schools because of the large cluster involved. The sample was cluster based on the three Senatorial Districts and two Local Government were used from each senatorial districts that is (Akoko South West and Owo) Local Government were selected in Ondo North Senatorial districts (Akure South and Ondo west) Local Government were selected from Ondo Central Senatorial districts (Irele and Okitipupa) Local Government were selected from Ondo South Senatorial Districts of Ondo State.

Using proportional sampling, 35% of total Public Secondary Schools were sampled from each Senatorial Districts. Therefore, 12 public secondary schools were sampled from the (34) Public Secondary Schools in the two Local Government selected in Ondo North, 21 Public Secondary Schools were sampled from the (60) Public Secondary Schools in the two Local Governments selected in Ondo Central, while 12 public Secondary Schools were sampled from the (33) Schools in the two Local Governments selected in Ondo South Senatorial Districts. Making a total of

45 Public Secondary Schools. A self-designed questionnaire titled "Private Cost of Public Secondary Schools Questionnaire (PCPSSQ)" and a profoma titled Social Cost and Efficiency of Public Secondary Schools (PSCEPSS)" was developed. Test-retest method was used to carry out the reliability of the instrument. The instrument was administered twice to respondents outside the sampled area within the interval of two weeks. Pearsom product moment correlation was used to find the relationship between the two instruments and 0.89 reliability co-efficient was obtained. The research questions were answered using descriptive statistics such as percentage, mean and standard deviation while the hypotheses were tested using Pearson Product Moment Correlation and t-test statistics respectively at 0.05 level of significance.

Results

Research Question 1: What is the private cost of education in public secondary schools in Ondo State Nigeria from 2017–2019?

Table2
Private Cost of Public Secondary Schools in Ondo State

Items of Private Cost	2016/ 2017		2017/2018		2018/ 2019		Average	
	<input type="checkbox"/>	%	<input type="checkbox"/>	%	<input type="checkbox"/>	%	<input type="checkbox"/>	%
School Uniform	1519.44	8.8	1591.49	9.2	1894.57	11.3	1668.5	9.8
Transportation Fee	2821.48	16.4	3047.90	17.5	3072.63	18.4	2980.67	17.4
Feeding	3863.15	22.4	3645.37	21	3666.65	21.9	3725.06	21.8
Book & Stationaries	4007.17	23.3	3964.16	22.8	3583.89	21.4	3851.74	22.5
Sport Wear	1788.46	10.4	1827.3	10.5	1793.16	10.7	1802.98	10.5
PTA and Other Levies	3222.43	18.7	3312.05	19.0	2712.98	16.2	3082.49	18.0
Total	17,222.13	100	17,388.27	100	16,723.88	100	17,111.42	100

Source: Field Work, 2020

The result in table 2 indicates that in 2016/ 2017 academic session, students incurred private cost of 17,222.13 per students. In 2017/ 2018 session, each student incurred a private cost of 17,388.27, while the cost incurred by students in 2018/ 2019 session was 16,723.88

The average total revealed that an average cost of 16723.88 was incurred by each student. This was such that 22.5% of the cost (₦3,851.74) was spent on book and stationaries, 21.8% (₦3,725.06) was spent on feeding, 18% (₦3,082.49) was spent on PTA and other levies, 17.4% was spent on transportation fees, 10.5% was spent on sport wears, while 9.8% was spent on school uniform. This implied that from the indicated average spending of students on private cost, the highest spending was experienced in book and stationaries while the least was on school uniform.

Research Question 2: What is the social cost of education in public secondary schools in Ondo State between 2017 and 2019?

Discussion of Findings

The central theme of this study investigated the relationship between educational cost and efficiency of public secondary schools. The results of the study are discussed based on the research questions and the hypotheses tested:

The result in table 2 indicated the unit cost of a child in public secondary schools for three academic sessions. This result shows the average amount spent by parents on their children in public secondary schools in Ondo State. This finding agrees with Enaigbe and Olubor(2016) who was of the opinion that private cost can be academic or non-academic (incidental cost). Contributions to school can be used in a variety of ways, for example, to purchase reading materials for a library, to purchase sports equipment, or to construct a school building. Therefore parents must make available all the necessary finance for their children. According to Mbipon (2010) who found that it is the responsibility of parents and guardians to care for the youths of the community, in the process of undergoing formal education. These consist of expenditures on tuition fees, clothes, books, transportation and accommodation. The decision to go to school is personally costly to the student. The student foregoes the opportunity to work and contribute to family income earnings.

As indicated in table 3, government grants to the school was inadequate in the three academic sessions. That is why Efianga (2014) stated that social cost are the costs borne by the society, represented by the cost incurred by the federal, state and local governments in the process of providing education for citizens. This also implies that government should make available the cost needed for education in order to improve on their efficiency. Many governments recognize education as an investment which brings favourable returns to the entire populace. It is viewed as a tool for launching a nation into economic independence, improved productivity and development in science and technology. Without education, the production and replication of human resource, material and technology needed for continuity and survival may not be guaranteed

Archbong (2002) Government as the major source of fund for financing education has over the years failed to live up to its responsibility of sufficiently funding education. However, Akpotu, (2008) explained that social cost is borne by the public through the government to cover all items under private and institutional costs minus subsidies and tuition fees, Akpotu's study, though, similar to the study in the area of cost of education, looked at trend of social cost of education; it is different in focus, because this research deals with private cost of education as it affects effectiveness of secondary education in Ondo State.

Table 4 indicated that the private cost incurred by students affect their efficiency such that students that experienced higher billings that ended up in higher level of private cost had less efficiency compared to those that was less tasked in academic needs and ended up paying less. This finding agrees with Levin, (1995), cited in Ismail, *et al*(2016) which says private cost of education is an economic burden to the household and could be measured by a ratio to household income. Otherwise known as household cost, private cost could be referred to be the amount of money incurred in the education of a child. It entails payments for items and services such as tuition, school wears, certificates, results, transportation, hostel

charges, and so on. Also Adegbemile (2014) says Poverty of parents were seen to have elastic effects on their children's academic works as they lack enough resources and funds to sponsor their education and good school, good housing facilities and medical care and social welfare services

Table 5 proved that efficiency is best when the social cost is high at a reasonably level, compared to a low social cost. Thus for schools and government to achieve optimum efficiency in academic, they are expected to invest significantly into the system as the impact is felt in the performances of the students. That is why Oyetakin, (2014) says governments must recognize education as an investment which brings favourable returns to the entire populace. It is viewed as a tool for launching a nation into economic independence, improved productivity and development in science and technology. Without education, the production and replication of human resource, material and technology needed for continuity and survival may not be guarantee.

The result in Table 5 indicated that the relationship between educational cost and efficiency was negatively significant. This was such that when the educational cost of students increases, there tend to be an increase in the efficiency of the student. Also, a reduction in educational cost results in reduction in the students' efficiency. This result negate the formulated null hypothesis 1, therefore, it was rejected. The finding corroborate that of the increasing cost of education appears to be pervasive. In China for example, most of the household income was spent on education (Zhang & Soukup, 2016) whereby 52 percent was set aside for higher education (Dong & Wan, 2012). In the case of Malaysia, Ismail, *et al* (2016) observed that the living cost for students kept on increasing due to the hike in food prices. Accommodation and living expenses were identified as significant factors contributing to the private cost. In addition, students also need to pay for computer, communication and related items. It was however concluded that private costs of education increase as the level of education increases (Ismail *et al.*, 2016).

Alimi, *et al* (2012) also conducted a study on analysis of education productivity of secondary schools in Ondo state, Nigeria using descriptive survey design and respondents were randomly selected from the nine Educational Zones. The study found that secondary schools in Ondo State were internally efficient within the period of 1998 to 2007. The study gave credence to the increase in the qualification of teachers as during that period many NCE holders bagged degrees, which must have improved the efficiency of the schools.

Conclusion

The result of the finding shows that there was low level of efficiency of in public secondary schools in Ondo State, average private cost was 17,111.42 and average social cost was 542,999,630.41. This was substantial amount that was spent in the sampled school during the period under study.

Recommendations

As a result of the findings and conclusion from this study, the following recommendations were made for the improvement of public secondary schools in Ondo state.