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Education and Economic Growth: Empirical Evidence from Nigeria

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Executive Statement

The objective of this policy brief is to bring to the fore the contribution of various levels of education to growth (both the oil and non-oil) in Nigeria. There has been an outcry on the deteriorating state of education at all levels (despite government commitment), manifesting in the form of strikes and closures, thus having adverse effects on the quality of output churned out annually. This is to inform=the federal ministry of education as well as the various state ministries of education that the stock of human capital is a sine qua non for reducing unemployment, poverty and improved output rather than the mere flow of resources to the sector. Hence adequate investment on these different levels and periodic assessment of the available stock of human capital will facilitate rapid economic growth.

Introduction

Considering the place of education in nation building, countries of the world have been investing on this all-important sector as the development of any nation may be traceable to its level of stock of human capital which normally entails education and health. To maximally utilize education to break out of the vicious circle of poverty, income inequality and above all increase output has been a challenge in Nigeria hence there is the need to critically appraise the state of these different levels of education. Education in Nigeria is faced with several humiliating characteristics ranging from inadequate learning infrastructures to abandoned capital projects and these have serious implications on growth. It has been ascertained that the level of education of a nation has a direct bearing on its output particularly tertiary education which has the capacity to be more productive and a higher degree of adapting new technologies. Experts opined that countries that are closer to the technological frontier paid more attention to research and innovation because technological advance increase labor productivity.

Literature classified these measurements into flow variables (i.e. flow of resources devoted to education capital formation) and stock variables (i.e. stock of education human capital), however, available evidence favoured the stock variables more depending on data availability. In the case of Nigeria, almost all the studies used education expenditure as

measure of education though just a few included primary school enrolment rate to capture human capital in their growth model. In this study, different levels of enrolment rates which capture the three tiers of government flow of resources to the different levels of education were empirically analysed as against the available federal government expenditure used by previous studies. The study also used the only available stock variable (secondary school completion) data to capture education and examines its impact on the different aspect of growth (oil and non-oil growth).

Methodology

To empirically analyze the long-run relationships and short run dynamics interactions between education captured by school enrolment and completion rates and growth as espoused from the endogenous growth theoretical framework, we employed recent cointegration techniques using the Fully Modified Ordinary Least Square (FMOLS) and the Dynamic Ordinary Least Square (DOLS) approaches and other necessary estimation techniques.

The data cover the period 1970-2010 and were extracted from the Central Bank of Nigeria (CBN) Statistical Bulletin and the Nigerian Bureau of Statistics. The data used in the estimation are Non-oil Gross Domestic Product (GDP) growth, Oil GDP growth, economic growth, primary school enrolment rate, secondary school enrolment rate, secondary school completion rate, tertiary school enrolment rate, openness which is import plus export as share of GDP, gross fixed capital formation as percentage of provide in full (R)GDP as proxy for investment.

Results and Conclusions

The following major findings were revealed in the study:

(i) The flow of resources devoted to human capital formation at the different levels of education has positive effects on overall growth in Nigeria. Primary and secondary levels were significant while the tertiary level had an insignificant effect on overall economic growth.

(ii) The flow of resources devoted to the primary and secondary levels of education had positive and significant effects on oil growth whereas the tertiary level had positive but insignificant effects.

(iii) The flows of resources devoted to the different levels of education were found to have positive and significant effect on non-oil growth in Nigeria. The positive and significant estimates suggest that the primary, secondary and tertiary levels of education all have significantly positive impacts on non-oil growth in Nigeria.

(iv) The stock of education human capital was also found to have a positive and significant effect on non-oil growth.

(v) The degree of trade openness variable had positive and significant impact on non-oil growth. This is consistent with theory that openness facilitates technological spillover effect thereby encouraging better technical know-how in production.

Implications

The policy implications we can derive from this study is that the flow of resources devoted to education at the primary and secondary school levels supports growth generally but that of the tertiary seemed otherwise. Further implying that the government's current public spending to the sector is more felt in the primary and secondary levels. If this trend

continues the tertiary level will not be able to rightly produce the expected change desired for increased output (in all sectors) for a mono-product based economy such as Nigeria, to reduce unemployment and poverty.

Again, not all resources devoted to education human capital formation end up amounting to the desired stock of human capital, probably due mainly to rent seeking which is very prevalent in Nigeria today.

The different levels of education have different effects on non-oil growth with tertiary having the most effect. The insignificantly positive effect of tertiary level of education on oil growth and overall growth is not surprising because the oil sector engages very few of the graduates of the tertiary sector. It engages more from the primary and secondary levels than the tertiary and on overall economic growth. This may is related to the very alarming rate of unemployment in Nigeria and very few graduates of the tertiary levels are really engaged to productive activities. A more skilled person is more productive.

Recommendations

The federal ministry of education and the various state ministries of education in Nigeria should as a matter of importance improve on public spending on education particularly the tertiary level. This level of education possesses the requisite skills needed for high-brow research and innovation as well as adapting new technologies.

Similarly, a periodic assessment of the stock of human capital by the federal ministry of education and its state counter-parts is necessary as this would help to justify whether the flow of resources to the sector actually translate to increasing the stock of human capital.

It is obvious that different levels of education have differential effects on growth and this has research implications. Therefore, researchers need to disaggregate education into the various levels as failure to do so may lead to biased estimates of the effects of education.

References

Aghion, Philippe, Leah Boustan, Caroline Hoxby and Jerome Vandenbussche 2006. "Exploiting States" Mistakes to Identify the Casual Impact of Higher Education on Growth".

ISNIEConference.http://www.isnie.org/ISNIE06/Paper06/05.2%20%28no%20discussant%29/Vandenbussche.pdf. Not clear>

Barro, Robert J. and Lee, J-W. 2010. A new data set of educational attainment in the world, 1950-2010 NBER Working Paper No 15902. April, 2010. JEL No. F43, 121, 011, 04

Easterly, W. and Rebelo, S. 1993. "Fiscal Policy and Economic Growth: An Empirical Investigation". *Journal of Monetary Economics,* 32: 417-458.

Needs Assessment Report 2012, Federal Government Committee Report on Needs Assessment of Public Universities in Nigeria. Council Chamber, State House, Abuja.

Vandenbussche, Jerome, Philippe Aghion and Costas Meghir 2006. "Growth, Distance to Frontier and Composition of Human Capital". *Journal of Economic Growth,* 11(2): 97-99.