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INTELLECTUAL CAPITAL AND ECONOMIC GROWTH IN NIGERIA (2000-2016)

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Abstract

The study examined intellectual capital and Economic Growth in Nigeria from 2000-2016. The secondary data were collected from CBN statistical bulletin and ERA report. Simple regression was the tool used to analysis the data in this study. In the model the IC was regressed on the GDP. The study revealed that IC has a significant impact on the economy of the nation. The paper therefore recommended the Government should pay attention to the strengthening of IC, such as reforming infra-structure, improving the quality of education and compliance with regulatory frame work, which will go a long way in strengthens the economy of the nation as a whole.

Keywords: Intellectual Capital(IC), Gross Domestic Product (GDP), Infrastructure, Education

INTRODUCTION

The globalization of the world economy that began in the middle of the twentieth century has lead to series of structural transformation and reforms in world's economic system. There is now a shift in the physical variable and things that can affect the economic growth in a country to more technological variable that can affect the growth in the economic, such as skills, talents, creativity, information, dedication and experience of the people in the country, Ekwa (2013).

As the world is moving faster and faster, there is need to have manpower that will fit into the situation, when nearly everything is now computer based even the car, that is driven, selling of patrol in the filling station, marking of student scripts, even in the medical field they have gone far, and this still need trained manpower that can fit into it as the time is moving they help the country to generate more income and development for its people, the knowledge that is needed is what is called intellectual capital. Intellectual capital Tanja Cesen (2014) is defined as non-financial recourses that determine the value and competitiveness of an enterprise and national economy. Intellectual capital is the education information experience and intellectual property – everything that allows a value creation. The argument is that, in the era of high-speed trade of commodities services, ideas and information to competitive dominance of the economy largely is dependent on domestic human capital. The modern person he/she a student, a worker a person with his knowledge, intellect, experience and professionalism determines the economic and sound development of the society. In today's world companies view a market competitive advantage as depending not so much on things such as technical equipment and inventory but on the timely availability of relevant information and competent personnel who can manage and regulate business activities not only in the normal condition but also in the most difficult times of crisis. The concept of intellectual capital refers to the abilities and skills of human resources of a country, while human capitals formation refers to the process of acquiring and increasing the number of persons, who have the skills, educate and experience that are critical for economic growth and development of a country, Olojike (1995). Human resources are all embracing that is it is inclusive of persons who will now, or are likely to be productively employed sooner or later. It is a continuum, a continuing process from childhood to old age, and a must for any society or enterprise that view opines that the essence of human resources development becomes one, of ensuring that the workforce in continuously adapted for and up, graded to meet the new challenges of its total environment. This implies that these already on the job require retaining reorientation or adaptation to meet new challenges, Babatunde, Adedayo and Omonilic (2014). This special human capacity can be acquired and developed through education, training, health promotion, as well as investment in social services that influence man's productive capacities, Adamu (2003). The role of education as a component of intellectual capital for economic growth and development cannot be over emphasized. Education matters not only for personal development, health status, social inclusion and labour market prospect of individual learners but also for broader climatic performance of countries OECD (2006). According to Daudu (2010) Education is a basic to development and also regarded as to any instance through which the society can be transformed. Education equips

human resources with the needed knowledge skills and competencies, which would make them functional and capable to all round development of the nation.

This study therefore investigates the relationship between intellectual capital and economic growth in Nigeria; it sets to find out whether intellectual capital can significantly and positively influence economic growth in Nigeria as a country. Why the choice of intellectual capital as it affect economic growth in Nigeria is that, most organization in the country especially the Banking sector which are most preannounce are noted for farming graduates with second class honors' degree (Upper Division) in their employment policies thereby giving weight to the fact that it determines increase in growth of the country Ekwe (2013).

Objectives of the Study

The major objective of the study is to carry out an empirical analysis of intellectual capitals on economic growth in Nigeria. In the study the intellectual capital is breakdown into the following variables; (1) Expenditure in Education, (2) total Enrolment in school.

1. To determine the extent to which expenditures in education affect economic growth.
2. To ascertain the effect of number of school enrolment in the nation to economic growth.

Research Questions

To purse the above objectives the following questions has been raised:

1. To what extent does Expenditure on Education affect economic Growth (GDP)?
2. To what extent does number of school enrolment has on GDP?

Research Hypotheses

Ho1. There is no significant relationship between Expenditure on Education and GDP.

Ho2. Number of school enrolment and GDP does not have significant relationship.

CONCEPTUAL REVIEW

Meaning of Intellectual Capital

The term intellectual capital was first introduced by Galbraith (1969). It is a group of knowledge assets that are attributed to an organization and most significantly contribute to an improved competitive position of this organization by adding value to adding value to define key stakeholders. Intellectual capitals define also as a broader concept than human capitals and refer to other non financial resources that determine the value and the competitiveness of an enterprise and national economy.

International Federation of Accountants (IFAC) (2001) sees intellectual capital as a capital property that is based on knowledge. While Ulrich (1998), claimed that intellectual capital is knowledge and skills that employees have.

According to Stahle, Stahle and Aho (2013), 'Intellectual capital' is referred to the sources of non-physical (added) value for a company or organization: human capital (e.g. skills, experience, and training), relational capital (e.g. customer and stakeholder relations, brands, agreements) and structural capital (e.g. company culture, working environment, systems, immaterial rights).

In addition, Sanchez (2007) also considers that intellectual capital is just a sum of all the knowledge in a company. Evensong and Malone (1997) affirm that intellectual capital is a management of employees' knowledge, experience, skills, customer relations, technologies and innovations

Economic Growth

Is defined as a sustained use in the output of goods, services and employment opportunities with the sole purpose of improving the economic and financial welfare of the citizens

Gross Domestic Product

(GDP) is employed as proxy for economic growth in the study and it is conceptualized on the total monetary value of goods and services produced in a economy over a defined a specified period of time say (one year).

THEORETICAL REVIEW

The theoretical basis of intellectual capital and economic growth is noted in the endogenous growth theory which is developed by Anow (1962). Endogenous growth theory is primarily the result of endogenous and not external forces. Endogenous growth theory holds that investment in human capital; innovation and knowledge are significant contributions to economic growth. The theory also focuses on positive externalities and spillover effect of a knowledge – based economy which will lead to economic development. The endogenous growth theory have primarily holds that the long run growth rate of an economy depends on policy measures e.g. subsidizes for research and development or education increase the growth rate in some endogenous growth models by increasing the incentive for innovation.

The AK model which in the simplest endogenous model, gives a constant serving rate of endogenous growth and assures a constant, exogenous, saving rate. It uses the assumption that the production fact does not exhibit diminishing values to scale to lead to endogenous

growth. However, the endogenous growth level is further supported with models in which agents optimally determined the consumption and saving optimizing the resources allocation to research and development leading to technological progress.

EMPIRICAL REVIEW

Oni, Akinsanya and Aninkan (2014) examined intellectual capital formation and economic growth in Nigeria, using secondary data covering periods of 1980-2011. The unit root and co-integration tests were conducted and Error Correction Mechanism (ECM) was employed. The result shows that public investment in education maintains a positive long run negative relationship with economic growth.

The study among other things recommends that the policy makers should pay more attention to education sector in terms of its yearly allocation and distribution also put in place the policy to increase the school enrolment ratio of the population to stimulate rapid economic growth.

Leoning (2002) investigated the impact of human capital on economic growth in Guatemala through the application of an error correction methodology. He examined two different channels by which human capital is expected to influence growth. The result from his study revealed that a better educated labour force appears to have a positive and significant impact on economic growth both via factor accumulation as used as on the evolution of total factor productivity.

Haouas and Yagoubi (2005) examine openness and human capital as sources of productivity growth for MENA countries. Controlling for fixed effect as well as endogeneity in the model, they find that while human capital significantly influence growth it has no underlying effect on productivity growth.

RESEARCH METHOD

Research Design

In this study, quasi experimental design involving the use of existing data or Secondary data was adopted.

Sources of Data

Secondary data used for the study were gotten form Central Bank of Nigeria (CBN) annual report from 2000-2016 and the EFA report from 2000-2016.The reason for the Period chosen is because availability of data for the study.

Data Analysis Techniques

This study used the econometric technique of Ordinary Least Square (OLS) in form of Simple Linear Regressions to the relative regression coefficients. The regression model was estimated through the use of E-view software.

Model Specification

I.C- Intellectual Capital is measure under the following variables:

- Expenditure on Education
- Enrolment in school.

While Economic growth is measured using GDP

Hypothesis 1: Simple Regression

The statistical tool of this model will be expressed as

$GDP = \beta_0 + \beta_1 EED + \mu$

Where

β_0 = estimated of the true intercept, β_0

β_i = estimated of the true parameter β_i

μ = stochastic term.

GDP= Gross Domestic Product

EED= Expenditure on education

Hypothesis 2: Simple Regression

The statistical tool of this model will be expressed as

$GDP = \beta_0 + \beta_1 ENROL + \mu$

Where

β_0 = estimated of the true intercept, β_0

β_i = estimated of the true parameter β_i

μ = stochastic term.

GDP= Gross Domestic Product.

ENROL=Enrolment in School.

RESULTS AND DISCUSSIONS

Ho1. There is no significant relationship between Expenditure on Education and GDP

Table 1. Hypothesis testing 1

Dependent Variable: GDP				
Method: Least Squares				
Date: 06/15/17 Time: 04:01				
Sample: 1 16				
Included observations: 16				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
EED	247.1980	21.49784	11.49873	0.0000
C	-7225.204	4656.259	-1.551719	0.1430
R-squared	0.904254	Mean dependent var		37390.01
Adjusted R-squared	0.897415	S.D. dependent var		32147.95
S.E. of regression	10296.61	Akaike info criterion		21.43349
Sum squared resid	1.48E+09	Schwarz criterion		21.53006
Log likelihood	-169.4679	F-statistic		132.2209
Durbin-Watson stat	1.961418	Prob(F-statistic)		0.000000

The value for the coefficient for EED (i.e β_1) is 247.1980, while the constant intercept, c is -7225.204. The value of -7225.204 for c represents what GDP (Gross Domestic Product) will be without EED (Expenditure on education).

The value 247.1980 for β_1 implies that holding all other factors constant, a unit increase in EED (Expenditure on education) will lead to 247.1980 increases in GDP (Gross Domestic Product). R^2 tells the percentage variation in GDP (Gross Domestic Product) explained by EED (Expenditure on education). By implication, the value of 0.904254 means that about 90% of total variation in GDP (Gross Domestic Product) is as a result of changes in EED (Expenditure on education) , while 10% is unexplained. This remaining percent could be caused by other factors or variables not built in the model. Since the Durbin- Watson statistic is near 2, there is no evidence of first-order autocorrelation.

The estimated F-value is significant at 1% level (because the p value is zero) we can strongly reject the null hypothesis that there is no significant relationship between Expenditure on Education and GDP. We therefore conclude that there is no significant relationship between Expenditure on Education and GDP.

Ho2. Number of school enrolment and GDP does not have significant relationship.

Table 2. Hypothesis testing 2

Dependent Variable: GDP				
Method: Least Squares				
Date: 06/15/17 Time: 04:04				
Sample: 1 16				
Included observations: 16				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
ENROL	949292.3	223296.1	4.251272	0.0008
C	-208832.7	58177.63	-3.589570	0.0030
R-squared	0.563500	Mean dependent var		37390.01
Adjusted R-squared	0.532321	S.D. dependent var		32147.95
S.E. of regression	21985.03	Akaike info criterion		22.95058
Sum squared resid	6.77E+09	Schwarz criterion		23.04715
Log likelihood	-181.6046	F-statistic		18.07331
Durbin-Watson stat	1.867040	Prob(F-statistic)		0.000806

The value for the coefficient for ENROL (i.e β_1) is 949292.3, while the constant intercept, c is -208832.7. The value of -208832.7 for c represents what GDP (Gross Domestic Product) will be without ENROL (Enrolment in School).

The values 949292.3 for β1 implies that holding all other factors constant, a unit increases in ENROL (Enrolment in School) will lead to 949292.3 increases in GDP (Gross Domestic Product). R^2 tells the percentage variation in GDP (Gross Domestic Product) explained by ENROL (Enrolment in School). By implication, the value of 0.563500 means that about 56% of total variation in GDP (Gross Domestic Product) is as a result of changes in ENROL (Enrolment in School) , while 44% is unexplained. This remaining percent could be caused by other factors or variables not built in the model. Since the Durbin- Watson statistic is near 2, there is no evidence of first-order autocorrelation.

The estimated F-value is significant at 1% level (because the p value is zero) we can strongly reject the null hypothesis that number of school enrolment and GDP does not have significant relationship. We therefore conclude that number of school enrolment and GDP has a significant relationship.

CONCLUSION AND RECOMMENDATIONS

This study has provided empirical evidence on the effect of intellectual capital on economic growth in Nigeria. The Regression result showed that intellectual capital that was represented by expenditure on education and numbers of enrolment in school have a positive and significant effect on the economic growth of Nigeria. It is recommended that the government of Nigeria

should pay more attention to the strengthening of intellectual capital. Making structural and process reforms, compliance with regulatory frame works, implementing operational plans, strengthening strategies, reforming infra-structures, improving the quality of education are all effective ways of strengthening intellectual capital which can consequently create value for the country. The country should also try to efficiently manage their human capital as they are the backbone of the knowledge economy that plays a vital role in creating economic value. Further research can be carried out on Intellectual Capital and other variables of Economic growth in Nigeria such as 1) Level of savings and savings ratio,2)Investment level, 3)Employment levels and Pattern of employment,4)Debt levels with other countries,5)Human Development index (HDI) and 6) Human Poverty Index (HPI).

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