Effect of Company Income Tax Productivity on Economic Development in Sub-Saharan Africa

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Abstract

The study examined the effect of company income tax (CIT) productivity on the economic development of three Sub-Sahara African Countries (SSA) of Nigeria, South Africa, and Kenya. In line with the objective of the study, relevant data were collected from the World Bank and Organization for Economic Co-operation and Development (OECD) database from 1995 to 2018. The study adopted an ex post facto research design. Augmented Dickey-Fuller unit root test was used for the stationarity test of the data. Johansen Co-integration test was used to test the long-run relationship of the variables. Ordinary Least Square (OLS) was used to test the hypothesis at 5% level of significance. The findings revealed that CIT was found to have a positively significant influence on Human Development Index (HDI) in Nigeria, negatively significant effect in South Africa and negatively insignificant effect in Kenya. Based on the findings, the study, therefore, recommended that Nigeria should strategize to achieve economic development through increase in CIT but South Africa and Kenya should ignore the use of CIT strategy as the two countries have a negative significant and insignificant influence on HDI respectively.

Keywords: Company Income Tax, Economic Development, Sub-Saharan Africa, Taxation and Tax Productivity.

Introduction

Tax can be defined as a charge or levy by the government on a product, income or activity. If the charge is levied directly on personal or corporate income, it is classified as a direct tax. If on the other hand, the charge is levied on the price of a good or service, then it is called an indirect tax. As a further elaboration, the Institute of Chartered Accountants of Nigeria (2006) and Chartered Institute of Taxation (2002) defined taxation "as the enforced contribution of money to the government under authorized legislation".

According to Ola (2001), the main purpose of taxation is to fund government expenditure and to reallocate the wealth of the nation. Whether the tax collected is enough to fund the government of a country will depend on the needs of the country and if it is not enough the country may seek alternative ways to raise revenue to fund sustainable development. Tax revenue is money obtained from the tax structure. The tax revenue accruing to Nigeria, for example, includes petroleum profit tax, direct and indirect taxes received from other sectors

of the country. Sanni (2007) stressed that the use of tax in obtaining revenue has both a negative and positive effect on the individual and government. Relating to individual's low-income tax rate means an encouragement to work and save while high-income tax rate indicates discouragement to work and saving. With government, high tax rates constitute more income and an increase in its ability to discharge its responsibility of providing basic infrastructure.

Taxation is also defined as a compulsory levy imposed by a public authority on the income, profit or wealth of an individual, family, community, corporate and unincorporated body for public use. Taxation is, therefore, a process or system of raising income through levying of various types of taxes.

Taking into consideration the various definitions of taxation, Nzotta (2000) classified four main areas that must be made clear to enable taxation to play its functions in the society. In the first place, tax is a compulsory contribution made by the people in the country to the government and this contribution is made for the general use of the people. Secondly, tax is a charge which is mandatory for the taxpayer. Thirdly, there is an assumption that the contribution made to the government revenue by the taxpayers may not be in exchange for the benefits received by him. Fourthly, tax is not charged by the government because it has provided certain services to the individual or his family. It is a certainty that a sound tax system plays various roles in the process of economic development of any nation as a result, Nigeria and other countries cannot be an exception (Appah, 2010).

Due to the absence of sufficient funds for financing long term development, Nigeria and some other Sub-Sahara African Countries have heavily obtained foreign capital such as loans, as a means of achieving economic development. The resultant effect of this is the accumulation of huge external debts with the attendant problems arising from debt servicing in respect of foreign exchange flow and the outcome is that a lot of the populace lives in abject poverty. For example, Nigeria is presently having a high debt portfolio with the attendant problems of rising debt servicing.

Taxation in developing countries is very important because it makes it possible for the government to finance basic public utilities such as infrastructure, education, health, maintenance of law and order, job creations including investment and business innovation. In Sub-Saharan Africa, taxation is regarded as a brake on development (Andre, 2017). Tax rules and laws are not specifically focused on taxpayers' peculiarities and in most cases, they do not take into consideration the weak administrative capacity available in the countries of the region.

Confronted with the unpleasant situation, countries in the region have embarked on a series of reforms that were focused on eliminating the burden of a tax structure that hinders economic growth and development (Andre, 2017).

Some of the European countries of Canada, the United States, the United Kingdom, and Netherland have derived substantial revenue from Company Income Tax, Value Added

Tax and import duties, and other types of taxes, the proceeds of which were used to advance the welfare and progress of their citizens. It is sad to note that in Nigeria and many Sub-Sahara African Countries, the contribution of tax revenue has not been meaningful.

Performance of tax revenue in Sub-Saharan Africa has not been very impressive. The ratio of tax/ GDP increased slightly from 16 -17 percent in 1990 to 19 percent in 2005 (IMF, 2008). In this regards, economic development in the region has slowed down in recent years. It declined to 3.4 % in 2015, its lowest level since 15 years; and it could be slowing down gradually to 1.6% which was quite below the rates of 5% to 7% that was achieved during the past decades (IMF, 2016).

In Nigeria, South Africa, and Kenya the prevalent of tax evasion and economic avoidance is high which results in a low level of government revenue and subsequently affects the level of expenditure on goods and services (Festus & Samuel, 2007).

There has been a rising magnitude of deficit financing of annual budgets by various governments. Ariyo and Raheem (1990) suggested that serious efforts should be made to reduce expenditure or generate additional revenue. The most important problem facing many governments today is expanding tax revenue and decreasing expenditures. The study was focused on tax productivity in Nigeria, Kenya and South Africa because they have highest robust capital markets in Sub-Sahara Africa.

The main objective of this paper is to ascertain the effect of Company Income Tax productivity on economic development in Sub-Saharan Africa countries of Nigeria, South Africa and Kenya. Section two is concerned with literature review while section three covers research methodology. Section four and five are concerned with data presentation, summary of findings and conclusion. It is in light of this that the study intends to examine the effect of tax productivity on the economic development of Nigeria, South Africa, and Kenya.

Conceptual Clarification

Concept of Companies Income Tax Productivity in Nigeria

Companies Income Tax was introduced in 1961 to govern the collection of taxes on profits made by companies in Nigeria excluding companies engaged in petroleum exploration activities. The original law that enacted it has been amended many times and is currently codified as the Companies Tax Act of 2004 (CITA) CAP AP21 2004 LPN as amended. The profits or gains of any company accruing in, derived from, brought into earned or recorded in Nigeria are assessable to tax under companies Tax Act AP 21, 2004 LPN as amended in 2007. The tax rate has been 30% and the education rate of 2% on Assessable profit.

In Nigeria the two main bodies that are charged with the responsibilities of administering Company Income Tax are Joint Tax Board (JTB) and the Federal Board of Revenue

(FBIR). The Joint Tax Board was established in 1961 to advise to the Federal Government and organize various aspects of Taxation and encourage uniformity in the country.

There are certain privileges and benefits which confer on limited liability companies that make corporate structure an attractive form of business. For example, the theory of separate entity between the company and its shareholders with the provision of levying tax on the profits of the company and if the company wishes to distribute any of its profits to shareholders; the distribution is regarded as income in the recipients' hand and so it is charged to income tax through withholding tax scheme. This provision is sometimes criticized as "double taxation".

The tax computation system levies tax in the company profits and income tax on distribution, however with this practice a portion of the company tax is "imputed to the income tax liability of shareholders at the appropriate time a provision is made for the tax credit to be paid to them. This imputation system is appreciated in European Union (EU) because it attracts investors and broadens the base of capital markets at the heart of being a good communitarian.

Section 8 of Company Income Tax Act (CITA) 1990 as amended charges to tax at the rate of 30% in each year of assessment, the profits of any company accruing or derived from or brought into or received in Nigeria. This charge provision is to ensure that no income escapes taxation since the structure of the company can be used as a tax avoidance device. The Act also makes provision for where income is derived from more than one logical source that is in case of two or more tax jurisdictions, an apportionment can be made to catch the profit attributable to Nigeria operations.

There is need to bear in mind the distinction made by CITA between a Nigeria company and a foreign company. Sec 84 of CITA (1990) as amended distinguished a Nigeria company and a foreign company. In its definition of the terms company' as stated in the Act, a Nigerian company is one incorporated under the Companies and Allied Matters Act 1990 whereas a foreign company is the one established by law in any territory outside Nigeria. The purpose of this distinction is to clarify the profits of the two types of companies for tax purposes. For a Nigerian company, according to Sec 11 (11) of CITA 1990 tax is based on its income worldwide whether or not they have been brought into or received in Nigeria. On the other hand, Sec 2(2) of CITA 1990 for a foreign company only profit attributable to its operation within Nigeria is taxable.

Economic Development

The concept of economic development was initially interpreted as growth in terms of output over time, but now it is being considered in terms of literacy, per capita income and good health. The terms economic growth and economic development were frequently used by different researchers to mean the same thing but this is not correct. Economic growth can be described as a means to an end (i.e.) economic development. Economic growth is regarded as the ability of a country to produce goods and services from a particular period

to another. Generally, goods and services are measured in nominal or real terms. Nominal economic growth implies a situation where adjustment is made for inflation and the real economic growth is not subject to any adjustment (World Bank, 2018). Usually, the accumulation of economic growth is measured in terms of Gross National Product (GNP) or Gross Domestic Product (GDP).

Economic growth is expanding the economy and the effect of this expansion leads to economic development. The result of the expansion will lead to a rise in production, springing up of more companies and the creation of more jobs with a corresponding increase in literacy, life expectancy and an increase in per capita income. Economic development is a combination of so many factors; hence it is difficult to have a simple satisfactory definition. It comprises a process where a low-level income economy is transformed into a modern industrial economy.

According to Kindleberger and Herrick (1958), economic development comprises of so many elements which include improvements in material welfare relating to persons with lowest income, eradication of mass poverty, illiteracy, disease, and premature death, shift from the traditional method of agriculture towards mechanised and industrial production approach. Economic development can be defined as a process of improving the economic wellbeing and standard of life of a community by creating jobs and enhancing incomes. On the other hand, economic development means improving different indicators of Human Development Index (HDI) such as life expectancy, literacy rates and property rates among others. GDP is a way of measuring the economic wellbeing of a nation. Economic development comprises of various policies which governments carry out to fulfil wide spread economic objectives such as high employment, price stability, increment of tax base and a lasting growth (World Bank, 2018).

From the aforementioned conceptual definition economic development is made up of many facets, income per capita is one of the earliest measures of economic development. However, some economists have stated certain indicators for development such as level of literacy, health, employment, eradication of poverty among others. It has now become a practice to measure development in terms of composition of indices such as Human Development Index (HDI), Gender Development Index (GDI) and Human Poverty Development Index (HPI) etc. Moreover, this study intends to use Human Development Index as the appropriate indicator to measure economic development (Kindleberger & Herrick, 1958).

Concept of Tax Productivity

Tax productivity is the money obtained from the tax structure of a country. The tax productivity obtained in a country depends on the tax components in existence in that country. For example, the tax productivity is equivalent to tax revenue accruing to Nigeria

and includes Petroleum Profit tax, direct and indirect taxes received from other sectors of the economy.

The whole purpose of tax revenue is to obtain revenue to promote the welfare of the people of a nation through the establishment of basic amenities for improving public service through proper administrative systems and structures. Tax revenue plays an important role in promoting various activities in an economy. Through tax revenue government guarantees that resources are directed towards important projects in the society which include health services, education, and infrastructure. It must be emphasized, however, that the role of tax revenue in promoting activities in the economy may not be felt adequately if poorly administered. As a result, there is a need for proper scrutiny of the relationship between revenue obtained from taxes and the economy to provide proper policy formulation and strategies towards its competence.

Tax revenue is of vital importance for the sustainability of developed and developing economies. In many poor emerging economies, a low tax revenue/GDP ratio prevents these nations from embarking on prospective expenditure program. When there is a rapid increase in domestic revenue, it may lead to a corresponding increase in public spending.

Nevertheless, there is a need to be careful about increased public expenditure and increased taxation. This is because distortionary taxes can reduce growth when pushed after certain limits. It is difficult to determine the appropriate level of Tax/GDP ratio among countries. Depending on political dispensations, governments all over the world have different goals relating to public expenditures which may signify the different levels of taxation. The tax/GDP ratio varies tremendously across regions.

Concept of Company Income Tax Productivity in South Africa

Profit of companies based in South Africa is taxed globally. However before determining the companies' chargeable profits some expenses incurred wholly and exclusively for the purposes of revenue generation are deductible. Other expenses that are allowed include motor vehicles repairs, expenses incurred for legal purposes, expenses for medical and dental treatment, bad debts incurred during business operations, contributions for pension and provident funds, and retirement annuities including municipality taxes. Allowances are provided for capital allowances in the courses of computing taxable profits. Furthermore, in order to stimulate the growth of small scale businesses, some tax incentives are granted which include research development expenditures, infrastructural development, public private partnership grants and deduction for environmental expenditures. The rates of company income tax are graduated according to the size of the companies. South Africa Income Tax Act No 28 makes provision for micro-businesses with annual turnover less than 1 million ZAR to be taxed under micro business tax system in place of the ordinary income tax.

The Corporate Income tax was reduced from 35 to 30 percent in 1999. However, the income tax rate is now levied at 26.6% by the company law no 71 of 2008 of the taxable

income of the company. Some Companies qualify as a small business corporation which attracts a levy of 10% and taxable income above R5750 to a limit of R300, 000 and 28% on taxable income above R 300,000. Companies employing personnel pay a tax of 33%, and the companies are also subjected to an additional tax known as dividends or secondary tax on companies at 10% of declared dividends.

Concept of Corporate Tax Productivity in Kenya

The corporate tax Act was established to handle all issues relating to companies. All companies are required to register with the Kenya Revenue Authority for a Personal Identification Number. The companies' rate of tax is at present 30% of taxable income. The governing body in Kenya for realizing revenue from taxes is the Kenya Revenue Authority (KRA). The corporation tax is charged on companies and has a constant rate.

In Kenya, income tax started in 1937 when there were indications of continuous growth in commercial and manufacturing activities in the country. Also, there were steady markets for manufactured products which justified the charging of tax on the profits generated in this sector. As the trend of activities increased, tax regulations were introduced in 1941 to include excess profits in tax in addition to the existing 10% tax on company profits which applies to all businesses, trade or vocation irrespective of the time it was carried out. Income tax can be described as tax charges on all income of persons whether living or not in Kenya for each year under the Income Tax Act of 2010.

In Kenya, the most important tax used is income tax. Every employer must ensure that taxes are deducted at source from employees and remitted to the Kenya Revenue Authority (KRA) All employees must have a PIN. There is a penalty charge of $22 to any employer who made payment to an employee who does not have a PIN. The tax rate is 30%, however, there are relief allowances granted to individuals for dependent relatives, medical expenses and expenses incurred by employees while working for the company. All employees are subject to a Pay as You Earn (PAYE) system.

Theoretical Framework

There are many theories which establish the relationship between fiscal policy and economic growth and have occupied a wide scope in literature. However, Tosun and Abizadel (2005) opined that the theoretical study relating to the impact of fiscal policy on economic growth is still inconclusive. According to Judd (1985) and Chamley (1986) the neoclassical growth theory emphasizes the functions of fiscal policy on determining the level of output instead of the long term rate of growth. The Equilibrium growth rate is determined by exogenous factors comprising of population growth and technological progress while fiscal policy can affect the process of transition to the equilibrium state.

Endogenous Growth

Endogenous growth theory was propounded by Schumpeterian who defined it as a long-term economic growth as stated by forces that are internal to the economic system especially those forces relating to the creation of technological knowledge. In the long-run the rate of economic growth can be determined by rate of output per person relating to the growth rate of Total Factor of Production (TFP) which also depends on the rate of technological progress.

The theoretical exposition in this study revolves around the endogenous growth model's proposition that government spending and tax policies can have a long-term effect on growth. Endogenous theory recommends the activation of level and growth rate per capital output through the implementation of economic policies such as tax policies. Economic growth is usually determined by a combination of three factors of production namely; labour, capital, and technological progress which are related to one another through production function. Taxes can alter the economic decisions relating to these factors and they affect economic growth (Zipfed & Heinrich, 2012).

The earliest attempts made at endogenizing the link between growth and fiscal policies were by Barro (1990). He demarcated four classifications of public finance comprising of productive vs non-productive expenditure and distortionary vs. not distortionary taxation. Taxation is distortionary and as such it affects economic growth. Subsequently, the expansion of economic growth leads to economic development.

Endogenous theory states that taxation can have a positive effect on growth rate. The positive effect arises as government embarks on public expenditure. According to Eugene and Skinner (1996), examples of government expenditure on public goods such as goods generating positive externalities are infrastructure education and public health. Relating endogenous growth model's effect of taxes on economic activities, governments in the Sub-Saharan Africa Countries stand to derive enormous tax productivity.

Empirical Review

There are different views on the relationship between Company Income Tax and economic development in Sub-Saharan Africa Countries. Some are of the opinion that company Income Tax has a positive and significant effect on economic development while others have different view. Chibu and Njoku (2015), Tosun and Abiazadal (2005), Adegbei and Fakile (2011) and Ojong, Anthony and Arikpo (2016) found out in their studies that Company Income Tax have significant impact on economic development. The outcome of their studies provides encouragement to Africa countries to exploit the tax productivity option in Company Income Tax in order to enhance economic development and human development index.

On the other hand, Festus and Samuel (2007), Skinner (1987) and Xing (2012), found that Company Income Tax does not have significant relationship with economic development

but concluded that serious effort could be taken to increase the tax productivity in Company Income Tax in order to induce economic growth in SSA and improve human development index.

Many studies have examined the effect of tax productivity on economic development in Sub-Saharan Africa Countries. One of such studies is that of Johansen (2008) who carried out a study titled *Tax and Economic Growth*. He made use of secondary data and adopted the ordinary least square to analyze the data. He found out that corporate taxes are harmful to growth. This is followed by individual income tax and consumption taxes.

Lee and Gordon (2005) carried out a study on the impact of corporate taxes on the growth of the economy. They made use of cross-country data in the United State covering a period of 1970 to 1997 to ascertain the effect of tax policies on a country's economic growth and concluded that increases in corporate taxes have an adverse effect on economic growth.

Chigbu and Njoku (2015) examined the impact of taxation on the Nigerian economy from 1994-2012. The regression analysis revealed that a significant relationship existed between the explanatory variables Custom and Excise Duties, Company Income Tax, Petroleum Profit Tax, and the dependent variable: Gross Domestic Product and unemployment. In the same vein, Okafor (2012) researched Tax Revenue Generation and Nigerian Economic Development. He obtained secondary data from 1981-2007 and adopted multiple regression analysis to ascertain the relationship between Nigeria's economic growth and major components of tax revenue comprising of petroleum tax, company tax revenue, Value Added Tax, Custom and Excise duties revenue. The results showed a favorable relationship between customs and excise duties and GDP and an insignificant relationship between company income tax and GDP.

Anyanwu (1997) investigated the effects of taxes on economic growth in Nigeria covering a period of 1981-1996. The data were analyzed using simple linear regression techniques which revealed that customs and excise duties favorably affect GDP as well as company income tax.

Adegbie and Fakile (2011) x-rayed the relationship between company income tax and Nigeria's economic development covering the period of 1981 to 2007. They used GDP to proxy Nigerian Economy and it was used to measure annual tax revenue from company income tax for the relevant period. The data were subjected to both chi-square and multiple linear regression analysis. The results showed that the company income tax's impact on GDP was very impressive.

Festus and Samuel (2007) investigated the relationship between company income tax and Nigerian economic development; the result showed that the relationship between income tax revenue and economic development in Nigeria was not impressive. In a similar development, Ojong, Anthony and Arikpo (2016) examined the relationship between tax

revenue and economic growth in Nigeria spanning from 1986 to 2010 using ordinary least square regression analysis and the findings revealed an impressive relationship from the company's income tax and economic growth. In the same vein, Tosun and Abizadel (2005) undertook a study of the relationship between tax policies and economic growth in 21 member nations of the (OECD) covering a period of 1980 to 1999 and adopted random effect model (REM) the outcome of the analysis revealed a pleasant relationship between taxes and economic growth highlighting significant results on personal and corporate tax.

Ramat and Ichihashi (2012) carried out a study titled the effect of tax structure and development and income inequality. He made use of panel data from 1970-2006 which was analyzed using regression analyses. The findings showed that company income tax rates had a negative effect on development and income inequality.

Skinner (1987) carried out a study titled taxation and growth in Sub-Saharan Africa countries. He made use of panel data covering a period of 1965 to 1982, which was analyzed through regression and he found out that corporate tax and personal income tax affect output negatively while sales tax, import, and export taxes slightly affect output.

Widmalm (2001) carried out a study to find out the effect of tax structure on output. He obtained data from 23 countries which he analyzed using linear regression analysis. It was discovered that corporate tax affects output, unlike personal income tax. Similarly, Xing (2012) examined the effect of tax structure on growth; he obtained data from OECD countries which was analyzed through the error correction model. He found out that corporate tax, consumption tax, and personal income tax are associated with lower per capita in the long run.

Methodology

Research Design

The study adopted the ex post facto research design because the researcher intended to determine the cause and effect relationship between the dependent and the independent variable using the data that already existed and the researcher made no attempt to change its nature and values.

Area of the study

The study was conducted using the three largest and developed economies in Sub-Saharan Africa; Nigeria and South Africa and Kenya and largest in terms of their gross domestic product and development in terms of their financial system and tax system (all the countries operate direct and indirect tax system and have the highest tax productivity).

Sources of Data

The study used time series data which are predominantly secondary and extracted from secondary sources. The data for variables were sourced from Nigeria- Federal Bureau of Statistics, Central Bank Metadata and Federal Inland Revenue Service, Kenya data were

sourced from the Kenya Revenue Authority, KRS and Organization for Economic Co-operation and Development (OECD Statistics). The data from South Africa relied on the South Africa Revenue Service (SARS). The data sourced covered twenty-four years between 1995 and 2018. The study relied on data from such official sources for accuracy and standardization.

Method of Data Analysis

The study adopted multiple regression analysis to analyse the data. Augmented Dickey-fuler unit root test was used for stationarity test of the data. Johansen Co-integration test was also used to test the long run relationship of the variables.

Model Specification

The following is the model specification. The human development index was proxy by the components of human development; health service development, educational sector development and income per capita were used to evaluate the economic development as it depicted the level of development in each country while the independent variable was the value added tax capital gain tax in each country and the model is as specified below.

Human Development Index (HDI) is the dependent variable represented by (Y).

Tax productivity is the independent variable represented by (X^1), company income tax.

Hence

$Y = f(X^1)$ ……. Model (1)

Transforming the model to its simple linear form

$Y = \beta_0 + \beta_{x1} + e$ ……... Equation (1)

Where:

Y	=	Human Development Index (HDI)
β_0	=	Constant
β_{x1}	=	Co-efficient of independent variable, Tax Productivity is measured by Company Income Tax
e	=	Error term

Presentation of Data

The study investigated the effect of Company Income Tax productivity on economic development in Nigeria, Kenya and South Africa, from 1995 to 2018. Being that the study's data were a time-series data, we conducted several diagnostic tests such as unit root test (using Augmented Dickey-Fuller (ADF) tests to check the stationarity of our variables) and co-integration test to check for the long-run relationship of our variables. The correlation matrix was employed alongside the panel regression to investigate these tax productivity strategies, using error correction model (ECM). Added to the above, the variables for this study include Economic Development, proxy as Human Development

Index (HDI) as dependent variable while independent variable is tax productivity measured as Company Income Tax.

Diagnostic Test to Check for Stationarity of Variables

Augmented Dickey-Fuller (ADF) test was employed to test the stationarity of the variables under study. The ADF tests were on level series, first difference and second difference series. The decision rule is to reject stationarity if ADF statistics are less than the values of critical values at 1%, 5%, and 10 %, otherwise, accept stationarity when ADF statistics is greater than the critical values of 1%, 5% and 10% in absolute terms. The result of the ADF is presented below in Table 1 (see appendix 2 for a detailed result).

Table 1: Unit Root Test of Data Collected from Nigeria Economy

Variables	T-Statistic Value	Critical Value	Order of Integration	Sig. Level
LHDI	-3.718	-3.000	1(2)	5%
LCIT	-3.249	-3000	1(1)	5%

Source: Researcher's computation (2019)

Note that the decision rule is to reject stationarity if ADF statistics is less than the critical values at 1%, 5%, and 10% values, and accept stationarity when ADF statistics is greater, the table 1 above revealed that Company Income Tax assume stationarity at first difference except for human development index variable (HDI) that assume stationary at second difference.

Co-integration Analysis to check for Long-Run Relationship

The unit root test in above 1 showed that all the variables assume stationarity at different integration orders, hence, we moved further to check for the existence of a long-run relationship in our variables using co-integration test. The essence is to establish whether the variables have a long-run relationship among them or assume equilibrium among them. For this purpose, we used the Johansen co-integration method and the trace maximum Eigen-value co-integration rank is presented in Table 2.

Table 2: Johansen Co-integration Result using Nigerian Data

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.960887	194.2167	95.75366	0.0000
At most 1 *	0.893945	116.4255	69.81889	0.0000
At most 2 *	0.704397	62.57436	47.85613	0.0012
At most 3 *	0.616399	33.32462	29.79707	0.0188
At most 4	0.335435	10.32899	15.49471	0.2563
At most 5	0.021517	0.522048	3.841466	0.4700

Trace test indicates 4 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.960887	77.79121	40.07757	0.0000
At most 1 *	0.893945	53.85112	33.87687	0.0001
At most 2 *	0.704397	29.24975	27.58434	0.0303
At most 3 *	0.616399	22.99563	21.13162	0.0270
At most 4	0.335435	9.806938	14.26460	0.2249
At most 5	0.021517	0.522048	3.841466	0.4700

Max-eigenvalue test indicates 4 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level

Source: Researcher's computation (2019), using Eview9.0. Software

Table 2 showed that trace statistics and maximum Eigen-value have at most three (3) co-integration equations respectively. This shows that a long-run relationship exists between the variables. That is, the linear combination of these variables cancels out the stochastic trend in the series. This will prevent the generation of spurious regression results. Hence, the implication of this result showed a long-run relationship exists between the study's dependent and explanatory variables used in the model.

Test of Hypothesis Formulated Using Nigeria Data

$HDI = \beta_0 + \beta_1 CIT + e$ ……*Equation* (1)

Decision Rule:

Accept H0 if P-value is more than a 5% level of significance, otherwise, reject H0.

Testing of Hypothesis Formulated for Nigeria Economy

In other to examine the impact relationships between the dependent variable HDI and the independent variable to also test the formulated hypotheses given, the study used a panel multiple regression analysis, using Error Correction Model (ECM) estimation method, owing to the fact that the data is a time series (1995-2018) data and the result of our analysis is presented in Table 3.

Table 3: HDI Panel Regression Result for Nigeria Data

Sample 1995 2018
Included observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.095817	0.056741	-1.688664	0.1151
DLHDI(-1)	0.670056	0.287804	2.328167	0.0367
DLCIT(-1)	0.196452	0.077279	2.542123	0.0246
ECM(-1)	-0.812666	0.309403	-2.626563	0.0209

R-squared	0.907445	Mean dependent var	0.006818
Adjusted R-squared	0.836249	S.D. dependent var	0.349943
S.E. of regression	0.141609	Akaike info criterion	-0.767934
Sum squared resid	0.260690	Schwarz criterion	-0.227993
Log likelihood	20.21521	Hannan-Quinn criter.	-0.624687
F-statistic	12.74568	Durbin-Watson stat	1.556114
Prob(F-statistic)	0.000036		

Source: Researchers summary of Nigeria Economic Data analysis (2019) from E-view 9.0 statistical package.

Table 3 above presented the panel regression result obtained in investigating the effect of tax productivity on economic development in Nigeria, the dependent variable is economic development measured as human development index (HDI) and the independent variables Company Income Tax. From the table 3, the coefficient of determination (R-Squared) and Adjusted R-Squared are found to be 0.907445 and 0.836249 respectively. This implies that the explanatory powers of the variables are high. That the explanatory variables used for this study jointly explain about 91% of the systematic variations in economic development, proxy as human development index (HDI) of our study.

F- Statistics Result: F-test is applied to check the overall significance of the model. It shows the goodness of fit of the specified model of a study. In table 3 above, the F-statistics value stood at 12.74568 and the P-value stood at 0.00. This shows that our model is generally significant and well specified and significant at 5% level.

Test of Autocorrelation: Using Durbin Watson (DW) statistics which we obtained from our regression result in table 3, it is observed that the DW statistic is 1.556114 which is approximately 2, agrees with the Durbin Watson rule of thumb. Showing that our data is

free from autocorrelation problems and as such fit for the regression result to be interpreted and result relied on. Akaike Info Criterion and Schwarz Criterion which are -0.767934 and -0.227993 respectively further strengthen the fitness of our regression result for reliability as they confirm the goodness of fit of the model specified.

Error Correction Model (ECM): Based on the negative value of -0.812666 and the p-value of 0.02, it shows that the model used in this study is well specified and the regression result could be relied on and interpreted. ECM measures the speed at which the dependent variable can come back to its equilibrium in the long run. Table 3 above, therefore, showing ECM value of -0.812666 is an indication that it will take our dependent variable which is human development index (HDI) the speed of about 81% to bounce back to equilibrium position on the long run. This implies that the speed of adjustment indicates that about 81% of the previous year's shocks adjust to equilibrium in the current year. In addition to the above, the specific finding for each explanatory variables of our model is provided as follows:

Company Income Tax (CIT) at lag one, based on the positive value of coefficient of 0.196452 and p-value of 0.02, was found to have a positive influence on the human development index and this influence is statistically significant at 5% level since the p-value is less than 0.05. This result suggests that we should reject our null hypothesis (HO_1) which states that company income tax (CIT) has no significant effect on economic development in Nigeria, to accept the alternative hypothesis. This result is an indication that in the short run, CIT does not significantly influence HDI but in the long run. The result showed that a 1% increase in CIT revenue collected by the government, during the year under study, can lead to about 0.196452(20%) increase in human development index (HDI) in Nigeria, though in the long-run. This result is consistent with the findings of Chigbu and Njoku (2015).

South Africa Data

Table 4: Unit Root Test of Data Collected from South Africa Economy

Variables	T-Statistic Value	Critical Value	Order of Integration	Sig. Level
LHDI	-4.404	-3.000	I(2)	5%
CIT	-3.547	-3.000	I(1)	5%

Source: Researcher's computation (2019)

Note that the decision rule is to reject stationarity if ADF statistics is less than the critical values at 1%, 5% or 10% values, and accept stationary when ADF statistics is greater, the table above reveals that Company Income Tax assume stationarity at first difference except for human development index variable(LHDI) that assume stationarity at second difference.

Co-integration Analysis to check for Long-Run Relationship

The unit root test in 4 above showed that all the variables assume stationary at different integration order, hence, we moved further to check for the existence of a long-run relationship in our variables using co-integration test. The essence is to establish whether the variables have a long-run relationship among them or assume equilibrium among them. For this purpose, we used the Johansen co-integration method and the trace and maximum Eigen-value co-integration rank are presented in Table 5.

Table 5: Johansen Co-integration Result for South Africa

Series: LHDI LCIT
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.977741	212.0865	95.75366	0.0000
At most 1 *	0.895051	120.7658	69.81889	0.0000
At most 2 *	0.756537	66.66310	47.85613	0.0004
At most 3 *	0.540350	32.75612	29.79707	0.0222
At most 4	0.426631	14.10115	15.49471	0.0802
At most 5	0.030837	0.751749	3.841466	0.3859

Trace test indicates 4 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.977741	91.32064	40.07757	0.0000
At most 1 *	0.895051	54.10274	33.87687	0.0001
At most 2 *	0.756537	33.90698	27.58434	0.0067
At most 3	0.540350	18.65497	21.13162	0.1073
At most 4	0.426631	13.34940	14.26460	0.0694
At most 5	0.030837	0.751749	3.841466	0.3859

Max-eigenvalue test indicates 3 co-integrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level

Source: Researcher's computation (2019), using Eview9.0. Software

Table 6 showed that trace statistics and maximum Eigen-value have at most three (3) and two (2) co-integration equations respectively. This shows that a long-run relationship exists between the variables. That is, the linear combination of these variables cancels out the stochastic trend in the series. This will prevent the generation of spurious regression results. Hence, the implication of this result shows a long-run relationship exists between our dependent and explanatory variables used in the model.

Table 6: HDI Panel Regression Result for South Africa Data

Sample 1995 2018

Included observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.000576	0.002785	-0.206997	0.8388
DLCIT	-0.029151	0.012914	-2.257402	0.0393
ECM(-1)	-0.187676	0.093931	-1.998028	0.0642
DCIT(-1)	0.007604	0.009677	0.785766	0.4442
R-squared	0.744751	Mean dependent var		0.002360
Adjusted R-squared	0.608618	S.D. dependent var		0.009593
S.E. of regression	0.006001	Akaike info criterion		-7.113712
Sum squared resid	0.000540	Schwarz criterion		-6.671941
Log likelihood	94.36454	Hannan-Quinn criter.		-6.996510
F-statistic	5.470770	Durbin-Watson stat		2.257946
Prob(F-statistic)	0.002352			

Source: Researchers summary of South Africa Economic Data analysis (2019) from E-view 9.0 statistical package.

Test of Hypotheses Formulated Using South Africa Data

$HDI = \beta_0 + \beta_1 CIT + e$ …… *Equation (2)*

Decision Rule:

Accept H0 if P-value is more than a 5% level of significance, otherwise, reject H0.

Testing of Hypotheses Formulated for South Africa Economy

In other to examine the impact relationships between the dependent variable HDI and the independent variable (CIT) and to also test the formulated hypotheses given, the study used

a panel multiple regression analysis, using Error Correction Model (ECM) estimation method, owing to the fact that the data is a time series (1995-2018) data and the result of the study's analysis is presented in Table 6.

Table 6 presented the panel regression parsimonious result obtained in investigating the effect of Company Income Tax productivity on economic development in South Africa, the dependent variable is economic development measured as human development index (HDI) and the independent variable (CIT). From the table 6, the coefficient of determination (R-Squared) and Adjusted R-Squared are found to be 0.744751 and 0.608616 respectively. This implies that the explanatory powers of the variables are high. That the explanatory variables used for this study jointly explain about 74% of the systematic variations in economic development, proxy as human development index (HDI) in South Africa.

F- Statistics Result: F-test is applied to check the overall significance of the model. It shows the goodness of fit of the specified model of a study. In table 6 above, the F-statistics value stood at 5.470770 and the P-value stood at 0.00. This shows that our model is generally significant and well specified and significant at 5% level.

Test of Autocorrelation: Using Durbin Watson (DW) statistics which we obtained from our regression result in Table 6, it is observed that the DW statistic is 2.257946 which is approximately 2, agrees with the Durbin Watson rule of thumb. Showing that our data is free from autocorrelation problems and as such fit for the regression result to be interpreted and result relied on. Akaike Info Criterion and Schwarz Criterion which are -7.113712 and -6.671941 respectively further strengthen the fitness of our regression result for reliability as they confirm the goodness of fit of the model specified.

Error Correction Model (ECM): Based on the negative value of -0.187676 and the p-value of 0.06, it shows that the model used in this study is well specified and the regression result could be relied on and interpreted. ECM measures the speed at which the dependent variable can come back to its equilibrium in the long run. Table 6 above, therefore, showing ECM value of -0.187676 is an indication that it will take our dependent variable which is human development index(HDI) the speed of about 19% to bounce back to equilibrium position on the long run whenever there is a shock in the economy. This implies that the speed of adjustment indicates that about 19% of the previous year's shocks adjust to equilibrium in the current year. In addition to the above, the specific finding for each explanatory variables of our model is provided as follows:

Company Income Tax (CIT): Based on the negative value of coefficient of -0.029151 and p-value of 0.04, was found to have a negative influence on human development index and this influence is statistically significant at 5% level since the p-value is less than 0.05 but have a negatively significant effect on human development index in South Africa. This result suggests that we should reject our null hypothesis (HO_1) which states that company income tax (CIT) has no significant effect on economic development in South Africa, to

accept the alternative hypothesis. This result is consistent with the findings of Chigbu and Njoku (2015).

Analysis of Kenya Data

Diagnostic Test to Check for Stationary

Augmented Dickey-Fuller (ADF) test was employed to test the stationarity of the variables under study. The ADF tests were on level series, first difference and second difference series. The decision rule is to reject stationary if ADF statistics are less than the values of critical values at 1%, 5%, and 10 %, otherwise, accept stationarity when ADF statistics is greater than the critical values of 1%, 5% and 10% in absolute terms. The result of the ADF is presented below in Table 7.

Table 7: Unit Root Test of Data Collected from Kenya Economy

Variables	T-Statistic Value	Critical Value	Order of Integration	Sig. Level
LHDI	-4.198	-3.000	I(2)	5%
LCIT	-6.449	-3.000	I(2)	5%

Source: Researcher's computation (2019)

Note that the decision rule is to reject stationarity if ADF statistics is less than the critical values at 1%, 5% or 10% values, and accept stationarity when ADF statistics is greater, the table above reveals that all the variables (human development index (HDI), and Company Income (CIT) Tax assume stationarity at second difference in Kenya.

Co-integration Analysis to check for Long-Run Relationship

The unit root test in the foregoing Table 7 above showed that all the variables assume stationary at the same integration order, hence, we moved further to check for the existence of a long-run relationship in our variables using co-integration test. The essence is to establish whether the variables have a long-run relationship among them or assume equilibrium among them. For this purpose, we used the Johansen co-integration method and the trace and maximum Eigen value co-integration rank are presented in Table 8.

Table 8: Johansen System Co-integration Result for Kenya

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.958731	158.7063	95.75366	0.0000
At most 1 *	0.769383	82.20272	69.81889	0.0037
At most 2	0.533167	46.99478	47.85613	0.0601
At most 3	0.469831	28.71195	29.79707	0.0663
At most 4	0.418156	13.48253	15.49471	0.0983
At most 5	0.020017	0.485276	3.841466	0.4860

Trace test indicates 2 co-integrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Co-integration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.958731	76.50357	40.07757	0.0000
At most 1 *	0.769383	35.20794	33.87687	0.0345
At most 2	0.533167	18.28282	27.58434	0.4717
At most 3	0.469831	15.22943	21.13162	0.2731
At most 4	0.418156	12.99725	14.26460	0.0785
At most 5	0.020017	0.485276	3.841466	0.4860

Max-eigenvalue test indicates 2 co-integrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level

Source: Researcher's computation (2019), using Eview9.0. Software

Table 9: HDI Panel Regression Result for Kenya Data

Included observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.000503	0.002170	0.231781	0.8198
DLHDI(-1)	1.032331	0.214189	4.819710	0.0002
DLCIT	-0.024002	0.020895	-1.148729	0.2687
ECM(-1)	-0.378541	0.175782	-2.153472	0.0480

R-squared	0.771437	Mean dependent var	0.007294
Adjusted R-squared	0.649536	S.D. dependent var	0.011957
S.E. of regression	0.007079	Akaike info criterion	-6.783419
Sum squared resid	0.000752	Schwarz criterion	-6.341649
Log likelihood	90.40103	Hannan-Quinn criter.	-6.666217
F-statistic	6.328420	Durbin-Watson stat	1.852207
Prob(F-statistic)	0.001123		

Source: Researchers summary of South Africa Economic Data analysis (2019) from E-view 9.0 statistical package.

Test of Hypothesis Formulated Using Kenya Data

$HDI = \beta_0 + \beta_1 CIT + e$ ……*Equation (3)*

Decision Rule:

Accept H_0 if P-value is more than a 5% level of significance, otherwise, reject H0.

Testing of Hypotheses Formulated for Kenya Economy Using Kenya Data.

In order to examine the impact relationships between the dependent variable HDI and the independent variable (Company Income Tax) and to also test the formulated hypotheses given, the study used a panel multiple regression analysis, using Error Correction Model (ECM) estimation method, owing to the fact that the data is a time series (1995-2018) data and the result of our analysis is presented below.

Table 8 shows that trace statistics and maximum Eigen-value have at most one (1) co-integration equations respectively. This shows that a long-run relationship exists between the variables. That is, the linear combination of these variables cancels out the stochastic trend in the series. This will prevent the generation of spurious regression results. Hence, the implication of this result shows a long-run relationship exists between our dependent and explanatory variables used in the model.

Table 8 above presents the panel regression parsimonious result obtained in investigating the effect of tax productivity on economic development in Kenya, the dependent variable is economic development measured as human development index (HDI) and the independent variable (CIT). From the table, the coefficient of determination (R-Squared) and Adjusted R-Squared are found to be 0.771437 and 0.649536 respectively. This implies that the explanatory powers of the variables are high. That the explanatory variables used for this study jointly explain about 77% of the systematic variations in economic development, proxy as human development index (HDI) in Kenya.

F- Statistics Result: F-test is applied to check the overall significance of the model. It shows the goodness of fit of the specified model of a study. In table 8 above, the F-statistics value stood at 6.328420 and the P-value stood at 0.00. This shows that our model is generally significant and well specified and significant at 5% level.

Test of Autocorrelation: Using Durbin Watson (DW) statistics which we obtained from our regression result in table 8, it is observed that the DW statistic is 1.852207 which is approximately 2, agrees with the Durbin Watson rule of thumb. Showing that our data is free from autocorrelation problems and as such fit for the regression result to be interpreted and result relied on. Akaike Info Criterion and Schwarz Criterion which are -6.783419 and -6.341649 respectively further strengthen the fitness of our regression result for reliability as they confirm the goodness of fit of the model specified.

Error Correction Model (ECM): Based on the negative value of -0.378541 and the p-value of 0.05, it shows that the model used in this study is well specified and the regression

result could be relied on and interpreted. ECM measures the speed at which the dependent variable can come back to its equilibrium in the long run. Table 9 above, therefore, showing ECM value of -0.378541 is an indication that it will take our dependent variable which is human development index (HDI) the speed of about 38% to bounce back to equilibrium position on the long run whenever there is a shock in the economy. This implies that the speed of adjustment indicates that about 38% of the previous year's shocks adjust to equilibrium in the current year. In addition to the above, the specific finding for each explanatory variables of our model is provided as follows:

Company Income Tax (CIT): Based on the negative value of coefficient of -0.024002 and p-value of 0.27, was found to have a negative influence on human development index and this influence is statistically not significant since the p-value is more than 0.05 and does not have an effect on HDI in Kenya economy. This result suggests that we should accept our null hypothesis (HO_1) which states that Company Income Tax (CIT) has no significant effect on economic development in Kenya, to reject the alternative hypothesis. This result is consistent with the findings of Festus and Samuel (2009). This result is an indication that on the short run, CIT does not significantly influence human development index in Kenya's Economy, therefore can be ignored by managements that are planning to boost their economic development through the use of company income tax (CIT) strategy since it has no significant effect on economic development of the country.

Conclusion

The study examined the effect of Company Income Tax productivity on economic development of three Sub-Saharan Africa countries of Nigeria, South Africa and Kenya by using a dataset which covered a period of twenty-four years from 1995 to 2018. Based on findings, the study concluded that company income tax productivity has positive significant effects on human development index in Nigeria and negative significant effects on human development index in South Africa while it has negative insignificant effects on human development index in Kenya.

Recommendation

Based on findings above, the study recommends that the Nigerian government should grow their economic development through tax productivity by increasing company income tax (CIT) as it is positively significant for human development index. However, South Africa and Kenya governments should not think of increasing company income tax as this was found to have an inverse relationship with human development index.

References

Adegbie F.F. & Fakite A.S. (2011). Company Income tax and Nigeria economic development. *European Journal of Social Sciences* 22(2); 309-320.

Andre, G. (2017). Impact of taxation on growth in Sub-Sahara Africa New evidence based on *Dalaset International Journal of Economics and Finance*. 9(11).

Anyanwu, J.C. (1997). Monetary economics: Theory, Policy and Institutions Hybrid Publishers Onitsha.

Appah, E. (2010). The problem of tax planning and administration in Nigeria. The Federal and State government experience Int. Journal Lab. Organ Psychel 4(1-2); 1-14.

Ariyo, A. & Raheen, M.I. (1990). Deficit Financing Empirical Perceptive from Nigeria Final Report Presented to the African Economic Research Consortium. Abijan December.

Barro, R.J. (1990). Government Spending in a simple model of endogenous growth. *Journal of Political Economy* 98(55); 103-125.

Chamley, C. (1986). Optimal taxation of capital income in general equilibrium with infinite lives. *Econometrical Journal of the Econometric Society* 607-622.

Chartered Institute of Taxation of Nigeria (CITN) (2002). Nigeria Tax Guide and Statutes CITN Publications.

Chigbu, E. E., & Njoku, C. O. (2015). Taxation and the Nigerian economy: (1994-2012).

Management Studies and Economic Systems (MSES), 2(2); 111-128.

Company Income Tax Act (1990) as amended CITA CAP AP21 2004.

Eugen, E. & Skinner, J. (1996) Taxation and Economic Growth. *National Tax Journal,* 49(4); 617-642.

Festus, A.F & Samuel, K. (2007). Company income tax and Nigerian economic development. *European Journal of Social Sciences* 22(2); 2011.

Institute of Chartered Accountants of Nigeria ICAN (2006) Tax Management and Fiscal Policy in Nigeria VI Publishing hd. 1st Edition 46.50.

International Monetary Fund (IMF) (2016). World economic outlook update. Accessed from www.imf.org>external>pubs>web>2016update on the 14/12/2019.

International Monetary Fund (IMF) (2008). Annual report accessed from www.imf.org>imf>external>pubs>2008>eng>pdf>-ar08_eng on the 12/12/2019.

Johanson, E. (2008). "Tax and economic growth" Economic Department working Paper 620.

Judd, K.L. (1985). Redistributive taxation in a simple perfect model. *Journal of Public Economics* 28(1); 59-83.

Kindleberger, C.P. & Herrick, B. (1958). Economic development 3rd edition New York McGraw – Hill.

Lee, Y. & Gordon, R. (2005). Tax structure and economic growth. *Journal of Public Economic* 89(1); 1027-1043.

Nzekwe, E.C. (1991). An empirical review of Nigeria's tax system and administration. A Paper presented at a National Workshop on Tax Structure and Administration in Nigeria.

Nzotta, S. M. (2000). Tax evasion problems in Nigeria: A critique Nigeria account 12(1); 40-43

Ojong, M. M. & Arikpo, A.G. (2016). The impact of tax revenue on economic growth. Evidence from Nigeria JORS *Journal of economic and finance.*

Okafor, R.G. (2012) Tax revenue generation and Nigerian Economic Development. *European Journal of Business and Management* 4; 19-49.

Ola, C.S. (2001). Income tax law and practice in Nigeria. Hemman Educational Book Nig. Plc Ibadan

Ramat, I. & Ichihashi, R. (2012). The effects of tax structure on economic growth and income inequality. *Asian Journal of Research in Banking and Finance* 25(76); 217-233.

Sanni, A.U. (2007). Tax reform in the capital market. A Welcome Development Seminar Paper Ogun State Internal Revenue Service Seminar.

Skinner, J. (1987). Taxation and output growth: Evidence from African countries. NBER Working Paper 2335.

Tosun, M.S. & Abiazadal, S. (2005). Economics growth and tax components: An analysis of tax changes in OECD *Journal of Applied Economics* 37; 2251-2263.

Wildmalm, B. (2001). *Tax structure and economic growth are some taxes better than others? Public choice,* 107/3-4; 199-219.

World Bank Development Report (2018). Accessed from https://www.worldbank-org/en/.../wdr2018/brief/world-development-report-2018 on the 08/07/2019.

Xing, J. (2012). Tax structure and growth. How robust is the empirical evidence? Economic letters 117(3); 397-382. https/dos.org/10.101615econlet2.201205.05.

Zipfed, F. & Heinrichs, C. (2012). The impact of tax system on economic growth in Europe: An overview Deutsche Bank Research