THE IMPACT OF TAXATION ON ECONOMIC GROWTH OF LIBERIA

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Abstract: **The study examined the impact of taxation on economic growth in Liberia from 1997 to 2023. The study used yearly data generated from the World Bank Development Indicator Data Based. Yearly data on variables such as Gross Domestic Product, Foreign Direct Investment, Consumers price indexes, tax revenue, Employment Rate, and Government Expenditure covering the period from 1997 to 2022 were sourced from the World Development Indicators (WDI) of the World Bank, 2022 edition. Data collected were analyzed using empirical econometrics technique of the Augmented Dickey-Fuller test (ADF) and Phillip-Perron unit root test results showed that all the variables are co-integrated to the first order and vector error correction Model. The study found that the coefficients of foreign Direct investment ($\beta 1 = 0.161.; < 0.05$); positive and statistically significant effect on foreign Direct investment in Liberia, on the other hand, consumer price indexes ($\beta 2 = -0.036; p < 0.05$) has a negative implication on economic growth; government expenditure ($\beta 3 = -0.179; p < 0.05$) and log tax revenue ($\beta 4 = 0.232; p < 0.05$) has positive and significant effect on economic integration in the Liberian economy. The result implies that a unit increase in tax revenue will lead to 0.23% increase of the economic integration in Liberia. The study concluded that those variables play an important role in promoting economic integration in Liberia.**

Keywords: **Gross Domestic Product, Foreign Direct Investment, Tax Revenue, Government Expenditure.**

1. INTRODUCTION

Background of the Study

Taxation is intended to raise funds for public expenditure, to redistribute income, to stabilize the economy, to influence the allocation of resources, while at the same time should be supportive to economic growth. Taxation is a central means for countries to produce public money, which allows them to fund investment in human resources, infrastructure, and the provision of services to citizens and enterprises. Taxation is primarily about raising revenue for public purposes. The extent to which taxation stimulates economic performance in an economy is of importance Kadenge (2021).

These objectives can sometimes be long time, such as maintainable growth and development, or short term such as the stabilization of economy in response to sudden and unpredictable events". Economic growth is the change in the quantity of goods and services produced in a country from one year to the next. The efficiency of taxation and the way in which the tax system is design plays a vital role in achieving economic growth. Increase taxes can discourage investment rate, labor participation, productivity growth and distort efficient use of human capital. (Ojede & Yamarik,2012) noted that "taxes affect economic performance through their effect on work effort, savings, and investments (as cited by Kadenge,2021).

In most countries taxes serve as an important source of government revenue. Taxation is a mechanism for microeconomic and fiscal policy that involves the transfer of resources from the private sector to the public sector to achieve economic and social services (Egiyi, 2022). According to the Revenue code of Liberia 2000(as amended by the consolidated tax Amendments Act of 2011), a tax means: "any tax, tariff, duty, impost, or license or registration fee imposed by this code.

Tax policy and structure are key determinants in achieving economic development. Through taxation a sustainable and equitable economic progress is guarantee.

(Organization for Economic Cooperation and Development: (OECD, 2018) Governments can achieve tax and transfer policies for inclusive growth while also supporting the revenue- raising capacity of the tax system and ensuring the sustainability of public spending. Amplified inequality off course increases call to use the tax system to withstand policies to decrease income and wealth inequality, which also creates efficiency trade- offs.

In addition to providing social amenities to citizens, taxation also has objectives that are economic, social and political in nature, such as: promoting the growth and reconstructing of essential sectors, industries and enterprises; to address inflationary and deflationary trends in the economy; and to address balance of trade." Tax is a major player in every society of the world" (Egiyi, 2018). The administration of tax in every society plays an important role in how individuals and corporations will cooperate and pay fair taxes, establishing a tax system that is well structured and effective will benefit society in the long run. According to Bartik ,1994"The impact of taxes on local economies, when public services are held constant, will be greater than when public services are allowed to vary". (Bartik ,1994)

The Liberia Revenue Authority (LRA) is in charge of administering revenues in Liberia (World Bank, 2019). As observed by Musgrave (1997), every country imposes taxes on citizens and institutions with the aim of achieving long term objectives such as meeting development activities and promoting economic growth (Musgrave, 1997),

The emphasis of fiscal policy would be twofold – raising revenues though behind deficit at financeable level. In such a tight fiscal condition, the imperative is to protected equal or improved quality of public services by arranging and improving the structure of expenditure, enhancing efficiency, and expanding the resource envelope by stepping up the revenue mobilization efforts (World Bank, 2019, p. 4). The extent to which tax revenue stimulates economic performance in an economy especially developing nations has continued to attract empirical argument (Babatunde, Ibukun, & Oyeyemi, 2017).

The legitimacy of a government is defined by how taxes are collected and spent. Tax morale, or the extent to which people acknowledge a moral need to pay taxes as their contribution to society. Consequence, governments must endure to advance the design and management of their tax systems to maintain public trust (Egiyi, 2022). Taxes contribute to everyday public services and social programs. The collection of tax revenue is a key growth priority. Taxation is often a second best policy instrument in achieving inclusive policy design (Egiyi, 2022).
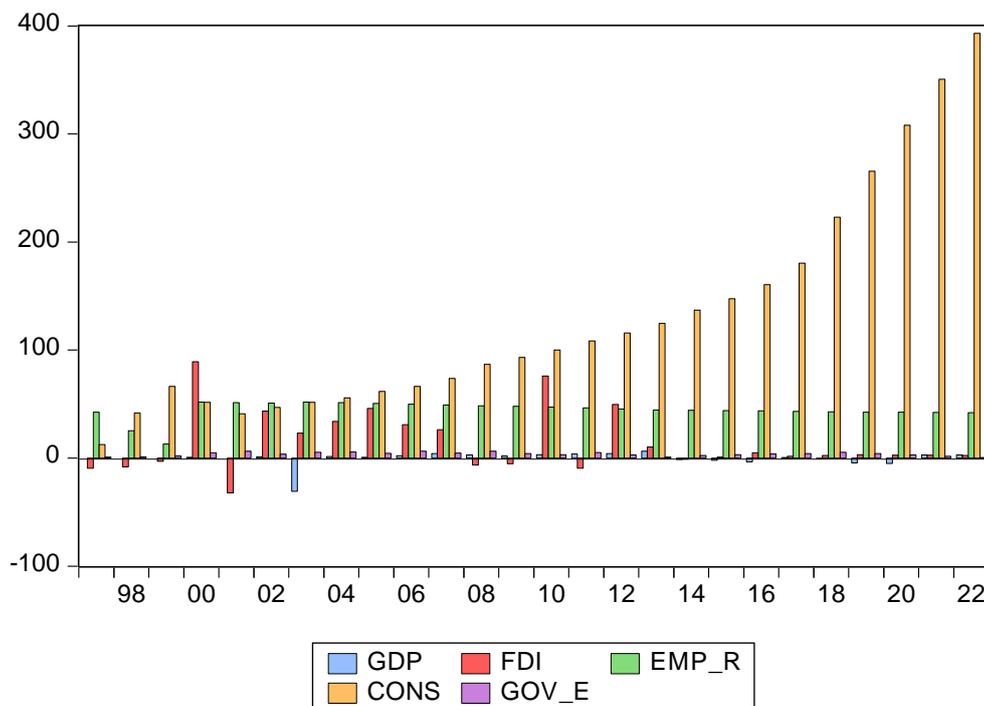
Statement of the Problem

Taxation is a major source of government revenue that is used to pay for government expenses and to promote economic growth in many countries. Regardless of the relatively rich natural resources base in iron ore, rubber, gold and a range of other minerals, and a large share of sectors. There are concerns whether or not taxation has stimulated economic growth in Liberia. Liberia collects minimal public revenues from these activities but depend largely on external grants to finance expenditures. Based on the World Bank assessment, Liberia is one of the eighty-one (81) countries in the world in which natural resources play a dominant social, economic and political role. Taxation should serve as a tool for regulating commerce and business to preserve social and economic stability. Effective taxation reduces excessive reliance on aid and offers a pathway from unsustainable revenue streams for economic performance, this leads to flourished economic growth. With this, it is therefore important that the relationship between taxation and economic growth be examined. The lack of a better and communicated tax administration, poor implementation of tax policy, monitoring or giving special attention to natural resources taxation are some of the problems that has led to lapses in the system, and thereby affecting the economy. This research therefore intends to assess the impact of taxation on the economic growth of Liberia.

Research Questions

The study aims at addressing the following questions:

i. Does taxation serve as a tool for Economic Growth in Liberia?

ii. Is there a well communicated and effective system of tax administration?

iii. Is there any contribution of tax to Gross Domestic Product(GDP) in Liberia?

Objectives of the Study

The objectives of this study are as follow:

i. To measure if taxation has contributed to the economic growth of Liberia.

ii. To examine the effectiveness of the tax administration in regulating and implementing tax policy.

iii. To examine if there is any contribution of tax to Gross Domestic Product in Liberia.

Significance of the Study

Examining how tax structures could be designed to promote economic growth is a key issue for tax policy making. Taxation is a function that is very essential and of great importance to any country. It does not only apply to generating revenues to defray Government expenditures but it also helps to boost the economy, this way the government will be able to invest in development, relieving to an extend poverty and delivering public services to its citizens. This study will contribute towards ascertaining how taxes have been raised to contribute to the economic growth of the country. Without adequate revenues the Government of Liberia (GOL) cannot invest in physical and social infrastructure required for sustainable development, which make this study significant in addressing governance issues in tax area and taking a look at the capacity building in tax administration and tax policy design. This study will also help citizens to understand how the tax system works and how it contributes to their well-being, this of course will motivate a more transparent and fair payment of taxes by taxable persons.

Delimitation of the Study

The study is regulated to evaluate the impact of taxation on the economic growth of Liberia, covering the period 1997-2022. Key reports on the economic performance as it relates to collection of tax revenue will be evaluated to assess the impact it has made on the economic performance of the country.

Definition of Key Terms

Taxation: It is the system or method where in government collect revenue to pay for its debt, implementing certain policies, paying for public services and welfare benefits.

Economic Growth: This describe an increase in the amount of goods and services produced by an economy or country in a financial year. It is measure as the percent rate of increase in the real gross domestic product.

Tax Administration: Tax administration is define based on two concept- first, as an organization that oversees the implementation and enforcement of tax legislation and regulations and second, as a process- that is, the administering or collection of taxes imposed in a jurisdiction.

Tax Policy: Tax policy refers to the procedures or rules developed by a government concerning how taxes are imposed, in what amounts, and on whom.

Liberia Revenue Authority: LRA is the body responsible for administering and enforcing the revenue laws for the purpose of evaluating, collecting and accounting for all national revenues and to facilitate legitimate international trade and customs border management enforcement in Liberia.

Organization of the Study

This work is organized into five main chapters. Chapter one highlights the background of the study, the statement of the problem, the research questions, the objectives of the study, significance of the study, delimitation of the study, definition of key terms and the organization of the study. The next chapter (chapter two) covers the review of related literature, it gives conceptual, theoretical and empirical review. Chapter three gives the methodology used to achieve the research objective. Chapter four covers the presentation of data and interpretation and chapter five, which is the last chapter, gives the summary, conclusion and recommendations.

2. LITERATURE REVIEW

Introduction

This chapter presents related review of the study presented by different researchers and authors. The literature covers a conceptual review, theoretical review and empirical review for the purpose of the study.

Conceptual Review

Taxation is intended to raise funds for public expenditure, to redistribute income, to stabilize the economy, to influence the allocation of resources, while at the same time should be supportive to economic growth. The process of growth is cumulative. Division of labor is made possible by accumulation of capital and expansion of market, increase national income and output, which in turn, facilitates saving and further investment. Taxes can affect the cost of producing goods and services, and so change the relative international competitiveness of some sectors, prompting structural changes.

There have been various studies conducted by different researchers, using different methodologies to determine whether a long run relationship exist between taxation and economic growth. The assessment of the impact taxation has on economic growth is of importance in many countries, as it establishes a relationship between the government and citizens in terms of formulation of tax policy, the tax system and the implementation of developmental agenda. Also productive government expenditure stimulates economic growth. Taxation is a system of compulsory contribution, it is the inherent power of the state to impose and demand contribution upon persons, businesses and properties for public purpose. The power to impose tax in any jurisdiction is legislative.

Taxation serves as a governmental assessment on physical assets, property value and on transactions. Simply stated, taxation is the power of the state to collect revenues for public purposes. Governments play a crucial role in the country's economy, seeking to maintain and promote stability in both real and monetary sides. The basis of stability is economic growth, which can be reflected by continues increase in total production in the economy. (Engen and Skinner,1996) points out that "tax policy does affect economic growth.

Taxation policy, has always been a crucial tool for increasing income, particularly in emerging nations where it is the primary source of domestic revenue. According to Joweria & John (2004), It is a necessary tool for achieving a proper pattern of resource allocation, income distribution, and economic stability so that the advantages of economic progress are dispersed fairly. The collection of taxes should not be one of immense burden on citizens or businesses, a tax system should be designed in such a manner that it encourages inclusiveness and growth. A report done by IMF, OECD, UN and World Bank, (2011) noted that "Taxation is integral to strengthening the effective functioning of the state and to the social contract between governments and citizens. If there is no significant influence of taxation on the growth of the economy, it will be difficult to implement developmental agenda and thus the government will rely heavily on external grants and aids to finance its activities.

Overview of Liberia's Tax System

The source of authority to impose taxes in Liberia is found in Article 34(d) (I) of the Liberian Constitution. Every tax imposition must have a legal basis so as to have a binding force, without an appropriate legal basis the tax purportedly imposed will be contested. Therefore, every tax is imposed pursuant to a relevant legal basis. The Revenue code of Liberia 2000(as amended by the consolidated Tax Amendments Act of 2011) governs taxation in the Republic of Liberia and it provides that, in the case of a conflict between the Revenue Code and any other legislation, the provisions of the Revenue Code should be applied for purposes of taxation.

Persons Regulated by Tax Legislation

A person under the Revenue Code of Liberia 2000(as amended by the consolidated Tax Amendments Act of 2011), means any legal person or any natural person. A nature person is an individual. A legal person refers to any person other than a natural person, and includes any legal entity created by the operation of law such as a government agency, partnership, corporation, trust, estate or similar legal person created under foreign.

Personal Income Tax

Personal Income Tax refers to taxes imposed on the salaries, wages, and allowances of employed resident persons in Liberia. An annual income tax is imposed on the annual taxable income of every natural person resident in Liberia and It is calculated using the graduated tax scale which ranges from 5% to 25% on taxpayer's taxable income.

Business Income Tax (Corporate income tax)

A corporate tax, also called company tax, is a direct tax imposed by a jurisdiction on the income or capital of corporations or legal entities. The corporation tax rate in Liberia is 25% for general companies and 30% for mining / petroleum companies.

Goods and Services Tax (GST)

GST is a value additional tax obligatory on most goods and facilities sold for domestic consumption. GST is pay by consumers, but it is remitted to the government or taxing authority by the businesses selling the goods or rendering the services. GST is levied at on every taxable supply by a registered manufacturer and every taxable import as specified by the Revenue Code. The rate of goods tax is 10%, except that if the supply is an export of goods, the rate of tax is zero (0) percent. The tax rate of services is 10%, however, an additional 5% surtax applies to telecommunication services which amount to the total of 15%.

Excise Tax

This is a levy on goods with heath, environmental or social effect. Excise tax is a commodity based tax imposed at the manufacture or production stage of excisable goods in Liberia, the importation of excisable goods onto Liberia and the provision of excisable services in Liberia. The essence of this imposition is to discourage the consumption of items that are health hazards, that create negative externalities and that generate environmental problems.

Taxation from Natural Resources

Income from natural resources are subject to tax under two broad headings: Mining and Petroleum. For mining projects, the tax rate is 30%. However, income from high yield mining project is subject to a surtax on taxable income as specified by the Revenue Code, and for Petroleum project the same tax rate is applied.

Tax Policy and Administration

For the proper functioning of the tax administration and compliance by tax subjects it is important to establish guidelines that govern the revenue collection process. Without a well-defined rule or guideline, to have an effective tax system is difficult. Tax policies are general statements of intention which guide the thinking and the action of all concerned towards the realization of the set goals with respect to taxation. Tax policy establishes a system of transparency, fairness and accountability. Tax Administration is the body responsible to oversee the tax collection process; in Liberia, LRA is responsible for such duty and is headed by the Commissioner General along with a seven (7) member deliberative body called the Board of Tax Appeals and other officials.

Tax Administration must develop a contemporary vision and communicate with taxpayers in an effective way about changes to significant policies or procedures and development. The responsibility of tax administration goes beyond just the collection of taxes to include: applying tax laws in a fair, trustworthy and transparent manner with all taxpayers, properly handling the appeals and complaints of tax subjects, provide the necessary assistance to taxpayers and a good relationship should be maintained between the tax administration and taxpayers. In every country Tax Administration implement and enforce tax laws and regulations, the case is the same in Liberia, LRA oversees all of the activities concern with tax laws and regulations.

The revenue code of Liberia provides notes on how taxes are to be collected, exempt persons, tax base and tax rate, however, there should be clearer explanation regarding some of the information provided by the code to be understandable by taxpayers even by those with average education.

Theoretical Review

The Benefit Received Theory

This is the theory that individuals should be taxed in proportion to the benefit they receive from the government and that taxes should be paid by those who receive the direct benefit of the government programs and projects out of the taxes paid. In accordance with Bhartia, (2009) members of the society are provided with some supplies and services by the state, and they pay a proportional share of the cost of these supplies in exchange for the benefits they receive. The Benefit received theory establishes the fact that there should be a medium of exchange between the government and taxpayers in terms of payment and benefit.

Expediency Theory

This theory is predicted on the relationship between tax liabilities and state activity (Anyanfo, 1996). It is assumed that the state should charge society's members for the services it provides. According to Bhatia,2009 taxation provides a powerful set of policy tools to the authorities and should be effectively used for remedying economic and social ills of the society such as income inequalities, regional disparities, unemployment, cyclical fluctuations and so on.

The Ability – to – pay Principle

This holds that taxes should correspond with the people's income or the ability to pay, that is, people with greater income or wealth and can afford to pay more taxes should be taxed at a higher rate than people with less wealth. This theory is assumed to be applied in the area of personal income tax.

Socio – Political View

According to this theory there are social and political factors that relate to taxation that should be considered. The socio-political theory proposed that a tax system should not be designed to benefit individuals, but rather to address society's problems as a whole.

Fiscal Exchange Theory

This theory was proposed by Buchanan J. M in 1976, in his study, taxation in fiscal exchange to prove that the two sides of fiscal account (taxes and expenditure) must be analyzed simultaneously. According to this theory government spending is a vital tool for motivation of compliance to pay taxes. The government can harness more revenue through its expenditure in providing goods and services that are required by citizens in an efficient and accessible form.

Economic Deterrence

Economic deterrence, coercion, is the focus of the classical tax evasion model (Allingham and Sandmo 1972), which assumes that the taxpayer's behavior is influenced by factors such as the tax rate determining and the benefits of evasion, and the probability of detection and penalties for fraud which determine the costs. The problem is as a consequence one of rational decision making uncertainty whereby tax evasion either pays off in terms of lower taxes or subjects one to sanctions. This indicates that, the discovery is likely and penalties are severe few people will evade taxes. In dissimilarity, under low audit probabilities and low penalties as actions taken against people, the expected return to evasion is high. The economic deterrence then predicts substantial noncompliance.

Political Legitimacy

One component of the literature review emphasizes that higher legitimacy for political institutions leads to higher tax compliance (Torgler and Schneider 2007). Tayler (2006: 376) argues that legitimacy makes "people feel that they ought to defer to decisions and rules, following them voluntarily out of obligation". According to this theory, tax compliance is positively related to perceptions about the government's, in particular the tax authority's trustworthiness (Tayler 2006; Kirchler et al. 2008)

Principles of a Tax System

According to Adam Smith, a tax system is said to be good when one or more of the following principles are present:

I) Certainty

This principle requires that the tax regime is as clear as possible to both taxpayers and tax administration as regards the tax object or subjects, the tax rate, time of payment; the taxable amount and etc. certainty will reduce the level of randomness and ambiguity in the interpretation and application of the tax rules

Economy

This principle of a good tax system focuses more on tax administration. It requires that the revenues to be generated from any tax regime should exceed the cost involved in administering tax. This will justify the efforts involved in the tax regime. It simply requires that taxes are administered at least costs. Where the costs involved in administering the tax exceeds the expected revenues to be generated, then, the efforts in the tax process will not worth the while.

II) Convenience

The principle of convenience requires that the methods, procedures and formalities involved in both tax administration and compliance process should not be burdensome. For instance, the mode, place, timing of the payment of the tax must be suitable to both the taxpayer and tax administration. In the case of tax administration, it must be easy to identify and locate the taxpayer as well as the subject or object of the tax. Similarly, taxpayers should be able to easily access the payment points to fulfill their tax obligations.

III) Efficiency

Also known as the principle of productivity, looks at the cost versus benefit analysis of tax compliance and tax administration. This principle of a tax system requires that the costs incurred by taxpayers in complying with their tax obligations should not be prohibitive. That is, costs of complying with the tax should not exceed the benefits so as to encourage voluntary tax compliance. Similarly, the costs incurred by tax administration in administering the tax should not be excessive in comparison with the revenues accruing there from, so as to justify the process.

IV) Equity

This is another major criterion by which tax systems are judged. It is a measure of the degree of fairness and justness of the tax system. It assesses the extent to which the taxes paid by taxpayers reflect their ability to pay such taxes. The canon of equity is important because the more taxpayers are convinced about the fairness of the tax system; the more compliant they are likely to be with the system; it is also important because it is often viewed as a tradeoff with efficiency with resulting implications for growth.

Empirical Review

Johansson et al. (2008) purported that the structure of the tax system can have an impact on GDP per capita by affecting the amount of hours worked in the economy (labour utilization), and the amount of output that is produced per hour (labour productivity) or both. However, it is generally difficult to assess the overall effect of a tax reform on output performance for several reason. First, changes in any single tax may simultaneously affect several determinants of GDP per capita.

(Alkasasbeha, Haron and Abueid,2018) investigated the impact of taxes and spending by the government on the growth of the economy. The ARDG model was used for analysis and it confirmed a positive relationship between taxation and expenditure with growth. (Babatunde, Ibukun and Oyeyemi. 2017) investigated the impact of taxes on the growth of the

African economy. According to the findings, the total amount of tax revenue has a positive effect on GDP and helps to encourage economic growth in Africa.

The empirical results from the analysis of (D. Stoilova & N. Potonov,2013) indicate that tax structure based on direct taxes is more efficient in terms of supporting the economic growth in the European Union countries. Romer Ch. D and D.H. Romer (2007) review other papers presenting evidence for various aspects of the relationship between taxation and economic growth. There are different kinds of econometric approaches applied. Some of the studies link GDP growth rate and public spending and receipts (Andersen & Jordan,1968).

The studies of Blanchard and Perotti (2002) and Perotti (1999) are considered as more sophisticated, because these researches assume that once one corrects for the impact of economic activity on revenues and controls for the behavior of government spending, changes in revenues are uncorrelated with other determinants of output growth. A different approach is applied in studies, which are reviewed by Gale and Orszag (2004) and invested the impact of tac changes on consumption (as cited by D. Stoilova & N. Potonov,2013)

According to Wasylenko "the rate of economic performance can be affected by policy through the effect that taxation has upon economic decisions. As increase in taxation reduces the returns in investment (in both physical and human capital) and research and development". (as cited by Kadenge, 2021). Taxation however has a positive impact whereby some public expenditure can enhance productivity, such as the provision of infrastructure, public education and health care. Taxation provides the means to finance these expenditures and indirectly contribute to an increase in the growth rate.

According to Wilfred and Ekpung (2014) the political, economic and social development of any country depends on the amount of revenue generated for the provision of infrastructure in that given country. Azubike (2009) is of the view that tax is a major player in every society of the world. A tax system offers itself as one of the most effective means of mobilizing a nation's internal resources and if lends itself to creating an environment conducive to the promotion of economic growth.

Myles (2000) Revenues generated through taxes are used to fund expenditures and/ or reduce deficits. As a result, tax effects are always net effects and will differ depending on how tax revenue is spent. Relatedly, different types of taxes are assumed to have different consequences for economic growth, as may different types of expenditures.

Akintoye, Awotomilusi and Adegbie, (2019) raising revenue to meet government expenditure and redistribution of wealth are the main reasons for the payment of taxes. It is important to note that tax is for the good of the economy and a payment by the society to the government. The efficiency of resources utilization may be influenced by a designed system of tax incentives and penalties. The distribution of the proceed of economic development is aided by the distribution of tax burdens; the tax affects the size of capital inflow from investment outside the country and the reinvestment of the earnings (Jhingan,

3. RESEARCH METHODOLOGY

Introduction

In this study the impact of taxation on economic growth in Liberia is analyzed using the annual data over the period 1997-2022. Different sources have been used to gather data of the variables that are used for this study, the Central Bank of Liberia. world bank development indicators. The model used in this study is an econometric model, which runs a multiple regression analysis between gross domestic product (dependent variable) and the variables that effect economic growth such as taxation, foreign direct investment, employment rate, consumer price index, and government expenditure (independent variables).

Materials and Methodology

Hypothetical Framework

According to Robert Solow (1980), positively formulated a model to use in analyzing economic growth by using three basic components for the Gross Domestic Product (GDP) inclusively, Capital (K), Labor (L) and Knowledge or Technological Progress (A).

$Y = AK^{\propto}L^{(1-\propto)}$………………………………………………………….1

Next, a counter-argument was provided by Romer (1986) and Lucas (1988), pointing out that the Solow model should be extended by inclusion of additional variables of interest such as human capital, noting that; the inclusion of human capital can better lead to a more involved technology and stimulate economic growth. Giving the model in this form:

$$Y = K^{\alpha}(AH)^{1-\alpha} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 2$$

The inclusion of additional variable in to the endogenous growth model have been allowed, additional review concerning economic growth incorporate various variables in their model such as, exchange rate, Life expectancy, government revenue, inflation, interest rate, government expenditure, labour, consumption expenditure, government budget, Foreign Aid, Unemployment rate, corruption, population growth rate, Human Capital, taxation, government spending, investment or real investment and financial monetary system Anaman; (2004) and Kogid at el; (2010). Therefore, the specification on the model created from Cobb Douglas production function as follows:

$$Y = A_{it} \, K_{it}^{\alpha} \, LAB_{it}^{\beta} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 3$$

Where Y represents total output in the economy in order words the GDP, *A* denotes the level of technological progress, K represents the amount of capital shock, α symbolize output elasticity of capital; and LAB exemplifies the Labour force, whereas β exemplifies the output elasticity of the labor force.

We can rewrite equation (1) as:

$$Y_{it} = f(K, LAB, A)$$

Accounting for the second equation above K is characterized as the productivities yield by the total physical capital investment; it is observed that the capital stock of the economy is not negative, given that the factor K affects the total output through capital investment.

Therefore, total output (GDP) can be affected by total physical capital and definitely depends on Advancement in technological progress to raise the output growth with in an economy. This means that the impact of the independent variables such as tax rate, real investment, human capital and government spending towards taxation on economic growth can be possibly operated through capital accumulation via the level of technological progress of the host nation (Polodoo, Padachi, and Seetanah, 2011) whereas the transfer of capital is done through the taxation. Meanwhile, the paramount objective of this empirical study is to analyze the impact of taxation on economic development of Liberia; it is therefore assumed that the taxation (TR) is the function of total physical capital. Wherein equation (3) can be converted as follow:

$$GDP_t = f(FDI_t, EMP\_r._t, Gov\_e_t, Tax\_R_t, \, , LCons_t) \text{-----} 4$$

Accounting for the independent variables , $Rinv_t$, Gov_t , Tax_t and , Hum_t represent the yearly data used to examine the impact of taxation in Liberia, yearly foreign direct investment rate, Employment rate, and Government spending (government expenditure) in Liberia while Tax Revenue represents the yearly percentage of tax revenue obtained from tax payers while log of consumer price indexes which is used as a proxy welfare of the citizens "t" represents the time series trend of the model and μ_t denotes the error term of the model.

The econometrics model can therefore be written in this form:

$$GDP_t = \beta_0 + FDI_t, EMP\_r._t, Gov\_e_t, Tax\_R_t, \, , LCons_t + \mu_t \dots\dots\dots\dots 5$$

Therefore, this section focuses on the econometric approach used in the study to determine the influence and relationship between Taxation and Liberian economic growth. From 2000 through 2022, the study uses secondary yearly time series data from the Central Bank of Liberia's (CBL) and the World Bank database, from the global development indicators (World Bank data) on Liberia's taxation, foreign direct investment and investment rate, Employment rate, and Government spending (government expenditure) in Liberia while Tax Revenue represents the yearly percentage of tax revenue obtained from tax payers while log of consumer price indexes which is used as a proxy welfare of the citizens and economic growth rate.

We will estimate the equation using ordinary least squares (OLS) in this research work. The estimating approach will call for a unit root test to determine the order of integration of the variables used in the Taxation-Economic Growth model, which will be done through Augmented Dickey Fuller (ADF) unit root tests. Given that all of the variables will be integrated in the same order, the second step will be the cointegration analysis, which uses the Johansen cointegration technique to

estimate and determine a stable long-run equilibrium relationship between variables and to check the integration of linear combinations of variables in the model in testing the relationship of Taxation has on economic growth.

Finally, the Error Correction Model will be introduced to determine short run dynamics and the speed of correction to the long run. The Jacque-Bera normalcy tests were used. The presence of high order serial correlation was assessed using the LM test, and heteroscedasticity was tested using the autoregressive conditional heteroscedasticity tests. The Breusch Godfrey test was used to examine higher order serial correlation. The OLS estimation requires that the residuals must be normally distributed, there must be no autocorrelation, and the error term must be homoscedastic.

4. DATA PRESENTATION AND INTERPRETATION

Introduction

This chapter presents an analysis of the data. It presents descriptive statistics of the data, as well as hypothesis testing. The analysis dwells on the assessment of the link between taxation and economic growth.

Data Presentation and Interpretation

Descriptive Analysis of the Data

The foremost reason of using the descriptive analysis of the data is to create a condition in which the researcher will be truthfully informed about the status of the variables of interest included in the model of taxation and economic growth. Descriptive analysis table displays the descriptive statistics of the variables used in the model of this research. In the purpose of accounting for the data bring skewed as the means and medians have widely contrary values is to use the descriptive statistics in proving the two statistical measures. Additionally, in testing the null Hypothesis of whether the residuals are normally distributed the researcher used the Jarque-Bera statistic. The test statistic of Jarque-Bera measures the difference of the skewness and kurtosis of the series with those from the normal distribution. If the standardized residuals are normally distributed, the Jarque-Bera statistic should not be significant. The calculated statistic is rejected in all cases showing that the data are not normally distributed illustrated by the output of Gross Domestic Product, Foreign Direct Investment, Employment rate and Government expenditure with probability values of 0.213457, 0.158589, 0.232300 and 0.542037 respectively.

Descriptive Analysis of the Data

Variables	GDP	FDI	EMP_R	TR	GOV_E
Mean	-0.345444	14.43824	44.44319	129.4344	3.713643
Median	0.643907	2.613994	45.08000	96.60270	3.976059
Maximum	6.341041	89.23302	51.95000	393.3328	6.379454
Minimum	-30.70154	-32.23268	12.90955	12.42151	0.351336
Std. Dev.	6.753654	28.04775	8.418073	101.1438	1.768933
Skewness	-3.631201	1.084999	-2.468121	1.279013	-0.228961
Kurtosis	17.07083	3.727355	9.455270	3.667804	2.040348
Jarque-Bera	271.6249	5.674431	71.54008	7.571910	1.224841
Probability	0.213457	0.158589	0.232300	0.122687	0.542037
Sum	-8.981543	375.3942	1155.523	3365.294	96.55471
Sum Sq. Dev.	1140.296	19666.90	1771.599	255751.8	78.22813
Observations	26	26	26	26	26

Source: Author's computation

Covariance Analysis: Ordinary

Shows the Covariance coefficients between the Gross Domestic Product, Foreign Direct Investment, Employment rate, Consumer price indexes and Government expenditure. The Covariance analysis is a customary statistical method showed to evaluate how two variables differ of the variables in the model with each other.

The correlation between the GDP per capita as the dependent variable and the independent variables such as FDI, CONS, Tax_R and GOV_E do not have the expected signs which probably show the impact of the uncertainty in the macroeconomic Growth on the level of trade. In particular, the economy has suffered and continues to experience a downward pressure macroeconomic performance due to political instability, the disregard of the rule of law that brutally affecting international trade with Liberia's partners and creating uncertainty in investment activities of Liberia's trading partners causing a slowdown in the tax revenue generation intern reducing the economic development.

Covariance Analysis: Ordinary

Correlation t-Statistic Observations	GDP	FDI	Tax_R	LCONS	GOV_E
GDP	1.000000				

	26				
FDI	0.040915	1.000000			
	0.200610	-----			
	26	26			
Tax_R	-0.084280	0.365712	1.000000		
	-0.414358	1.924962	-----		
	26	26	26		
LCONS	0.058689	-0.228707	-0.108967	1.000000	
	0.288014	-1.150934	-0.537023	-----	
	26	26	26	26	
GOV_E	-0.196144	0.139120	0.551623	-0.374027	1.000000
	-0.979940	0.688237	3.239911	-1.975758	-----
	26	26	26	26	26

Source: Author's computation

Time Series unit root results (level and first difference)

Variable	LEVEL		FIRST DIFF			No. OF COINTEGRATION
	CONSTANT	CONS&TREND	CONSTANT	CONS&TREND	P-VALUE	
GDP	-4.652809	-4.599908	-3.286362	-7.923039	0.0000**	I(1)
FDI	-3.336897	-6.752738	-9.610492	-10.62493	0.0022**	I(1)
TAX_R	-3.509008	-3.798117	-7.18256	-5.82569	0.0020**	I(1)
LCONS	-3.347144	-6.246067	-6.168881	-12.2006	0.0010**	I(1)
GOV_E	-1.84149	-1.21932	-4.65168	-3.25714	0.0006**	I(1)

Note: * reject the null of no cointegration at 1% and 5% present levels of significant respectively.

Source: Author computation

Time series Unit Root properties of variables

The Augmented Dickey-Fuller Unit Root test (ADF) results used two outcomes the first output is a test statistic and the second is a p-value. The test statistic is compared to the critical values at different significance levels, usually 1%, 5%, and 10%. If the test statistic is more negative than the critical value, implies the rejection of the null hypothesis and certainly conclude that the time series is stationary. If the test statistic is less and negative than the critical value, it indicates the acceptance of the null hypothesis and definitely concludes that the time series has a unit root.

The p-value is the probability of obtaining a test statistic as extreme or more extreme than the observed one under the null hypothesis. If the p-value is less than the significance level, means the rejection of the null hypothesis and conclude that the time series is stationary. If the p-value is greater than the significance level, you cannot reject the null hypothesis and conclude that the time series has a unit root.

When time-series data are non-stationary it implies that the means and variances are not constant over time. The time series properties of all the variables were tested using the Augmented Dickey-Fuller test (ADF) and Phillip-Perron unit root test. The results of the unit root test are shown in the Table above.

On the basis of the McKinnon (1996) one sided p-values at these levels both the augmented Dickey-Fuller test and the Phillip-Perron unit root test for the gross domestic product, is stationary at first difference at a one percent (1%) level of significance indicating a p-value of 0.0000. Also, the growth rate in the foreign direct investment is stationary at first difference at the one percent (1%) level on the basis of both the augmented Dickey- Fuller test and the Phillip-Perron unit root test. Both the augmented Dickey-Fuller test and Phillip-Perron unit root test show that foreign direct investment is stationary at first difference at the one percent level of p-value of 0.0022<5% of significance level.

Similarly, the variable for tax revenue, is stationary (at the one percent level) at first difference using both Augmented Dickey-Fuller test and Phillip-Perron unit root test of p-value of 0.0020 <5% of significance level. Likewise, the variable for log of consumer price index, is stationary (at the one percent (1%) level) at first difference using both Augmented Dickey-Fuller test and Phillip-Perron unit root test of p-value of 0.0010 <5% of significance level. Equally, the output government expenditure is stationary (at the one (1%) percent level) at first difference using both Augmented Dickey-Fuller test and Phillip-Perron unit root test of p-value of 0.0006 <5% of significance level.

Johansen cointegration test

In order to test and verify whether there is the existing of a long run relationship among variables of the time series or not, the researcher used the Johansen cointegration test in order to establish the type of relationship. When both the dependent and the independent variables show that they cannot be identified it is called endogenity. To solve these endogenity problems within the model, the VAR model has been applied. Given the estimated results of the trace test and maximum eigenvalue test have been presented in the below table respectively. The results represent the long run coefficient (β of the matrix) for the rank (r) that tells about the numbers of cointegrating vectors between the variables.

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	**0.998920**	**230.1626**	**69.81889**	**0.0000**
At most 1 *	0.828512	73.04876	47.85613	0.0000
At most 2 *	0.599803	32.49424	29.79707	0.0239
At most 3	0.266824	11.43089	15.49471	0.1863
At most 4 *	0.170245	4.292383	3.841466	0.0383

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.998920	157.1139	33.87687	0.0001
At most 1 *	0.828512	40.55451	27.58434	0.0006
At most 2 *	0.599803	21.06335	21.13162	0.0511
At most 3	0.266824	7.138507	14.26460	0.4729
At most 4 *	0.170245	4.292383	3.841466	0.0383
Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				

Source: Author Computation

The result of the trace test, accessible in the Table above, indicates three equations are statistically significance provided by the P-value of 0.0000, 0.0000 and 0.0296 of the equation None, At Most 1, and At Most 2 respectively are all (less than 0.05) for rank (r) = 0, therefore null hypothesis which state that: no co-integration among the variables in the model is strongly rejected but rather to accept the alternative hypothesis which state that: there are co-integration among the variables in the model. While for rank (r) = 1, the P-value is not significant (greater than 0.05); thus, null hypothesis of no co-integration cannot be rejected. The table indicating the Unrestricted Cointegration Rank Test, presents co-integration rank test results based on maximum eigenvalue. The results show that there is no variable in the sample that has no co-integration.

The results obtained from both Tables above proved that there is a presence of at least two and at most three co-integration equations at 5% level of significant which illustrates that long run relationship exists among gross domestic product (GDP) and other fiscal and monetary variables such as FDI, TAX_R, LCONS and GOV_E (Deduced form of the Moye's model for Taxation and economic growth is suitable to estimate the numerical long run relationship between factors that influence the functions among the monetary variables and taxation, factoring the short-run relationship among variables that can be attained through Vector Error Correction Model (VECM) approach.

The use VECM was adapted based on the assumption the use of VAR model is not a good strategy when one co-integration equation exists among variables in a model; it has been evidenced by Johansen co-integration test. Consequently, considering the use of VECM to considered as an enhanced option rather than VAR in order to investigate the long run and short run relationship of tax revenue and other fiscal and monetary variables.

Vector Error Correction Model (VECM)

The VECM can be estimated by using two steps: in the first step, the estimation of the co-integration relationship can be done by using Johansen procedure, on the other hand, the error correction relation term(ECT) that was estimated from the first equation (denoted conitEq1) Formally, the results of co-integration equation and error correction have been presented in the below table secondly, the co-integration equation (co-integration Eq1):

$$GDP + 0.161FDI - 0.036CONS - 0.179GOV\_E + 0.232LTR = GDP + 0.161FDI - 0.036 - 0.179GOV\_E + 0.232LTR = 0$$

Which the above equation can be rewritten as:

$$GDP = 0.161FDI - 0.036CONS - 0.179GOV_E + 0.232LTR$$
$$= 0 \quad GDP \; 0.161FDI - 0.036CONS - 0.179GOV\_E + 0.232LTR = 0$$

The long run relationship between variables is characterized by the coefficient of the co-integration equation and the deviations from that long run relationship affect the changes in the variable in the next period is shown by coefficient of that term in VECM.

The coefficients of all the variables is being as long run elasticity since, all the variables in the model are transformed into log form and proving have only co-integration vector.

In the long run analysis, the results show that all variables in the co-integration equation are all statistical significantly have both positive and negative influenced on economic growth at 1% level of significant in Liberia during the period from 1998 to 2022. Mostly, Foreign Direct Investment and consumer price indexes bring about rise and fall in the gross domestic product of an economy considerably; on the contrary, the outputs of the co-integration Equation do not support this statement. The results show that foreign direct investment and government expenditure positively influence the Gross Domestic Product at 1% significance level.

A 1% increase in both the Foreign Direct Investment and government expenditure lead to 0.16% and 0.18% respectively rise in the Gross Domestic Product, thus creating a positive impact on economic growth leading to a more stimulating interns of job creation that promotes the inflows of foreign currency in to the Liberian economy, while log of Consumer Price Indexes has a significant influence on economic growth negatively, a 1% increases in inflation leads to -0.04% decrease in economic growth. This means that there is an opposite relationship between Consumer Price Indexes and Economic growth, contrary; there exist a parallel relationship among Taxation and economic growth and with a statistically significant at 10% percent level respectively.

The results of error correction have been presented in the below table. The value of error correction term should lie between (0, 1). If it has negative sign, it shows convergence and, evaluates the speed of adjustment towards equilibrium. The results indicate that error correction term for all the variables has right sing (negative sign) and values' lies within the range 0 and -1, except that for the. The results from the error correction term show the convergence in the direction of equilibrium level.

The main feature of error correction term is that it has the capability to correct for any disequilibrium that may occur due to shock in the system which derived from time to time. When there is disequilibrium in a system the error correction term is used in order to correct such disequilibrium and offers guidance to variables of the model to come back towards equilibrium. It can be understood that correction of D(GDP), D(FDI), D(CONS) and D(GOV_E) show 88.94%, 17.71%, 47.70 % and 13.08% respectively of disequilibrium was "corrected" for each years by changes in Gross domestic product, Foreign Direct Investment, welfare of the population with a proxy variable called Consumer price Indexes and Government Expenditure, respectively. It is evident that the Gross Domestic Product and Consumers Price Indexes are showing high instability than the other variables in the error correction model results.

Vector Error Correction Model (VECM) Test

Cointegrating Eq:	CointEq1			
GDP(-1)	1.000000			
FDI(-1)	0.161274 (0.00462) [34.9192]			
CONS(-1)	-0.036316 (0.00138) [-26.2934]			
GOV_E(-1)	0.179368 (0.04247) [42.2371]			
LTR(-1)	0.23190 (0.08594) [81.1050] [81.1050]			
Error Correction:	D(GDP)	D(FDI)	D(CONS)	D(GOV_E)
R-squared	0.816083	0.823184	0.908520	0.649577
Adj. R-squared	0.632166	0.646367	0.817039	0.299153
Sum sq. resids	406.8186	8850.999	567.8797	20.58812
S.E. equation	6.081407	28.36611	7.185083	1.368082
F-statistic	4.437236	4.655582	9.931306	1.853690
Log likelihood	-65.67363	-101.0927	-69.50936	-31.36162
Akaike AIC	6.754229	9.834147	7.087771	3.770575
Schwarz SC	7.346660	10.42658	7.680202	4.363007
Mean dependent	0.125660	0.245409	14.21909	-0.072210
S.D. dependent	10.02717	47.70056	16.79782	1.634182
Determinant resid covariance (dof adj.)	97.86156			
Determinant resid covariance	2.448704			
Log likelihood	-173.4769			
Akaike information criterion	20.73712			
Schwarz criterion	23.94612			

Source: Author Computation

VEC Residual Normality Tests

The single-equation skewness test statistics are of the null hypothesis that the disturbance term in each equation has zero skewness, which is the skewness of a normally distributed variable.

The row marked ALL shows the results for a test that the disturbances in all equations jointly have zero skewness. The skewness results shown above do not suggest non-normality.

The kurtosis of a normally distributed variable is three (3), and the kurtosis statistics presented in the table test the null hypothesis that the disturbance terms have kurtosis consistent with normality. The results in this example do not reject the null hypothesis but certainly accepts the null hypothesis.

The Jarque–Bera results present test statistics for each equation and for all equations jointly in contradiction of the null hypothesis of normality. For the individual equations, the null hypothesis is that the disturbance term in that equation has a univariate normal distribution. For all equations jointly, the null hypothesis is that the K disturbances come from a K-dimensional normal distribution. In this output, the single-equation and overall Jarque–Bera statistics do not reject the null hypothesis of normality.

VEC Residual Normality Tests

Component	Skewness	Chi-sq	Df	Prob.
1	-0.264437	0.268053	1	0.6046
2	0.729868	2.042045	1	0.1530
3	1.893863	13.74908	1	0.0002
4	-0.459628	0.809823	1	0.3682
5	-0.887661	3.020445	1	0.0822
Joint		1.88945	5	2.5262

Component	Kurtosis	Chi-sq	Df	Prob.
1	2.323501	0.438582	1	0.5078
2	4.963357	3.694156	1	0.0546
3	8.434541	28.30364	1	0.0000
4	2.638675	0.125116	1	0.7236
5	7.590482	20.19451	1	0.0000
Joint		2.75600	5	2.6289

Component	Jarque-Bera	Df	Prob.
1	0.706635	2	0.7024
2	5.736201	2	0.0568
3	42.05273	2	0.0000
4	0.934938	2	0.0066
5	23.21495	2	0.0000
Joint	1.025403	10	2.2238

Source: Author Computation

Findings of the Study

From the descriptive analysis the calculated statistic is rejected in all cases showing that the data are not normally distributed, foreign direct Investment, Employment rate, Consumer price indexes and Government expenditure with probability values of 0.213457, 0.158589, 0.232300, 0.122687 and 0.542037 respectively. However, from the VEC Residual Normality Tests,

the kurtosis of a normally distributed variable is three (3), and the kurtosis statistics presented in the table test the null hypothesis that the disturbance terms have kurtosis consistent with normality. The results in this example do not reject the null hypothesis but certainly accepts the null hypothesis and it can therefore be concluded that the assumption is valid and the model is reliable.

The Jarque–Bera results present test statistics for each equation and for all equations jointly in contradiction of the null hypothesis of normality. For the individual equations, the null hypothesis is that the disturbance term in that equation has a univariate normal distribution. For all equations jointly, the null hypothesis is that the K disturbances come from a K-dimensional normal distribution. In this output, the single-equation and overall Jarque–Bera statistics do not reject the null hypothesis of normality.

On the basis of the McKinnon (1996) one sided p-values at these levels both the augmented Dickey-Fuller test and the Phillip-Perron unit root test for the log of the gross domestic product, is stationary at first difference at a five percent level of significance indicating a p-value of 0.0000. Also, the growth rate in the foreign direct investment is stationary at first difference at the one percent level on the basis of both the augmented Dickey- Fuller test and the Phillip-Perron unit root test. Both the augmented Dickey-Fuller test and Phillip-Perron unit root test show that foreign direct investment is stationary at first difference at the one percent level of p-value of 0.0022<5% of significance level.

Similarly, the variable for tax revenue, is stationary (at the one percent level) at first difference using both Augmented Dickey-Fuller test and Phillip-Perron unit root test of p-value of 0.0020 <5% of significance level. Likewise, the variable for log of consumption price indexes, is stationary (at the one percent level) at first difference using both Augmented Dickey-Fuller test and Phillip-Perron unit root test of p-value of 0.0010 <5% of significance level. Equally, the output is stationary (at the one (1%) percent level) at first difference using both Augmented Dickey-Fuller test and Phillip-Perron unit root test of p-value of 0.0006 <5% of significance level.

From the time series unit root table using the ADF test and Phillip-Perron unit root test shows that the Variables (Gross Domestic Product, Foreign Direct Investment, Consumers price indexes, tax revenue, Employment Rate, and Government Expenditure) are stationary, which implies that the means or variances are constant over time giving the researcher the reliance that the model is more suitable to be used in the determination or explanation of the impact of taxation on economic growth (GDP).

The results show that foreign direct investment and government expenditure positively influence the Gross Domestic Product at 1% significance level.

This was also confirmed by the findings done by (Shafiq et al.,2022) which indicated that government expenditure have a favorable and significant association with economic growth, but inconsistent with the findings of (Rudolf Macek,2014) which indicated that government expenditure decreases economic growth.

The findings of Babatunde, Ibukun & Oyeyemi,2017) reveals that Foreign Direct investment have a positive influence on GDP A 1% increase in both the Foreign Direct Investment and government expenditure lead to 0.16% and 0.18% respectively rise in the Gross Domestic Product, thus creating a positive impact on economic growth leading to a more stimulating interns of job creation that promotes the inflows of foreign currency in to the Liberian economy, economic performance helps to reduce unemployment by creating jobs.

while log of Consumer Price Indexes has a significant influence on economic growth negatively, a 1% increases in inflation leads to -0.04% decrease in economic growth. This means that there is an opposite relationship between Consumer Price Indexes and Economic growth, contrary; there exist a parallel relationship among Taxation and economic growth and with a statistically significant at 10% percent level respectively. This indicate that taxation play a major role in the economic performance of the country.

The result is consistent with the finding of (Babatunde, Ibukun & Oyeyemi,2017) which indicated that tax revenue is positively related to GDP and promotes economic growth. It was significant at 5% level, but inconsistent with the findings of (Kadenge, 2021; Gbato,2017) as they found a negative impact of tax revenue on economic growth.

The Pearson's Correlation test was conducted to measure the level of change in one variable due to the change in other variables. From the table, it shows that the correlation between the dependent variable GDP and that of the independent variables such as FDI, EMP_r, CONS, TR and GOV_E indicate that no linear relationship exists between the variables.

Page | 253

The Johansen Cointegration was used to verify whether there is a long run relationship among the variables of the time series. From the trace test, it shows that no co-integration among the variables in the model which strongly rejected the null hypothesis but accepted the alternative hypothesis, and also the unrestricted cointegration rank test presents that there is no variable in the sample that has no cointegration.

The result of the trace test, indicates three equations are statistically significance provided by the P-value of 0.0000, 0.0000 and 0.0296 of the equation None, At Most 1, and At Most 2 respectively are all (less than 0.05) for rank (r) = 0, therefore null hypothesis which state that: no co-integration among the variables in the model is strongly rejected but rather to accept the alternative hypothesis which state that: there are co-integration among the variables in the model. While for rank (r) = 1, the P-value is not significant (greater than 0.05); thus, null hypothesis of no co-integration cannot be rejected

The results obtained from the both tables proved that there is a presence of at least two and at most three cointegration equation at 5% level of significant which indicate that long run relationship exists among GDP and other fiscal and monetary variables such as: FDI, TAX-R, LCONS and GOV-E.

5. SUMMARY, CONCLUSION AND RECOMMENDATIONS

Introduction

This chapter presents a summary of the study and recommendation based on the findings of the study. The chapter consists of three sections, namely: summary, conclusion and recommendation.

Summary

Tax systems are primarily aimed at financing public expenditure. Tax systems are also used to promote other objectives, such as equity, and to address social and economic concerns. The composition of the tax system is as important for economic growth as is the total tax revenue. Taxes effect the decisions of households' savings, supply labour and invest in human capital, the decisions of firms to produce, create jobs, invest and innovate. From the finding it is shown that there exists a long run relationship between GDP and other fiscal and monetary variables such as FDI, TAX-R, LCONS and GOV-E. It also shows that there exists a parallel relationship between Taxation and economic growth and with a statistically significant at 10% percent level respectively, this indicates that taxation has an impact on the economic performance of the country.

Conclusion

This study set out to carry out an empirical analysis on the relationship between taxation and economic growth in Liberia from the periods 1997 to 2022. A number of test was carried out on the model to check whether the model was correctly specified and reliable. With the results, it is established that taxation has an impact on the economic growth, as taxation was found to have a parallel relationship with growth with a 10% significance level. And it also indicated that there exists a long run relationship with economic growth and other fiscal and monetary variables, such as: Foreign direct investment, Employment rate, Consumer price index and Government expenditure.

A country that mobilizes adequate tax revenue reduces her budget deficit which translates into reduced external borrowings, which is a strong factor for economic growth since the amount of country's revenue which could be used in paying external debt can be employed in other productive sectors of the economy. With this there will be reduction in unemployment and attracting foreign direct investment.

The study confirms the positive and significant influence of tax revenue on Gross Domestic Product. Although, it has proven that there is a link between taxation and economic growth in Liberia, however there's still exist lots of gaps in the economy. Unemployment rate is still at an increase and the government depend largely on external grants and other aid.

Recommendation

The study has revealed the presence of long run relationship between taxation and economic growth as measured by GDP. Base on the outcome of the findings, there are problems identified and in order to tackle those problems the researcher derives the following recommendations:

➢ Focus should be given to natural resource taxation collection, with the rich base of natural resources in the country it is vital that government generate more tax revenue from these extractions which will help to boost the economy and create opportunities for citizens.

➢ Formulation and Implementation of fiscal policy relating to the administration of taxes, there is a need that the already existing policy that govern tax administration should be effectively followed and monitor in that way there will be transparency in the system and will discourage tax evasion.

➢ Reduction in tax on the importation of major and consumable products like Rice and Petroleum, with this there will be more imports of the country's stable food and petroleum products and thus, promoting the free movement of goods and services which will intern reduced the cost of those goods and services making them be available and affordable to consumers. And also encourage investment in such sectors.

➢ There should be the formulation of policy for more awareness on how the tax system works, especially out of the country's capital to areas like, Bong County, Nimba County, Maryland and other counties. When people have clear understanding about what and why they need to pay taxes to government revenue, it will lead to more tax compliance by entities and individuals.

➢ It is already proven that taxation has a positive influence on economic growth in Liberia, it is therefore important that the government through the tax administration applied much effort in making sure the tax system work for the sole purpose of generating tax revenue to implement ARREST developmental agenda. It means that, the government of Liberia must ensure that the implementation of the budget must be effective and timely, that will serve as a point of motivation for the tax payers in promoting the social welfare functions of taxation.

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