SELINUS UNIVERSITY
BUSINESS SCHOOL

INVESTIGATION OF THE RELATIONSHIP BETWEEN INCOME, IMPORT, EXERCISE, AND VALUE ADDED (VAT) TAXES AND KENYA'S ECONOMIC GROWTH IN THE POST DEVOLUTION PERIOD (2011 TO 2023). YEARS (2023 TO 2025).

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ABSTRACT.

Taxation is a means of generating revenue for the government's development objectives and provision of public services such as education, security, medical etcetera. As much as taxation can have positive impact to a country's economic growth, it can also have negative impacts; high marginal tax rates can discourage work, saving, investment, and innovation, while specific tax preference can affect the allocation of economic resources. Tax cuts can also slow long-run economic growth by increasing deficit.

Kenya government has been faced with constantly increasing development and recurrent expenditure with limited sources of revenue. A number of factors do contribute to the increased government expenditure namely, prolonged draught over the years, high rate of inflation, demands for salary increment, meeting both the current and development needs of county governments among others. This has resulted into widening of the government's budget deficit over the years. External borrowing has been the fallback for government towards sealing the annual budget deficit. This has led to accumulation of public debt to approximately Ksh 10.2 trillion ($65.8 B) according to the central bank of Kenya report of 2023.This which is no longer sustainable to the country. The government has therefore been forced to initiate strategies to cut on borrowing and enhance improvement of collection of internal revenue. Taxation in the country has therefore been increased mainly to finance the ever-growing public budget and servicing of public dept.

The study is focused at assessing the effects of increased taxes on the country's economic growth mainly with a focus on income tax, excise duty, customs/import duty and value added tax (VAT). The study period of 2010 to 2023 was selected since it is the period that the country has been governed under the new constitution which was promulgated in 2010, it is the period that the country has experienced unprecedented borrowing by government to finance the ever-increasing annual national budget deficit and also the period in which taxes have been increased unprecedently towards enhancement of collection of internal revenue by the government.

The general objective of this study is to investigate the effect of income tax, excise tax, value added tax (VAT), and import duty on economic growth of Kenya while the specific objective is to study the trend of collection of these taxes within the period of study against their effect on

changes in economic growth indicators (GDP) in country. The study will also show the correlation between these taxes and the country's economic growth within this period. These tax categories were chosen as they are the four main types of taxes levied by the Government of Kenya. This study aims at answering the question, "How does these taxes affect the country's economic growth?". The study will deal with each tax independently rather than in combination; investigate the effect of each of these taxes to the economic growth of the country.

The study adopts benefit theory, diffusion theory of tax incidence and endogenous growth theory to show the effect of these levied taxes on economic growth of the country. The study used quantitative research design with secondary data collected from central bank of Kenya (CBK), Kenya national bureau of statistics (KNBS) and Kenya revenue authority (KRA) from the period 2011 to 2022. Multiple regression model was used in identification of the relationship between the independent variables and dependent variable and how the variables relate among themselves. The linear regression results shows that a 1% increase in income tax leads to a decrease of GDP by 2.98% holding all other variables constant, a 1% increase in VAT leads to a decrease in GDP by 1.80% holding other variables constant, a 1% in import duty leads to an increase in GDP by 44.67 % holding all other variables constant, and a 1% increase in excise duty leads to an increase of GDP by 13.37 % holding all other variables constant. Through this study, it was concluded that total tax has a statistically significant relationship with economic growth with a p- value of 0.00.

The study recommends that, the future similar studies should focus on investigating the effect of other country's form of taxes to its economy since as proved by the study, not all taxes have positive effect on the economy, the country should develop a frame work to bring the country's vibrant informal sector into the tax bracket, the country should leverage import/export duty which has the highest positive effect on the country's economic growth, the government should encourage development of private sector and especially manufacturing sector, the government should stop further increasing of income tax and value added tax as the two have negative effect to the country's economic growth, and government should enact tough laws to combat the rampant tax evasion in the country and corruption within the tax collection and administration system.

Key words: Taxation, National tax policy, Economic development, canons of taxation Income tax, Custom duty, Value added tax (VAT), Excise duty. Tax ratio, Direct tax, Indirect tax, Gross domestic product, Tax band, Linear regression, Correlation.

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INTRODUCTION

This chapter covers background of the study, problem statement, general research objective, specific research objectives, research questions, significance of the study, scope, and limitation of the study.

1.1 Background of the study

In 2010, Kenya promulgated a new constitution dispensation whose main aim was to address failures associated with quality of governance including corruption, poverty, development inequalities and increasing interethnic tensions and conflicts. The constitution introduced a two-tier level of government; the National government and the county governments for the 47 created counties in the country. The new constitution gave the county governments responsibility of provision of various services including healthcare, and pre-primary education among others. To fund the provision of these services, each county is annually allocated funds from the central government based on specific weighted criteria. (KIPPRA, 2019).

County governments in Kenya have two main sources of revenue: own sources; this generated locally through collection of property tax, entertainment tax, and charges for services offered, and disbursement from national government (equitable share) which is the largest source of income for the counties; the largest portion of counties' revenue is collected at the national level through the country's centralized tax collection system. The national government funds close to 70% of the annual budget for the counties to facilitate performance of their constitutional mandates.

Taxation in Kenya is anchored in article 209 of the Constitution of Kenya which empowers the national Government to impose Income tax, Value added Tax, Excise Duties and other duties on imports and exports, as well as any other form of tax which may be provided for through an Act of parliament or of a County Assembly. The article also empowers county Governments to charge property rates, entertainment taxes, and any other form of taxes authorized by an Act of parliament. Also, both National and county Governments are allowed to impose charges for services they provide. Article 2010 of the constitution stipulates that the burden of taxation shall be shared fairly and the revenue raised nationally shall be shared equitably among National and County Governments.

Since inception of devolution, county revenue and hence expenditure have progressively increased but within the same period, the national government revenues and expenditures have increased at a significant faster pace as depicted by the graph below.

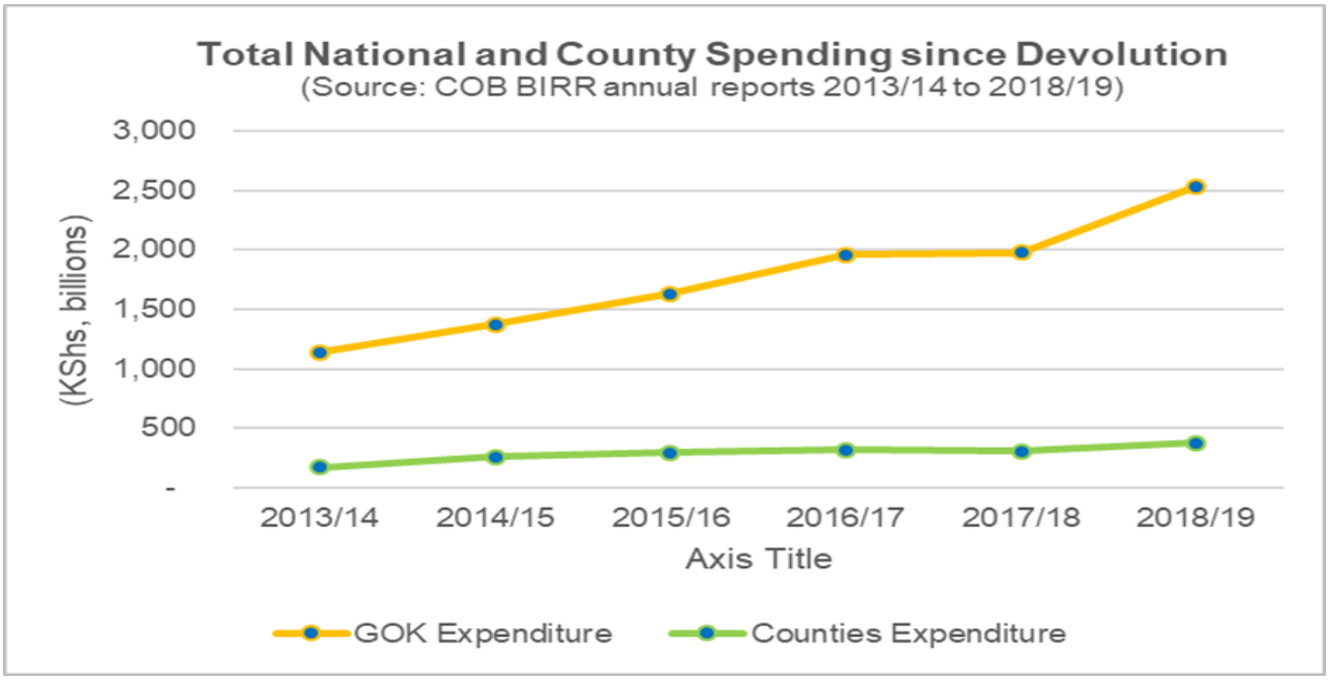

Fig 1.1 Total national and county spending since devolution.

Source: COB BIRR annual reports 2013/14 to 2018/19

Tax revenue in Kenya contribute more than 75% of total generated revenue and it is the main source of revenue for the government. Other sources of revenue include, loans from development partners, aids and grants from friendly countries, rent from government buildings, court fines, dividends from government shares in various companies, profits made by parastatals, earnings from exports, earnings from sale of public properties, and revenue from internal borrowing.

1.2 Taxation

Taxation is the compulsory transfer or payment from private individuals, institutions or groups to the government (Anyanwu, 1997).It may also be defined as imposition of compulsory financial charge or some other type of levy on individuals or entities by a government in order to collectively fund government spending, public expenditure, or as a way of regulating and

reducing negative externalities. Therefore, taxes differ from other sources of revenue since they are compulsory levies and are unrequited. Taxation transfers wealth from households or businesses to the government and this has an effect on economic growth and economic welfare that can be both increased, which is referred as fiscal multiplier or decreased which is referred to as excess burden of taxation.

Taxation is a strong and powerful weapon of physical policy and therefore governments all over the world put structures in place to maximise revenue collection from its various tax components. The taxation structure should be such that it is broader enough to generate revenue to finance government expenditure and other government's objectives including economic development agenda to improve the welfare of the citizens through provision of social goods (Nguluu, 2017)

Collecting of taxes and fees is a fundamental way for countries to generate public revenues to facilitate financing of investments in human capital, infrastructure, and provision of services for their citizens and businesses. It is however estimated that the financing gap for achieving sustainable development goals for developing countries is at about 2.5 trillion US dollars annually and much of this financing gap will need to be met through increased private sector investment in sustainability, which requires appropriate tax policies to create the needed price incentives. However, the developing countries who are mostly in need of revenue to meet their development needs, often face a lot of challenges in collecting taxes as compared to the developed nations; many developing countries are still struggling to collect sufficient revenues to finance their own development needs and countries collecting less than 15% of GDP in taxes find it difficult to finance basic needs of their citizens and businesses. The revenue role of taxation is given much attention than the fiscal role of income and wealth redistribution due to the increasing fiscal budget deficits (Duncan, 2019). The level of taxation is an important tipping point to make a state viable and put it on a path to growth (World bank report, 2010).

Generally, tax is deemed necessary for a society to function and grow in an orderly and equitable manner through government's provision of public goods and services. Taxation is considered as the most viable option to operate a government since it enables a government to generate revenue without heavily interfering with market and private businesses; taxation preserves the efficiency and productivity of the private sector by allowing individuals and businesses to make their own economic decisions, engage in flexible production, competition, and innovate as a result

of market forces. This is echoed by Marina et al, (2022), who recognizes taxation as the only practical way a government can collect revenue from the citizens.

Making it easier to pay taxes improves competitiveness. Overlay complicated tax systems are associated with high levels of tax evasion, large informal sectors, more corruption, and less investment. Modern tax systems should therefore seek to optimize tax collections while minimizing the burden on tax payers to comply with tax laws (World bank report, 2010). There is also need to ensure that tax system is fair and equitable. Governments need to balance goals such as increased revenue mobilization, sustainable growth, and reduced compliance costs by ensuring that the tax system is fair and equitable. Fairness considerations include the relative taxation of the poor and the rich, corporate and individual taxpayers, cities and rural areas, formal and informal sectors, labour and investment income, and the older and the younger generations.

Some of the main indicators of an economy that provide insight into its health and the direction it is taking include, gross domestic product (GDP), inflation rate, unemployment, money supply, consumer spending, retail sales, and home sales; growth is predicated upon availability of funds and other human and materials resources.

1.3 Tax Bands in Kenya

Taxes in Kenya fall under two main categories: direct and indirect taxes. Indirect statutory taxes are collected through purchased good and taxes under this banner include, excise duty, custom duty and levies, and value added taxes (VAT) while direct tax such as income tax is tax levied on income or profits of persons who pay it, rather than on goods or services. Direct tax affect income of the taxed individual while indirect taxes affect activities in which an individual is engaged in such as purchase of goods and services (Omar et al, 2021).

Direct and indirect taxes are classified into three classes namely, the tax base, tax incidence and tax rate. Taxes classified based on tax base include, income tax and corporate tax while tax classified based on tax rates include progressive tax, regressive tax, digressive tax, and proportional tax. Tax incidence describes who bears the burden of a new tax; it describes a case when buyers and sellers divide a tax burden for instance, among the producers and consumers, or among various segments of a population. Tax incidence can also be related to the price elasticity of supply and demand. When the supply is more elastic than demand, the tax burden falls on buyers and when demand is more elastic than supply, producers will bear the cost of the tax. Tax incidence depicts

the distribution of the tax obligations, which must be covered by the buyer and the seller. The level at which each party participates in covering the obligation shifts based on the associated price elasticity of the product or service in question as well as how the product or service is currently affected by the principles of supply and demand.

Kenya's tax areas include, excise duty, stamp duty, capital gain tax (CGT), payroll taxes (income tax), employers' national social security fund contributions (NSSF), national hospital insurance fund (NHIF), affordable housing levy, business permits, tourism levy, national industrial training levy (NITA), railway development levy (RDL), import declaration fee (IDF), export and investment promotion levy advance tax on motor vehicles, fringe benefit tax, betting, lottery, and gaming taxes, local government rent and rates income tax, customs (import) duty, and value added tax (VAT).Some of these taxes are discussed below.

1.3.1 Direct Taxes

a) **Income Tax**

Income tax is an annual tax charged on income of a person and corporate bodies whether resident or non-resident, which is accrued in or was derived from Kenya. Under the Kenyan income tax system as stipulated in the Income Tax Act (Cap. 470), income includes; business income, dividends and interests, employment income, royalties, rental income, pension income, income from a digital marketplace, natural resource income, leases, capital gains, and income deemed to be income of a person among others.

Income tax is classified into two major categories depending on whether it is from companies or individuals. These are:

i) Corporate Income Tax

This is a form of income tax that is levied on corporate bodies such as limited companies, trusts, and co-operatives on their annual income. Companies registered outside Kenya but operate or with branches in Kenya are subject to corporate income tax on income accrued in Kenya. Such entities are referred to as permanent establishments. Corporate income tax is paid in instalments on the 20th of the 4th, 6th, 9th and 12th month of a company's financial year. Any balance of tax at the end of the year must be paid within four months after end of the financial year.

ii) **Personal Income Tax**

Personal Income Tax (PIT) is levied on the wages, salaries, dividends, interest, and other income earned by a person in gainful employment. Tax on wages and salaries is collected through pay as you earn (PAYE) system. In this system, companies, partnerships and individuals with liable employees are required to deduct tax in accordance with the prevailing tax rates from their employees' salaries or wages on each payday for a month and remit the same to KRA on or before the 9th of the following month. Self-employed individuals (partnerships and sole proprietorships) are required to account and pay taxes on the income derived or accrued in Kenya.

1.3.2 Indirect Taxes

a) **Value Added Tax (VAT)**

VAT is a consumption tax charged under the Value Added Tax Act, 2013 on supply of goods and services. The supplies are categorised into either zero-rated supplies, exempt supplies or standard rated supplies. The tax is charged on the value added at different stages of production and at different levels of distribution of goods or services.

The VAT Act requires that a person who in the course of business makes taxable supplies or expects to make taxable supplies whose value is five (5) million Kenya shillings or more within a period of twelve (12) months or is about to commence making taxable supplies whose value is expected to exceed five million Kenya shillings within a period of twelve months, shall be liable for VAT registration and should apply to the commissioner for registration.

Taxpayers are required to account for the tax at the time of supply and file and make payment not later than the 20th day of the following month in which the supply occurred. However, for imported goods, tax is collected at the point of importation by the Commissioner of Customs and Border Control.

Value added tax (VAT) in Kenya is based on destination principle and therefore allows for zero rating of exports. Generally, all goods and services are vatable unless expressly provided for under the Act as exempt supplies. The objective of exempting certain supplies is to lower the costs of essential goods and services or to promote certain investments.

***b)* Excise duty**

Excise duty is a consumption tax charged on excisable goods manufactured in Kenya by a licensed manufacturer, or excisable services supplied in Kenya, or on excisable goods imported into the country. Besides generating revenue, excise duties are also designed to address negative externalities associated with consumption of certain goods and services. However, exemption from excise duty applies to goods and services exported from Kenya or those specifically provided for in the Excise Duty Act.

Excise duty is charged based either on specific rates or ad valorem rates to a narrow or selective base of goods and services. The tax period for which the excise duty must be reported and paid is the calendar month and the prescribed due date as provided for in the Excise Duty Act,2015. However, for imported goods, excise duty is collected at the point of importation by the Commissioner of Customs Services.

***c)* Customs/import duty**

Customs Duty is a tax levied on either the importation or exportation of goods across international borders. Kenya as a member of the East Africa Customs Union, administers the East Africa Community (EAC) Customs Management Act,2004, EAC Common External Tariff (EACCET) and the EAC Rules of Origin.

For collection of custom duties, the rules of international trade by way of treaties, conventions and Instruments of World Trade Organisation (WTO) and World Customs Organisation (WCO) to which Kenya is a signatory are considered. Kenya being a member of the EAC and COMESA, accord preferential tariff treatment/rates to goods that are imported from member countries.

Import duties are either computed as a percentage of the value of imports (ad valorem) or at a specific duty rate. The import duty rate structure is based on the general categorization of goods where raw materials and capital goods attract no duty, intermediate goods which attract a higher rate of duty, and the finished goods which attract the highest rate of duty so as to discourage importation of such goods into the country. There are some categories of goods which are categorised as sensitive. These goods attract higher rate than other goods. These are mainly goods produced in the region and hence the need to protect them from competition from imported goods.

In order to address shortage of foreign exchange which was resulting from reduced exports, the Government in 1993, introduced an Export Processing Zones (EPZ), to promote exports. The

EPZ provides tax incentives for firms to produce goods for export. The incentives include a ten-year corporate tax holiday and a corporate of 25 percent thereafter, a ten-year withholding tax holiday on dividend duty, excise duty, VAT, and fees and levies are exempted on all goods imported into the EPZ, except motor vehicles. The firms operating in the export processing zones also enjoy favourable business regulatory procedures.

Other schemes that were implemented for promotion of exports include Manufacturing Under Bond (MUB). Raw materials imported under this scheme are not subject to import duty, VAT, excise duty, fees, and levies and Special Economic Zones (SEZ) which provide for lower corporate tax rates, VAT,import duty,and excise duty.Additionally, it offers fees and levies exemption on raw materials and inputs imported into the SEZ. The common factor on these Schemes, is that goods produced from these schemes when sold into the domestic market, are subject to all taxes, fees and levies just like any goods imported from foreign countries.

In addition to custom duty, imported goods may also attract fees or levies such as Railway Development Levy (RDL), Import Declaration Fee (IDF) among others. IDF and RDL are charged on all goods imported for home use.

1.4 Canons of taxation

While taxation has been there for centuries, the canons of taxation were first presented by Adams Smith in his book "The Wealth of Nations". The canons define numerous rules and principles upon which a good taxation system should be built. Adams Smith's four canons of taxation also popularly known as the 4 Main Canons of Taxation are: *Canon of equality or equity:* equality means equality of sacrifice. Accordingly, canon of equality states that the burden of taxation must be distributed equally or equitably in relation to the ability of the tax payers.Hence, to ensure abiding by the canon of equality, taxes are to be imposed in accordance with the principle of ability to pay,*Canon of Certainty:*this canon argues that the tax which an individual has to pay should be certain and not arbitrary with respect to the time of payment, the manner of payment, the quantity to be paid (tax liability) among others. In other words, Canon of Certainty states that, they must be certain to the taxpayer as well as to the tax-levying authority in respect to certainty of revenue the government intends to collect over the given time period, *Canon of Economy:* this canon implies that the cost of collecting a tax should be as minimum as possible. Any tax that involves high administrative cost and unusual delay in assessment and high collection of taxes

should be avoided altogether, and *Canon of Convenience:* According to this canon, taxes should be levied and collected in such a manner that it provides the greatest convenience not only to the taxpayer but also to the government. For example, it is convenient to pay a tax when it is deducted at source from the salaried classes at the time of paying.

Other canons of taxation as identified by other public finance writers such as Charles Francis Bastable (Irish classical economist:1855–1945) include, *Canon of productivity:* A tax is said to be a productive one only when it acts as an incentive to production. Accordingly, this canon implies that a tax must yield sufficient revenue and not adversely affect production in the economy, *Canon of elasticity:* According to this canon, an ideal system of taxation should be fairly flexible in nature in accordance with the requirement of the country. Flexible taxes are more suitable in bringing social equality and achieving equal distribution of wealth, *Canon of Simplicity:* The system of taxation should be made as simple as possible since complicated tax system is bound to yield undesirable side-effects. In other words, every tax must be simple and intelligible to the people so that the taxpayer is able to calculate it without any difficulty, *Canon of Diversity:* This canon simply implies that taxation must be dynamic which means that there should be a multiple tax system of diverse nature rather than having a single tax system. A dynamic or a diversified tax structure will result in the allocation of burden of taxes among the vast population resulting in a low degree of incidence of a tax in total, and *Canon of Expediency:* This canon states that a tax should be determined on the ground of its economic, social and political expediency. For instance, a tax on agricultural income lacks social, political or administrative expediency in India and that is why the government of India had to discontinue it.

From the above, it is clear that the purpose for taxation is, to raise revenue for the government, to redistribute income and wealth from the rich to the poor people, to protect domestic industries from foreign competition, and to promote social welfare.

1.5 Taxation and economic performance

The question of whether or not taxation stimulates growth has dominated theoretical and empirical debate for a long period of time. Correlation between taxation and economic performance has existed as the most important issue in economics of Kenya since independence. The level of taxation affects the level of a country's GDP but theoretical link between these factors and economic growth was not clearly established in the standard neoclassical models.

In recent years, most governments have increasingly used taxes on consumption such as sales taxes and value added tax to finance a larger share of its spending, taking little attention to form and implement policies that can widen base and expand international tax competition of different tax rate (Engen & Skinner, 1996).This makes it more difficult for such governments to collect corporate and income taxes from their citizens and move from taxes on income to taxes on consumption which would improve economic efficiency and increase the rate of growth or improve competitiveness and protect employment.

The choice of how much revenue to collect from taxes on consumption rather than taxes on income can be described as a choice of balance between direct and indirect taxation. There are significant differences in the design and economic effect of different taxes within the general classes of "taxes on consumption" or "taxes on income". Taxes on consumption are better for growth than taxes on income. The main argument being related to the way different taxes affect savings and labour supply decisions. The different treatment of savings between the two types of taxes is a key element, with taxes on income subjecting savings to heavier taxation than taxes on consumption. Shift from taxes on income to taxes on consumption does not change total tax revenue and can be expected to encourage savings leading to increased investments and thus economic performance (Engen & Skinner, 1996). This arises because taxes on income include both income that is saved and income from saving. Taxes on consumption exclude savings.

1.6 Comparison of tax levels between Kenya and other African countries

According to OECD report on tax revenue statistics in Africa, the average African tax to GDP ratio increased by 1.5% from 15.7% to 17.2% percent between 2008 and 2017.This was mainly due to increase from value added taxes (VAT) which increased by 0.7 percentage points and individual income taxes which increased by 0.7 percentage points. The average ratio has plateaued at 17.2 percent in 2015, as increase in some countries offset decrease in other countries.

Tax to GDP ratio for some African countries in 2017 varied as follows: Seychelles had 31.5 percent, Tunisia 31.2 percent, South Africa 28.4 percent, Nigeria 5.7 percent, Equatorial Guinea 5.9 percent, and Democratic Republic of the Congo 6.6 percent. Kenya had 18.2 percent above African average of 17.2% and below Latin America and Caribbean (LAC) average of 22.8%. This implies that Kenyan Tax-to-GDP is not that bad as compared to other African countries.

Between 2008 and 2017, revenue sources have shifted to VAT (increase of 1.7 percentage points of total taxes) and individual taxes (increase of 2.6 percentage points of total taxes). While the share of individual taxes is still lower than the share of corporate taxes, corporate tax revenue has reduced by1.2 percentage points of total tax revenue during the same time frame. Consumption taxes other than VAT have decreased by 3.4 percentage points of total revenues.

The decline in consumption taxes other than VAT in many African countries is partly due to lower trade tax revenues. Trade liberalization across the region has led to reduced import tariffs, a narrower base of goods and services subject to excise taxes, and the elimination of taxes on exports, lowering overall trade tax revenues. The 2019 launch of the African Continental Free Trade Area (AFCFTA) will further reduce tariffs and thus decrease trade tax revenues in the short term. In the long run, however, this decrease is expected to be offset by additional tax revenues resulting from economic growth generated by closer integration.

On average, non-tax revenues accounted for 43 percent of the amount of collected revenues in 2017. Non-tax revenue varied substantially among the countries covered, ranging from 18.7 percent of GDP in Botswana to 0.5 percent of GDP in South Africa. In almost all countries, non-tax revenues were lower than tax revenues.

Table 1.1 Tax Structure in some selected African Countries in 2017

Country	**Individual Taxes**	**Corporate Taxes**	**Social Insurance Taxes**	**Property Taxes**	**Value-Added Taxes (VAT)**	**Consumption Taxes Other than VAT**	**Others**
Botswana	0.0%	0.0%	0.0%	0.3%	34.0%	4.4%	61.3%
Burkina Faso	7.4%	15.7%	9.9%	0.7%	36.9%	27.6%	1.9%
Cape Verde	20.2%	12.1%	0.2%	1.5%	36.3%	29.7%	0.0%
Cameroon	6.8%	13.2%	7.3%	1.1%	36.3%	26.5%	8.7%
Congo	23.4%	18.5%	0.0%	0.8%	29.3%	24.5%	3.4%
Côte d'Ivoire	0.3%	11.2%	11.5%	2.6%	20.0%	41.9%	12.6%
Democratic Republic of the Congo	17.2%	19.6%	7.5%	0.2%	29.5%	22.4%	3.5%

Egypt	9.6%	27.7%	15.0%	0.6%	21.1%	22.9%	3.0%
Equatorial Guinea	11.6%	66.2%	0.0%	0.0%	12.4%	8.6%	1.1%
Eritrea	30.9%	17.9%	13.3%	2.3%	24.8%	10.7%	0.0%
Ghana	14.3%	17.2%	9.0%	0.0%	28.6%	30.1%	0.8%
Kenya	24.9%	12.9%	2.5%	0.7%	24.0%	27.9%	7.1%
Madagascar	11.1%	12.4%	3.5%	0.6%	48.1%	24.0%	0.4%
Mali	7.7%	16.5%	10.5%	2.2%	29.4%	29.3%	4.5%
Mauritania	12.5%	20.9%	2.0%	0.2%	31.8%	32.5%	0.1%

As observed by Musgrave (1997),every country imposes taxes to citizens and institutions with the aim of achieving long term objectives such as meeting development activities and promoting economic growth.However, according to Musgrave (1989), taxation leads to growth retardation due to the disincentive effects it generates to the economy; although taxation is the most preferred tool of government revenue collection, as it is easily accessed in terms of equity, fairness, and simplicity, taxation as a method of revenue collection, creates disincentives in the economy by generating contradictory effects. Taxation reduces consumption at household level due to its reduced disposable income and motivation to invest in physical or human capital and innovation. Taxation can also stifle operation of the private sector; a higher tax burden on businesses and corporations increases the cost of doing business and consequently reduces profits. This can lead to other consequences such as layoffs and increased unemployment levels (Maingi, 2010).

Just like other many emerging economies, Kenya has revealed its aim for rapid economic and broad-based growth and targets to achieve a growth rate of at least 8% per annum while pushing the country's economy up to a middle-income class as outlined in the Kenya's Vision 2030, the country's economic development blue print. Broad based growth and economic growth and development are important to a country and can only be easily achieved through generation of enough internal revenue to finance the country's annual budgets. Kenyan government however, mostly rely on the donor support in terms of bilateral and multilateral funding to achievechieve its economic objectives as its internally generated revenue cannot fully meet its expenditure requirements.

The level of a country's taxation is assumed to affect the level of the country's GDP. Economic growth cannot take place without proper prioritization of development projects as per the ability of the economy to finance them. This means that the government needs funds to carry out planned programs, strategies and objectives that bring about economic growth. In most Sub-Saharan African countries including Kenya,the main source of revenue is taxation and this therefore suggests that at least there must be a relationship between taxation and a country's economic growth.

Taxes affect economic performance through their effect on work effort, savings and investments (Ojede & Yamarik, 2012).The output of an economy will increase with increased productivity, and productivity of an economy will increase when there is investment in both physical and human capital. Investment comes from both the private and public savings. Thus, any factor affecting investment will influence the economic performance.

Since income tax is charged on individual income and corporate profits, higher taxes on salaries of the workers can discourage work effort, human capital formation, and discourage private savings. High taxes on corporate profits discourage investments and entrepreneurial spirit leading to reduced economic output. Lower income taxes on the other hand, may encourage work effort, and increase private savings and investment leading to improved overall productivity of the economy and consequently economic growth.

According to Ahmed (2010), fiscal policy of government expenditure is of great importance since it promotes sustainable growth and price stability in employment, output and income which are significant indicators of economic growth. Thus, expenditure by government can only be achieved through revenue collection which is only done through taxation. Governments therefore collects taxes for two main reasons: to achieve its fiscal policy of redistributing income and to provide public goods and services.

1.7 Long-term effects of taxation on an economy

Economic activity reflects a balance between what people, businesses, and governments want to buy and what they want to sell. In short-run, demand factors loom large but in the long-run, supply factors play the primary role in determining economic potential. A business' production capacity depends on the size and skills of the workforce, the amount and quality of equipment in use, and the stock of knowledge and ideas.

By influencing incentives, taxes can affect both supply and demand factors either positively or negatively. For instance, reducing marginal rates on wages and salaries can induce people to work more, expanding the earned income tax credit can bring more low skilled workers into the labour force, lower marginal tax rates on the returns on asset such as interest, dividends, and capital gains, can encourage saving, reduced marginal tax rates on business income can encourage companies to invest domestically rather than abroad, while tax breaks for research can encourage the creation of new ideas that spill over to help the broader economy and so on. However, tax reduction can also have negative supply effects. For instance, if a cut increases workers' after-tax income, some may choose to work less and take more leisure. This 'income effect' pushes against the 'substitution effect' in which lower tax rates at the margin increases the financial reward of working. Tax provisions can also distort how investment capital is deployed. For instance, the US tax system favours housing over other types of investment. This differential most likely induces overinvestment in housing and reduces economic output and social welfare. Tax cuts can also slow down long-run economic growth by increasing budget deficits. When the economy is operating near potential, government borrowing is financed by diverting some capital that would have gone into private investment or borrowing from foreign investors. Government borrowing thus either crowds out private investment, reducing fore productive capacity relative to what it could have been, or reduces how much of the future income from that investment goes to the country's residents. Either way, deficit reduces future well-being of an economy.

The long run effects of tax policies thus depend not only on their incentive effect but also on their budgetary effects. If the marginal tax rates on individual incomes is reduced for example, the long-run effects can be either positive or negative depending on whether the resulting impacts on saving and investment outweigh the potential drag from increased deficits.

1.8 History of taxation in Kenya

First Kenya's pre- independence tax legislation was enacted in 1937 and it remained effective until 1952 when the income tax management act was enacted. The tax system then was characterized by a narrow tax base comprising of taxes such as hut tax, land tax, and poll tax which were regressive in nature. After independence, the new government embarked on modernization of the tax system through enactment of modern tax laws such as income tax, sales tax, excise duty and custom duty.

In the 1960s and early 1970s, tax policies and laws were common across the East African Community (EAC), consisting of Kenya, Uganda, and Tanzania. After disintegration of the East African Community in 1977, each partner state continued to use same tax laws which have been modified with time to reflect each country's unique economic requirements.

Kenya revenue authority collected an average of USD 2.988 Billion monthly tax between September 1999 and September 2023.It recorded an all-time high of USD 15.664 Billion in June 2022 and a record low of USD 126.882 million in July 2001 (CEIC data 1999-2023).

1.9 Kenya's taxation legal and regulatory framework

i) **Income tax Act**

This Tax Act was first enacted by the colonial administration in 1921 as an income ordinance but it was revised in 1954.The current Income Tax Act was enacted in 1973 and a year later it came into effect. This Act has been amended severally to align it with the changing environment and international best practice. This Act provides for ascertainment, assessment, and collection of income tax.

ii) **Sales tax Act.**

Sales Tax was introduced in 1973 due to the need to generate more local revenue to finance the government's budget. The general rate of tax was at 10% and was applicable on goods manufactured in Kenya by the registered manufacturers or goods imported into the country. In addition to the general rate of tax, some few goods were subject to specific rate of tax. The tax base of the sales tax was narrow as it was charged at the manufacturer's level or at the point of importation only. The tax had a huge negative impact on the local manufacturing since the manufacturers of the goods that were subject to sales tax were not allowed to deduct the input tax, hence increasing the cost of goods.

iii) **Value Added Tax (VAT) Act**

Sales tax was replaced by the Value Added Tax (VAT) in 1990. The transition from sales tax to Value added tax was informed by the fact that the former legislation was retrogressive and had negative impact on businesses because it did not provide for deduction of input tax, unlike VAT where the suppliers of vatable goods or services deduct the tax paid on input supplies from

the tax paid on output supplies and pay the net to Kenya Revenue Authority (KRA). Additionally, sales tax was being charged on goods only whether locally manufactured or imported while VAT widened the scope through inclusion of services. At the time of enactment, VAT was considered to be progressive tax and a major source of Government revenue compared to other tax heads such as income tax, excise duty and import duty. However, as a proportion of gross domestic product (GDP), VAT has continued to yield far less revenue compared to income tax.

The VAT Act (Cap. 476) was reviewed in 2013 leading to the current VAT Act. The new VAT act was enacted to modernize the law; rationalize/ reduce zero-rating and exemption of goods which had increased over time. However, it has been noted that, over time, some goods and services that had been removed from the exemption and zero-rated schedules have been re-introduced progressively thus creating uncertainty in terms of tax policy. Nevertheless, the review was mainly aimed at increasing the revenue raised from VAT through minimizing tax expenditure as well as aligning it with international best practices.

The Act provides for imposition of value added tax on goods and services made in, or imported into Kenya.

iv) **Excise duty Act**

Prior to joining the East African Community Custom Union in 2004, Custom and Excise duties were administered under one law: the Customs and Excise Act Cap. 472.The East African Community Customs Management Act (EACCMA),2004 was enacted by the East African Community Legislative Assembly to provide a legal framework to administer Customs matters. However, the excise matters continued to be administered under the Customs and Excise Act on transitional basis until 2015 when the Excise Duty Act,2015 came into force. The main objective of enacting the Excise Duty act was therefore, to have separate provisions on excise duty matters from customs matters, since customs matters were taken care of by enactment of the East African Community Customs Management Act of 2004.

The act provides for the charge, assessment, and collection of Excise Duty on excisable goods and services.

v) **Tax procedures Act**

It provides for harmonization and consolidation of procedural rules for the administration of tax in Kenya.

The most recent changes in tax laws in Kenya was the enactment of the 2023 finance act whose aim is to generate additional revenue to the exchequer.

vi) **Kenya National Tax policy**

The National Tax policy sets out broad guidelines on taxation and other tax related matters including tax strategies in Kenya. It also articulates the principles governing revenue collection and tax administration in Kenya through provision of a set of guidelines that regulate taxation and thus forms the basis for enactment of tax legislation, review, development, and administration (Kenya National Tax policy, 2022). Thus, it provides a set of guidelines for taxation of income, goods and services. It is a vital tool for revenue mobilization to facilitate social and economic development. The policy is guided by the principles of public finance as stipulated under article 201 of Kenya's constitution.

The overall objective of the policy is to guide the development of a progressive tax system and administration of Kenya's tax system in order to enhance revenue mobilization, promote investment and foster a flexible fiscal space. Its specific objectives are: to offer policy guidance on tax administration and enforcement of tax and custom laws, to promote investment and enhance regional and international trade, to enhance compliance with tax and customs legislations, to provide the basis for review and development of tax laws, to guide stakeholders including investors on tax policy, to provide a basis for institutionalizing progressive tax culture, to provide principles for negotiation of bilateral, multilateral, regional, and international agreements on tax and customs matters, to provide guiding principles for the Kenyan tax system, to provide guidelines for development of a framework for granting tax incentives and concessions to various sectors of the economy, and to define the roles and responsibilities of key players in the tax administration. It additionally aims is to expand tax base so as to enhance fairness and equity in tax system as well as embrace the national best practice in tax administration and create certainty in predictability of tax rates and tax bases, enhance tax compliance, and reduce tax expenditure.

The Kenya National Tax policy is anchored on following principles:

a) Economic efficiency: The tax system shall minimize discrimination in favour of,or against, any economic choice to mitigate distortions and expand the productive capacity of the economy.
b) Equity and fairness: The tax system will be designed to treat equally all taxpayers placed in similar circumstances (horizontal equity), and treat differently those placed under different circumstances (vertical equity).
c) Simplicity: Tax laws and administrative processes shall be clear so that it is easy to comply and difficult to evade.
d) Administrative efficiency: The cost of compliance by taxpayers and administration cost to Revenue Authority, shall be kept at minimum level.
e) Flexibility: While the tax system shall provide certainty of direction, it will be dynamic and responsive to changing circumstances in the economy.
f) Revenue adequacy: The tax system will be designed to mobilize adequate tax revenues to meet the needs of public expenditure.
g) Transparency and accountability: The tax system shall enhance disclosure of information of revenues collected and the tax expenditures.
h) Neutrality: The tax system shall minimize discrimination in favour of, or against any economic choice.
i) Consultative: The national treasury and Kenya Revenue Authority, will consult tax key players (defined in the policy) in developing and implementing changes to the tax system to ensure it adheres to the guiding principles and meets the constitutional requirements (Kenya National Tax Policy, 2022).

1.10 Challenges facing Kenya's tax system

1.10.1 General Challenges

Despite all initiatives undertaken to transform the country's tax system, the system still faces challenges which impact negatively on the country's revenue performance. These challenges are:

a) Hard to tax sectors: The country's economy is dominated by a large informal sector, which is difficult and also uneconomical to tax. The sector is characterized by poor record keeping, cash-based transactions and limited information due to its unregulated nature. Previous efforts to tax this sector including turnover tax and presumptive income tax have not realised the expected results.
b) Tax incentives: The country's tax laws provide various tax incentives in the form of tax exemptions, tax relief, allowances, tax deferral, and concessional tax rates or timing rules such as accelerated depreciation of capital investments. Although these incentives are aimed at promoting investments, providing relief to low-income earners and vulnerable groups in the society, they erode the tax base and cause the Government to forego tax revenue. This impacts negatively on revenue mobilization and implementation of the government programmes.
c) Low tax compliance: The tax compliance in terms of filling tax returns and payment of tax due, respectively stood at 70% for the fiscal year 2020/2021 and 77% for the fiscal year 2021/2022.Such levels of compliance are mainly attributed to the technical and complex nature of tax laws and procedures, taxpayer apathy, high compliance cost, inadequate sharing of taxpayer information among National and County Government agencies, lack of physical presence of KRA officers in some regions of the country and low literacy among citizens. These factors make it difficult to file tax returns and pay taxes due.
d) Complexity in taxing emerging digital economy: The country's tax system is not fully equipped to deal with emerging technological business models. This has led to some business activities being left out of the tax bracket especially activities carried out through digital platforms. These business activities can be carried out in a tax jurisdiction without having any physical presence in that jurisdiction and most of the time go unnoticed (Kenya National Tax Policy, 2022)

1.10.2 Challenges to specific tax heads

i) Income tax: Lack of clarity on taxation of some income derived or earned in Kenya, lack of progressivity in taxation of the personal income. The tax bands are narrow and an individual reaches the top bracket at a very low income, lack of guidelines for granting preferential tax rates, challenges in administering income tax exemption since other Acts of parliament provides tax exemption, avoidance of tax by non-resident companies through repatriation of profits and also to avoid high corporate rate for non-residence, lack of clarity on tax point on

taxation of gains from sale of property leading to noncompliance, complexity in taxation of some sectors, deduction of expenditure which are not used for the production of income thus eroding the tax base, lack of principles to guide investment allowance leading to some deduction exceeding 100%, and many personal reliefs which erode tax base.

ii) Value Added tax: High tax expenditure: VAT tax expenditure is relatively high compared to the overall VAT collection, Multiple rates: VAT Act provide 8% for petroleum products, 16% for other goods/ services and 10% for export goods. The lower rate on petroleum products creates a perverse incentive for relatively higher consumption, violation of the destination principle of some goods and services in the second schedule, lack of guiding principles for identifying goods or services that will be taxable, exempt, or zero rated, low compliance, regressivity in so far as exemption provides higher VAT benefit to the richer section in comparison to the poor and vulnerable.

iii) Excise duty: High excise duty rate of goods and services compared with the other East Africa community partners states. This contributes to the increase in illicit trade across borders such as smuggling. High excise duty rates also discourage investment in the country and distort the market, narrow tax bases as only few goods and services are subjected to excise duty, lack of principles in identifying goods and services, and low compliance: low compliance due to existence of illicit trade and counterfeits excisable goods. This reduces revenues accruing from excise duty to the Government and creates unfair burden on compliant manufacturers and importers of excisable goods.

iv) Custom duty: Dynamics in international trade including, emerging business models, new trading partners, increased security threats, organized crimes, and increasing number of regional free trade areas that Kenya is a member, present challenges in customs administration. The specific challenges faced by customs administration are: low level of automation in some custom processes that create loopholes for revenue leakage, inadequate modern technological tools at entry/exit border points to detect and deter cross border smuggling, mis-declaration, undervaluation, and miscalculation of goods, inadequate cargo monitoring and management system, inadequate staff capacity and training to handle the ever-changing business environment, inadequate knowledge by importers and their agents on custom processes, inadequate cooperation, coordination, and collaboration amongst Government agencies on customs and border management matters, inadequate customs to

customs regional and international cooperation to curb cases of abuse of rules of origin, cargo diversion, and undervaluation, and porous borders which create room for illicit trade.

The Kenya National Tax Policy 2023, provides recommendations for addressing the challenges. It further outlines the implementation and coordination framework and the roles and responsibilities of various actors in its implementation.

1.11 Key players in national tax administration

i) Kenya Revenue Authority

Kenya revenue authority was incorporated in 1995 mainly to strengthen revenue collection and harmonize the separate tax collection arms that existed before then. It was expected to put in place an efficient tax system so as to seal the loopholes that existed in the tax system, bring down tax evasion, and enlist as many tax payers as possible into the tax net. To accomplish this, the institution is given substantial budgetary support to facilitate enhancement of pay structure of revenue officers, attract and retain professional staff and also establish structure for identifying and dismissing incompetent and corrupt staff. This was considered prudent as efficient revenue collection was seen as the only way to reduce on Government borrowing and ease pressure on inflation and interest rates as well as increase government revenue to meet both recurrent and capital expenditure (Nyaga et al, 2016).

Prior to its establishment, various taxes were collected by separate entities under the ministry of finance including, department of Value Added Tax, department of income tax, and department of customs. The high administrative costs, duplication of efforts and roles as well as difficulties in enforcement and audit, brought about by existence of these separate entities led to the demand of an efficient and cost-effective tax collection and management system. KRA was therefore formed through an act of parliament in1995 so as to address these challenges.

The functions of KRA include, administration of tax laws in line with national tax policy, , conduct taxpayer's education and awareness on tax matters in line with the policy, provide feedback on implementation of the policy, establish a system for prevention, detection, and deterrence of tax malpractices, liaise with bilateral and multilateral institutions on tax matters, advising the National treasury on matters relating to the implementation of the tax policy, ensure requisite capacity for effective tax administration in line with the policy, sensitization of stakeholders on implementation of the policy, assessing collection and accounting for all collected tax revenues, to advice on matters

relating to the administration of, and collection of revenue, and to perform such other functions related to revenue as the minister of finance may direct.

ii) Central bank of Kenya

The central bank of Kenya is the banker for the government, encompassing the national government, government ministries, departments, and agencies and county governments. These institutions hold a variety of accounts with central bank, depending on their needs, which allow them to receive deposits and make payments. The central bank monitors these accounts to ensure that the institutions are not at risk of overdraft, and also provides financial advice to the institutions.

As a parastatal, Kenya Revenue Authority (KRA) houses its main tax collection account at Central Bank of Kenya while selected commercial banks are authorised to hold collection accounts on behalf of KRA to allow the general public to conveniently make tax payments. The money collected in these accounts is deposited into the main account at the Central Bank.

iii) The national treasury

The National Treasury is one of the departments of the government of Kenya whose responsibility include, management of national economic policy, preparation of government's annual budget, and management of the national government's public finances; it formulates, implements and monitors macroeconomic policies involving expenditure and revenue, manages the level and composition of public debt and guarantees, evaluates, and promote economic and financial policies that facilitate social and economic development in conjunction with other national government entities, mobilizes domestic and external resources for financing national and county governments budgetary requirements, and design and prescribe efficient financial management system for national and county governments. This ensures transparent financial management and standard financial reporting, ensures that the national government and its entities apply uniform accounting standards. It does this, in consultation with the Accounting Standards Board, develops the policy for establishing , managing, operating, and winding up of public funds, prepares the annual division of revenue bill and county allocation revenue bill in consultation with commission on revenue allocation and the intergovernmental budget and economic council, strengthens financial and fiscal relations between the national government and county governments, and assists county governments to develop their capacity for efficient, effective and transparent financial management among others.

Its roles regarding the National tax policy, are: take lead in implementation of the policy, streamlining existing and future tax laws for coordinated implementation, the comprehensive review of the policy, and sensitization of stakeholders on the provisions of the policy, monitor the implementation of the policy, liaise with the judiciary for establishment of a tax court as an independent body to adjudicate tax matters, administer and monitor the tax expenditure programme, and take lead in public participation on proposals for review of the tax regime.

iv) County Governments: Comply with the policy and tax laws, collaboration with national Government in the implementation of the policy, facilitate integration of county revenue administration system with the tax administration systems of the Kenya Revenue Authority (KRA), and provide relevant information to the tax administration to facilitate tax compliance.

v) Judiciary: Resolution of tax disputes between tax payers and customs administration and tax payers, interpretation of tax laws, establishment of a tax court, facilitate out of court tax dispute resolution through the mediation process, and facilitate capacity building of judicial officers on tax matters.

vi) Tax Appeals Tribunal: Determine tax disputes between the KRA and tax payers.

1.12 Other issues that complicate collection of tax in Kenya

Kenya's revenue collection yield is still below the specified 25 % of GDP required for EAC monetary union despite the heavy investment by the Government to transform the tax system.In particular, ordinary tax revenue as a percentage of GDP has generally been declining over the last ten years from a high of 18.2% in the financial year 2013/2014 to 13.8% in the financial year 2020/2021.Some of the issues that hamper collection of taxes in the country include, a growing tax expenditure estimated at 2.9% of the GDP as of 2020, complexities of taxation of emerging online businesses, international tax disputes and dispute resolutions, and tax compliance among tax payers. Others are, financial illiteracy; many tax payers in the country lack the knowhow required to understand the tax system which makes it difficult to comply with tax regulations, complicated procedures for filing of taxes; the procedure is not easy to some tax payers which makes it difficult for them to file their taxes on time, lack of book keeping; most small businesses do not have capacity to keep proper and up to date financial records making it difficult for tax authorities to assess their tax obligation which leads to lose a lot of would be tax revenue, tax evasion, lack of

required skill set; some of the tax authorities staff do not have the appropriate skills to implement tax reforms effectively, and resistance to change; tax authority in some cases encounter resistance to change when implementing tax reforms among the taxpayers which hinder their efforts in improving tax collection (Republic of Kenya, 2022).These issues complicate tax collection in the country and consequently lead to shortage in revenue collection which has negatively impacts on government's actualization of its financial plans and economic development objectives (Kenya National Tax Policy, 2023).

Jepkemoi (2008), in his study on macroeconomic determinants of tax revenue share in Kenya, established that, government expenditure and revenue have maintained a consistent growth patterns but with expenditure always exceeding revenues. This is despite all the tax reforms undertaken by the government. The imbalance between expenditure and revenue lead to a large fiscal deficit. He asserts that, poor tax performance in terms of raising revenue can be due to deficiencies in tax structure or inadequate effort on the part of government, both of which are influenced by various factors. The study's long-run results indicated that tax revenue share in GDP in Kenya is determined by the level of per capita income, imports, agriculture, manufacturing, external, debt, and trade liberalization.

There is no study that has been conducted on the relationship between the effect of changes in income tax rates, excise duty, import duty and value added tax and Kenya's economic growth in the post devolution years (2010-2023). This the knowledge gap that this study aspires to fill.

1.13 Aim of the study

The aim of this study is to assess the effect of income, import, excise, and Value added (VAT) tax changes on Kenya's economic growth in the post devolution period (from 2011 to 2023).

1.14 Objectives of the study

The objectives of this research are:

a) To study the country's trend of tax collection between 2010 and 2023,
b) To study the trend of the country's public dept within this period,

c) To study the trend of the country's gross domestic product and gross domestic product to tax ratio within this period.
d) To analyse relationship between the country's annual collected tax revenue and gross domestic product within the period of study.

1.15 Problem statement

Of late the government has increased the payable taxes arguing that its objective to achieve increased revenue collection as a strategy for arresting towards arresting of the widening of the country's fiscal deficit and thus expand the fiscal space. Enhancing domestic resource mobilization, a noble cause, is equally seen as a way of addressing reduced export revenue and encouraging foreign direct investment. The second argument for increased taxation in the country is that Kenya's tax yield is still below the desired east African Community target of 25% of GDP. The highest GDP to tax ratio in Kenya was recorded in 2014 at 19.3% while the lowest was recorded in 2002 at 6.1%.

The four tax regimes of income, import, excise, and value added tax accounts for the highest tax revenue collected in the country and since taxation can influence economic growth, either positively by generating revenue for government expenditure or negatively by creating disincentives in the economy, each of these four tax regimes must be related in one way or another with the country's economic growth.

1.16 The research questions

a) What has been the country's trend of tax revenue collection been between 2010 and 2023?
b) How has the country's gross domestic product (GDP) been within this period?
c) How has the country's gross domestic product (GDP) to tax ratio been within this period?
d) How has each of the taxes related to the Kenya's economic growth?

1.17 Significance of the study

The study will be of great significance to the future researchers on either this topic or related topic as it will be available for reference and thus contribute to the general pool of knowledge. The results of the study can be used as a guide in policy formulation by policy makers to come up with informed tax policy decisions and prescription aimed at ensuring maximum and efficient revenue collection from taxation at levels and rates that influence the country's economy in a positive

manner. Additionally, the results of this study will be of importance to multilateral and bilateral institutions such as the world bank and IMF in measuring the country's credit worthiness on accessing loans and servicing them and make use of their expertise to guide and support them accordingly.

1.18 Scope of the study

The study uses secondary data on economic growth and taxation. The data is collected from the Central bank of Kenya, Kenya Revenue Authority, and Kenya National Bureau of Statistics. The sought data was for income taxes, excise duties, VAT taxes, and import duties for the period 2011 to 2023.

1.19 Limitations of the study

The country has many forms of taxes that in one way or another impact on the country's economic growth. This study however, only dealt with the effect of the main taxes: income, excise, import and VAT taxes to the country's economic growth and left out all the other form of taxes.

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter reviews the existing literature that focus on taxation and country's economic performance/growth. First it reviews the theoretical models on which the study is built on and then reviews the empirical studies relevant to the subject. It traces the theoretical development in economic analysis of the effect of taxation changes (and specifically the four main tax heads: income tax, import duty, excise duty and value added tax (VAT)) on Kenya's economic growth.

2.2 Theoretical literature review

Economists have put forward many theories or principles of taxation at different times to guide the state as to how justice or equity in taxation can be achieved. The main theories/principles are,

a) The benefit theory

The benefit principle is a concept in the theory of taxation from public finance. The benefit approach was initially developed by two Swedish economists Mr Knut Wisksell (1896) and Mr Erik Lindahl (1919) for use in assessing the efficiency of taxes and appraising fiscal policy. This principle bases taxes to pay for public-goods expenditures on a politically-revealed willingness to pay for the benefit received.

The benefit principle takes a market- oriented approach to taxation. The objective is to accurately determine the optimal amount of revenue that should be spent on public goods.

According to the principle, the state should levy taxes on individuals according to the benefit conferred to them; the more benefit a person derives from the activities of the state, the more he should pay to the government. The principle suggests that, households and businesses should purchase the goods and services of the government in basically the same manner in which other commodities are bought. Typical example in this is road tax; people who get the benefit of driving on the roads pay the tax for maintenance and construction of roads.

The main justification for the benefit principle of taxation is that, the principle recognizes that the purpose of taxation is to pay for government services through payment of taxes in proportion to the benefits people receive from government spending, under the principle, taxes are seen as serving a function similar to that of prices in private transactions. This can lead to an economically efficient solution as the allocation of resources through the public sector would

respond directly to consumer wishes, and the principle measures benefits received by individuals in the case of certain special taxes such as petrol tax, betterment tax and many others.

The principle has however been criticized on the grounds that, the basic principle of tax is that, it is a compulsory contribution and there is no direct quid pro quo. Hence, if the state maintains a certain connection between the benefits conferred and the benefits derived, this principle goes against the basic principle of tax and if the principle is applied in practice, then the poor will have to pay the heaviest taxes. This is because they benefit more from services of the state compared to the wealthier group and getting more from the them in terms of taxes goes against the principle of justice. The principle however seldom fail in practice when there are 'free riders' over pure public goods where benefit received cannot be measured such as street lights.

b) Ability to pay principle

The idea of people with ability to pay should pay higher percentage of their income was first mooted by Adam Smith. In modern Public Finance, the Ability to Pay theory presented by the English economist Arthur Cecil Pigou in 1920 is considered to be one of the most influential theories.

The ability to pay Principle of taxation maintains that taxes should be levied according to a tax payers' ability to pay, as a means of easing the financial burden that taxes can create to low- income households.

The rationale behind this principle is that those with higher incomes are more capable of paying more taxes and low-income earners need most of their income and their low ability to pay taxes allows them to keep most of it to help stimulate the economy.

The principle is severely criticised on the grounds that, it reduces incentives to increase income; critics argue that through this system, high incomes are penalized and this can lead to lose of incentives to earn more and there is no government spending accountability; apart from collecting taxes from citizens, the government also makes decisions on how to best spend the revenue to benefit the citizens. Sometimes however, government fails to maintain accountability on spending tax revenue. For instance, the tax revenue collected from petroleum products should be channelled towards improvement of roads, but this is not necessarily the case with ability to pay taxation system as the government can make use of it in other purposes.

c) The dynamic theory of public spending, taxation, and debt

This theory builds on the well-known tax smoothing approach to fiscal policy pioneered by Robert Barro's (1979). The approach predicts that government will use budget surplus and deficits as a buffer to prevent tax rates from changing too sharply. Thus, government will run deficits in times of high government spending needs and surpluses when needs are low. Underlying the approach is that are the assumptions that governments are benevolent, that government spending needs fluctuate overtime, and that the dead weight costs of income taxes are a convex function of the tax rates (Battaglini & Coate, 2008)

The economic underlying the theory is similar to that in the tax smoothing literature but key departure is that policy decisions are made by a legislature rather than a benevolent planner and that legislators can distribute revenues back to their districts via a pork barrel spending.

It also assumes that policy choices are made by a legislature comprised of representative elected by a single member in geographically defined districts. The legislature can raise revenue in two ways: via a proportional tax on labour income and by borrowing in the capital market. Borrowing takes the form of issuing risk-free one period bonds. The legislature can also purchase bonds and use the interest earnings to help finance future public spending if it so chooses. Public revenues are used to finance the provision of public goods that benefit all citizens and to provide targeted district -specific transfers, which are interpreted as pork barrel spending. The value of the public good to citizens is stochastic, reflecting shocks such as wars or natural disasters. The legislature makes policy decisions by majority (or super majority) rule and legislative policymaking in each period is modelled using the legislative bargaining approach of David Baron and John Ferejohn (1989). The level of public debts acts as a state variable, creating a dynamic linkage across policymaking periods (Battaglini & Coate, 2008).

d) Supply-side Economic or Laffer Curve Theory

Supply-side economics is a macroeconomic theory that posits that economic growth can be most effectively be enhanced through lowering of taxes and decreasing regulation (Lucas, 1990). According to supply-side economics, consumers will benefit from greater supplies of goods and services at lower prices, and employment will increase.

A basis of supply-side economics is the Laffer curve that was developed by the American supply side economist Arthur Laffer. The curve shows a theoretical relationship between tax rates

and the amount of tax revenue collected by governments. The Laffer curve states that 'the tax revenue is most likely not maximized when tax rates are at 100%, as these disincentives workers from earning wages". The curve is often used to illustrate the argument that cutting tax rates can result in increased total tax revenue. Critics of this theory however argue that Laffer curve is too simplistic and uses only a single tax rate. Demand-side economics also oppose this theory.

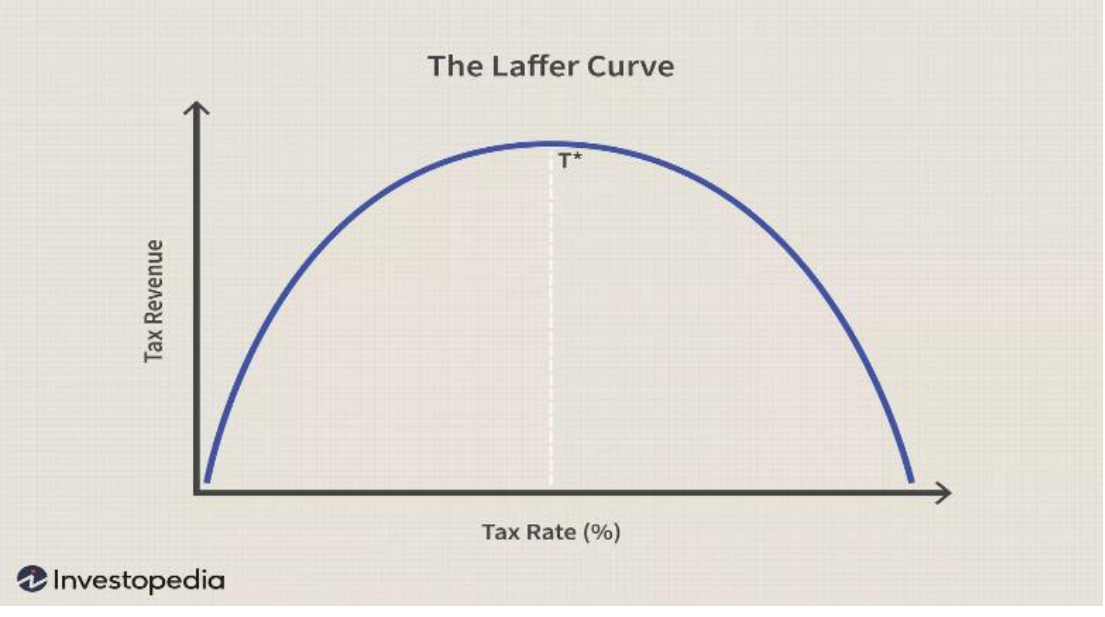

Fig 2.1 Laffer curve.

Sources: Julie Bang © Investopedia 2019

The Laffer Curve follows certain logic, as tax revenue does not always increase whenever the tax rate increases. Of course, when the tax rate is 0%, the government collects no income. In situations where the government collects 100% tax revenue, though all earnings will be remitted to the government, there will be no incentives for workers to be employed. In this case, though the rate is highest (further along the x axis of the curve), total revenue actually falls as shown by diminishing portion of the curve. Therefore, though it may feel counterintuitive, tax revenue is most often not maximized when tax rates are highest due to extenuating circumstances.

The revenue reaches an optimum point, represented by T*on the graph. To the left of T*, an increase in tax rates raises more revenue than is lost to offsetting workers and investor behaviour. Increasing tax rates beyond T* however, cause people not to work as much or not at all, thereby reducing total tax revenue. If the tax rate is to the right of T*, lowering the tax rate will stimulate economic growth by increasing incentives to work and invest and increasing government revenue.

Arthur Laffer argued that tax cuts have two effects on government's budget, both arithmetic and economic. The arithmetic effect is immediate and an x% increase/decrease in the tax rate will result in a corresponding x% increase/decrease in tax revenue. This seems logical enough at the face value but it is actually more complex when the second (economic) effect comes into play. Economic effect is long term and has a multiplier effect. As a tax cut increases income for tax payers, they will spend it. The increase in demand creates more business activity, spurring an increase in production and employment (Laffer, 2004)

The position of T* in Laffer curve is dependent on worker and investor preference to work, technology and other economic factors. Government would like to be at point T* because at this point it collects maximum amount of tax revenue while people continue working hard.

Supply-side economics proposed that production or supply is the key to economic prosperity and that consumption or demand is merely a secondary consequence (Lucas, 1990).

e) Theory of tax incidence

Tax Incidence or Incidence of Tax refers to the money burden of the tax. In simple terms, tax incidence relates to the final resting place of the tax. When a tax is levied, its money burden falls on one individual or another. Under tax incidence, one tries to find out where the burden of money actually falls or who bears the money burden of the tax.

Impact of Tax Incidence and Incidence of Tax Incidence are two different concepts. The impact of tax falls on the person who pays the tax first. However, the incidence of tax falls on the person who ultimately pays the tax. It is because the person who pays tax in the first instance does not necessarily bear the money burden of the tax. Simply put, the impact is the original burden of the tax while the incidence is the ultimate burden of the tax.

There are three theories of Tax incidence namely,

f) Concentration theory

The Concentration Theory states that each tax ultimately tends to get concentrated on a specific class of taxpayers, irrespective of the person or commodity on which these taxes are originally imposed. According to the Physiocrats of France, each type of tax imposed on people ultimately fell on the net income from land. Simply put, whether the tax is imposed on a commodity or a person, it would ultimately fall on land-owning classes. These Physiocrats also believed that agriculture was the only occupation which is productive and gives rise to economic surplus. Therefore, according to them, if tax was imposed on a commodity or a

person, through the process of tax shifting, it would ultimately fall on land. Based on these grounds, the Physiocrats suggested that a single tax should be levied on the net income from land and all other taxes on the people should be abolished.

However, this theory of Physiocrats has been criticised because agriculture is not the only occupation that is productive, as it solely does not give rise to economic surplus. Also, a single tax imposed on land would not provide revenue that is enough to fulfil the requirements of a modern welfare state. However, some truth lies in this theory; the concentration theory emphasises an essential point; ultimately all taxes are paid out of economic surplus. Besides, if the economic surplus is missing, then various attempts would be made to the transfer tax burden on others' shoulders.

g) Diffusion theory

Diffusion theory was propounded by various economists like Mansfield and Canard. This theory states that the tax burden automatically gets distributed in society through tax shifting. Mansfield described the tax as a stone or pebble which when thrown into a pond or lake creates a series of circles, and each circle leads to the other circle. This process of a series of circles goes on till the original circle coincides with the whole lake. The same thing happens in the case of taxes. When the government levies taxes on a specific point, its burden does not get confined to a specific point, instead it gets distributed widely among the different sections of society. This automatically diffuses the tax burden throughout society, making it impossible to keep the tax confined to a particular point.

Canard tried to explain the substances of this theory by comparing tax imposition to blood extraction from a human vein. Even though the blood is extracted from a single vein, the loss of blood automatically gets spread over the entire human body and it continues to remain in equilibrium.

The explanation of Diffusion Theory by both Mansfield and Canard simply states that the tax burden is shifted and reshifted until it spreads throughout society. Therefore, there is no need of studying the problem of tax incidence in public finance.

The diffusion theory prefers commodity or indirect taxes over personal or direct taxes because the possibility f diffusion of the burden is more in indirect taxes (through trade and exchange). Similarly, this theory supports old taxes instead of new taxes. It is because, through the passage of time, the tax burden of old taxes has already got diffused in society; however,

till the burden on new taxes gets spread in society with the lapse of time, it causes discontent and dissatisfaction in the society.

Despite its advantages, the critics rejected Diffusion Theory due to, the theory does not believe that the tax levied by the government falls on each individual based on their ability to pay. In fact, many times, the tax burden falls on an individual beyond his capacity to pay, resulting in discontent and dissatisfaction in society, the critics do not agree with the view of this theory that there is no need of studying tax incidence in public finance. It is known that through taxation, modern governments majorly aim at achieving the objective of maximum social advantage and to achieve this objective, it is essential for governments to check that the tax burden is borne by different sections of the society based on their ability to pay and therefore, the issue of tax incidence cannot be ignored, diffusion theory overlooks the fact that it is not possible to shift all taxes in exchange transactions; it is not possible to automatically diffuse the tax burden in society. This is however possible only under some circumstances, and the theory assumes there is perfect competition in the market, which is an unrealistic assumption. As there exist monopoly and monopolistic competition in the market, there is a check on the automatic diffusion of tax in society.

h) Modern Theory

The Modern Theory of Tax Incidence primarily deals with the incidence of commodity taxation. This theory states that one can pay tax out of surplus only. It means that, if a taxpayer is enjoying a surplus, he will pay the tax out of that surplus. However, if the taxpayer does not enjoy a surplus, he will shift the tax burden on the shoulders of someone else who could be enjoying surplus. As the tax imposed on a commodity is an essential element in its production cost, the commodity's price must cover it up. Simply put, the price of a commodity is inclusive of the tax levied on it.

It is worth noting that, tax incidence on a commodity cannot be shifted without making some transaction with another party or consumer which means that without making a transaction, tax incidence cannot be shifted in a forward or a backward direction. Therefore, tax shifting depends on the process of pricing. As commodity pricing is a function of the forces of demand and supply, the modern theory of incidence is considered as part and parcel of the theory of pricing.

The process of shifting in commodity taxation is quite common and widely spread. The tax burden either falls on the buyer or the seller. If the price of the commodity increases by the amount equal to the tax, then the tax incidence or money burden is put wholly on the buyer. If the price of the commodity does not increase at all, then the tax incidence or money burden is put entirely on the seller. However, if the price of the commodity increases by an amount less than the tax, then the tax incidence or money burden is put partly on the buyer and partly on the seller.

i) Endogenous growth model

The endogenous growth theory is the concept that economic growth is due to factors that are internal to the economy and not because of external factors. The theory is built on the idea that improvements in innovation, knowledge, and human capital lead to increased productivity, positively affecting the economic outlook.

The endogenous growth theory was first created due to deficiencies and dissatisfaction with the idea that exogenous factors determined long-term economic growth. In particular, the theory was established to refute the neoclassical exogenous growth models, as it made predictions about economic growth without factoring in technological change. The endogenous growth theory challenges such the idea by placing importance on the role of technological advancements. Since long-term economic growth is derived from the growth rate of economic output per person, it would depend on economy's productivity levels. In turn, economy's productivity would depend on the progress of technological change, which relies on innovation and human capital; these factors are considered internal to an economy, not external.

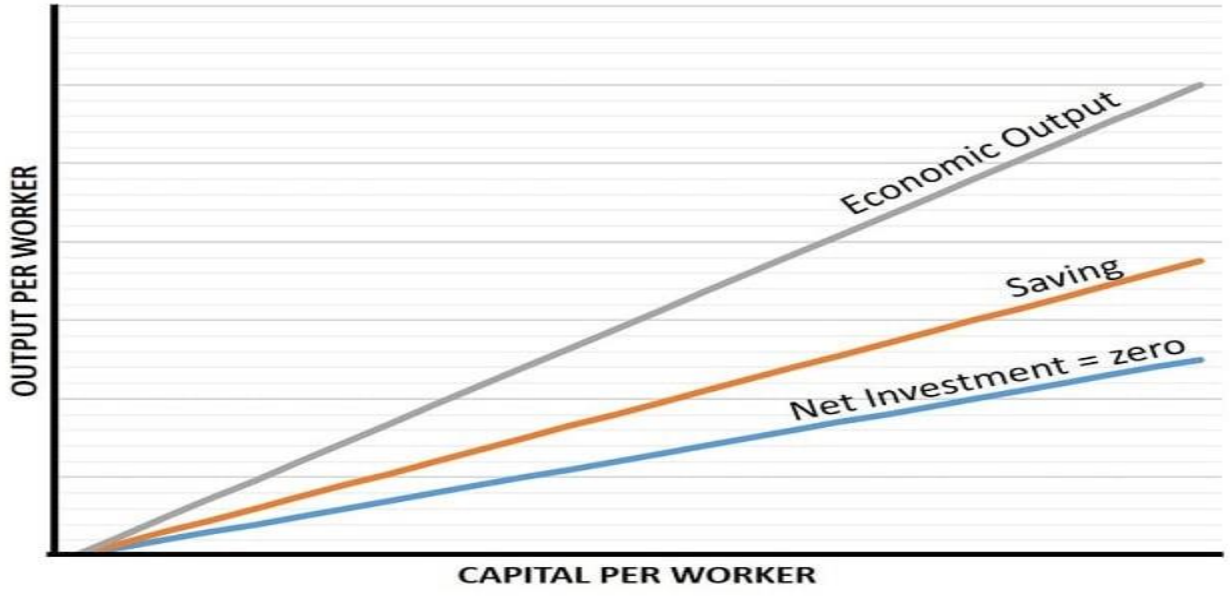

Fig 2.2 Endogenous Growth Theory and New Growth Theory.

Assumptions in the Endogenous Growth Theory

a) Economists who believe in the theory emphasize the need for the government to provide incentives and subsidies for business in the private sector. It motivates businesses to invest in research and development so they can continue to drive innovation.
b) There are increasing returns to scale by investing in human capital through education or training programs. Doing so can improve the quality of labour, which increases productivity.
c) The government should enact policies that help entrepreneurs, which create new businesses and new jobs.
d) Investments should also be made to improve infrastructure and manufacturing processes in order to achieve innovation in production, and
e) Intellectual property rights, such as copyrights and patents, are incentives for businesses to expand their operations.

Endogenous theory includes,

a) Arrow Model

Also known as the AK model of economic growth, the arrow model is used to explain economic changes as a result of innovation and technology. The "learning by doing" model is also used in the arrow model to explain how self-practice and innovation result in productivity and improved human capital. It is because learning by doing leads to a decrease in labour required to create a unit of output.

b) Uzawa–Lucas Model

The Uzawa-Lucas model explains how economic growth, in the long term, is attributed to the accumulation of human capital. In order to produce human capital, education should be used.

Therefore, the model assumes that human capital is the only input element in the education sector. It also assumes that economic output is developed by using physical capital and human capital. As a result, the ratio of physical capital to human capital is the measurement used to determine the total capital in an economy.

c) Romer Model

The Romer model considers changes to technology to be endogenous and therefore technological advancements lead to economic improvements. Additionally, the model assumes that innovative ideas are a very important part of economic growth. Combining improvements to human capital and existing knowledge can create innovative ideas to enhance the production of goods in an economy.

Limitations of the Endogenous Growth Theory

The exogenous growth theory often draws criticisms for relying on assumptions that cannot be assessed accurately, and there is no empirical evidence to validate the theory. In some endogenous growth models, some may also argue that the difference between physical capital and human capital is not distinct. Others also argue that the endogenous growth theory disregards the role of organizations and places too much weight on human capital.

i) Lindahl's model

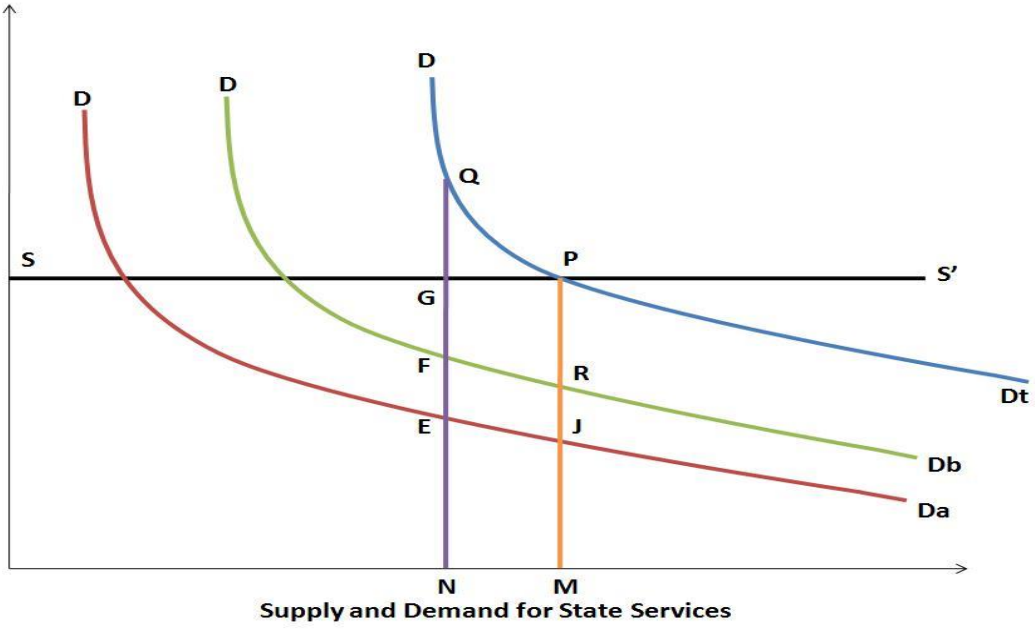

Fig 2.3 Lindal's model.

Lindahl model tries to solve three problems namely extent of state activity, allocation of the total expenditure among goods and services, and allocation of tax burden.

In the Lindahl model, if SS' is the supply of state services, it is assumed that production of social goods is linear and homogenous. D-Da is the demand curve of taxpayer A, and D-Db is the demand curve of tax payer B. The horizontal summation of the two curves results in the community's total demand schedule for state services. A and B pay different proportions of the cost of the services which is vertically measured. When ON (O is the graph origin, at axes intersection) is the amount of state services produced, A contribute NE and B contributes NF; the cost of supply is NG. Since the state is non-profit making, it increases its supply to OM. At this level, A contributes MJ and B contributes MR (the total cost of supply). Equilibrium is reached at point P on a voluntary exchange basis.

The Lindahl equilibrium proposes that individuals pay for the provision of public goods according to their marginal benefits in order to determine the efficient level of provision for public for public goods. In the equilibrium state, all individuals consume the same quantity of public goods but may face different prices because some people may value a particular good

more than others. The Lindahl equilibrium price is the resulting amount paid by an individual for his or her share of the public goods.

j) Bowen's model

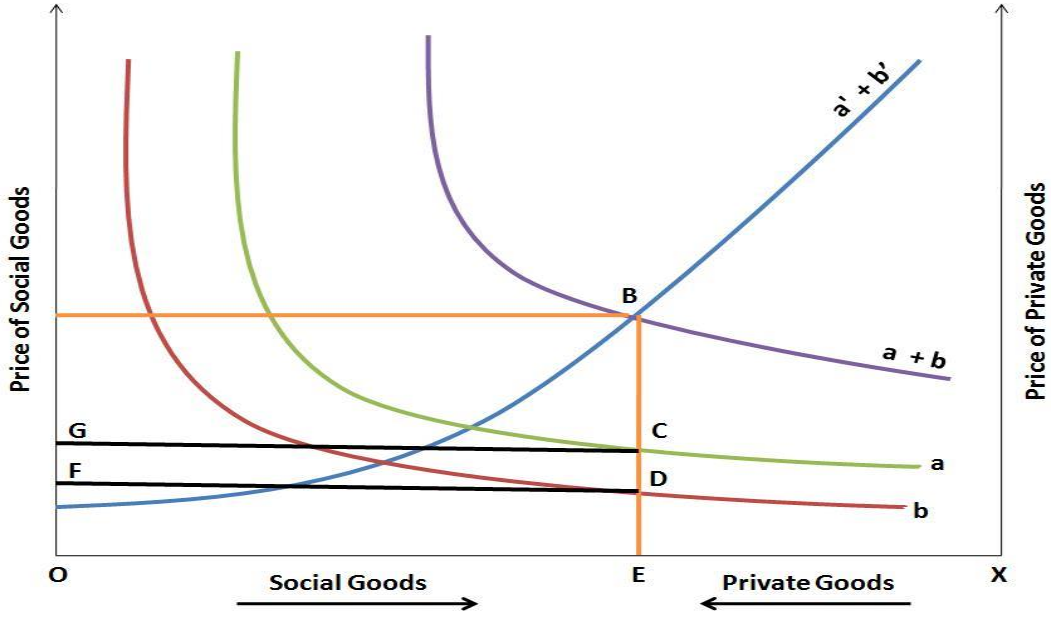

Fig 2.4 Bowen's model.

Bowen's model has more operational significance, since it demonstrates that when social goods are produced under conditions of increasing costs, the opportunity cost of private goods is foregone. For example, if there is one social good and two taxpayers A and B, their demand for social goods is represented by the curves *a* and *b;* therefore, *a+b* is the total demand for social goods. The supply curve is shown by *a'+b'*, indicating that goods are produced under conditions of increasing cost. The production cost of social goods is the value of foregone private goods; this means that a'+b' is also the demand curve of private goods. The intersection of the cost and demand curves at B determines how a given national income should (according to taxpayers' desires) be divided between social and private goods; hence, there should be OE social goods and EX private goods. Simultaneously, the tax shares of A and B are determined by their individual demand schedules. The total tax requirement is the area (ABEO) out of which A is willing to pay GCEO and B is willing to pay FDEO.

2.3 EMPIRICAL LITERATURE REVIEW

2.3.1 Taxation models

Empirical literatures provide different views pertaining the effect of tax on economic performance and debate whether taxes affect economy positively or negatives remains inconclusive and the direction of their relationship remain unclear. Most of empirical studies on relationship between taxation and economic performance are carried out across countries and very few country-specific studies are in existence.

The GDP of an economy is the country's national total output which is the total of consumption, government purchases, investment spending, and net exports. It is therefore represented by the expression

$$Y = C+G+I+NX$$

Where Y (GDP) is National output/ income,

C is Consumption,

G is Government purchases,

I is investment spending, and

NX is exports.

A change in income tax will affect investment spending in the above equation either positively or negatively and will lead to change in national output (GDP) of a country. This is in harmony with Mankiw's (1993) opinion that "a change in income tax affects national income". According to Wanyagathi (2014), a decrease in taxes has a multiplier effect on income as it raises disposable income, increases consumption and planned expenditure which lead to a greater increase in national income. Income tax can also reduce the multiplier effect of an increase in consumption or government purchases on national income. This effect is however on short term only.

Scholars have developed models to explain causes of long run growth of an economy: Solow (1956) analysed how higher saving and investment affects long-run economic growth assuming full employment of capital and labour. The model established that in the short run, higher saving and investment increases the rate of growth and national income and product. According to this model however, higher saving and investment has no effect on the rate of growth in the long run. The model is consistent with the stylised facts of economic growth. Engen and Skinner (1996),

uses a similar model to explain how taxes affect economic growth and recognizes growth of output of the economy as the key determinant of its economic growth. According to the model, growth of output is represented by the following expression.

$$\acute{y} = \alpha_i k_i + \beta_i m_i + \square_i$$

Where $\acute{y}$ = GDP growth rate in country i.

k_i = Change in the capital stock over time

m_i = Percentage growth rate in the effective labour force over time.

$\square_i$ = Economy's overall productivity growth.

α_i = Marginal productivity of capital.

β_i = Output elasticity of labour

According to Engen & Skinner (1996), this theoretical frame work allows understanding the five ways that taxes might affect output growth, corresponding to each of the variables on the right-hand side of the equation: higher taxes can discourage the investment rate or the net growth in the capital stock (factor k_i) through high statutory tax rates on corporate and individual income, high effective capital gains tax rates, and low depreciation allowances, tax may attenuate labour supply growth (factor m_i in the equation) by discouraging labour force participation and hours of work, or by distorting occupational choice or acquisition of education, skills, and training, tax policy has the potential to discourage productivity growth (factor $\square_i$) by attenuating research and development (R&D) and the development of venture capital for "hi-tech" industries, activities whose spillover effects can potentially enhance the productivity of existing labour and capital and can also influence the marginal productivity of capital by distorting investment from heavily-taxed sectors into more lightly-taxed sectors with lower overall productivity (Harberger,1962, 1966), and heavy taxation on labour supply can distort the efficient use of human capital by discouraging workers from employment in sectors with high social productivity but with a heavy tax burden. In other words, highly taxed countries may experience lower values of β and α, which will tend to retard economic growth, holding constant investment rates in both human and physical capital (Engen &Skinner, 1992).

The impact of tax changes on economic growth, measured as a change in real GDP or the components of GDP such as consumption and investment, are difficult to measure. Some tax changes occur as a response to economic growth, and looking at a tax cut at a certain point in time could lead to the mistaken conclusion that tax cuts are bad for economic growth since tax cuts are

often enacted during economic down turns. For this reason, most of the literature in recent years have followed the methodology developed in Romer and Romer (2010): '*Looking at unanticipated changes in tax policy'*, which economists refer as "exogenous shocks".

There are some methodological challenges including, failure to control other factors that impact on economic growth. For instance, government spending and monetary policy can understate or overstate the impact of taxes on growth. Some tax changes such as corporate tax changes, may have stronger long-run impacts relative to the short-run effect and a study with only limited time series would miss this effect and tax reforms involve many moving parts; certain taxes may go up, while others may drop. This can make it difficult to characterize certain reforms as net tax increases or decreases, leading to mistaken interpretations of how taxes impact growth (Durante, 2021).

Durante (2021) in his conducted literature review on the causal impact on taxes and economic growth confirmed that taxes changes and particularly corporate and individual income tax changes have negative effect on economic growth. His findings were: Mertens and Olea (2018), used time series from 1946 to 2012 to estimate the impacts of marginal tax rates on individual income and found that marginal rate cuts led to both increase in real GDP and declines in employment; a 1 percentage point decrease in the tax rate increases GDP by 0.78 percentage points by the third year after the tax change. They also found that changes in income following a tax change are responsive to the marginal rate change regardless of the change in the average tax rate. This implies that the positive GDP changes the authors found, are the response to changes in the incentives, rather than due to an increase in aggregate demand through the consumption channel. Cuts in tax rates for the top one percent also have positive impacts on other income groups which is consistent with the supply-side narrative of how reductions in top marginal rates can increase incomes for other groups over time. However, tax cuts for the top one percent do increase inequality, Zidar (2019) examined the impact of federal tax burdens on economic growth and labour supply across different income groups and states from 1950-2011. He found positive impacts of tax cuts on economic growth following two years after the change in policy but finds that tax cuts for low- and medium-income taxpayers affect growth more than tax cuts for high-income taxpayers. The study found that a one percent of state GDP tax decrease for the bottom 90 percent of earners increases state GDP by 6.6 percent. Looking at labour supply effects in

particular, he found that a one percent of state GDP tax decrease increases labour force participation for the bottom 90 percent of earners by 3.5 percentage points and hours worked by 2 percent. He does not find any significant impact on labour force participation rates, hours worked, or GDP growth for the top 10 percent of earners from a similarly sized tax change. This is somehow in contrast with the findings of Mertens and Olea (2018) for top earners. The results may lead someone to assume that Zidar is identifying "Keynesian" effects of tax changes, or aggregate demand effects. However, the author finds strong effects of tax cuts on real wages as well. As Zidar notes, "the increase in real wages suggests that supply-side responses are important and may exceed demand-side responses to tax changes for the bottom 90%." Additionally, some may argue that this study shows that tax cuts for top earners have no impact on growth. However, the author only looked at short-run impacts of tax changes on GDP but did not consider the broader implications of tax policy on long-run growth, human capital, or innovation. Nonetheless, the study provides convincing evidence of tax cuts impacting growth through the supply side which is consistent with neoclassical economic theory, Mertens & Olea (2018) used a time series data from 1946 to 2912 to estimate the impacts of marginal tax rates to individual income. They found that marginal rate cuts led to both increase in real GDP and decline in employment; they found that a 1 percentage-point decrease in the tax rate increases real GDP by 0.78 percent by the third year after the tax change. Importantly, they find that changes in income following a tax change are responsive to the marginal rate change regardless of the changes in the average tax rate. This shows that the positive GDP changes the authors find are the response to changes in the incentives, rather than due to an increased aggregate demand through the consumption channel. Cuts in tax rates for the top 1 percent also have positive impacts on other income groups, consistent with a supply-side narrative of how reductions in top marginal rates can increase incomes for other groups over time. However, tax cuts for the top 1 percent do increase inequality, Ljungvist and Smolyansky (2018) looked at 250 state corporate tax changes from 1970 to 2010 to assess their impact on employment and income. By comparing nearby counties across states, this allowed the authors to isolate the impacts of corporate tax changes relative to other policies that might affect economic growth. They found that a 1 percentage point cut in statutory corporate tax rates leads to a 0.2 percent increase in employment and a 0.3 percent increase in wages. They find that tax increases are almost uniformly harmful, while tax cuts seem to have their strongest positive impact during recessionary environment. This is only examined short-run effects though it is possible that these positive effects

could grow over a longer time horizon, Gunter, (2019) used a data set of 51 countries from 1970-2014 to examine the impacts of value-added taxes (VAT) on economic growth. They found that the effect of taxes on growth are highly non-linear: at low rates with small changes, the effects are essentially zero, but the economic damage grows with a higher initial tax rate and larger rate changes. For this reason, increases in the VAT in countries with high VAT rates, such as much of industrialized Europe, will have more significant impacts on GDP than increases in countries with low VAT rates. These non-linearities imply strong Laffer curve effects; at certain tax rates, further increases beyond that point will actually reduce federal tax revenues. For European industrialized countries, the authors estimates a tax multiplier of 3.6 for two years after a tax change, suggesting that tax cuts strongly stimulate economic activity in these countries, Nguyen et al. (2021) examine the effects of individual income, corporate, and consumption taxes in the United Kingdom from 1973-2009. They found that income tax cuts, defined in their paper as an aggregate of individual and corporate income, have large effects on GDP, private consumption, and investment. A percentage-point cut in the average income tax rate raises GDP by 0.78 percent. The effects of consumption tax cuts are comparatively smaller and did not produce statistically significant effects, but the study found that switching from an income to a consumption tax base has positive effects on growth. Consumption taxes are generally viewed as less distortionary than other forms of taxation, as they do not significantly impact incentives to work and invest that are essential for ensuring long-run economic growth, Cloyne et al. (2018) studied the interwar period of the UK, 1918-1939, a period of high debt and low interest rates, to understand the impact of taxes on economic growth. The British tax system at this time consisted largely of excise taxes on alcohol, tobacco, and motor vehicles, and to a lesser degree taxes on income and corporate profits. As this time period predates the development of Keynesian macroeconomic theory, tax changes were generally not designed to be countercyclical, but rather focused on balancing the budget, inequality, or enhancing productivity. The study found that a 1 percentage-point reduction in taxes as a share of GDP increased GDP between 0.5 to 1 percent, rising to 2 percent after one year. The study does provide enough evidence of how taxes impact growth in high debt and low interest rate environments, and Alinaghi and Reed (2021) conducted a meta-analysis on the effects of taxes on growth for OECD countries and their sample included 979 estimates from 49 studies. Unlike other earlier mentioned studies, this study considerd both the effects of taxes and spending on growth. The authors disaggregate policy changes into three categories: tax negative fiscal policies, tax

positive fiscal policies, and tax ambiguous fiscal policies. Tax negative fiscal policies include increases to fund unproductive investments, or increases in distortionary taxes combined with a decrease in non-distortionary taxes. Tax positive fiscal policies include tax increases to fund productive investment, decreases in distortionary taxation combined with increases in non-distortionary taxation, or tax increases to reduce the deficit. Tax ambiguous fiscal policies are those where the overall economic effect is unclear. Using these classifications, the authors found that a 10 percent decrease in taxes of a tax negative fiscal package increases GDP growth by 0.2 percent. The same sized tax decrease for tax positive fiscal policies reduces GDP growth by 0.2 percent.

2.3.2 Tax reforms in Kenya

According to Wanjala & Karingi (2005), tax reforms in Kenya were initiated under the tax modernization programme (TMP) in the late 1980s with an aim to create a sustainable tax system that could generate inadequate revenues to finance public expenditure and also to address issues of inequality. Tax reforms are mostly undertaken to tackle some common problems facing tax systems in including tax administration, increasing tax productivity, and reducing economic distortions created by taxes. The importance attached to different objectives such as efficiency, fairness, and administrative feasibility of the tax regime has changed over the period of reforms. He posits that indirect taxes (particularly consumption taxes) have become more significant than direct taxes for raising government revenue and consumption taxes are viewed as more favourable for investment, and therefore economic growth. The importance of trade taxes has declined, and they are being used more to foster export-led industrialization. Other significant features of Kenya's tax reforms include: Kenya has increased revenues to become a high tax yield (tax revenue as a percentage of GDP), sales tax has been replaced by Value Added Tax (VAT), though VAT productivity is still low, poverty concerns have been addressed mainly by exempting low- income households from income tax; additionally there is also no VAT for certain basic food commodities which form a higher proportion of total spending by the poor than the wealthier group, and Kenya Revenue Authority (KRA) was established to improve tax administration.

Kenya has reached its tax-yield target of 22% by reducing reliance on direct taxes and trade taxes as they have been found not to increase revenues despite the undertaken tax reforms. In other words, focus is currently on improving tax administration to broaden the tax base so that existing tax rates can be reduced without affecting government revenues.

In 2018, the National Treasury of the Republic of Kenya released a draft Income Tax Bill (ITB) in efforts to overhaul the Income Tax Act (ITA), which was enacted in 1974. The ITA has undergone a number of piecemeal amendments that have, in some instances, resulted in inconsistencies and led to ambiguity in the legislation. The ITB is intended to do away with the confusion created by the previous piecemeal amendments, provide greater clarity, and make the legislation simple and easy to comprehend.

Further, on 8 July 2022, the National Treasury developed a draft National Tax Policy for guiding tax administration and revenue collection. The policy sets out broad parameters on tax policy and related tax matters in Kenya, with the objectives of providing policy guidance on the collection, enforcement, and administration of tax laws, the basis for review and development of tax laws, guidelines to stakeholders, including investors, on tax policy matters, guiding principles for the Kenyan tax system, and a legal framework for granting tax incentives to various sectors of the economy. The National Tax Policy intends to bring certainty in the Kenya tax regime and harmony between the economic and tax policy.

The 2022 Act amended the Income Tax Act by introducing a digital asset tax (DAT) at a rate of 3% payable by a person who owns a platform or facilitates the exchange or transfer of a digital asset. The tax is levied on the gross fair market value consideration received or receivable at the point of exchange or transfer of a digital asset and remitted within five days after making the deduction. Non-resident persons who own platforms on which digital assets are exchanged or transferred will be allowed to register under the simplified tax regime.

The Finance Act, 2023 amended the Tax Procedures Act and empowered the Commissioner to issue a waiver on interest and penalties for principal taxes that were due but had not been paid before 31 December 2022. The taxpayer was however required to propose a payment plan for the outstanding amount and commit to pay all the outstanding principal taxes not later than 30 June 2024.

The Act amended the Income Tax Act and introduced a tax exemption on income earned by a non-resident contractor, sub-contractor, consultant, or employee involved in the implementation of a project financed through a 100% grant under an agreement between the

government and the development partner, to the extent provided for in the Agreement. The exemption is valid only if the non-resident is in Kenya solely for the implementation of the project.

The Finance Act, 2023 introduced a housing levy where both employers and employees are each required to contribute 1.5% of the gross salary of the employee every month as the housing levy. The Finance Act, 2023 also introduced an income tax on the repatriated income for branches of foreign companies and permanent establishments (PEs) at a rate of 15%. Accordingly, the effective tax rate for permanent establishments (PEs) and branches would be 40.5%, which is the same as that of an incorporated Kenyan company with non-resident shareholders. The aim of this finance Bill is to broaden the scope of turnover tax and increase the tax revenue. There are, however concerns that these changes may have unintended consequences. For instance, raising the turnover tax from 1% to 3% and including businesses ranging from Ksh 500,000 to Ksh 1M can drive informal businesses in devising ways of evading this tax. Also raising taxes on employees earning more than Ksh 500,000 per month may have negligible effect on revenue while creating disincentives for high earners, increasing the risk of tax avoidance and evasion, and potentially stifling economic growth. The requirement that persons making payments to digital content creators to withhold and remit a 15% withholding tax aims to ensure fairness and equity. However, it may be more effective if the government establishes a graduated tax rate that distributes the tax burden proportionally (Price house water coopers, 2023).

The proposal to levy excise taxes on all the fees charged by financial institutions and digital lenders could increase the cost of borrowing and financial transactions. This can violate the Pigouvian rule, which states that taxes should be levied on activities that generate externalities to correct market failures. This Finance Act 2023 may therefore have unintended economic consequences by increasing the cost of borrowing and financing transactions (Institute of Economic Affairs, 2023).

The Kenya's economic blue print code named Kenya Vision 2030, proposed the following tax reforms whose objective was to enhance collection of tax revenue to finance government programmes and meet the fiscal deficit targets. Some of the reforms have been implemented while others are yet to implemented.

- *Integrated Tax Management System (ITMS):* The second phase of the implementation of ITMS was to ensure that a wide range of electronic services were availed including electronic filing and registration, electronic payment, electronic taxpayer accounts, core internal modules covering compliance, audit, debt and refund, incorporation of road transport department's functions into ITMS and electronic tax register data transmission. The system would enable large and medium taxpayers make online filing of their returns as well as online payments. It will also reduce the frequency of payments made in a year and thereby improve Kenya's ranking as a preferred investment destination in the World Bank's Doing Business ranking.
- *Payments of Taxes via Mobile Money***:** Common Cash Receipting System (CCRS) as a common revenue collection platform in KRA will be enhanced and rolled out to cover all business systems. In addition, CCRS would be fully integrated with CBK and appointed commercial banks for seamless flow of revenue collection information. CCRS was to be enhanced to incorporate electronic payment of taxes (e-Pay) and mobile banking.
- *Turnover Tax:* The Turn over tax was to be revamped to make it more efficient and easier for the taxpayers to comply with. A sector specific taxpayer education programme as well as an expanded scope of electronic payment was to be implemented to increase recruitment and registration of taxpayers and revenue collection.
- *Taxation of Real Estate Sector:* KRA was to put in place new information technology called GEOCRIS that uses geo-spatial information to locate property and track landlords to pay rental income.
- *Taxation of High-Net-Worth Individuals (HNWIs):* KRA would enhance its strategy to identify and tax HNWIs and work with other jurisdictions through tax information exchange agreements to conduct joint audits of HNWIs.
- *Single Customs Territory***:** Implementation of Single Customs Territory (SCT) and introduction of tax payment at first point of entry required development of an optimal revenue sharing agreement formula with partner states by the Customs Services Department (CSD). The CSD would strengthen the computerised systems to reduce cost of doing business and ensure timely disbursement of revenues, separate policy and oversight functions from implementation roles through addressing the non-trade barriers (NTBs) that may inhibit free movement of trade, undertake audit visits to partner states in order to

increase governance in revenue management, and also train CSD staff on SCT procedures and structure.

- *Dynamic Risk Management System:* A wide Dynamic Risk Management System (DRMS) would be developed, implemented, and integrated with all relevant KRA systems to target resources for higher end activities and facilitate increased efficiency.
- *Implementation of Electronic Cargo Tracking System (ECTS):* Multi-vendor ECTS will be completed and rolled out to allow other service providers to come on board. In addition, the system would be integrated with other regional authorities' electronic cargo systems to ensure seamless monitoring of cargo throughout the region.
- *Transfer Pricing:* To prevent loss of revenue and foreign exchange through transfer pricing the KRA would review the governance structure of the transfer pricing programme, enhance the transfer pricing risk assessment, implement an alternative dispute resolution strategy, build up its third-party information base and sources and strengthen tax information exchange agreements and partnerships.
- *Implement the strategy for taxation of mining sector:* The increasing activities in the mining sector are a pointer to the potential of the sector to contribute substantially to the economy and government revenue. This follows the recent discovery of various mineral resources in the country. KRA would put in place the requisite mechanisms and framework to collect increased revenue from this emerging sector.
- *Review of Revenue Acts:* Several revenue statutes would be repealed to provide a wider scope for revenue enhancement. In particular the Value Added Tax Bill would be tabled before Parliament for enactment.
- *County Taxation:* KRA would re-organize its regional structure in a manner that will bring services closer to Kenyans and position itself for the expanded role of assisting County Governments in collecting County revenue.
- *Strengthening and Revamping Tax Enforcement Mechanisms:* KRA would revamp enforcement strategy to address cyber crimes and other information technology related frauds to safeguard revenue and enhance compliance (Price house water coopers, 2023).

Despite the country making significant political and economic reforms that have contributed to the sustained economic growth, social development, and political stability gains over the past decade, the economy still faces several challenges such as internal and

external vulnerabilities manifested through high public debt, elevated cost of living, exchange rate pressure, global economic uncertainties, and tight global financial conditions that are threats to sustenance of its growth momentum (World bank, 2023). It is worth noting that as much as taxation is required to fund public goods and services, redistribute wealth, and reduce inequality, excessive taxation can stifle economic growth, deter investment and entrepreneurship, and reduce overall tax revenue due to diminishing returns. It is therefore important for the government to find the right tax structure and rates to fund and achieve its economic agenda but not to overburden the tax payers. Money collected through taxes always fall short of Kenya's government anticipated expenditure which forces it to borrow either externally or internally to finance the deficit.

2.3.3 Linkage between taxation and economic growth

According to Khramov & Lee (2013), economic performance refers to economic growth, labour productivity and improvement of peoples' welfare. Economic growth is assessed in terms of achievement of economic objectives which can be long term, such as sustainable growth and development, or short term such as the stabilization of an economy in response to sudden and unpredictable events (economic shocks). An economy performs well when there is high economic growth, high productivity of factors of production, and improved social welfare. Economic growth on the other hand refers to increase or improvement in the inflation adjusted market value of the goods and services produced by an economy within a financial year. Abbas (2005), defines economic growth as the cumulative output that a countries resource can produce over a given period, generally one year and the quantitative changes that occur within the country's economic development. Therefore, economic growth is a prerequisite for any country's economic development. Economic growth is measured as the annual percent rate of increase in real and nominal gross domestic product (GDP) while economic growth rate is measured using the ratio of the GDP to population (per capita income). Per-capita income is used to measure how well an economy is performing. Organizations such as organization for economic and cooperation development (OECD) and BLS also keep relative productivity metrics to gauge economic growth for instance through improvement in citizens living standards. Most countries strive to improve economic growth so as to alleviate poverty, control inflation, and increase employment opportunities in the country (Omar et al,2021). Most developing nations strive most to overcome the challenges to growth of their economies so as to interject the vicious cycle of poverty and try

to bridge the gap between the developing countries and developed countries (UN, 2016). A positive economic growth implies an expanding economy and is linked to an economic boom and economic recovery while negative growth is referred to as a dwindling economy which is related to economic depression and recession.

According to Hoang et al (2021), theoretically, endogenous growth models show that accumulation of productive capital promotes long-term economic growth and therefore any tax policy that changes the accumulation of productive or physical capital and /or human capital can affect a country's long-term economic growth. This effect can however be either positive or negative because raising tax increases the likelihood of government spending on one hand, and discourage private investments on the other. The impact of taxes on economic growth depends on the structure of the tax system in place; a proper tax system will help the government achieve its national physical goals more effectively, limit undesirable distortions, minimise welfare losses, and ultimately promote economic growth (Stoilova, 2017). Several existing studies on taxation, suggest that adjustment of any tax components can influence a country's economic growth. For example, Kneller (1999), Anold et al (2011) & Bairadi (2019), suggest that reducing direct tax and increasing proportion of indirect tax will have a positive impact on a country's economic growth. Such adjustment may be done to secure the budget revenue and encourage investment in the private sector (Hoang et al, 2023).

Despite the existing economic challenges such as poverty, inequality, youth unemployment, transparency and accountability, climate change, continued weak private sector investment, and vulnerability of the economy to internal and external shocks, Kenya's economic performance strengthened in 2023 with real GDP growth accelerating from 4.8 % in 2022 to an estimated 5% in 2023. The country achieved a broad-based growth averaging 4.8% per year between 2015 -2019 which reduced poverty from 36.5% in 2005 to 27.2 % in 2019. This is attributed to strong rebound in agricultural sector in 2023 as well as a moderate growth in the services sector. Recovery of agriculture has led to improvements in food supply and coupled with monetary policy tightening, has led to reduced inflationary pressure. Additionally, in 2023, tourism continued to expand, credit to private sector improved, and manufacturing activity is also expected to improve from the anticipated growth in agro- processing sector.

According to Duncan (2019), the aim of the Kenyan government is to stimulate and guide her economic and social development goals through its public revenue. As much as government

expenditure directly influence economic growth, the expenditures cannot be facilitated without collection of revenue inform of taxes. Taxation generates contractionary effects to the economy through reduction of the amount of disposable income which leads to a decreased ability and willingness to save and invest by households. Raising taxes to finance expenditure affects the capacity to create jobs and invest. Taxation also increases the cost of doing business for both local and international investors. Therefore, taxes have potential to influence economic growth either positively through generation of revenue for government's expenditure or negatively through creation of disincentive in the economy. Kenya recorded the highest tax to GDP to ratio of 17.5% in 2017 and the lowest of 12.5% in 2002. The country's GDP to tax ratio of 15.2 % in 2021 was slightly lower than the average (15.6%) for the African countries in 2023.

According to (world bank, 2010), evidence from 20 countries show that, the countries with lower taxes experience rapid expansion of investment, productivity, employment, and government services, and have better growth rates without discriminating against the poor and tax policy affects economic performance via two basic mechanism: i) lower taxes have resulted in higher real returns to savings, investment, work, and innovation, and higher returns have stimulated a larger aggregate supply of these factors of production and thus raised the total output; and ii) the focus and types of fiscal incentives provided by low-tax countries appear to have shifted resources from less productive sectors and activities leading to an increase of the overall efficiency of resources utilization. However, this does not imply that tax changes can bring immediate results; timing and context of tax reform is of critical importance.

From the aforesaid, it is clear that economic growth cannot be achieved without collection of revenue through taxation and taxation will positively impact on economic growth by boosting it or negatively affect it by slowing down the economic growth rate.

The recently published country's medium Term Revenue Strategy (MTRS) of 2023 aims at increasing revenue collection by additional 5% of GDP, increasing tax compliance rate by 22%, aligning the tax policy objectives with other government objectives such as ease of doing business and trade policies, and enhancing collaboration between Government and stakeholders in domestic revenue mobilization. The strategy for boosting revenue collection focus on all tax heads, income tax VAT, excise duty, and custom duty. It outlines strategic interventions for each of the tax heads and also administrative measures aimed at improving the tax system. The stipulated tax policy and administrative reforms will be implemented gradually within the period 2024/2025 to 2026/2027

(National treasury and economic planning, 2023). This strategy aims at increasing taxation to Kenyans to achieve its objective of increasing local revenue collection.

2.3.4 Kenya's Economic performance

Economic performance is usually accessed in terms of the achievement of economic objectives. The objective can be long term such as sustainable growth and development or short term such as stabilization of the economy in response to sudden and unpredictable events called economic shocks (Khramov & Lee, 2013). To know how well an economy is performing against those objectives, economists employ a wide range of economic indicators which measure macro-economic variables that directly or indirectly assist economist to judge whether economic performance has improved or deteriorated. These indicators include; levels of real national income, output and spending. These are the key variables that show whether an economy is performing or it is in recession. These indicators can also be measured per head. Notably, growth is determined by real national income, investment levels and the relationship between capital investment and national output, level of savings and savings ratio, price levels and inflation, and competitiveness of exports, employment levels and types of unemployment. Besides, the productivity of labour influences other economic variables such as economic competitiveness in international markets. Other indicators of economic performance are; the purchasing power of a country's currency, debt levels and trade deficit and surpluses with other countries (Khramov & Lee ,2013). An increasing GDP is often seen as a measure of welfare and economic success. This indicator estimates the value added in a country which is the total values of goods and services needed to produce them. It is common to divide the indicator by country's population to better gauge how productive and developed an economy is.

GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.

2.3.5 Government spending and output growth

Studies by Landau (1983, 1986), Grier & Tullock (1989) and Barro (1991b), found a consistent negative impact of the share of government spending on output growth rates. This

supports the notion that smaller government sectors are associated with faster growth rates (Aschauer, 1989). Also, Grier and Tullock (1989) found that a change in the share of GDP devoted to government spending reduced significantly the rate of output growth.

2.3.6 Taxation and output growth

Economic freedoms are affected by the entire tax system, including imposition of taxes and its administration. Economic liberty is the freedom to produce, trade, and consume any goods and services obtained without force, fraud, theft, or government regulation.

The link between economic freedoms and taxation is that, taxation is a government law and taxation has distortional effects, which implies that they distort the large sets of possible available choices, or they can change the efficiency of free trade, enjoyment of private property, or create disequilibria in free markets with economies, all within the short and long-term development trajectory.

Several economic freedom indices have been developed to measure free market and economic freedom, and correlation studies have revealed that higher economic growth is correlated with economic freedoms. It is a difficult political economy problem for governments to strike the right balance between economic freedom and taxation policy because of political and private incentives that end up driving spending upwards. Economic liberty encourages growth and well-being, whereas taxation funds public goods and services and reduces inequality. Therefore, when developing tax policies, policy makers must consider the impact of taxation on economic freedom. Taxation significantly affects economic freedom since it affects individuals' and businesses' ability to make economic decisions. The policy makers need to carefully balance the need for revenue and the need to promote economic freedom. Lowering tax rates, simplifying the tax system, broadening the tax base, and designing taxes to meet specific objectives are some of the policies that can promote economic freedom while maintaining revenue levels.

Arbitrary violation of taxation can harm economic growth and government revenue. Violating these principles can result into social unrest, decreased investment, and entrepreneurship, decreased compliance, increased administrative costs, and decreased overall tax revenue. As a result, governments must follow these guidelines to promote economic growth and ensure stable revenues.

Excessive taxation can stifle economic growth, deter investment and entrepreneurship, reduce overall tax revenue due to diminishing returns. Taxation on the other hand is required to finance public goods and services as well as distribute wealth and reduce income inequality. Finding the right balance between these competing objectives is critical for promotion of economic growth and ensure citizens' well-being. Lower tax rates can boost economic growth by incentivizing individuals and businesses to work, save and invest. A more straightforward, predictable, and uniform tax system can reduce the compliance burden on taxpayers and make it easier for them to understand their tax obligations. By reducing the number of exemptions, deductions, and credits in the tax code, and broadening the tax base can help lower tax rates while maintaining revenue levels. Therefore, taxation should be structured to achieve specific goals, such as promoting economic growth, reducing inequality, or protecting the environment (Institute of economic affairs. 2023)

According to Engen & Skinner (1992), taxation has a negative impact on output growth. This resonates with the findings of the study by Koester and Kormendi (1988) which established that marginal tax rate (conditional on fixed average tax rates) has an independent, negative effect on output growth rates. The study by Skinner (1988), which used taxation data from African countries, concluded that income, corporate, and import taxation led to a greater reduction in output growth than average export and sales taxation. Dowrick (1992), in his study of a sample of OECD countries found a strong negative effect on personal income taxation but no impact on output growth from corporate taxes. Chamley (1981) and King &Rebelo (1990), shows that in a nonconcave growth model, tax policy can have a potentially large impact on long-term growth rates. For instance, the King and Rebelo baseline simulation indicates that a ten-percentage point increase in the tax rates will reduce output growth rates by nearly two percentage points. The intuition in this model (Barro's model) is that taxes create a wedge between the gross and net return on savings. Since individuals are assumed to live forever, they are very sensitive to the net return on saving. Without the usual stabilizing impact of traditional neoclassical production functions (the lower capital-labour ratio increases the gross interest rate, which partially offset the initial decline in saving), the tax effects on investment and savings are strong and persistent (Bowden & Darrell, 1984).

According to Engen &Skinner (1996), taxes can affect the output growth by discouraging innovations and economic organizations that result in increased levels of output, holding constant

the supply of capital and labour; distortional tax policy may permanently reduce the level of technological growth. He posits that taxes might affect output growth in five ways: higher taxes can discourage the investment rate, or the net growth in the capital stock, through high statutory tax rates on corporate and individual income, high effective capital gains tax rates, and low depression allowances, taxes may attenuate labour supply growth by discouraging labour force participation and hours of work, or by distorting occupational choice or the acquisition of education, skills and training, tax policy has the potential to discourage productivity growth by attenuating research and development and the development of venture capital for hi-tech industries; activities whose spillover effects can potentially enhance the productivity of existing labour and capital, tax policy can influence the marginal productivity of capital by distorting investment from heavily-taxed sectors into more lightly-taxed sectors with lower overall productivity, and heavy taxation on labour supply can distort the efficient use of human capital by discouraging workers from employment in sectors with high social productivity but with a heavy tax burden, .

Therefore, highly taxed countries may experience retarded economic growth, holding constant investment rates in both human and physical capital (Egen & Skinner, 1992). The identified five mechanisms by which tax may affect economic growth may suggest that taxes should have a central role to play in in determination of long-term growth. However, the conventional Solow growth model implies that taxes should not have any effect on long term growth rates. In part, this result occurs by assumption, since productivity growth is assumed to be fixed and affected by tax policy. But this paradoxical result holds also because of the distinction between changes in the level of GDP and changes in growth rates of GDP. For instance, suppose that the long-term growth rate of the economy, given by population and general technology growth, is 3 percentage points but later tax rates are increased to 10 percentage points across the board. The extra tax distortion reduces labour supply and investment, causing a sudden decline in short term growth rates. However, once the economy has adjusted to the new tax regime, it will revert back to its original growth path though at a lower absolute level than it would have been in absence of the tax hike. (In Solow model, the rate of growth of the capital stock and labour supply growth reverts back to a rate consistent with general population and technology growth). The growth rate of the economy would be below 5 percentage points (and possibly even negative) during the transition phase but once back to the new though inferior steady state, the long-term growth rate will continue to be 5 percentage points (Engen & Skinner, 1996). Solow model implies that tax

policy, however distortionary, has no impact on long-term economic growth rates, even if it reduces the level of economic output in the long-term. There are however two possible mechanisms on how taxation can affect output growth rates. The first is when the structure of taxes change, short-term output growth rate is expected to change as well along a possibly lengthy transition path to the new steady-state (Engen &Skinner, 1996). The second possibility arises within the context of the new class of "endogenous growth" models (Romer,1990). In these models, the stable growth rate of the Solow model, stapled down by the technology and workforce productivity growth, is replaced by steady-state growth rates which can differ, persistently, because of tax and expenditure policies pursued by the government (King & Robelo, 1990). The endogenous growth framework emphasizes factors such as "spillover" effects and "learning by doing" by which firm specific decisions to invest in capital or in research and development (R&D), or individual investment in human capital, can yield positive external effects that are beneficial to the rest of the economy. In these models, taxes can then have long-term, persistent effects on output growth (Engen &Skinner, 1996).

Nguyen, et al (2023) in their study on impact of tax revenue on economic growth and the role of trade openness in developing countries found out that tax revenue positively impacts economic growth, and trade openness play an important role in enhancing such impact. The study however found out that too large trade openness does not add positive value to economy of the developing countries since it reduces the positive relationship between tax revenue and economic growth. This means that, developing countries need to maintain high tax revenues for economic growth, the countries need also to strengthen international integrations as well as improve trade openness as they directly contribute to economic growth.

Mwakalobo (2009) in his study of the impact of economic reforms on government revenue and public investment in the three East African Countries found that, inadequate revenue generation has adversely affected public investment in the three east African countries. This is particularly evident in Tanzania where the declining trends in government and tax revenue have been accompanied with the declining investment in almost all spending categories, where government revenue increased leading to adequate revenue generation, public investment in physical infrastructure increased. This is also particularly evident in Tanzania where government revenue increased and tax revenue performance has been more impressive and public investment also increased, the findings are consistent with the theoretical and empirical literature that shows

that in the periods of restrictive fiscal policies and fiscal consolidation, public investment in physical infrastructure often suffers the most from government expenditure compression, Official development assistance (ODA) showed statistically significant negative impacts on health spending in Kenya, and negative impact on overall human capital investment in Uganda. This suggests that there has been misallocation of foreign aids funds in Kenya and Uganda, heterogeneity in sectoral spending has significantly changed in the three countries; spending in defence has reduced though it was higher in Uganda than Kenya and Tanzania. The priority sectors that have been receiving higher shares of government expenditures are, general public services, human capital development, and physical infrastructure in all the three countries, spending in human capita; development has been relatively low in Tanzania compared to that of Kenya and Uganda which creates concern on Tanzania's government commitment on achieving the millennium development goals, reducing poverty and the overall economic development, and the three countries allocate most of their resources to unproductive sectors including defence and general public services which limits resources available for the productive sectors such as physical infrastructure and human capital development; education and health.

Owenvbiugie, (2020), revealed that a good revenue collection and effective tax administration can lead to good performance of government in provision of amenities. The study also revealed that the quantum of revenue realizable from taxes, in Nigeria is not sufficient for implementation and realization of government programmes. This is due to revenue losses within the tax system including tax fraud, non-tax compliance, wastage of public funds, corruption in tax administration. All these pose a challenge to effective administration, collection, and performance of tax revenue. The study recommended that the Nigerian government should seek for new policy and strategy to improve its revenue to meet its demand through innovative and aggressive in its method of revenue collection from various sources to enhance the optimum collection and utilization of tax revenue, by eliminating opportunities that facilitate tax fraud.

Iiyas & Siddiqi (2010) established that revenue gap has a significant negative impact on the countries' economic growth; if the gap between the targeted revenue and actual collected revenue is high, it affects economic growth negatively and significantly. The study recommends ways of reducing revenue gap such as doing away with exemptions and special treatments and asserts that, the real revenue increase can take place effectively only when the collective benefits of all stakeholders are upheld fairly and equitably. This in turn, with greater spending in areas of

both development and non-development, will bring about a more equitable distribution of income and allocation of national cake. This can consequently generate greater macroeconomic stability and balance. More sustainable economic development would be possible through availability of enhanced and exploitation of untapped sources of public revenue. This will help the economy achieve greater self-reliance and avoid large public debts and minimize budget deficits. He suggests expansion of tax base, setting priorities right, and streamlining and improving the tax administration as a way of increasing tax revenue.

2.3.7 Nexus between taxation and a country's economic performance

2.3.7.1 Global studies

In recent times, there has been debate on whether changes in the existing tax mix can promote economic growth. According to Atkinson, (1977), the choice between direct and indirect taxation is one of the oldest issues of taxation policy. This has elicited serious discussion in terms of economic benefits and limitations that characterized each choice. Most studies have reached substantially different conclusions on the relative impact of direct and indirect taxes on economic growth. Indeed, results of most studies are saddled with inconsistencies, while some researchers like Arisoy & Unlukaplan (2010), Ormaechea and Yoo (2012), Mura (2015), Phiri (2016) and Bazgan (2018) reported a negative relationship between direct tax and economic growth and a significant positive relationship between indirect taxes and economic growth. This contradicts the studies by Musanga (2007), Sameti & Rafie (2010), and Ebiringa & Emeh (2012) which indicate that indirect taxes are growth impeding while direct taxes are growth enhancing. Other studies including Harberger (1964), Madsen & Damania,(1966), Skinner (1987), Ehiagimusoe (2013), reported that, taxes cannot predict economic growth.

According to Oancea et al, (2023) amplifying tax revenues increases the economic growth of a country. He asserts that, tax revenues can be increased through raising of tax rates, broadening of tax base, or improving tax administration and also that influence of increasing tax collections on an economic growth can vary depending on a variety of factors, including the country's degree of development and increased tax revenue can contribute to increased economic growth through channels like funding public goods and services including infrastructure, education, and health. Improved economic growth boosts economic productivity, attracts foreign investment, and generates new employment opportunities, leading to an increased economic development. Tax

revenue can also be utilised to minimize income disparity and give social protection to the disadvantaged groups, boosting social cohesion, and promoting population well-being which translates to stronger economic development.

The study revealed that corporate income tax has negative effect on economic growth due to their disincentive effect on investment, promotion of debt financing, discouragement of entrepreneurship, and lowering competitiveness. Personnel taxes negatively influence economic growth due to their disincentive effect on labour, encouragement of informal sector, loss of disposable income, and discouragement of human capital investment. The study recommends that tax policy makers should carefully evaluate the economic consequences of personnel and corporate income tax rates and balance the trade-offs between tax collections and economic growth.

Djankov et al (2010) in their study on the effect of corporate taxes on investment and entrepreneurship using panel data for 85 countries, found that effective corporate tax rates have a significant negative correlation to investment, foreign direct investment and entrepreneurship. The corporate taxes are correlated to investment in the manufacturing sector but not in service sector. High corporate tax will therefore reduce investment and thus lower productivity adversely affecting economic growth. These findings are similar to those of a study done by Lee and Gordon (2005), who found corporate taxes to be negatively correlated with economic growth. Low corporate taxes encourage entrepreneurial activity which lead to improved economic growth.

Poulson & Kaplan (2008) investigated the impact of income tax policy on economic growth within the framework of an endogenous growth model in the various states in USA in the period 1964 to 2004. They are for the opinion that the tax policy pursued by the states can lead to different paths of long-run equilibrium growth. They used regression analysis to estimate the impact of taxes on economic growth in the states which revealed that higher tax rates had a negative impact on economic growth in the states and greater regressivity had a positive impact on economic growth; states that held the rate of growth in revenue below the rate of growth in income achieved higher rates of economic growth.

The analysis underscores the negative impact of income on economic growth in the states. Most states introduced an income tax and came to rely on the income tax as the primary source of revenue. Jurisdiction that imposed an income tax to generate a given level of revenue experienced lower rates of economic growth compared to jurisdiction that relied on alternative taxes to generate the same revenue, states with lower initial levels of income per capita experienced higher rates of

economic growth, states in the west were at an advantage in attracting population and investment and thus achieved higher rates of economic growth, states in the 'Rust Belt' were at a disadvantage due to the heavy concentration of agricultural and traditional manufacturing industries, and the southern states were at a disadvantage and the experienced higher growth rates in these states can be attributed to their tax policy and convergence.

The authors emphasize the importance of controlling for convergence and regional influences on economic growth. After controlling for those factors, we find that tax policies were significant determinants of differential growth rates in the states.

According to Easterly & Rebelo, (1993), since neoclassical model, steady state is driven by exogenous factors such as dynamics of population and of technological progress, fiscal policy can only affect the rate of growth during the transition to steady state. Due to this fact, the conventional wisdom based on the neoclassical model has been that the difference in tax systems and in debt and expenditure policy can be important determinants of the level of output but are unlikely to have an important effect on the rate of growth. This is however in contrast with the predictions of Easton's (1981) stochastic growth model, which features a linear production function, as well as with those of more recent "endogenous growth" models such as Romer's (1986) model that features steady state growth, the economics with convex technologies explored by Jones and Manuelli (1990), and Rebelo (1991), and the "lab-equipment model" of Rivera-Batiz and Romer (1991). In these models, fiscal policy can be one of the main determinants of the observed differences in growth experiences. They assert that endogenous growth models tend to transform the temporary growth effects of fiscal policy implied by the neoclassical model into permanent growth effects. The strength of these effects varies however form model to model, depending heavily on the elasticity of labour supply and on aspects of the technology to accumulate human capital and to create new goods about which very little is currently known. The authors note that, most growth models predict that taxes on investment and income have a detrimental effect on growth and these taxes affect the rate of growth through a simple, direct channel; they reduce the private returns to accumulation. However, not all taxes affect the rate of economic growth. In models with exogenous labour supply, the growth rate is immune to the level of consumption taxes; these taxes do not distort the relative price of consumption today versus tomorrow.

Bahl and Bird (2008) in their analysis of the characteristics of tax policy in developing countries for 30 years using cross country data, found that, for developing economies, revenue

from international trade taxes has declined due to opening up of the economy, and personal income taxes have been playing a limited role due to existence of large informal sector that is difficult to tax. They recommend that governments should not overtax so as to ensure that variables such as savings, investment, and work effort that promote growth are not adversely affected. Having a broad tax base, that encompasses both income and consumption taxes is good for the economy.

Chang (2006) examined the role of the relative wealth-induced status motive in affecting the neutrality of consumption taxation in an optimizing growth model. He found that a key factor determining the validity of the neutrality of consumption taxation in both the level sense and the growth rate sense is the desire for relative wealth-induced social status; when individuals care about their relative wealth, a rise in consumption tax enhances the steady-state level of capital stock and consumption. Additionally, if the production function takes a linear technology form as the engine of sustained growth, then increases in consumption taxes raise the economy's long-run growth rate. Also, an optimal consumption tax policy provides full subsidies to consumption so as to induce the economy to achieve the social optimum and the optimal growth rate.

Slemrod (1995) carried out a cross-country study on government involvement, prosperity, and economic growth using a time series data for real GDP per capita and the ration of taxes at all levels of government to GDP, for the period 1929 to 1992 for United States of America. The study found a strong positive association between taxes and economic performance in the developed countries. Among the OECD countries however, there is no correlation for either tax or expenditure and prosperity. There is however positive correlation when high tax OECD countries and the rest of the world are included in the sample. The author also shows a significant negative partial association between growth and a measure of government involvement, through comparison of tax to GDP ratio and the ratio of government expenditure to GDP with growth for OECD countries. He concludes that, there is no much persuasive evidence to show whether government involvement influence the economic performance either positively or negatively.

Mendoza et al (1997) examined the effect of tax policy on growth using endogenous growth mode and established that changes in the tax policy relating to private investment are economically and statistically significant, but are not sufficiently strong to influence growth. The study echoes Harberger (1964) who, using a growth accounting framework, shows that the changes of both direct and indirect taxes have negligible effects on growth of output. This is because taxes have negligible

effects on growth of labour supply and on labour income share thus savings and investment are not large enough to support economic growth.

Goode, (1984) analysed the relationship between taxes and economic performance in developing countries. The main variables being tax ratio and per-capita income. This model uses openness of the economy and economic structure for control. Openness of the economy is measured by the level of foreign trade; it is the total of imports and exports expressed as a ratio of GDP while economic structure is measured by the relative size of agriculture and mining sector. The study showed that when developing countries are considered together, the per-capita income is positively related to the tax ratio, with a high correlation coefficient (R^2=0.61, n= 72). However, when they are considered independently, the correlation between tax ratios and per capita income is weak and doubtful. Therefore, the effect of per capita income on tax ratio for developing countries is positive but doubtful. Openness of the economy has a positive impact on taxes, while agriculture has a negative relationship to taxes because it is hard to tax this sensitive sector.

Marsden (1983), found that taxation affect growth output indirectly via the product, labour and capital markets and through its impact on domestic savings and foreign investment, taxation affects capital accumulation. Taxation may cause capital to shift from one sector to the other or from one country to other, this movement impacts on output negatively. Skinner & Engen (1992) improving upon the work of Mardsen (1983) collected data for 107 countries for fifteen years period from 1970 to 1985. Using a GEM of fiscal policy and output growth, they found out that the discretionary effect of taxation impacts negatively on economic growth. Although the model by Skinner &Engen (1992) had wide coverage in terms of data, it addressed the issue of taxation in general but failed to scrutinize the impact of individual sets of taxes on growth of an economy. Skinner (1987) analysed the effect of taxation in sub-Saharan Africa over the period 1965 -1982. Using Two Stage Instrumental Variable (2SIV) techniques, they found that indirect taxes have no significant effect on economic growth, while taxes levied on personal and corporate incomes reduce economic growth. The latter result was also obtained by Ehigiamusoe (2013) when he examined the nexus between the tax system and economic growth in Nigeria from 1980 to 2011. Using correlation method, their results revealed that indirect taxes have no significant impact on economic growth. Mendoza et al (1997) analysed qualitative and quantitative effects of changes in tax structures on economic growth and investment in 18 OECD countries covering the period 1965-1991, using Ordinary Least Square technique (OLS), they observed a positive correlation between

consumption taxes and economic growth and a negative correlation between income taxes and economic growth. In relation to this, Angelopoulos (2007) examined the growth implications of the composition of government expenditure, and the various types of taxes used to finance it, in 23 OECD economies between the years 1970 to 2000.Their econometric results confirmed that a negative correlation exist between income tax and economic growth and a significant positive relationship between consumption taxes and economic growth. Bleaney and Gemmell (1999) employed static panel econometric technique to investigate the relationship between fiscal policy and growth on 22 OECD countries for the period 1970 to 1995. The result of the study found a significant and positive relationship between indirect tax and economic growth. They concluded that indirect tax is less harmful to the economy as it does not cut down on return on investment compared to direct tax. Ormaechea and Yoo (2012) replicated the Bleaney and Gemmell (1999) study using a data set of 69 countries within the period 1970-2009, They observed that increasing income taxes while reducing consumption and property taxes is associated with slower growth over the long term. In the disaggregation of consumption taxes, however, they found a robust and positive association between indirect tax and economic growth. While they consistently found these results to hold in high- and middle-income countries, they did not find strong evidence on the significance of shifts in the composition tax and economic growth in the case of low-income countries.

Poulson and Kaplan (2008) in their study of the impact of state income taxes on economic growth in the United States from 1964 to 2004, found that all taxes have a significant negative effect on economic growth, but the impact of income tax is more than that of other taxes. States with more regressive tax system have higher growth rates than those with progressive tax systems.

Gustavo et al. (2013) examined the effects of taxation policy on economic growth in a sample of 19 Latin American countries in the period 1990-2009. They used two empirical approaches; VAR analysis for Argentina, Brazil, Chile, and Mexico, and panel data analysis for the Latin American region alone. The regression results indicate that at higher levels of taxation, personal income tax could have significant negative effects on economic growth and greater reliance on indirect tax has significant positive effects on growth in Latin America in general. Focusing on the Turkish economy, Arisoy and Unlukaplan (2010) adopted ordinary least square (OLS) method to investigate the relationship between direct and indirect tax and economic growth. Using data from 1968-2006, they found that real output is positively related to indirect tax revenue.

They concluded that indirect taxes are significantly and positively correlated with economic growth in Turkey. Closely related results were also found by Scarlet (2011) in a study carried out to explore the impact of taxation on economic growth in Jamaica. He found that, increasing revenue from indirect taxes is more conducive to economic growth in the long run and increasing the share of taxes from direct taxes has the greatest harm on per capita GDP over time. Brașoveanu & Brașoveanu (2008) in their study about the correlation between fiscal policy and economic growth for Romania over the period 1990-2007, classified taxes according to their effects on private agents and viewed them as distortionary revenues, non-distortionary revenues and other revenues. The study revealed a negative effect between non-distortionary taxes and economic growth and also between distortionary taxes and economic growth.

In Nigeria, Anyanwu (1997) investigated the effects of taxes on economic growth during the period 1981-1996 using simple linear regression technique. The result revealed that indirect tax positively and significantly affects GDP just like companies' income tax. Ebiringa (2012) in his examination of the effect of tax on economic growth for the period 1985-2011, reported a negative and significant relationship between indirect tax and GDP while company income tax had a positive and significant relationship with GDP. Umoru and Anyiwe (2013), in their research on tax structures and economic growth in Nigeria, found that the policy of direct taxation is significantly and positively correlated with economic growth and that the tax-based revenue profile in Nigeria is skewed towards direct taxes. Acti and Abigail (2016) investigated the impact of taxation on economic growth of Nigeria using data from 1994 to 2012. Their regression result shows there is no significant relationship between company Income Tax, Value Added Tax and Gross Domestic Product (GDP), but there is a significant relationship between Petroleum Profit Tax, Custom, Excise Duties and Gross Domestic Product.

Lee and Gordon (2005) explored the relationship between taxation and economic growth using both cross-sectional and time series data for 1970-1997. The findings suggest the negative effect of corporation income tax on economic growth. Value added tax, customs and excise duties are not significantly associated with economic growth.

Musanga (2007) investigated the relationship between indirect taxes and economic growth in Uganda using data for the period 1987 to 2005. The study adopted the cointegration regression technique and the result of the study revealed that a percentage change in indirect tax decreased economic growth by 0.53%. The indirect tax variable had a regression t-value of (-2.588) which

means there was a significant but negative relationship between indirect tax and economic growth in Uganda.

Mura (2015) applied an empirical model to direct and indirect taxes as a percentage of total tax revenue on economic growth of six countries across Eastern Europe over the period 1995-2012. The empirical results revealed that direct taxes are significantly but negatively correlated with economic growth while indirect taxes have a positive effect on economic growth. On the other hand, Phiri (2016) used a smooth transition regression to investigated the effects of direct and indirect taxes on economic growth for South Africa in the period 1990-2015 and found that an optimal tax-growth ratio of 10.27 percent below which indirect taxes are positively related with economic growth but direct taxes are negatively related with economic growth. Bazgan (2018) in his study on the impact of direct taxes and indirect taxes on the economic growth of Romania over the period 2009 – 2017 and using an econometric Vector Autoregressive model (VAR) with three endogenous variables namely: the level of direct taxes as percentage of the Gross Domestic Product (% GDP), the level of indirect taxes as percentage of the Gross Domestic Product (% GDP) and the economic growth rate over the analysed period of time, found that a positive change in the structure of indirect taxes will have a strong positive influence on the economic growth over a medium-term period. On the other hand, economic growth will be negatively influenced in the next period of time after implementing a positive change in the structure of direct taxes, then returning to a positive influence over a medium-term period and maintaining that influence in the future time periods.

Samwick (2014) in his study on effect of income tax changes on economic growth, opines that economic growth can be influenced by both changes in the level of revenue and changes in the structure of the tax system but not all tax changes have equivalent, or even positive effects on the long-term growth. He concluded that tax cuts offer incentive to work, save, and invest but they also create income effects that reduce the need to engage in productive economic activity, and they may stabilize old capital, which provides windfall gains to asset holders that undermine incentives for new activity. Additionally, tax cuts as a standalone policy (not accompanied by spending cuts) will typically raise the government's budget deficit. This increase in deficit will reduce national saving and the capital stock owned by citizens and future national income and subsequently raise the interest rates leading to a negative effect on investment. Long persisting tax cuts financed by higher budget deficits are likely to reduce national income in the long-term but cuts on income tax rates

that are financed by spending cuts can have positive impacts on economic growth according to simulation models.

2.3.7.2 Studies specific to Kenya

Wawire (1991) in his study on tax performance in Kenya, analyses tax ratios, tax efforts indices, tax ratio buoyancy, and per-capita income elasticities of various tax ratios, The study found that tax ratios increase with per-capita income, volume of international trade, and economic activities such as manufacturing and mining. He concludes that, tax is greatly determined by the economic structure. Omondi, (2016) analyses the impact of indirect taxes as a whole and the different types of indirect taxes in particular on Kenya's economic growth within the context of endogenous growth model using a time series analysis for thirty-one years (1970 to 2000). The results of the study confirmed that indirect taxes cause distortional effect in market decisions and consequently impact negatively on the economy.

Kinyua (2013) applied the concepts of elasticity and buoyancy to examine the relationship between tax revenue and economic growth in Kenya for the period 2002 to 2012. The study found a significant relationship between total tax revenue and economic growth in Kenya in the period 2002 to 2012, import duties were not responsive to changes in national income, and discretionary tax measures implemented during the period failed to increase total tax revenue. However, the estimation of buoyancy and elasticity coefficient were done in total disregard of the time series properties and the period taken was only eleven years. Therefore, subjecting this alone to a regression model did not make statistical sense**.** Therefore, the results were not reliable for planning purposes.

Onduru (2003) analyzed the impact of indirect taxes on economic growth in Kenya for a period of thirty-one years (1972-2002), by interacting indirect taxes with certain key macroeconomic variables namely; population size, investment, volume of trade and external debt, the study found that indirect taxes cause distortions in the market decisions and consequently impact negatively on economic growth.

Omondi, (2018) investigated the relationship between direct tax versus indirect tax and economic growth in Kenya. The study ran a regression with economic growth as the dependent variable and independent variable were income tax, value added tax, custom duty and excise duty. A combination of Johansen cointegration test and error correction modelling was adopted for the

data analysis. The results of the study indicated a negative relationship between direct taxes and economic growth and a positive relationship between indirect taxes and economic growth in a time series data of Kenya's Economy. This supported the predictions of the endogenous growth models. The results of the study are also in tandem with the result of studies conducted by Mendoza et al (1997), Bleany & Gammel (1999), Ursoy & Unlukanplan (2010), Ormaeccha & Yoo (2012), Mura (2015), Phiri (2016), and Bizgan (2018) among others. All these studies reported a negative relationship between direct taxes and economic growth and a positive relationship between indirect taxes and economic growth. The findings of Omondi (2018) is however inconsistent with the study conducted by Koch et al (2005), Musanga 2007), Sameti & Rafie (2010) , and Ebiringa (2012) who found indirect tax as growth impeding while direct taxes as economic growth enhancing. The Johansen's cointegration test indicate a long-run relationship between tax revenue and economic growth. Error correction model indicates that there is a short and long run causality from tax revenue and economic growth and that all the tax components jointly correct for disequilibrium in Gross Domestic Product at the speed of 1.028119 annually. The author notes that the study is country specific and it utilised time series data and thereby overcomes the cross-country analysis that undermines variable differentials, productivity differentials as reflected in different production function, and country differentials. He further notes that, previous empirical studies adopted cross-country and cross section data analysis to relate measures of direct and indirect tax revenue and economic growth undermining the fact that cross-sectional studies can only obtain pooled estimates that fail to disentangle results for any specific country and since results are heterogenous across subsets of units, errors might be non-random across temporal units. Since the results of the study indicated that indirect taxes provide a predictable and stable flow to revenue to finance development objectives and consequently accelerate economic growth, it recommends that the government should rely more on indirect taxes in revenue generation than direct taxes due to its growth prospect and its less distortionary nature and also utilize the positive relationship between the tax variables and economic growth to realize efficient government investment expenditure that spurs economic growth.

Wanyagathi (2014) in his study on effect of income taxes on Kenya's economic performance established that income taxes have negative on the Kenyan economy though not that significant, consumption tax has positive effect on the economy though also not so significant. The study concluded that the effect of taxation on the country's economy, whether income tax or

consumption tax are not large enough to influence the economic performance. This study also concluded that foreign trade and population growth are not significant determinants of how well the country's economy is doing and that government consumption was the only variable with significant positive effect on economic performance. He noted that the ongoing heavy investment on infrastructure including roads and railway by the Kenya government will assist in improvement of the economic performance of the country. The study noted that mobilization of internal revenue to finance government's expenditure was good for the economy and therefore the revenue collection agency (KRA) should increase efficiency in revenue collection, raise public awareness about taxes to increase compliance levels, and broaden the tax base to increase revenue collection. According to Chang, (2006) broader tax base that includes both income tax and consumption tax is good for the economy. The UN report for the year 2008, also advocates for broader tax base, lower tax rates and sealing of tax loopholes by developing countries so as to enhance revenue collection. Additionally, the study established that government expenditure is good for the country's economy and therefore, to improve the country's economic performance, there is need to increase government expenditure; collected tax revenue can be used to provide more public goods and services resulting into enhanced productivity and hence economic growth. According to Leibfritz e al (1997), expenditure on public investment such as infrastructure, education institutions, and health facilities improves productivity, increases national output and thus improves economic performance. According to (Goode, 1984), tax policies for any country should consider expenditure needs of the people, alternative source of finance, effect of taxes on other economic variables, tax administration capabilities and political acceptability of the tax policy.

Gachanja (2012), in his study on the effect of tax reform and economic factors on tax revenue in Kenya using time series data for the period 1971- 2020, opines that, there exists a positive relationship between economic growth and all imposed taxes; all the taxes including income tax, import duty, excise duty, sales tax and VAT have a positive correlation to GDP, with income tax having the highest effect. The study also tested for direction of causation of the variables using Granger Causality test. He found reversal causality between economic growth and excise duty, and a unidirectional relationship between income taxes and economic growth, and VAT and economic growth. He points out that different uses of tax revenues affect growth differently. The model however fails to capture other variables other than taxes that influence GDP, including government expenditure and investment.

According to Wawire (2016), income tax system is growth inelastic despite the argument that it should be among the most elastic ones for it to be an important source of tax revenue. He asserts that the tax elasticity with respect to GDP is less than those with respect to the monetary GDP which indicates existence of an underground economy. According to Osoro, (1995), this underground economy in Kenya may consist of a parallel market that comprises rent seeking activities, the black market that comprises smuggled commodities and currencies, and the vibrant informal sector. The findings of the study pointed that the income tax reforms efforts by Kenya Revenue Authority including mandatory acquisition of personal identification number (PIN), compulsory filing of tax returns by all civil servants, and provision of online tax services have not borne fruits as expected. The findings however point at government's success in reducing the number of low-income earners directly involved in income tax payment (Republic of Kenya, 1997) and that income taxes in the long run throttle the effort that produces the taxable income through disincentives to save, invest, and work. He further notes that income tax revenue declines with the increase in population which can be attributed to the high dependency ratio, free rider problem, tax evasion and avoidance, and corruption. He attributes the challenges hindering translation of these reforms into higher income tax to structural weakness in the economy; the high poverty level, high dependency ratio, low levels of formal employment, and low wages and considers them as serious constraints on the ability of the country to raise income tax revenue collections.

A study by Magu, (2013), showed a steady increase of the country's collected income tax revenue between financial years 2002/2003 and 2008/2009, a decrease in the financial year 2009/2010, and increase in the 2010/2011 financial year. The country collected Ksh 66.74 billion in 2002/2003 financial year, Ksh 124.85 billion in 2006/2007 financial year, Ksh 204. 07 billion in 2008/2009 financial year, Ksh 104.13 billion in 2009/2010, and Ksh 122.93 billion in 2010/1011 financial year. As regards the country's economic growth, the study found out that there is a direct relationship between the collected income tax and the country's economic growth.

Mureithi (2013), in his study on relationship between government revenue and economic growth in Kenya, established income tax system leads to a continuous increase in revenue collected by government and it has a direct relationship with economic growth. The study however established that the government revenue being collected as income tax has reduced compared to the earlier years.

Masika (2014) in his study on the relationship between direct taxes and economic growth in Kenya found that, there is a link between economic growth and direct taxes especially personal income and corporate income taxes. He asserts that this is an indication that a flourished economy will attract major investments from both foreigners and locals which will lead to formation of employment for attraction of personal income tax and corporate profit for corporate tax income. Consequently, when there's enough revenue collection in the economy, it reduces the burden of borrowing thereby boosting public expenditure that encourages investment, improve welfare of the people and improvement on tax payment compliance.

Despite far reaching reforms implemented in tax revenue collection in Kenya, the government is more often than not faced with expenditure needs that outstrip the resource envelopes, and usually have limited options to raise additional resources domestically other than borrowing either internally or externally (Kago, 2014). Moreover, a country can no longer rely on external debts due to stringent foreign lenders' conditions and the high payment and servicing costs of external debts (Gelb, 1993) not considering that, potential sources for external loans/ grants reduce autonomy and increase political and economic dependence. Therefore, the only favourable option involves determining the most appropriate strategy to internally fund government's expenditure.

Tax policy and administration in Kenya has gone through various phases of reform over the years. From independence in 1963 until the early 1980s, public spending in Kenya was financed through a somewhat uncoordinated set of taxes and fees inherited from British rule and supplemented by foreign aid inflows (Eissa & Jack 2009).

Kenya recorded impressive economic performance within the first decade after independence (963 -1972); its growth rate of real GDP averaged 6.6% per year. The country however experienced its first major fiscal crisis occasioned by the international oil shock in the early 1970s which motivated the government to shift the tax policy towards greater reliance on indirect taxes as opposed to direct taxes. The aim for this was to create a sustainable tax system that could generate adequate revenue for economic growth. Consequently, the level of revenue from indirect taxes rose steadily in the period 1973-2010. This included an increase from an average of 6.6 per cent of GDP per year in the period 1963-1972 to an average of 12.1 per cent per year in the period 1973-2010. However, this was coupled with a dwindling economic growth.

The empirical studies on the subject matter for developing countries are relatively few and have reported contradictory results; some few studies were carried out in Pakistan, Iran, India, South Africa, Nigeria and Uganda.

The need for a paradigm shift from direct to indirect taxation in the face of various forms of resistance perpetuated within the direct taxes bracket, the inconsistency in existing empirics and the wide knowledge gap occasioned by the paucity of empirical literature on Kenya has made this issue open for further research in the country.

In the spirit of projecting the Kenyan economy to a middle level economy, implementing vision 2030 has led to expansion of infrastructure and social amenities which has massive expansion and investment that require major funding from both revenue collection and borrowing. From the study, this means that by 2030 Kenya will have stable revenue for its development projects if the policies of making Kenya a middle-income economy will have been implemented. Also, by having stable revenue collection, it will reduce the tendency of borrowing and encourage further investment that in the long run leads to growth of the economy.

The implementation of Vision 2030 by the Kenyan government among other development policies has been increasing domestic debt. However, growth in GDP from implemented projects has a positive investment multiplier to other sectors leading to growth in output. This could be a motivation to the Kenyan government that is embarking on attracting investments in Kenya, and other supports that if invested in development projects, could lead to an overall positive contribution to economic growth through corporate income taxes and personal income taxes due to creation of employment from such investment projects.

2.3.8 Excise duty and economic performance

Excise taxes, also called 'sin taxes', are applied selectively on particular goods and services and different countries levy them for different reasons. For instance, they can be applied to compel the users of the excised commodities to internalize the externalities that excisable commodities such as tobacco, alcohol, and petroleum products tend to have. They can also be used merely to generate revenue at relatively low administrative and compliance costs and improve the vertical equity of the tax system (KIPPRA, 2020). Therefore, governments use sin taxes to raise revenue, manage consumption, and promote public health (Mwiti, 2006).

According to Okello, (2001), in theory, excise taxes have several advantages over other types of taxes including, administrative ease of collection. The author analysed excise taxation in Kenya and found that Kenya's excise tax system is effective in raising of government revenue and excise tax contribute about 4.5% of Kenya's GDP. He found that excise tax system has been efficient over the period of study as evidenced by an elasticity of 1.13 and several factors seem to have paid dividends as evidenced by the arrived at buoyancy of 1.41. These factors include government efforts to increase the rate of excise tax in line with inflation where specific rates applied, and the conversion of most excise tax rates to ad valorem basis. Also, expansion of the excise tax base to include an additional range of products including imports, and the redefinition of the excise tax base itself have contributed to the buoyancy. This implies that, although in excise tax can mainly be attributed to the growth in GDP, the effects of discretional changes were successful in generating additional revenue. He however predicts that, in the long run, excise tax revenue will continue to grow faster than the growth in GDP, but that discretional measures will be inefficient in generating additional revenue as shown by the long run elasticity of 1.24 and buoyancy of 0.61.

Mwangi, 2019 found that the changes of financial performance of manufacturing firms in Kenya is caused by excise tax rates, excise tax regulation, and pricing models of excisable goods; it found that by holding excise tax regulation and pricing models constant, a unit change in excise tax will lead to a significant increase in profitability and that holding tax rates and prising models constant, a change in excise tax regulation will lead to increase in profitability, and holding excise tax rate and excise tax regulation constant, a unit change in prising models results to an increase in financial performance for the firms; over-shifting of excise tax burden determines the pricing models of various products and as excise tax keeps on changing, this also impacts on the products and thus has a significant impact on the firms' financial performance.

Wachuka (2016) in a study on the impact of excise tax changes on Kenya government's revenue and consumption of alcohol and cigarettes and their consumption patterns showed no relationship between alcohol and cigarette consumption and excise tax changes; increase in excise tax does not affect consumption of alcohol and cigarettes in the country. The study contributed this relationship to price elasticity of demand for cigarettes and alcohol to price change. The study however established a linear relationship between excise tax changes and its contribution to the government's revenue. On price elasticities of demand for excisable commodities, this study

echoed KIPPRA, (2020) that established a negative price elasticity for tobacco, alcohol products, and petroleum products (excisable products). According to KIPPRA, (2020), Commodities under soft drinks and financial services categories, have the most inelastic price elasticities demand with the least price elasticities of demand ranging from -0.210 to -0.548 and -0.203 to -0.635 respectively. ATM and other bank charges and mobile money transfers also exhibit inelastic demand with price elasticities of -0.267m and -0.635 respectively. Cigarettes and alcohol products have price elasticities of demand that range from -0.38 to -.92 and 0.366 to -0.80 respectively. Petroleum products exhibit relatively similar but moderate elasticity of demand. Among the petroleum products, petrol has the least price elasticity of demand of -0.637 while diesel has a price elasticity of demand of -0.665. Theory suggests that commodities which are highly inelastic in price elasticities of demand, are less responsive to price changes and therefore if the policy objective is to excise tax revenue through increase of excise taxes for commodities, then commodities with lower price elasticities of demand should bear a larger tax burden. But, depending on policy objective, levying of excise taxes needs careful considerations as any increase in excise tax rates may result in undesirable outcomes and therefore, it should not be guided by the concept of elasticity alone. For instance, caution should be excised when taxing financial service as heavy taxation may reverse the gains made in financial inclusion and since commodities such as mineral water, squashes, sodas, beer, and petroleum products are price inelastic, increasing their prices will not lower their consumption significantly. Also, any increase in excise duty should consider the likely negative effect it may have on consumer pattern of a product. For example, increase in excise duty on alcoholic products may result in increase in uptake of illicit brews (KIPPRA, 2020).

According to Mwiti, (2016), levied excise taxes on cigarettes are highly regressive since they do not lead to the low-income population quitting smoking but rather being more burdened by the high cigarette prices. Since low-income population are known to smoke more than the higher income population, it therefore implies that poor people end up using a larger part of their income in paying cigarette taxes than the rich since tax burden is usually passed over to the consumer.

Magu (2013) in his study on relationship between government revenue and economic growth in Kenya found out that, there was a steady increase of the excise duty tax revenue collected between the financial years 2002/2003 and 2008/2009, a decline of the collected revenue between financial years 2008/2009 and 2009/2010, and a slight increase in the financial year 2010/2011.

The country collected Ksh 35.643 billion in the 2002/2003 financial year, Ksh 50.309 billion in 2005/2006, Ksh 69.872 billion in 2008/2009, Ksh 39.525 billion in 2009/2010, and Ksh 42.596 billion in 2010/2011. The study concluded that, amount of the collected excise duty has a is directly related to the country's economic growth; increase in excise duty collection has a positive impact on economic growth and the vice versa.

Mureithi (2013), established it has a direct relationship to economic growth of the country; as increase of excise duty slow, it also slows down economic growth of the country. The study further established that, the revenue collected as a result of excise duty has been declining of late compared to the earlier years.

2.3.9 Value added tax and economic performance

A value added tax (VAT), known in some countries as a goods and services tax (GST) , is a type of tax that is assessed incrementally. VAT is an indirect tax since the person who ultimately bears the burden of the tax is not necessarily the same person as the one who pays the tax to the authority. It is levied on the price of a product or service at each stage of production, distribution, or sale to the end consumer; it is a tax on value addition. If the end consumer is a business that collects and pays to the government VAT on its products or services, it can reclaim the tax paid; VAT is accounted for using input-output system. Input tax refers to tax paid by a registered person on purchase of goods or services for the purpose of his business while output tax refers to tax charged on the sales of taxable goods or services; payable VAT tax is the difference between the output VAT tax and the input VAT tax.

According to Brown & Gale, 2012, Value Added Tax is widely accepted indirect taxation system across the globe and it has been implemented in more than 150 countries. The dramatic acceptance and rise of VAT across the world is due to the fact that VAT is a good way of raising resources and modernize the overall tax system (Ebrill et al, 2001). VAT is the third most important source of governments' tax revenue in the world, behind social security contributions, and income taxes (Charlet & Buydens, 2012) .

In Kenya, there are currently three rates of VAT: standard rated at 16%, zero rated, and exempt. VAT on goods and services supplied in Kenya is collected at designated points by VAT registered persons who act as the agents of the Government while VAT on imported goods and services are paid by the importer.

Magu, 2013, shows an increasing trend of the country's VAT tax collected revenue between financial year 2002/2003 and 2008/2009; Ksh 56.135 billion were collected as VAT tax in 2002/2003 financial year, Ksh 96.269 billion and Ksh 126.854 billion in 2006/2007 and 2008/2009 financial years respectively. The collection however decreased slightly to Ksh 75.927 billion in the financial year 2009/2010 but again increased to Ksh 89.871 billion in the financial year 2010/2011. The study found that VAT tax has a positive effect on the rate of the country's economic growth. It however noted that the collected revenue through VAT tax has been on a downward trend in the recent years.

Njogu (2015), in his study on effect of value added tax (VAT) on economic growth in Kenya found that, a percent change in the incident rate of GDP is an increase of 7% for every unit decrease in VAT. This led to his conclusion that there exists a significant negative relationship between VAT rates and GDP and recommendation for reduction and or maintenance of low VAT rate in order to increase the overall GDP. Regarding the effect of VAT rates on economic growth as measured by consumer price index (CPI), the study found that a percentage change in incident rate of CPI is an increase of 9.2% for every unit increase in VAT which was however not significant at 5% confidence level. This guided in his conclusion that there exists an insignificant positive relationship between VAT rates and CPI and hence the Kenya government should reduce and or maintain low VAT rate in order to maintain low levels of inflation (CPI) within the economy. Regarding the effect of VAT rates on economic growth as measured by unemployment rate, the study found that a percentage change in the incident rate of unemployment rate is an increase of 1.2% for every unit increase in VAT and based on this, he concluded that, there exists a significant positive relationship between VAT rates and unemployment rate. He therefore recommended that the Kenya government should endeavour to reduce and or maintain a low VAT rate to maintain low unemployment rates within the economy.

Omondi, (2013) in his study on VAT reforms and revenue productivity in Kenya, found out that Kenya's VAT is inelastic and non-buoyant, with elasticity and buoyancy coefficient being less than unity. This led to his conclusion that VAT as a source of revenue in Kenya is grossly underperforming and there is therefore need for further reforms on VAT to boost its revenue productivity. As a way of increasing revenue through VAT tax, the study proposed, immediate enactment of the 2013 VAT act which will simplify VAT tax collection procedures, broaden VAT tax base by reducing the number of zero rated and exempted goods and services, change process

of VAT dispute resolution; it should be expedited and its efficiency improved, address delay in repayment of VAT refunds by KRA, include online/e-commerce businesses and informal sector into the VAT bracket, sensitization of tax payers on the new tax act, improve administrative structure of KRA which will assist in reduction of the low VAT compliance rate, and improve on tax auditing to unearth fraud within the tax system to reduce rate of tax evasion and avoidance.

According to Adisa, (2011), foreign exchange, number of rates, range and age directly or indirectly influence VAT revenue. This conclusion was based on the observed increase of VAT collections in the country within the study period led by the changes in the VAT determinants. The study also found that the country's VAT productivity is normal compared to worldwide results; the results of the study are consistent with similar studies in other countries. For instance, the old VATs and a high range between the highest and lowest non-zero VAT rates have a positive bearing on VAT revenue and tax rate cannot be pushed too high without markedly reducing VAT revenue.

The study by Ayodeji et al (2021) on the relationship between value added tax (VAT) and Nigeria's gross domestic product (GDP) between 2004 and 2018, showed a significant positive relationship between value added tax revenue and economic growth of the country. The findings of the study is in line with the studies done by Ogonchukwu & Azubike (2016) and Izedonmi & Okunbor (2014) that found a positive and significant relationship between value added tax revenue with the economic growth of Nigeria.

According to Omar, et al. (2021) in their study on the effect of taxation on economic growth in Kenya, taxation has a significant positive effect on the growth of the economy. The findings of the study are in line with research findings in the empirical literature reviews conducted by Nguluu (2017) and Ouma, 2019). The study also concluded that VAT, income tax, and excise duty are beneficial to the economy as they increase the level of economic growth while import duty is detrimental to the country's rate of economic growth as it decreases the rate of economic growth. The study recommended that, the country should collect adequate tax revenue for its domestic expenditure and development needs in order to reduce the deficit in its budget by reducing both domestic and external borrowing as they further bring more harm to the economy; the country should rely more on taxes as they boost economic growth.

Wawire (2011) studied the determinants of Value Added Tax revenue (VAT) and found that growth elasticities for VAT were quite significant. The study findings showed that VAT revenues respond with significant lags to variations in its determinants and that VAT revenues are

responsive to changes in its determinants especially international trade though there is a challenge of creating a stable Value Added Tax system.

Mbithi, (2013), found that Kenya's VAT is currently responsive to changes in GDP but was rigid to changes in GDP in the years preceding 2004/2005 financial year, tax payers faced challenging compliance costs and that there was neglect of medium and small taxpayers who were found not to be compliant because of computational difficulties and lack of audit, and tax administration also face difficulties in implementing VAT laws due to inadequate resources. The study recommended that the country's national tax collection agent (KRA) should shift from focusing on revenue collection to coming up with systems that are more tax payer oriented so as to enhance their compliance with VAT laws, and some reforms that have negatively impacted on VAT collection such as scrapping of withholding VAT should be reviewed.

2.3.10 Import/customs Duty and Economic performance in Kenya

Import/custom duty is a tax collected on imports and some exports by a country's customs authority and it is usually dictated by the concerned good's value. Import duties have two distinct objectives: raise income for government and to give a market advantage to locally grown or produced goods that are not subject to import duties.

According to Kenya Revenue Authority, custom duty is levied at rates between 0%, 10%and 25% as provided for by the East Africa Community Common External Tariff (CET). However, sensitive items attract duty higher than 25%. Imported items are also charged excise duty depending whether the items are excisable or not, Value Added Tax (VAT) at a standard rate of 16% (however, many items are VAT exempted according to the VAT act 2013); VAT is calculated on the cost insurance flight (CIF) value of goods inclusive of applicable customs and excise duties, and any other charges such as packaging, financing, warranty, and commissions, import declaration fees (IDF) at 3.5% on customs value of goods, and railway development levy (RDL) at 2% on customs value of goods.

Kenya applies a conformity assessment program administered by (Kenya Bureau of Standards (KEBS), known as Pre-export Verification of Conformity (PVoC), which is aimed at ensuring that all products imported in the country comply with the applicable Kenyan Technical Regulations and Mandatory standards or approved specifications. This program consists of a mandatory cargo clearance document called certificate of conformation (CoC) that must be

obtained by a third-party service provider that must undertake a conformity assessment test in the country of origin of all products to be imported into Kenya, exempt goods for manufacturing within the East African Community (EAC) with a valid certificate of origin for a limited number of items that are exempted and listed in the Legal notice 183 of 5th December 2019. According to this notice, goods imported into the country without certificate of conformation (CoC), shall be held at the port of entry or kept in an approved warehouse for the purpose of inspection and testing (destination inspection) and subjected to a fee equivalent to 20% of the approved customs value of the goods.

According to Magu, 2013, the country's revenue collected as import duty increased from Ksh 18,477 million in 2002/2003 financial year to Ksh 23,532 million in 2004/2005 financial year. It however decreased to Ksh 20,511 million in 2005/2006 financial year, increased to Ksh 27,510 million in 2006/2007 financial year, further increased to Ksh 36,181 million in 2008/2009 financial year, decreased to Ksh 21,957 million in 2009/2010 financial year but later increased to Ksh 23,425 million in 2010/2011 financial year. The study found that import duty has an inverse relationship with the country's economic growth; the study showed that, as import duty increases, the economic growth declines and vice versa.

According to Murithi (2013), revenue obtained from import duty increased over the years to reach 36,181 million Kenya shillings in 2008/2009 financial year. A sharp decline was however observed in the subsequent years with a slight increase recorded in 2010/2011 financial year at 23,425 million shillings. The study found that import duty has an inverse relationship with economic growth; as import duty increases, economic growth declines and vice versa. He however concludes that, there is little relation between import duty and economic growth since the change in economic growth is determined by the type of goods imported and not the value of importation. This is according to the findings of Baark (1988) who established that import duty has both negative and positive effects on the level of economic growth depending on the type of goods imported. The author reports that import duty raised from capital goods leads to a higher economic development because of the key role such goods play in manufacturing sector; capital goods help to achieve new manufactured goods and affect the three main sectors of the economy namely, agriculture, industry, and transport. Import of equipment/ machines related to agriculture and industry increases a country's output as inputs into production besides the duty paid to the government as revenue.

Omondi, (2016) in his study on the effect of indirect tax revenue on economic growth in Kenya in the period 1973 to 2010, found out that, custom duty has a positive and significant effect on the country's economic growth. The study showed that a 1% increase in custom duty revenue leads to an increase of 0.1228% economic growth. It therefore concluded that custom duty has a potential of increasing the government's revenue base and make funds available for development purposes which will accelerate the economic growth. The study also showed that excise duty has a positive and significant effect on the country's economic growth; it showed that a 1% increase in excise duty revenue leads to an increase of 0.3709% economic growth. It therefore concluded that excise duty can potentially raise a great deal of revenue with little distortional effect. Excise duty therefore provides a predictable and stable flow of revenue to finance development objectives that will accelerate economic growth. On value added tax (VAT), the study found that value added tax (VAT) has insignificant positive effect on the country's economic growth. It showed that a 1% increase in the value of VAT revenue, would increase economic growth by 0.0356%. The insignificant impact of VAT on economic growth is attributed to the fact that VAT has impact on consumption which in turn has an effect on investment and employment and ultimately income and output. From its findings, the study recommended that Kenya government should rely more on indirect taxes (customs and excise duty) than income tax due to its growth potentiality and its low distortionary nature, and also utilize the positive relationship between the tax variables and economic growth to realize efficient government investment expenditure that spurs economic growth. It further recommends that, to increase the rate of growth of customs duty, the government should tackle the challenges of porous borders, smuggling, security and shortages of adequately trained personnel at the public agencies dealing with assessment, collection, and administration of custom duty in the country. Smuggling of goods into the country denies the government the would-be tax revenue and therefore everything should be done to root it out and consequently improve on collection of custom duty in the country.

Obura, (2022) in his analysis of direct taxes and gross domestic product of the Kenyan economy, established that direct tax has a significant relationship with real gross domestic product (RGDP) of the economy of Kenya. This contradicted the famous hypothesis 'that direct taxes do not have a significant relationship with Real Gross Domestic Product of the country. The study therefore recommended that the government should ensure an effective and efficient way of collecting direct taxes since they have a strong positive correlation with the country's real gross

domestic product. The government should additionally ensure effective and efficient use of taxes since they have a direct bearing on the growth of the country's economy.

CHAPTER 3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides the theoretical and methodological framework applied in analysing the relationship between income, VAT, excise and import taxes and Kenya's economic performance. The study utilizes economic theory and models to define this relationship. This chapter provides an insight of the used research design, the type of data collected, the applied statistical methods in data analysis, and justification and the limitations of the applied methodology.

3.1.1 Saunder's Research onion

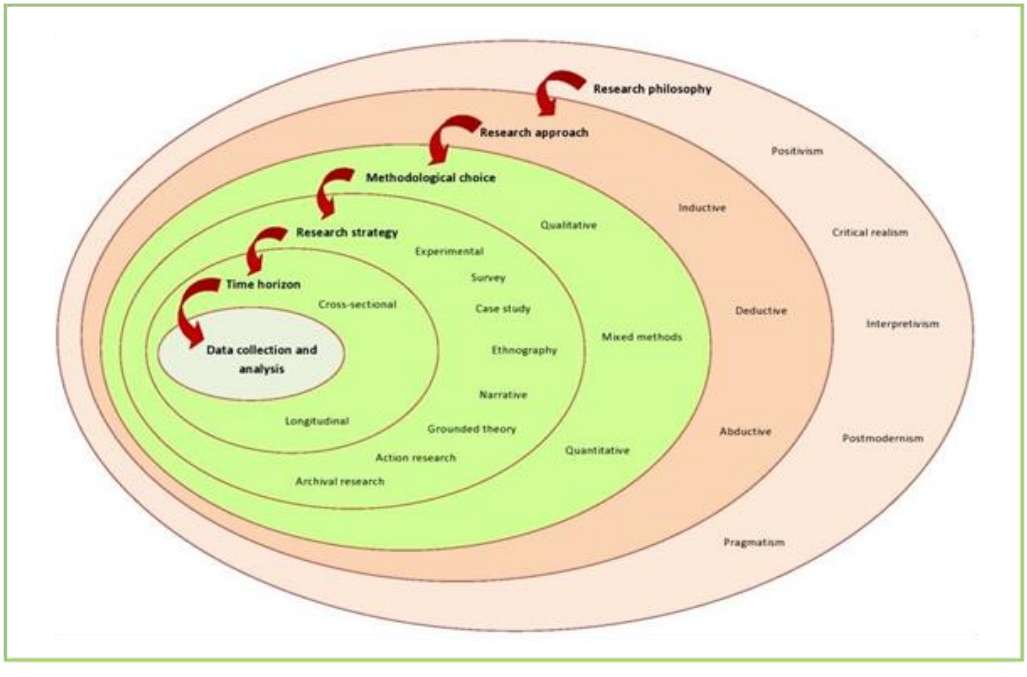

Fig 3.1 Saunder's Research Onion (Saunders et al, 2007:102)

Saunders' research onion describes different decisions required by a researcher in developing a research methodology; it explains different stages of writing a dissertation and help researchers in creating a better organized methodology; its six layers are of great significance in conducting research whether for dissertation, thesis or any other formal research project.

3.2 Research philosophy

To meet the objective of the research, the study will rely on gathering information and quantitative data on the country's trend of the taxes revenue, and the country's gross domestic product (GDP) within the period 2010 -2023 to aid in giving an insight on the effect of the selected taxes on the country's economic performance. The collected data will also aid in determination of the country's gross domestic product (GDP) to tax ratio within the period of study which will give a bearing on how well the government directs its economic resources through taxation. This study will therefore be based on positivism philosophy.

3.3 Research design

Research design refers to the overall strategy that is chosen to integrate the different components of the study in a coherent and logical manner to ensure that the research problem is effectively addressed; it constitutes the blue print for collection, measurement, and analysis of research data. The choice of a research design is determined by the research purpose categories of data needed, data sources and cost factors among others. The function of research design is to ensure that the evidence obtained in the research facilitates effective addressing of the research problem as unambiguously as possible.

Together with positivism philosophy, this research will use quantitative method and inductive analysis approach to facilitate achievement the objective; the study will involve collection of quantitative secondary data which will be analysed to answer the research questions. As this study aims at assessing the effects of the selected taxes revenue on Kenya's economic performance within the specified study period, the study will adopt descriptive correlational research design. This research design tries to explain the relationship between two or more variables without making any claim about cause and effect. It is a type of quantitative research design that focuses on describing and examining the relationship between variables without manipulating them.

3.2.1 Research strategy and time horizon

The research involves an analysis of a single subject to gain its in-depth understanding and therefore, case study will be adopted as the study strategy in this research.

The research will involve collection and analysis of data in one point in time and therefore it will apply a cross-sectional time horizon data collection method. Such studies are also relatively quick and inexpensive to conduct.

3.3 Population of study

The study examined the effect of VAT, Income tax, Import duty and Excise duty on Kenya's economic performance within the period 2010 to 2023. The required information and data related to income tax, VAT, excise duty and import duty revenues were sought from government ministries and agencies including ministry of finance, Kenya revenue authority and Kenya Bureau of statistics. The study also examined the country's growth domestic product (economic growth) within the same period for comparison purposes. This gave an insight of the relationship between the tax regimes and the country's economic growth of the country.

3.4 Data collection, sources and types

The research relied on secondary data sourced from the relevant ministries and government agencies including ministry of finance, Kenya Revenue Authority and Kenya bureau of Statistics. Secondary data is the data collected by someone else other than the user; it is the data that has already been collected through primary sources and made readily available for researchers to use for their research purposes.

Research data was collected using the document review approach. This is a process in which researchers analyse quantitative data found in existing primary documents, such as public records and personal documents. The data collected were, annual income, VAT, import and excise taxes income and annual country's GDP for the study period to facilitate deducing of the relationship between each of these taxes and the country's economic growth.

3.5 Data analysis

Data analysis was done using Pearson correlation coefficient formula, t-test formula and multiple regression analysis method. Descriptive statistics measures of both central tendency and variability were used in analysis of the collected data. Mean locate the centre of the relation frequency while standard deviation measures the spread of a set of observations.

In this study, the country's GDP was the dependent variable while income tax, VAT, excise duty and import duty were the independent variables. Inferential statistic was also used in the data analysis. Inferential statistic a practice of using sampled data to draw conclusion or make predictions about a larger sample data or population.

3.5.1 Data analysis model

Multiple linear regression model was applied in analysis of data in this study. Regression model is able to show whether changes observed in the dependent variable are associated with changes in one or more of the independent/ explanatory variables. It does this by essentially fitting a best fit line and seeing how data is dispersed around this line.

$Y = a + b1X1 + b2X2 + b3X3 + b4X4 + ...bnXn + u$

Where Y= dependent variable.

X1, X2.....Xn represent the independent variables as below.

X1=Total Income tax/GDP

X2=Total VAT/GDP

X3=Total Excise duty/GPD

X4= Total import Duty/GDP

a= Represents the Y value when every independent variable equals Zero or the Y-intercept of the graph.

b1, b2----bn (regression coefficients) is the regression coefficient which describes the change in the dependent variable relative to one unit change of the independent variable; it the slope of the explanatory (independent) variable.

u= regression residual or error term.

The multilinear regression was done using Excel where data on GDP were input as the dependent variable in the Y- range while data on income tax, value added tax (VAT), import duty and excise duty were input as the independent variables in the X- range before the analysis was done. The results of the regression analysis are presented in chapter 4 of this dissertation.

CHAPTER 4.0 FINDINGS OF RESEARCH

This chapter covers the research findings, research data analysis, interpretations, and discussion. The findings are presented in form of tables and figures.

4.1 Trend in analysis

Trend analysis was undertaken to investigate the trend pattern and behaviour of the research variables over the study period. Line graphs were used to explain the trends, patterns and behaviour of the variables during the study period.

4.1.1 Per capita Gross domestic product

The main variables in this study are

a) Country's economic growth rate (GR) measured by the gross domestic product per capita growth rate (GDP per capita growth rate)
b) Income tax (IT) measured as a ratio of the GDP.
c) Value added tax (VAT) measured as a ratio of the GDP.
d) Excise duty measured as a ratio of the GDP.
e) Import duty measured as a ratio of the GDP

Table 4.1 Kenya's annual per capita GDP.

	Year	Real GDP in million Ksh	Per capita GDP in million Ksh
2	2011	6090206	145644.4221
3	2012	6368448	147577.9604
4	2013	6610312	151469.65
5	2014	6942157	155536.1465
6	2015	7287024	158556.509
7	2016	7594064	161099.9632
8	2017	7885521	161099.9632
9	2018	8330891	166774.5881
10	2019	8733060	171869.9535
11	2020	8756946	167988.6893
12	2021	9395942	177261.8571
13	2022	9851329	182340.8481

Source: National treasury

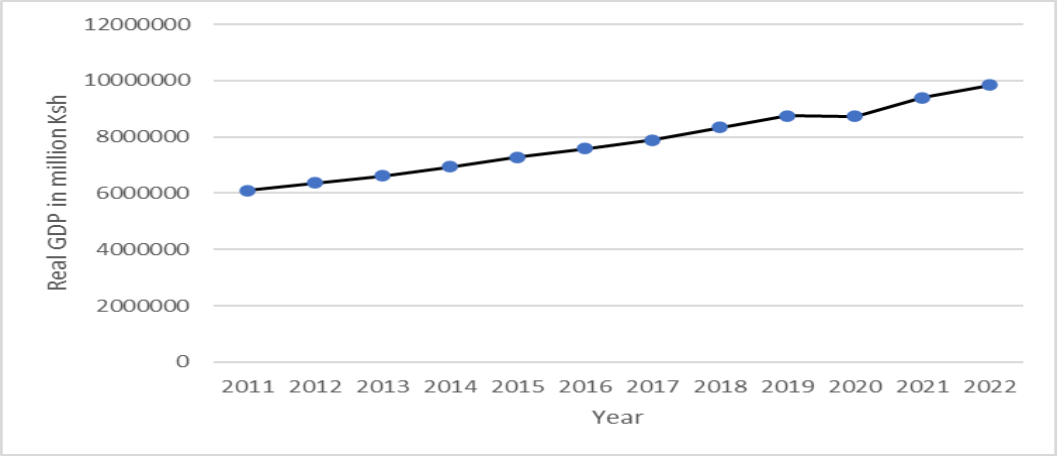

Fig 4.1 Kenya Real GDP.

The graph shows a steady increase of GDP between 2011 and 2019, it decreased in 2020 but later increased steadily between 2020 and 2022

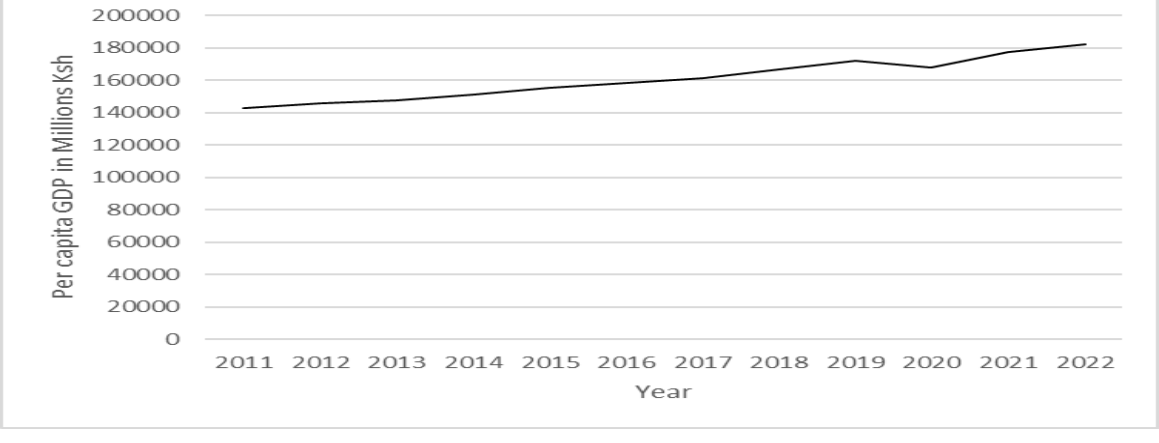

Figure 4.2 Kenya's annual per capita gross domestic product (GDP)

The figure shows a steady increase of the country's annual per capita GDP between 2010 and 2016, a decrease in 2017, an increase between 2017 and 2019, a decrease in 2020 and an increase between 2020 and 2022.

4.1.2 Tax to GDP ratios

Table 4.2 Income tax to GDP ratio

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Income tax to GDP ratio	5.13	5.86	6.80	7.33	7.70	8.23	8.12	8.23	8.07	7.95	7.36	6.87

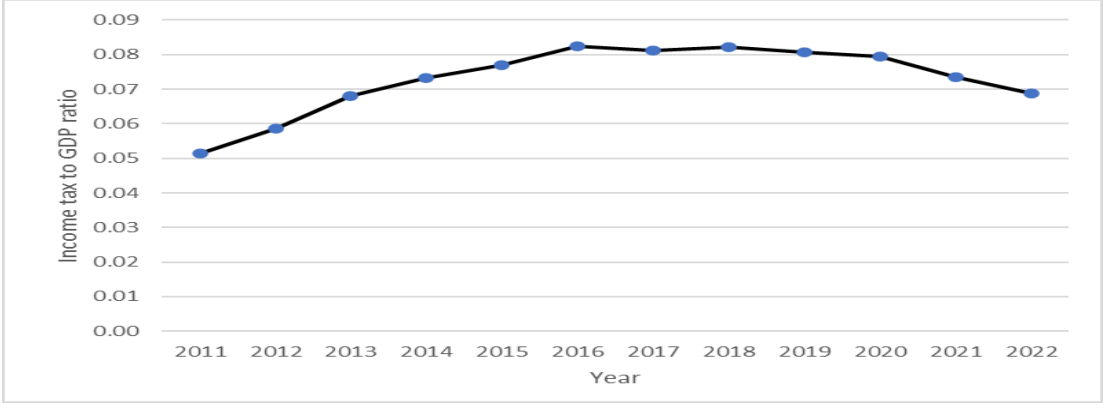

Fig 4.3 Income tax to gross domestic product (GDP) ratio.

Table 4.3 VAT to Gross domestic development (GDP) ratio

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2010	2021	2022
VAT to GDP ratio	2.90	2.90	3.52	3.74	3.97	4.46	4.53	4.97	4.38	4.70	4.33	4.10

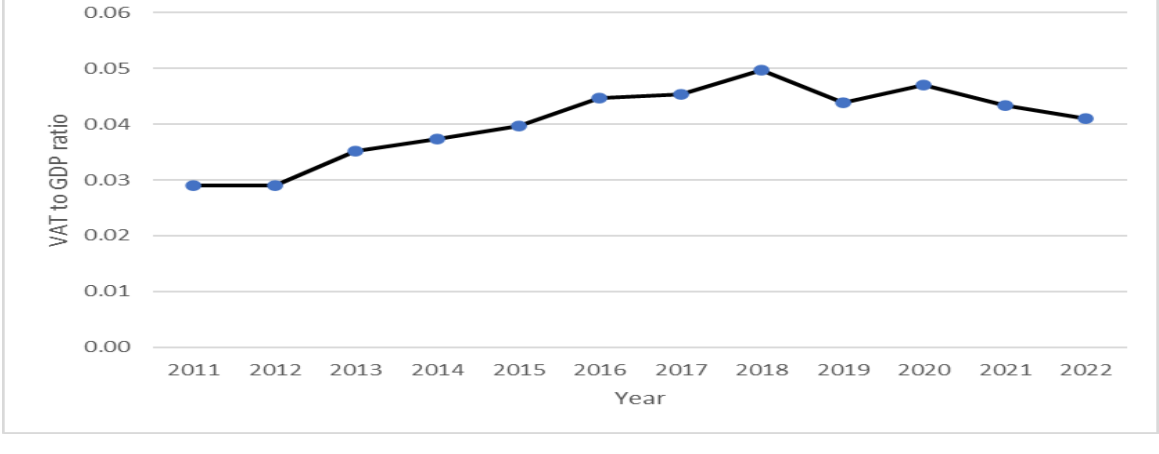

Fig 4.4 Value added tax (VAT) to GDP ratio

Table 4.4 Import duty to Gross domestic product (GDP) ratio.

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2010	2021	2022
Import duty to GDP ratio	0.8	0.9	1.0	1.1	1.1	1.2	1.2	1.3	1.1	1.2	1.3	1.2

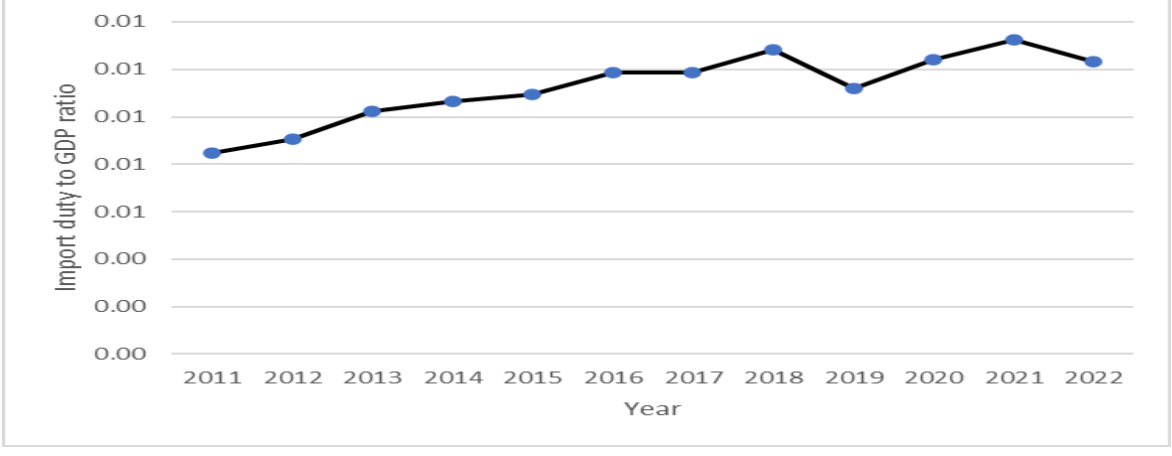

Fig 4.5 Import duty to GDP ratio

Table 4.5 Excise duty to Gross domestic development (GDP) ratio

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2010	2021	2022
Excise duty to GDP ratio	1.3	1.35	1.54	1.67	1.92	2.18	2.13	2.33	2.23	2.48	2.13	2.31

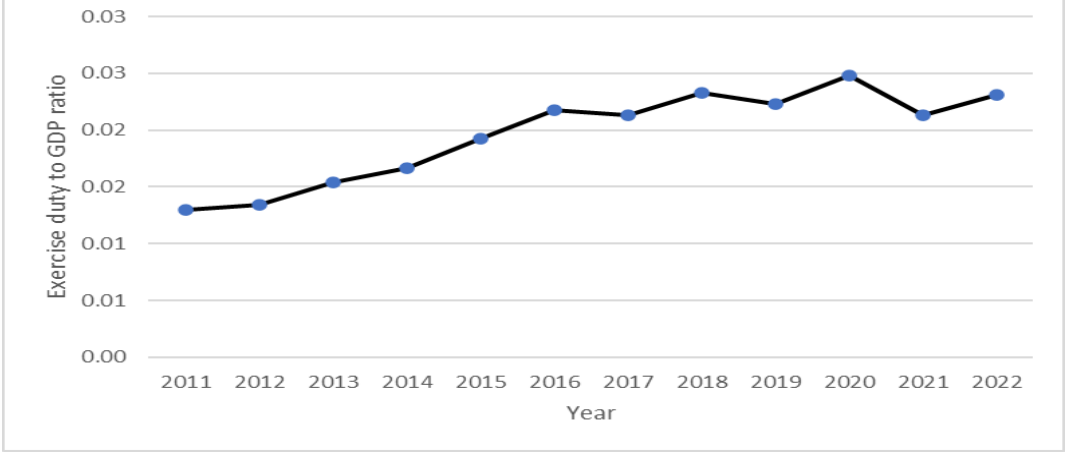

Fig 4.5 Excise duty to GDP ratio

Inference from the figures

a) Income tax ratio increased steadily between 2011 and 2016, but decreased between 2016 and 2022.
b) VAT ration increased steadily between 2011 and 2018, decreased in 2019, increased in 2020 but decreased between 2020 and 2022.
c) Import duty ration increased steadily between 2011 and 2018, decreased in 2019, increased between 2019 and 2021 before decreasing in 2022.
d) Excise duty increased steadily between 2011 and 2016, decreased in 2017, increased again in 2018, decreased in 2019, decreased in 2020 before increasing in 2022.

5.0 DATA ANALYSIS, INTERPRETATION AND DISCUSSION

5.2 Normality test

This test was conducted to determine whether the collected research data was normal or not. This study used Shapiro- Wilk test and Kolmogorov-Smirnov test since they were more appropriate for the sample.

Table 5.1 Kolmogorov-Smirnov and Shapiro-Wilk normality test

	Kolmogorov-Smirnov		Shapiro-Wilk		
	Ks value	Critical value	W-Statistics	P value	Critical value
Income tax	0.221	0.375	0.857	0.048	0.05
VAT tax	0.173	0.375	0.875	0.0831	0.05
Import duty	0.185	0.375	0.943	0.5	0.05
Excise duty	0.178	0.375	0.926	0.387	0.05
GDP	0.107	0.375	0.964	0.78	0.05

Inference from the table

a) Income tax has a Kolmogorov- Smirnov Ks value of 0.221 which is less than the critical value of 0.375 and a Shapiro Wilk test P value of 0.857 which is more than the significance level of 0.05. This implies that income tax data is normally distributed.

b) VAT tax has a Kolmogorov- Smirnov Ks value of 0.173 which is less than the critical value of 0.375 and a Shapiro Wilk test P value of 0.875 which is more than the significance level of 0.05. This implies that VAT tax data is normally distributed.

c) Import duty has a Kolmogorov- Smirnov Ks value of 0.185 which is less than the critical value of 0.375 and a Shapiro Wilk test P value of 0.5 which is equal to the significance level of 0.05. This implies that import duty data is normally distributed.

d) Excise duty has a Kolmogorov- Smirnov Ks value of 0.178 which is less than the critical value of 0.375 and a Shapiro Wilk test P value of 0.387 which is more than the significance level of 0.05. This implies that income tax data is normally distributed.

e) GDP data has a Kolmogorov- Smirnov Ks value of 0.107 which is less than the critical value of 0.375 and a Shapiro Wilk test P value of 0.78 which is more than the significance level of 0.05. This implies that GDP data is normally distributed.

As seen the whole of the data is normally distributed and can therefore be modelled using linear regression model

Table 5.2 Variables' Maximum, Minimum, Mean and Standard deviation values

		Maximum	Minimum	Mean	Std deviation
1.00	Income tax	706936.00	312463.00	577021.25	136350.97
2.00	VAT tax	414143.00	176386.00	321529.00	89719.13
3.00	Import duty	121378.00	51712.00	89450.00	23837.89
4.00	Excise duty	227566.00	78884.00	157457.33	51863.19
5.00	GDP	9851329.00	6090206.00	7820491.67	1215617.73

Inferences from the table

a) Income tax had a mean of 577021.25 with a maximum and minimum values of 706936 and 312463 in 2022 and 211 respectively.
b) Vat tax had a mean of 321529 with a maximum and minimum values of 414143 and 176386 in 2022 and 211 respectively.
c) Import duty had a mean of 89450 with a maximum and minimum values of 121378 and 51712 in 2022 and 211 respectively.
d) Excise duty had a mean of 157457.333 with a maximum and minimum values of 227566 and 78884 in 2022 and 211 respectively.
e) GDP had a mean of 7820491.667 with a maximum and minimum values of 9851329 and 6090206 in 2022 and 211 respectively.

5.3 Descriptive statistics

The descriptive statistics applied in analysis of the research data are: mean, standard deviation, minimum, range, skewness and kurtosis.

i) Mean is the average of data set.

ii) Standard deviation is the average amount of variability in a data set; it shows how far each value lies from the mean.

iii) Skewness is a measure of the asymmetry of a distribution. A distribution is asymmetrical when its left and right side are not mirror images and symmetrical when they are mirrow images.

Kurtosis is a measure of the tailedness of a distribution. Tailedness is how often outliers occur. Excess kurtosis is the tailedness of a distribution relative to a normal distribution. Normal distribution has a kurtosis of 3 and excess kurtosis of 0. Distribution with medium kurtosis (medium tails) are mesokurtic (has excess kurtosis approximately 0), distribution with low kurtosis (thin tails) are platykurtic or negative kurtosis (has excess kurtosis less than 0) and distribution with high kurtosis (fat tails) are leptokurtic or positive kurtosis (has excess kurtosis more than 0).

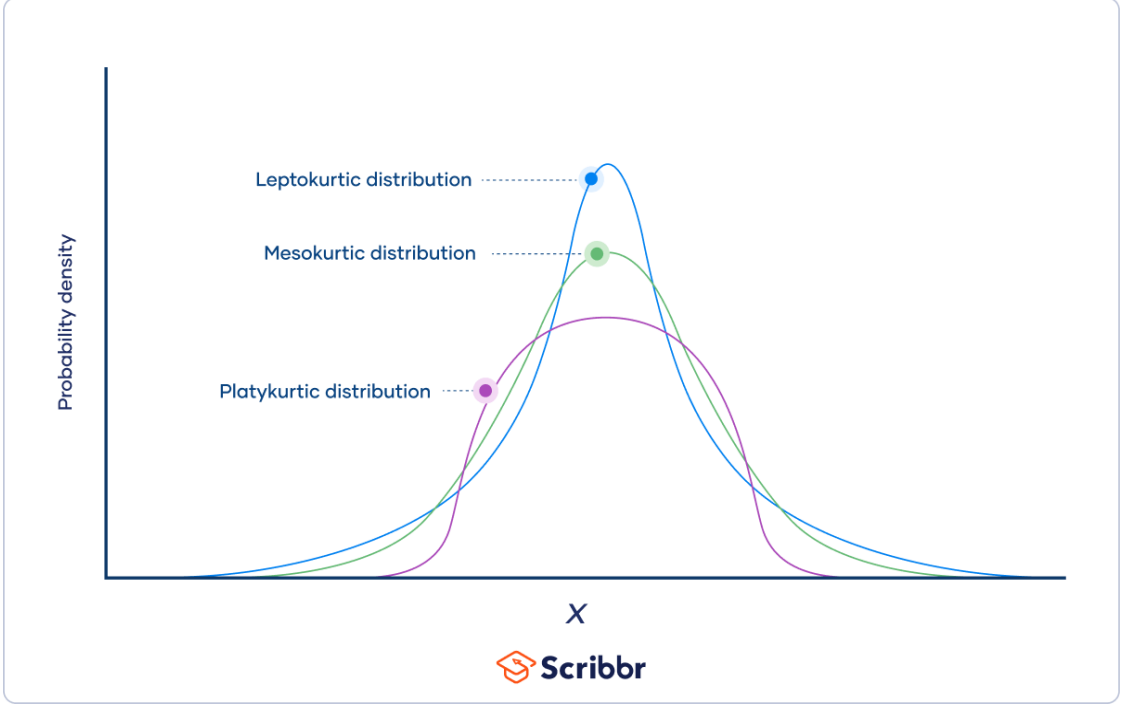

Fig 5.1 Types of Kurtosis

Table 5.3 Variables' skewness and Kurtosis test

Variable	N	Maxim-um	Minim-um	Mean	Std deviation	Skewness		Kurtosis		
	Statis-tics	Statis-tics	Statis-tics	Statis-Tics	Statis-tics	Statis-tics	Std error	Statis-tics	Excess Kurtosis	Std error
Income tax	12	706936	312463	577021	136351	-0.127	0.637	2.244	-0.756	1.414
VAT tax	12	414143	176386	321529	89719	-0.888	0.637	0.143	-2.857	1.414
Import duty	12	121378	51712	89450	23838	-0.298	0.637	0.157	-2.843	1.414
Excise duty	12	227566	78884	157457	51863	-0.530	0.637	0.138	-2.862	1.414
GDP	12	9851329	6090206	7820492	1215618	0.199	0.637	0.155	-2.845	1.414

Inferences from the table

a) Skewness is a measure of the level of asymmetry of data distribution; it measures how far the distribution deviates from the normal distribution curve. From the above table, it is seen that all the distribution except GDP, are negatively skewed meaning majority of the data points are more concentrated towards the right-hand side of the mean. GDP is positively skewed which implies that majority of its data is concentrated on the left side of the mean.

b) Kurtosis is a measure of the tailedness of a distribution and tailedness is how often outliers occur; tailedness measures Peakiness of a distribution. A normal distribution has a Kurtosis of 3. A Kurtosis greater than 3 indicates a positive Kurtosis and in this case, the value of Kurtosis will range from 1 to infinity. Similarly, a Kurtosis less than 3 means a negative Kurtosis and the values of Kurtosis will range from -2 to infinity. Kurtosis measures if the data is flat or peaked in comparison to a normal distribution.

From the above table, all the variables have negative excess Kurtosis (Platykurtic). This implies that they have a flatter peak and thinner tails compared to normal distribution. The thinner

tails are spread out more around the middle. When compared to normal distribution, their data distribution looks flatter and most of the data values are located near the mean and less data values are located on the tails.

5.4 Correlation results

5.4.1 Pearson correlation coefficient and Sig (2-Tailed) value

Pearson correlation measures the strength of the linear relationship between two variables. It has a value of -1 to +1, with a value of -1 implying a total negative linear correlation, 0 implies no correlation and +1 meaning a total positive correlation. Variables with correlation coefficient more than 0.7 have strong positive correlation.

p value is the probability that found current results would have bee found if the correlation coefficient was zero (null hypothesis). If this probability is lower than the conventional 5% ($p>0.05$), the correlation coefficient is statistically significant.

Table 5.4 Variables' Pearson correlation

		Income tax	VAT	Import duty	Excise duty	GDP
Income tax	Pearson correlation	1	0.987	0.974	0.968	0.919
	p value (Sig 2-tailed)	0.00	0.00	0.00	0.00	0.00
	N	12	12	12	12	12
	Pearson correlation	0.987	1	0.974	0.988	0.952
	p value (Sig 2-tailed)	0.00	0.00	0.00	0.00	0.00
	N	12	12	12	12	12
Import duty	Pearson Correlation	0.95	0.974	1	0.988	0.993
	p value (Sig 2-tailed)	0.00	0.00	0.00	0.00	0.00
	N	12	12	12	12	12
Excise duty	Pearson Correlation	0.968	0.988	0.988	1	0.981
	p value (Sig 2-tailed)	0.00	0.00	0.00	0.00	0.00
	N	12	12	12	12	12
GDP	Pearson Correlation	0.919	0.952	0.993	0.981	1
	p value (Sig 2-tailed)	0.00	0.00	0.00	0.00	0.00
	N	12	12	12	12	12

Inferences from the table

a) All the variables have Pearson correlation coefficients (r) ranging from 0.919 to 0.993. Since the values are greater than 0.7 and very close to 1, this indicates existence of strong positive relationship between the variables. Therefore, changes in one variable are strongly correlated with changes in the second variable. Since the values are all positive, it means that as one variable increases in value, the second variable will also increase in value. Similarly, as one variable decreases in value, the second variable will also decrease in value. However, no any other conclusions can be made about this relationship based on the Pearson correlation coefficient.

b) p or the Sig (2-Tailed) value is used to tell is there is a statistically significant correlation between any two variables. The correlation between the variables have Sig (2-Tailed) value of Zero. Since this is less than 0.05, it implies that the correlation between any two variable is statistically significant. This means that, increases or decreases in one variable do significantly relate to increases or decreases in the second variable.

5.4.2 Scatter plots

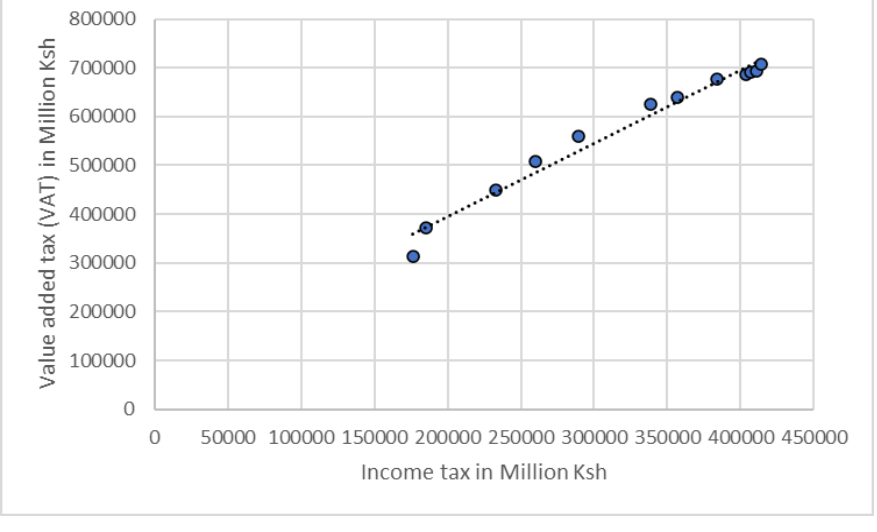

Fig 5.2 Value added tax verses Income tax.

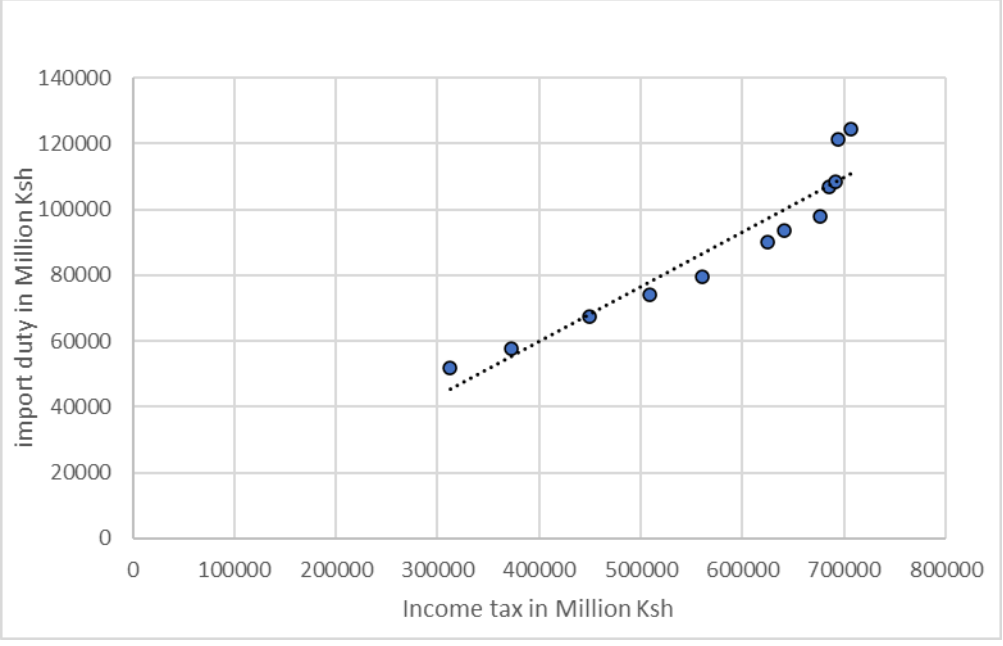

Fig 5.3 Import duty verses income tax

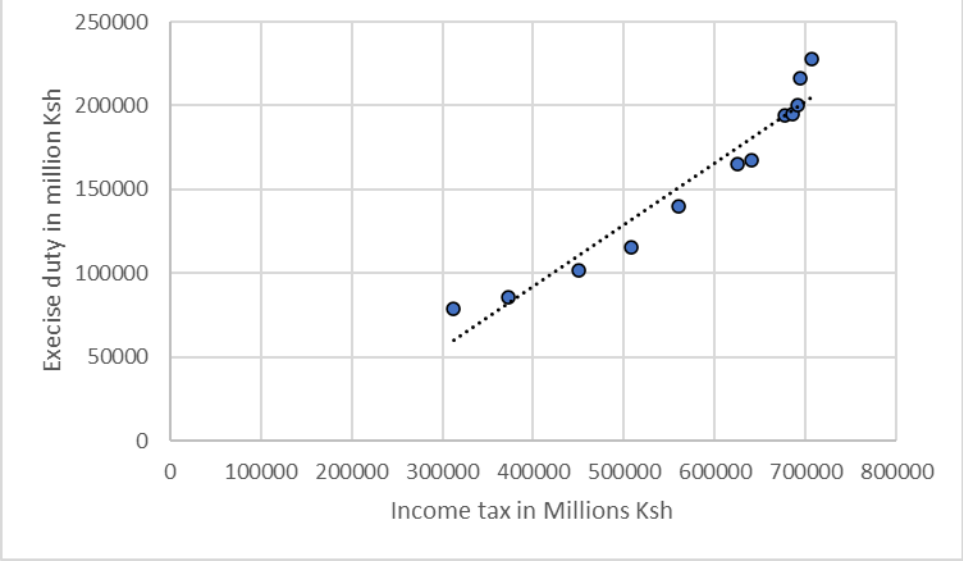

Fig 5.4 Excise duty verses Income tax.

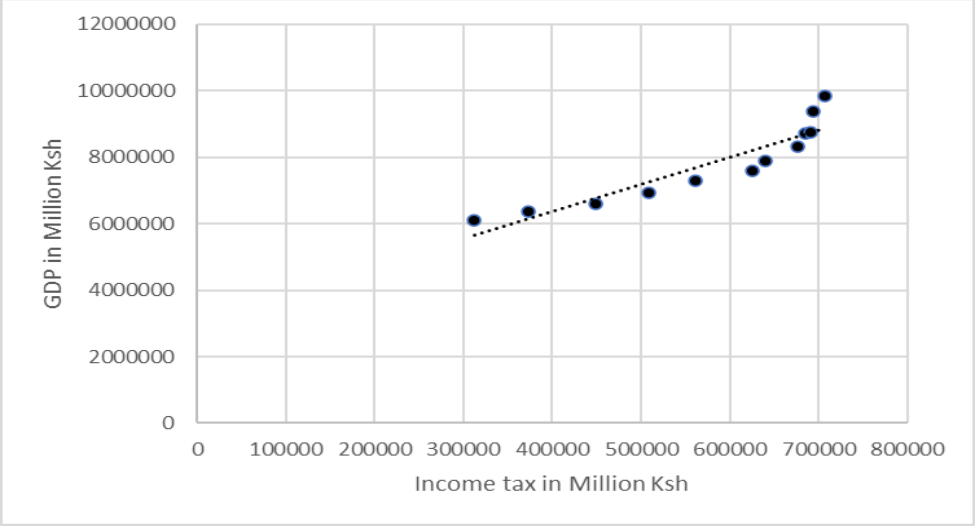

Fig 5.5 Gross domestic product verses Income tax.

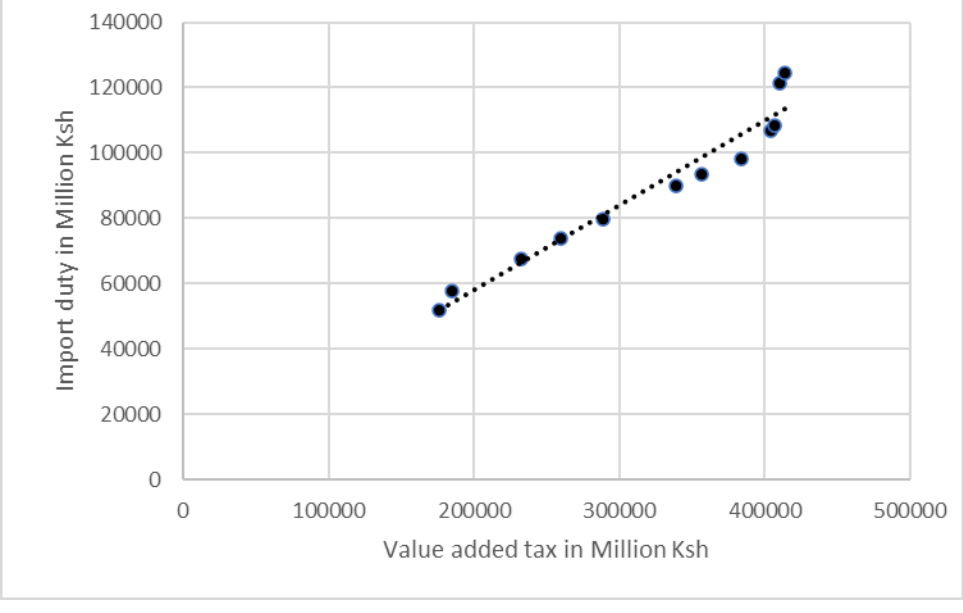

Fig 5.6 Import duty verses Value added Tax.

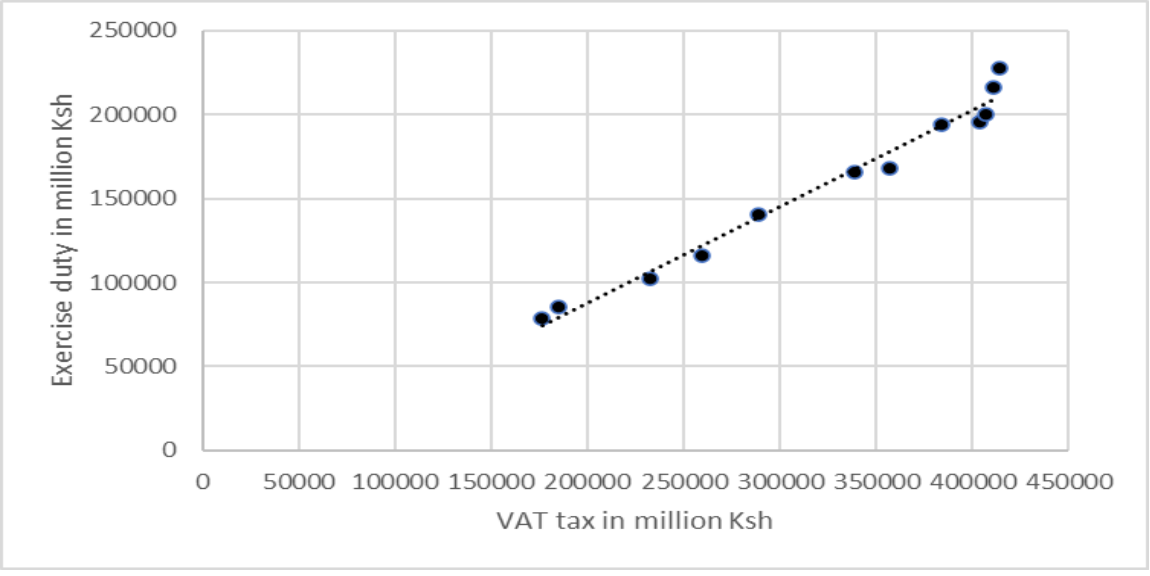

Fig 5.7 Excise duty verses Value added tax

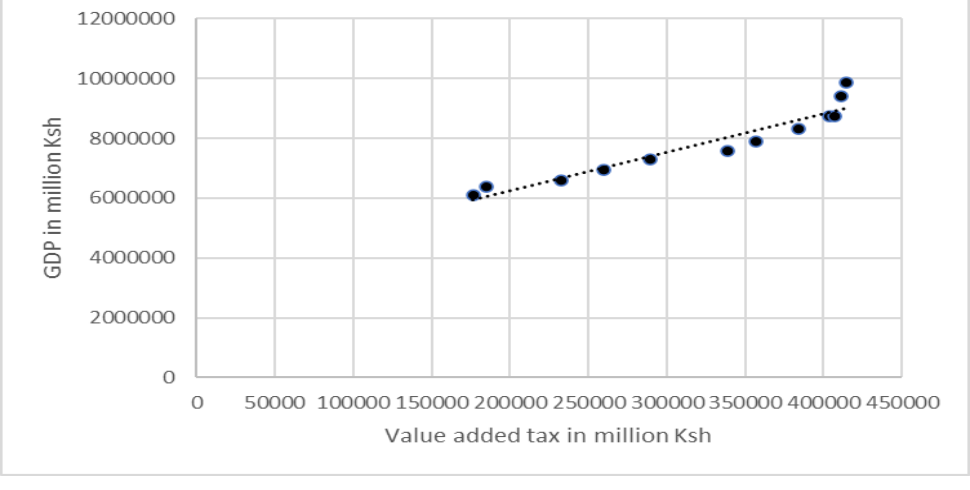

Fig 5.8 Gross domestic product verses Value added tax

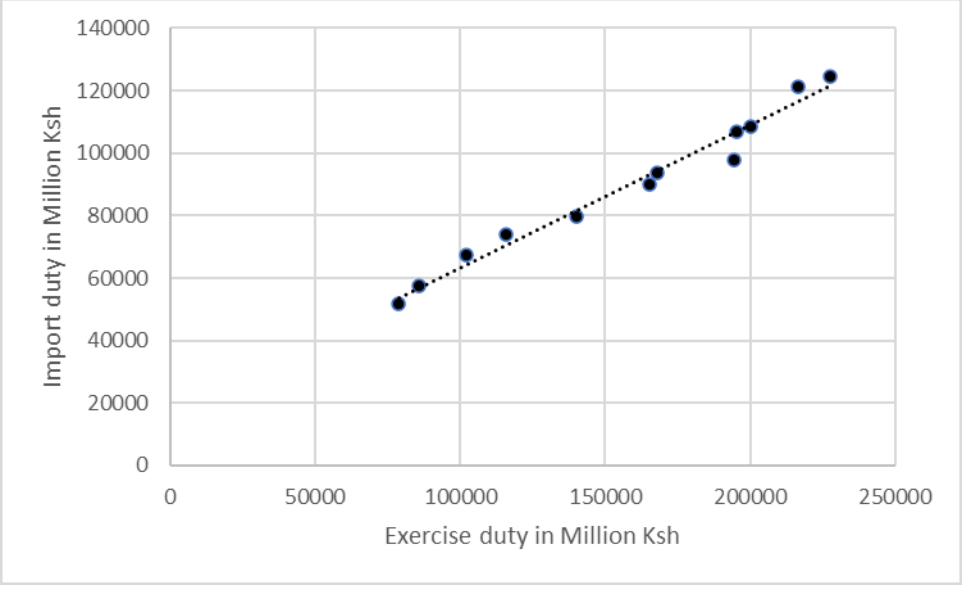

Fig 5.9 Import duty verses Excise duty

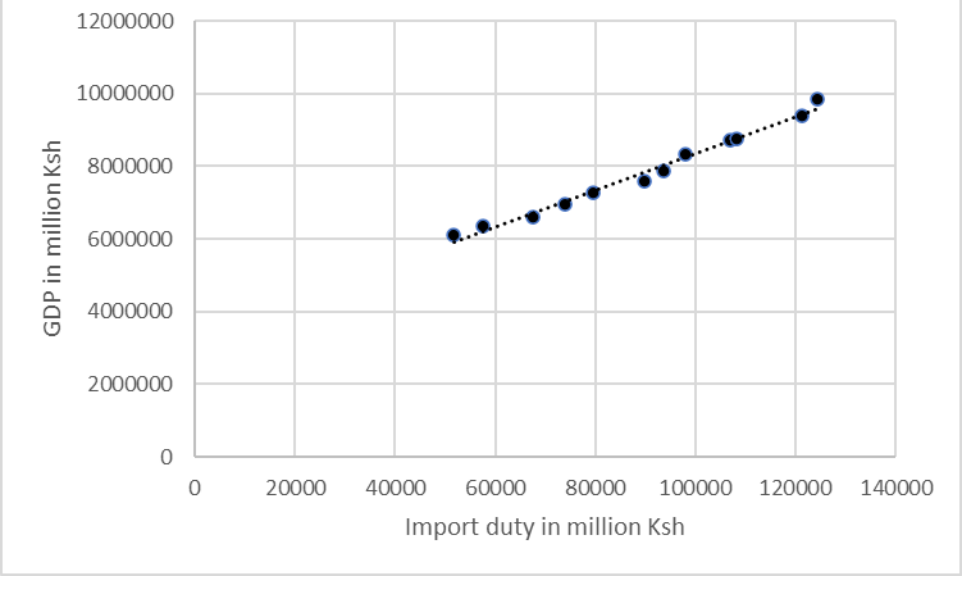

Fig 5.10 Gross domestic product against Import duty.

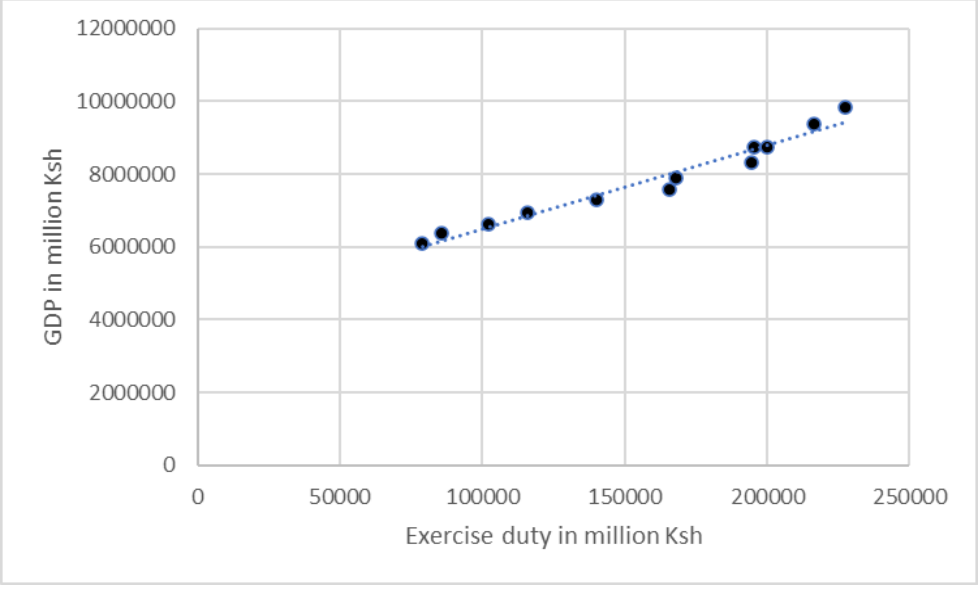

Fig 5.11 Gross domestic product against Excise duty.

Inferences from the scatter plot figures.

The dots for all the scatter plots more or less lie along a straight line with a positive gradient. This implies that the variables have a strong positive relationship and therefore increases in one variable are correlated with increases in the other variable and the vice versa. This confirms the findings of the earlier computed variables' Pearson coefficients and sig (2-Tailed) values.

5.5 Empirical model

This study applied a multiple regression model to model the data and diagnostic tests to test validity of the model and its significance in explanation of the data.

Multiple regression, or multiple linear regression, is a mathematical technique that uses several independent variables to make statistically driven predictions about the outcome of a dependent variable. It determines the linear association between independent variables and the dependent variable. In this study, the independent variables are, Income tax, Value added tax (VAT), Import duty and Excise duty gross domestic product (GDP) is the dependent variable.

The formula for multiple regression is,

$Y = a + b1X1 + b2X2 + b3X3 + b4X4 + ...bnXn + u$

Where Y= dependent variable.

X1, X2.....Xn represent the independent variables as below.

X1=Total Income tax/GDP

X2=Total VAT/GDP

X3=Total Excise duty/GPD

X4= Total import Duty/GDP

a= Represents the Y value when every independent variable equals Zero or the Y-intercept of the graph.

b1, b2----------bn (regression coefficients). A regression coefficient describes the change in the dependent variable relative to one -unit change of the independent variable; it the slope of the explanatory (independent) variable.

u= regression residual or error term

Table 5.5 Results for multiple linear regression.

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.997546759							
R Square	0.995099536							
Adjusted R Square	0.992299271							
Standard Error	106675.0702							
Observations	12							
ANOVA								
	df	*SS*	*MS*	*F*	*Significance F*			
Regression	4	1.61753E+13	4.044E+12	355.35906	3.69304E-08			
Residual	7	79656994260	1.138E+10					
Total	11	1.6255E+13						
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	4018767.866	272882.8529	14.727081	1.592E-06	3373502.454	4664033.28	3373502.454	4664033.278
VAT Tax	-1.812643658	3.772750137	-0.4804569	0.6455543	-10.73378013	7.10849281	-10.73378013	7.108492813
Income tax	-2.975760968	1.537533583	-1.935412	0.094169	-6.611450166	0.65992823	-6.611450166	0.659928229
Import duty	44.67044033	8.976675381	4.9762789	0.0016077	23.44397602	65.8969046	23.44397602	65.89690463
Exercise duty	13.37417494	6.267640392	2.1338453	0.0702701	-1.446439529	28.1947894	-1.446439529	28.19478941
RESIDUAL OUTPUT								
Observation	*Predicted Real GDP in million (ksh)*	*Residuals*						
1	6134233.928	-44027.92841						
2	6294844.157	73603.84293						
3	6641485.489	-31173.48932						
4	6892055.415	50101.58498						
5	7258518.427	28505.57287						
6	7775092.281	-181028.2813						
7	7893816.635	-8295.634704						
8	8287531.639	43359.36084						
9	8632983.142	100076.8582						
10	8741216.678	15729.32231						
11	9524072.164	-128130.1643						
12	9770050.044	81278.95587						

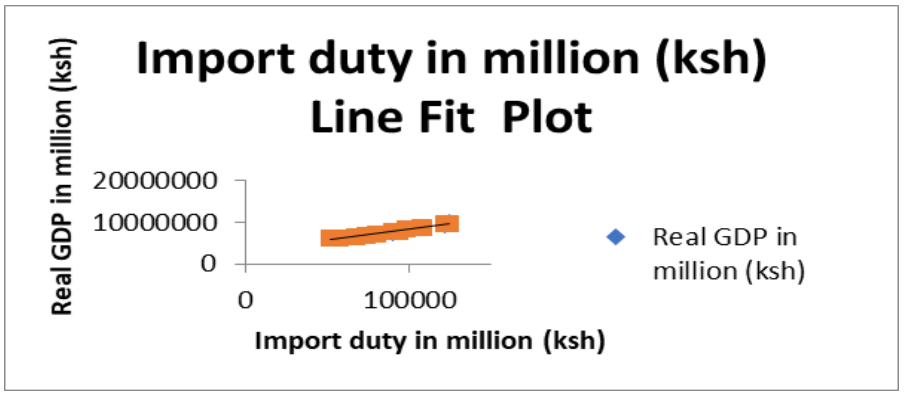

Fig 5.12 Linear regression graph- Gross domestic product against Import duty

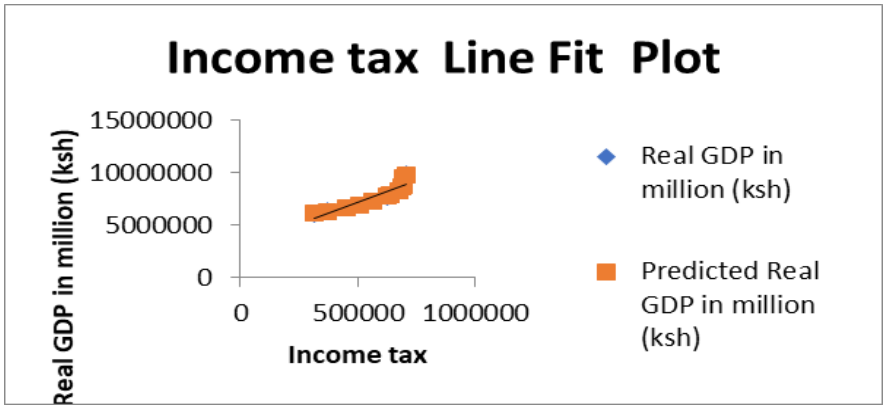

Fig 5.13 Linear regression graph- GDP against income tax

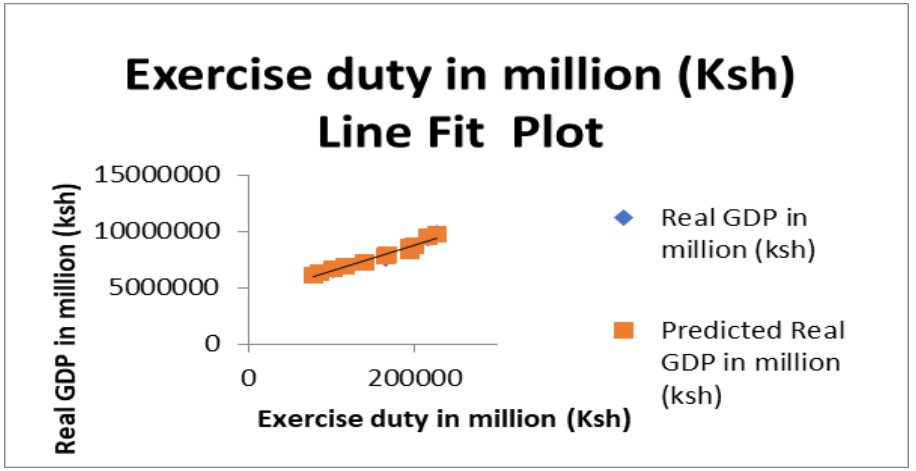

Fig 5.14 Linear regression graph- GDP against Excise duty

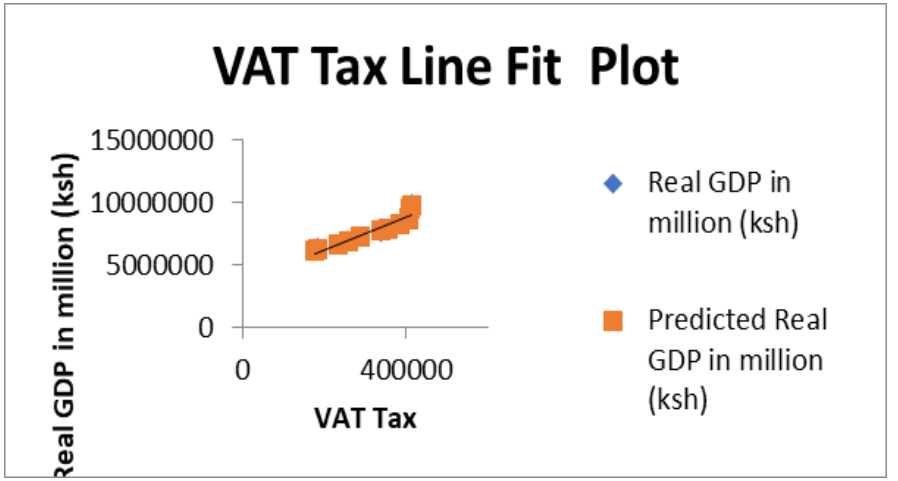

Fig 5.15 GDP against value added tax.

Inferences from the table of results for multiple linear regression

The conducted multiple linear regression resulted into a coefficient of multiple regression (R Square) of 0.995 which means that 99.5% of the changes in the country's gross domestic product (GDP) is attributed to income tax, VAT ta, import duty and excise duty. R square measures the goodness of fit of the model. It has a value of between 0 and 1 and a model is considered to be fit for the data if its R square is closer to 1. The regression model for this research is therefore fit for the research data.

5.6 Discussion of results for the regression model

a) Income tax and economic growth in Kenya

Income tax is a form of direct tax compulsorily imposed on individuals and profits of entities by the government of Kenya. The regression model yielded a regression coefficient of -2.976 which implies that income tax and the country's economic performance / growth are negatively related. A 1% increase in income tax holding all the other variables constant decreases the country's GDP by 2.976%. The model also yielded a p value of 0.094 for income tax which is greater than the significance level of 5% implying that income tax did not significantly contribute to the applied regression model.

The findings of this study is inconsistent with the previous studies from the research's empirical literature review. For example, Ngulu (2017), Masika (2014) and Abdulmalik (2013) concluded that income tax have strong positive relationship with the country's economic growth.

b) VAT tax and economic growth of Kenya

Value added tax is a consumption tax that is imposed by the government in each level of consumption chain where the incidence falls on the final consumer. The regression model yielded a regression coefficient of -1.812 which implies that value added tax and the country's economic performance / growth are negatively related. A 1% increase in VAT holding all the other variables constant decreases the country's GDP by 1.812 %. The model also yielded a p value of 0.6455 for VAT. This is greater than the significance level of 5% implying that VAT was not statistically significant and so did not contribute significantly to the used regression model.

The results of this study is inconsistent with some of the studies from the research's empirical literature review. For example, Ngulu (2017), Njogu (2015) and Abdulmalik (2013) concluded that VAT tax and Kenya's economic growth have a statistically strong positive relationship.

b) Import duty and economic growth in Kenya

Import duty is a trade tax imposed by the government on goods that are imported into the country or exported out of the country. This study's regression model yielded a regression coefficient of a +44.67 for import duty implying a strong positive relationship between income tax and the country's gross domestic product or economic growth. Accordingly, a 1% increase in import duty holding other variables constant will result into a 44.67% increase in the country's GDP. The model also yielded a p value of 0.0016 for import duty. This is less than the significance level of 5% implying that import duty contributed significantly to the regression model.

This result is inconsistent with some results findings from the research's empirical literature review such as Mureithi (2013), Abdulmalik (2013), and Widodo et al (2018) who found a negative relationship between import duty and Kenya's economic growth.

c) Excise duty and economic growth of Kenya

Excise duty are taxes levied on specific goods or services at the time they are purchased. They can be paid alvorem (paid by percentages) or specific (cost charged unit). They are charged on specific goods either produced locally or imported into the country.

The regression model resulted into a regression value of +13.37 for excise duty implying that excise duty and the country's GDP have a significant positive relationship. This implies that a 1% increase in excise duty holding other variables constant will lead to 13.37% increase in gross domestic product which is a measure of economic growth. The model also resulted into a p value of 0.0703 which is less than the significant value of 5%. This shows that excise duty had a significant contribution to the model.

The results are consistent with some of the studies' findings in the empirical literature review such as Owino (2019) and Abdulmalik (2013) both of whom concluded that excise duty have a significant positive relationship with Kenya's economic growth.

5.7 Linearity test

Ordinarily linear regression assumes a model that both linear in the parameters and linear in the variables. Linear in parameters means that the predicted score is obtained by multiplying a each predictor/independent variable by its associated regression coefficient and summing up across all predictors. Linear in variables means that the relation between the predictor and the outcome (residual) is linear. In other words, a plot of the relation between the predictor X and the outcome (residual) is approximately a straight line.

Non linearity of regression data is usually evident in a plot of observed against predicted values of dependent variable or a plot of residual against predicated values of the dependent variable. All these are part of standard regression model output. For linearity, the points should be symmetrically distributed around a diagonal line in the former plot or around a horizontal line in the later plot with roughly constant variance.

Violation of linearity implies non linear relationship between the independent variables and the dependent variable. It would not be effective to use linear regression model in such a case since linear regression uses a linear function to arrive at a best fit line. Linear regression model may not capture the true relationship.

The study checked linearity of the research data using a residual against GDP predicted values plot as shown below.

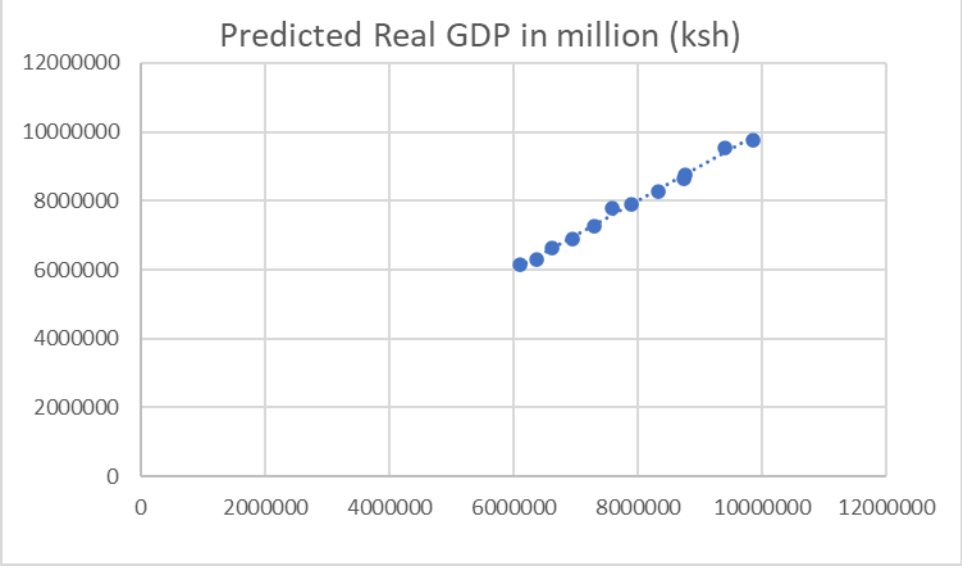

Fig 5.16 Linearity test: Residual against predicted Gross domestic product values

Inference from the figure.

The points are symmetrically distributed around the diagonal line which confirms the linear relationship between the dependent and independent variables in the regression model. This also confirms that the residuals are normally distributed.

5.8 ***Homoscedasticity (constant variance) test.***

Homoscedasticity refers to a condition in which the variance of the residual, or error term, in a regression model is constant; the error term does not vary much as the value of the predictor/ independent variable changes. Homoscedasticity of errors in regression model is checked using a plot of errors/residuals against time (for case of time series data), errors against predictions or errors verses any dependent variable. This study used the error against predictions plot to check on the homoscedasticity of the errors. This is shown here below.

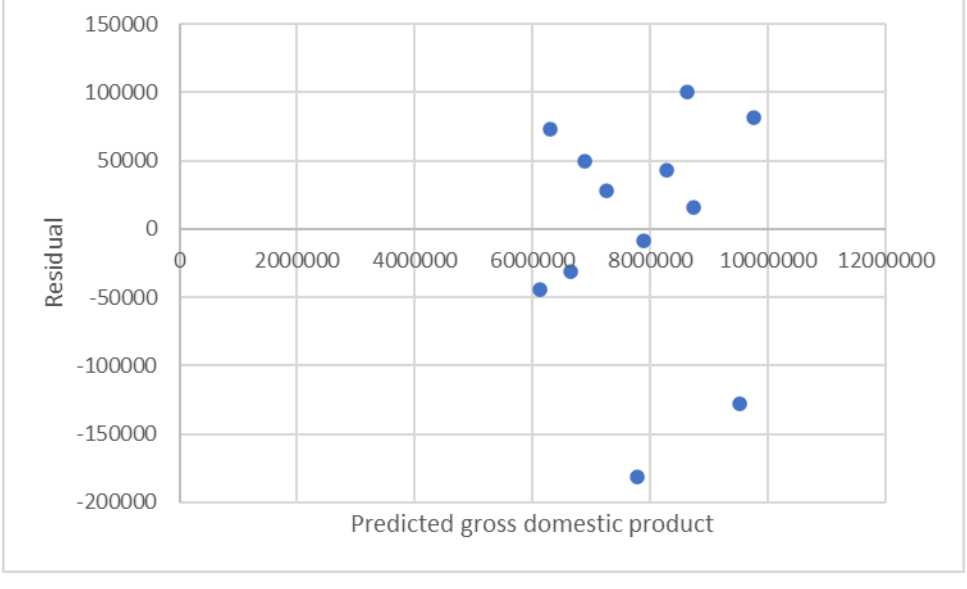

Fig 5.17 Homoscedasticity test: Residual against Predicted Gross domestic product values

Inferences from the figure

The figure shows that the residual points are symmetrically distributed around a horizontal line implying that the errors are homoscedastic; the variance of the residuals, or errors in the egression model is constant or the errors do not vary much as the value of the predictor/ independent variable changes.

5.9 Normality test

A scatter plot of frequency against the residuals was plotted to check on normality of the research data. This is as shown below.

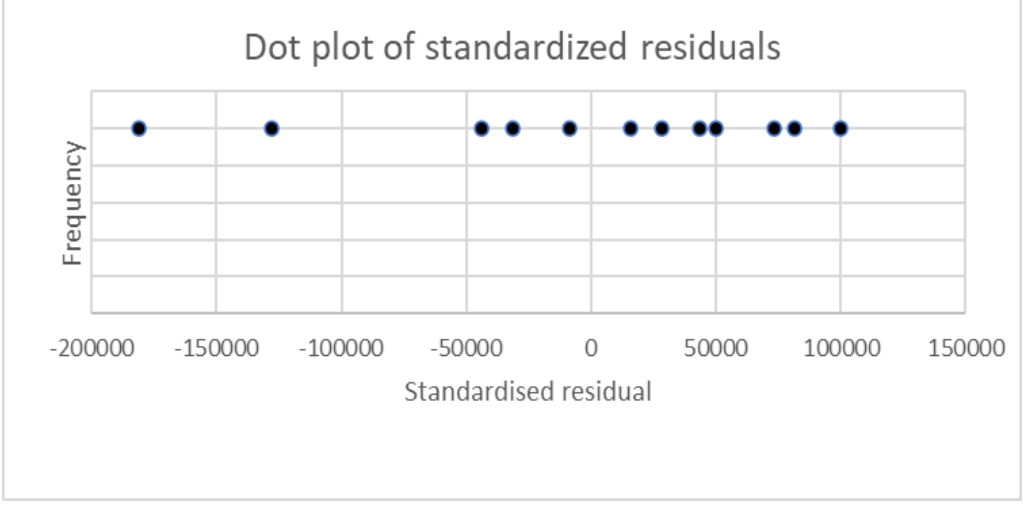

Fig 5.18 Normality test.

Inference from the figure.

The points are more clustered in the middle than at the edges. This implies that the normality requirement of regression is met.

6.0 CONCLUSION AND RECOMMENDATIONS

This chapter presents a summary of findings, conclusion and recommendations based on interpretation of the findings of the study and results of data analysis.

6.1 Summary of the findings.

The research was found to be normal based on the results of the Kolmogorov-Smirnov and Shampiro-Wilki Test. In the trend analysis, it was found that, there was a steady increase of GDP between 2011 and 2019, it decreased in 2020 but later increased steadily between 2020 and 2022, there was a steady increase of the country's annual per capita GDP between 2010 and 2016, a decrease in 2017, an increase between 2017 and 2019, a decrease in 2020 and an increase between 2020 and 2022.

income tax to GDP ratio increased steadily between 2011 and 2016, but decreased between 2016 and 2022, VAT to GDP ratio increased steadily between 2011 and 2018, decreased in 2019, increased in 2020 but decreased between 2020 and 2022, import duty ratio increased steadily between 2011 and 2018, decreased in 2019, increased between 2019 and 2021 before decreasing in 2022, and excise duty to GDP ratio increased steadily between 2011 and 2016, decreased in 2017, increased again in 2018, decreased in 2019, decreased in 2020 before increasing in 2022.

All the variables have Pearson correlation coefficients (r) ranging from 0.919 to 0.993 which is greater than 0.7 and very close to 1 indicating a strong positive relationship between the variables. Therefore, changes in one variable are strongly correlated with changes in the second variable. Since the values are all positive, it means that as one variable increases in value, the second variable will also increase in value and vice versa. The correlation between the variables has Sig (2-Tailed) or p value of Zero implying that the correlation between the variables is statistically significant. This means that, increases or decreases in one variable do significantly relate to increases or decreases in the second variable.

The undertaken multiple regression has a coefficient of multiple regression (R Square) of 0.995 which means that 99.5% of the changes in the country's gross domestic product (GDP) is attributed to income tax, VAT, import duty and excise duty. R square measures the goodness of fit of the model. It has a value of between 0 and 1 and a model is considered to be fit for the data if its R square is closer to 1. The regression model for this research is therefore fit for the research data.

The research found that both income tax and VAT are negatively related to Kenya's economic growth as they both have negative coefficient of linear regression. They have coefficient of linear regression values of -2.976 and -1.812 respectively which implies 1% increase of income tax and VAT will result into a decrease of 2.976% and 1.812% of the country's economic growth (GDP) for the case of income tax and VAT respectively. On the other hand, import tax and excise duty have positive coefficient of linear regression implying that they are positively related to the country's economic growth (GDP). They have coefficient values of +44.67 and + 13.374 respectively. It therefore implies that an increase of 1% in import duty will lead to 44.67% increase in country's economic growth (GDP) and an increase of 1% of excise duty will increase the a 13.374% increase in the country's economic growth (GDP).

Inference from the figure.

A plot of the observed values of GDP and residuals of the regression model shows that the residuals are symmetrically distributed around the diagonal line which confirms the linear relationship between the dependent and independent variables in the regression model. This also confirms normality of the residuals.

The plot for residual verses predictions plot for homoscedasticity test shows that residual points are symmetrically distributed around the horizontal line meaning that the errors are homoscedastic; the variance of the residuals, or errors in the egression model is constant or the errors do not vary much as the value of the predictor/ independent variable changes.

The residual normality test shows that residuals are more clustered in the middle of the graph than at the edges which confirms the normality requirement of regression is met.

6.2 Conclusion.

Since the study found positive relationship between both import duty and excise duty and the country's economic growth and a negative relationship between both income tax and value added tax and the country's economic growth, it is concluded that different forms of taxes affect the country's economic growth in different ways, both import duty and excise duty are beneficial to the country's economy as they increase its rate of growth but income tax and value added tax (VAT) are harmful to Kenya's economic growth as they decrease its rate of growth.

6.3 Recommendations

The following recommendations are made based on the findings of the research.

a) Kenya policy makers should device a framework of increasing tax collection so as to increase the tax revenue. This will enable the government to meet its development and other expenditure needs. Increased tax revenue means reduced budget deficit and consequently reduced internal and external borrowing. Borrowing is known to be detrimental to the country's economic development.

b) Kenya government should stop any further increase of both income tax and value added tax as their increase is detrimental to the country's economy. An increase in import duty and excise duty has a positive effect on the country's economic development; the two taxes should be increased to optimal levels that are fair and equitable to the tax payers so as to accelerate economic growth.

c) To leverage import/ export duty for economic growth, the government should encourage development of the private sector specially manufacturing. In 2012, manufacturing sector in Kenya accounted for only 10% of the country's GDP, compared with an average of 21% for middle-income countries. Encouraging private sector investment in manufacturing and scale up Kenya's manufacturing base can be achieved through establishment of especial manufacturing economic zones in major towns in the country. This should focus on agro - industrial business that blend and package fertilizer, businesses that deal with tea and coffee together with meat, fish processing plants and plants for cement manufacturing, chemicals and metal industries. These special economic zones have potential for attracting foreign textile manufacturers.

d) One of the challenges of tax revenue collection in Kenya is evasion by tax payers and corruption within tax collection system. To curb this, the country will be required to enact tougher legislation/ law to effectively deal with tax evaders and corrupt officials in the tax collection and administration agent (KRA). This will also discouraging the rampant tax evasion and corruption within the tax collection system.

6.4 Recommendations for further research.

This research is an eye opener as regarding relationship between various forms of taxes and Kenya's economic growth. The study has shown that some taxes contribute positively to the country's economic growth while others have negative impact on its economic growth. Future similar studies should be conducted on other forms of taxes such as rental income tax, stamp duty, advance tax, turnover tax, pay as you earn (P.A.Y.E) etcetera so that their effect on the country's economic growth can similarly be understood. This can guide the policy makers on the types of taxes that should be given a close attention due to their positive effect on the country's economic growth and which ones maybe phased out due to their poor contribution to the country's economic growth or their negative effect on the country's economic performance.

The country has a vibrant informal sector which to date has remained untaxed due to its nature of operation despite having a lot of money in circulation within it. This is an area that future studies can also focus at and formulate a workable frame work to guide the government on taxing the sector. This will expand the government's tax base and increase its tax revenue.

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ANNEX

	Kenya's income tax, VAT, import duty, exercie duty and total GDP between 2011 and 2022							
Year	Income tax in Million (Ksh)	VAT in million (Ksh)	Import duty in million (ksh)	Exercise duty in million (Ksh)	Total tax in million (Ksh)	Real GDP in million (ksh)	Population in millions	
2011	312463	176386	51712	78884	619445	6090206	42.645	
2012	372886	184916	57650	85660	701112	6368448	43.726	
2013	449590	232630	67555	102029	851804	6610312	44.792	
2014	508591	259685	74048	115872	958196	6942157	45.832	
2015	560762	289213	79638	140212	1069825	7287024	46.851	
2016	625050	339034	89943	165474	1219501	7594064	47.895	
2017	640546	357129	93685	167753	1259113	7885521	48.948	
2018	685330	414143	106875	194310	1400658	8330891	49.953	
2019	706936	383713	98022	195270	1383941	8756946	50.951	
2020	694053	410752	108375	216325	1429505	8733060	51.986	
2021	691541	406844	124515	200133	1423033	9395942	53.006	
2022	676507	403904	121378	227566	1429356	9851329	54.027	
	Kenya Tax ratios and per capita GDP between 2011 and 2022							
Year	Income tax to GDP ratio	VAT TO GDP ratio	Import duty to GDP ratio	Exercise duty to GDP ration	Per capita GDP			
2011	0.05	0.03	0.01	0.01	142811.72			
2012	0.06	0.03	0.01	0.01	145644.42			
2013	0.07	0.04	0.01	0.02	147577.96			
2014	0.07	0.04	0.01	0.02	151469.65			
2015	0.08	0.04	0.01	0.02	155536.15			
2016	0.08	0.04	0.01	0.02	158556.51			
2017	0.08	0.05	0.01	0.02	161099.96			
2018	0.08	0.05	0.01	0.02	166774.59			
2019	0.08	0.04	0.01	0.02	171869.95			
2020	0.08	0.05	0.01	0.02	167988.69			
2021	0.07	0.04	0.01	0.02	177261.86			
2022	0.07	0.04	0.01	0.02	182340.85			