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THESIS

**THE EFFECT OF TAXATION ON ECONOMIC
DEVELOPMENT**

TIME SERIOES 2011-2019

IN

SOMALIA

CANDIDATE

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**A THESIS SUBMITTED IN PARTIAL FULFILLMENT FOR THE
REQUIREMENTS OF THE AWARD OF BACHELOR OF
ECONOMIC AND MANAGEMENT SCEICENE AT SOMALI
NATIONAL UNIVERSITY**

JUNE, 2020

DECLARATION

I declare that this senior project entitled the effect of taxation on economic development in Somalia is the result of my own research except as cited in the references. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

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DEDICATION

This senior project is dedicated to my parents, grandfather, friends and my teachers who have raised me to be the people I am today. You have been with my every step of my way, through good times and bad. Thank you for all unconditional love, guidance and support that you have always given me, helping me to successes. I put my mind to, thank you for everything. I also dedicate it to my brothers and sisters.

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ABSTRACT

The objective of this study is to investigate the effect of taxation on economic development of Somalia proxy by Human Development Index (HDI). The study further looked at the relation between Direct tax (DT), Indirect tax (IDT) non-tax revenue and Economic Development. Secondary data were sourced from World Bank, IMF, Ministry Finance of Somalia (MOF), Economic Trading's and Others. for the period covered in the study, 2011-2019. The data were analyzed using descriptive statistics, econometric model with the aid E-views version 10. The results showed that a strong positive relationship exist between economic development and Tax variables used, Model was formulated and data were analyzed using Ordinary Least Square. Diagnostic tests were conducted using Augmented Dick Fuller Unit Root Test. all four variables only HDI was not stationary at level, and other variables become Stationary at First Difference, at 10% level of significance. I was going to check cointegration test but data faced on econometric Problem effects on researcher, for the sake of number of observations were short period available at the database of Ministry finance of Somalia. However, it was recommended that the economy should be diversified to enhance revenue base of the country, to rid corruption from the system, investing in economic activities that will generate jobs, harmonize our tax laws and administration to acceptable global standard. In addition, the study has also recommends that the Somali authorities further develop policies related to the expansion of tax bases in states and build tax relations with federal member states more effectively through fiscal federalism discussions. This will contribute to the efforts being made to mobilize domestic resources beyond the capital city. this study encourages further study on the empirical study on the effect of taxation and economic development of Somalia.

CHAPTER ONE:

1.0 INTRODUCTION

This chapter is the primary chapter of this study consisted of nine sections, in the first section, it would present background related to the study where as in the second section the problem statement, the third section researchers were consider research purpose, and the fourth section the study would present research objectives, the fifth section research questions, The sixth section, the study was discussed the scope of the study, The seventh section the study provided significance of the study, The eighth, the study described the operational definitions of key terms of the study, Finally, Conclusion of the chapter.

1.1: BACKGROUND OF STUDY

Taxation is the central part of modern economic development. Its significance arises not only from the fact that it is by far the most important of all revenues but also because of the gravity of the problems created by the present-day heavy tax burden. Taxation by the central or local government as a levy on an individual or corporate body to finance that government's spending as well as to implement its fiscal policy. The state can thus move funds from private consumption to public investment through taxation (Greene, 2011).

Taxation is the act of setting a tax, i.e., the method through which a local, state, and central government, through its legislative body, raises income to defray the government's needed costs. Taxation can be described, according to Anyanwu (1997), as the obligatory transfer or payment (or sometimes of products and services) from private people or organizations to government. The purpose and importance of taxation is to raise funds with which to

promote the general welfare and protection of its citizens, and to enable it to finance its multifarious activities and to redistribute wealth and management of the economy (Ogbonna and Ebimobowei,2012).

According to Musgrave (2008), taxation is used as a tool to achieve certain social goals, i.e. as a means to redistribute wealth and thus reduce inequalities. Therefore, taxation in a contemporary government is needed not only to increase the revenue needed to satisfy its ever-increasing administrative and social services spending, but also to decrease income and wealth inequalities. Taxation is also needed to draw away money that would otherwise go into consumption and cause inflation to rise(Adejare, 2017).

Taxes are obligatory payments related to certain activities. Revenues collected through taxation are used to buy the inputs needed to produce goods and services supplied by the government or to redistribute purchasing power among citizens. Taxation reallocates resources in two distinct steps from private to government use. First, individuals ' ability to command resources is reduced as taxation reduces revenue for market goods and services expenditure. Second, government revenues are then used to bid for resources needed to deliver government goods and services, and to provide income support payments to recipients of government transfers such as pensions for social security(David, 2014).

According to Ogbonna and Ebimobowei (2012) “the political, economic and social development of any country depends on the amount of revenue generated for the provision of infrastructure in that given country”. They further stated that a well-structured tax system would boost the generation of the income for a meaningful development of such country.

The most commonly used tax bases can be grouped into three broad categories: income, consumption, and wealth. These are economic bases; their values depend on decisions made by individuals. For instance, individuals make daily choices that affect their income. They also can control the allocation of their income between saving and consumption. Because most individuals must save to accumulate wealth, their choices regarding consumption also affect their wealth (David, 2014).

There were many taxes needed from the provinces to administrate the Roman Empire these taxes paid for a good system of good roads, law and order, security, religious freedom, a certain amount of self-government and other benefits. The provisions of these basic amenities depend on the amount of revenue being generated(Kiabel and Nwokah (2009)).According to him, the increase in the price of running government, combined with the steady decline in revenue, left all levels of government with strategies to enhance the income base. Taxation is one such strategy.

According to PricewaterhouseCoopers, has made some improvement to the tax system. The major objective of taxation is to Finance government expenditure and to redistribute wealth, which will have a positive causation effect on development of the country. According to IMF “Developing countries must be able to raise the revenue required to finance the services demanded by their citizens and the infrastructure (physical and social) that will enable them to move out of poverty. Taxation will play the key role in this revenue mobilization”(Jhingan 2004).

Apart from the obvious purpose of providing revenue, taxation aims at achieving other objectives. These are resources allocation, income redistribution, price stabilization, full employment and economic growth. Within the scope of these social objectives, two principals have been put forward as a basis for modern taxation namely. The benefit principle or benefit received theory the ability-to-pay approach (Ogbonna and Ebimobowei,2012). Although neither of these two principles goes without fault still an understanding of them is useful in formulating a workable tax system.

Benefit Principle or received theory: This benefit principle theory, also called vertical equity stipulates that an individual ought to be taxed according to the benefits he receives from government provision of goods and services. This in other words, is a benefit cost approach in which tax is a cost and government amenities are benefit principle(Anyanfo, 1996). This theory assumes a state of equality between the marginal tax rate (MTR) and marginal benefit received (MBR) to determine the amount of taxes to be paid. However, the benefit principle does not work well for the efficient provision of public (near public) goods.

For example military defense. Thus, the conditions of equality between taxes –paid and benefits-received which sound so egalitarian in principle, do not hold in practice. The ability-to-pay approach: is concerned with the equitable distribution of taxes according to assumed taxable capacity or ability to pay of an individual or group. This approach, sometimes called horizontal equity, enables the distribution and stabilization of objectives of taxation to be achieved more equitably.

We know that taxes are a means of transferring the purchasing power of income to governments; the ability to pay is based on income. It then means that those who have more income can afford to pay more taxes. Although this theory has the above-stated advantages, it is not free from flaws. Its disadvantage is that the criterion on which “ability” is judged is not clear. (Anyanfo, 1996).

Cost of Service Theory: According to Chigbu) this theory is very similar to the benefits-received. It is centered on the relationship that exists between the state and the citizens to a greater extent. The theory aimed at a balanced budget policy. Socio-Political Theory: This theory of taxation to an extent anchored on Thomas Hobbes social contract which saw in the beginning man lived in the state of nature. They had no government, and there was no law to regulate them. There were hardship and oppression on the sections of the society. To overcome from this hardship, they entered into two agreements which are (1) “Pactum Unions” (2) Pactum Subjections” therefore, the socio-political theory states that social and political objectives should be major factors in selecting taxes. It implies that government getting revenue through taxing the citizens should use it to cure the ills of society as a whole.

The Rwandan Revenue Authority (RRA) was formed in 1998 To lead all tax measures in the nation with the aim of administering, collecting and accounting for all taxes and certain non-tax revenues and providing facilities to promote economic development. Therefore, Rwanda’s state-building approach through taxation, among other major reforms, was anchored around the establishment of this system (tax policy and its administration), which would strengthen the legitimacy of the state through five core principles political inclusion;

accountability and transparency; perceived fairness; effectiveness; and political commitment to shared property (RRA, 2014). It is important to note that since 1998, our revenues have registered a 6.5-fold increment. In real terms, this covers about 78% out of government's recurrent budget or 52% of the total budget say in 2009 up from a meager 38% of the recurrent budget in 1998(Harelimana, 2018).

Somalia's economy is largely dominated by the informal sector. The economy is based on international trade networks controlled by a small group of wealthy businessmen. The majority of the population lives at the subsistence level and is engaged in small-scale businesses, as petty traders, livestock or grain producers. It should be noted that for the first time since 1991, the US has recognized the new Government of Somalia in January 2013. Somalia's Federal Government is committing itself to a well performing the Public Financial Management System, which is a main result of fiscal discipline, spending only what it can afford. The tax revenue contribution is not encouraging as the government relies heavily on international grants rather than taxes and other sources of income(SNDP, 2016).

Short-term affordability refers to the equilibrium of the budget, i.e. maintaining the fiscal deficit within the ordinary funding available. Fiscal sustainability is critical in the medium term—expenditure choices and the time path of expenditure from a multi-year view need to be affordable. While international support has provided Somalia with an opportunity to finance temporarily. This study briefly the structure of Federal Government 's budget and recent fiscal trends. Define fiscal sustainability and put forward a Medium-Term Fiscal Framework (MTFF) for Somalia. The study also examines the main expenditure drivers related to fiscal sustainability and mobilizing domestic revenues. It will also propose

financing options and management of fiscal risks and presents some illustrative medium term fiscal scenarios and estimates on resource envelope (SNDP, 2016).

The strategy will be to enhance the effectiveness of the current system for collecting income and conduct a thorough evaluation of the current tax structure to restore the tax base to its relative size. It is also anticipated that, with measures to stimulate economic growth, enhanced financial activity will produce profits that add to enhanced mobilization of national profits.

Somalia is still characterized by a severe lack of basic economic and social statistics. The situation has been worsened by the two-decade conflict and the resulting collapse of the country's institutions. The statistical system is very weak and no comprehensive household income and expenditure survey has been conducted for a very long time. As a result, it is almost impossible to undertake planning and programming work, as well as to monitor economic and social developments and the MDGs.

The common feature in the structure of the economy of the three sub-entities of Somalia is the predominance of agriculture and livestock in the economy and livelihoods, accounting for about 65% of the GDP and employment of the workforce. Though difficult to quantify, the GDP of Somalia was estimated at close to US\$ 5.8 billion in 2010, with a per capita GDP of USD600. Livestock accounts for about 40% of GDP and more than 50% of export earnings. Other main products include fish, charcoal and bananas, sugar, sorghum and corn. According to the Central Bank of Somalia, aggregate imports of goods average about US\$460 million per year, which stand above the level prior to the start of the civil war in

1991. Exports of about US\$270 million annually have also surpassed pre-war aggregate export levels (before 1991), but still resulting in a trade account deficit of about US\$190 million per year (Cassanelli, 2007).

Economic Recovery of Somalia Diaspora has brought significant investment into the local economies. Establishing small and medium enterprises is another quantum leap for the informal local economy. Investment usually takes the form of either establishing a new business individually or as a group from the Diaspora or part investment and part leading the business at executive level. Most of the major companies in the country fall into one of these categories. A top manager of a big telecommunication company informed that 30% – 40% of their shareholders are from the Diaspora. Besides investment, most of these major companies are also managed and led by Diaspora (Hammond, 2007).

In Somalia, Public Finance Management (PFM) is not effective. In the absence of a central government apparatus and regulatory bodies, there is no formal tax policy. Businesses are not regulated or taxed, though an informal system of taxation has developed. Industries operate informally, even when they are highly profitable. Somalia has been characterized by high public expenditures by Governments, deficit financing through money printing, uncontrolled money supply and inflationary trends. The value of the Somali Shilling (SOS) is quite difficult to determine given the fluctuation of exchange rates from region to region within the Somali territory. The inflation rate is estimated to remain in the range of 300%.

However, the main issue facing Somalia's tax system is non-compliance between taxpayer sectors in the Mogadishu context. Although the rate of Somali analphabetism is very high, this means that the Somali population has insufficient knowledge to react positively to all government actions including the tax imposed by the government. If the people are well educated, they obey the rules and regulations of the government because knowledge is the only way that can change the taxpayers' behavior.

In this context, the extensive Somali Diaspora has played a major role, by injecting a significant inflow of funds through a somewhat sophisticated banking system. The majority of services are offered by individual suppliers including a dynamic financial sector, water, electricity and other vital services in stable areas. Various new telecommunications companies have sprung up, in the absence of public-owned infrastructure, with funding from Somali entrepreneurs and backed by expertise from countries such as China, Korea and some European countries.

In addition, the policy will be also regularly reviewing the efficiency of government 's expenditure programs and seek to reduce spending, wherever possible as well as improve service delivery. Ministries will be required to reprioritize their programs to reduce unproductive spending and align with the priorities outlined in the NDP. In addition, focus will be given to personnel remunerations as of now it stands at over 40 per cent of expenditure and transfers and subsidies. Levels of public sector employment (estimated at around 500010) will be carefully managed to align the skills mix with the demand of the ministry to contain cost, and ministries and agencies will be restructured to be more efficient(SNDP, 2016).

1.2 PROBLEM STATEMENT

Tax is a method of raising the revenue for the day-to-day running of government activities. Government activities involve generating funds and using same to provide security, social amenities, infrastructural facilities, etc. for the inhabitant of the country. Base on this, it is worthy of note that the objective of taxation is in tandem with the functions of government.

The main challenges facing tax managing in Somalia include frontiers of professionalism, poor accountability, lack of awareness of the general public on the imperatives and benefits of taxation, corruption of tax officials, tax avoidance and evasion by taxing units, connivance of taxing officials with taxing population, lower rate of tax, poor method of tax collection, etc. Individual and tax agencies, money, tools, and machinery to meet the ever increasing challenges. In fact, the negative attitude of poor remuneration and motivation, taxpayer enforcement, tax education the service delivery.

In 2017, Somalia set up a three-year plan of the Federal Republic of Somalia and the Domestic Revenue Section specified Establishment consolidate and decide on the current system by expanding the tax base to include all large taxpayers who do not currently pay taxes expand the scope of tax collection beyond Mogadishu and also focus on improving enforcement between potential taxpayers. However, Tax registered private companies and hotels improving the capacity of tax and customs administration and Providing tax education and information may lead to reach higher rate of tax compliance.

The new Somalia central bank is to operate with all the prerogatives of a monetary institution, in particular the power to issue currency, regulate the banking and credit system and manage the external reserves of the Republic. However, it is handicapped by the lack of adequate human, material and financial resources. Alongside the Somali shilling, the US dollar is widely accepted as legal tender for relatively large transactions involving local trade activities. The inflationary trend is expected to lessen when the central bank takes effectively full charge of monetary policy and replaces the currency circulating, printed by the private sector.

1.3 Objective of the Study

1.3.1 General Objectives

The main objective of the study was to investigate the effect of taxation on economic development of Somalia.

1.3.2 Specific objectives:

The study has taken into accounts the following specific objectives:

1. To determine the effect of indirect tax on economic development in Somalia.
2. To determine the effect of direct tax on economic development in Somalia.
3. To determine the effect of non-tax revenue on economic development in Somalia.

1.4 The research questions of this study will be:

In carrying out this research, certain questions need to be answered and these questions are:

1. How the effect of indirect Tax on economic development in Somalia?
2. How the effect of direct Tax on economic development in Somalia?
3. How the effect of non-tax revenue on economic development in Somalia?
4. What are major problems that cause lack of effective Tax system in developing Economic of the country?

1.5: SCOPE OF THE STUDY:

This study is deeply impounded the role in which taxation manipulate the economic development in Mogadishu, Somalia. The reason I choose to gather data from Mogadishu is that the main offices of the ministry of finance are located at Mogadishu, and it will be focused just the way in tax affects the development of economic in Somalia. This study will

be conducted between Feb - Dec 2019. This is the period that university board of research has allocated for the students to conduct their studies.

1.6 SIGNIFICANCE OF THE STUDY

This study will also help in shaping and providing a better understanding to citizenries how taxation is charged on and its contribution to the economy. More so, it will help other researchers to carry out further research on this subject area.

- i.** The results will help government and policy makers in policy making; local private institutions, civil society organizations, international and local organizations.
- ii.** It will contribute to spread this innovative concept “The impact of taxation on economic development of Somalia
- iii.** It will help giving some concrete actions that can enable its development in the area of economic development through Taxation.
- iv.** The study also helps for private and non-government sector development, and importantly brings the benefits of the development efforts to the citizens.
- v.** It also helps to other researchers who are going to conduct a research in this field.

1.7: OPERATIONAL DEFINITIONS

Tax: A tax is a compulsory levy imposed by the government on individual and business firm and paid by them to the government.

Taxes - Compulsory payments associated with certain activities. Taxation is the amount of money that people have to pay in taxes.

Taxation is the system by which a government takes money from people and spends it on things such as education, health, and defense.

Income tax: This is the tax on the income of individual after all allowances have deducted. Income is the revenue a business earns from selling its goods and services or the money an individual receives in compensation for his or her labor, services, or investments.

Direct tax: A direct tax is a tax levied directly on the income of individual and business firm.

Indirect tax: These are taxes levied on goods and services.

Sale tax: It is a tax levied and collected either at a wholesale or retail level. **Progressive tax system:** A tax is said to be progressive if the rate increases as the size of income increases.

Regressive tax: A regressive tax takes a small portion of income as income rises in order words, as income increases, the amount of tax paid decreases.

Proportional tax system: proportional taxation is the income earners both rich and poor.

Tax evasion: Is a deliberate attempt not pays tax.

Tax avoidance: is an attempt to exploit the flow or loopholes in the tax with a view to not paying the required tax.

Tax incidence: Tax incidence is the impact of tax and where the tax burden ultimately rests.

Consumption: is distinct from intake expenditure, which is the purchase of goods and services for use by households.

Wealth: is the accumulation of resources. Specific people, organizations and nations are said to be wealthy when they are able to accumulate many valuable resources or goods.

Saving: process of setting aside a portion of current income for future use, or the flow of resources accumulated in this way over a given period of time.

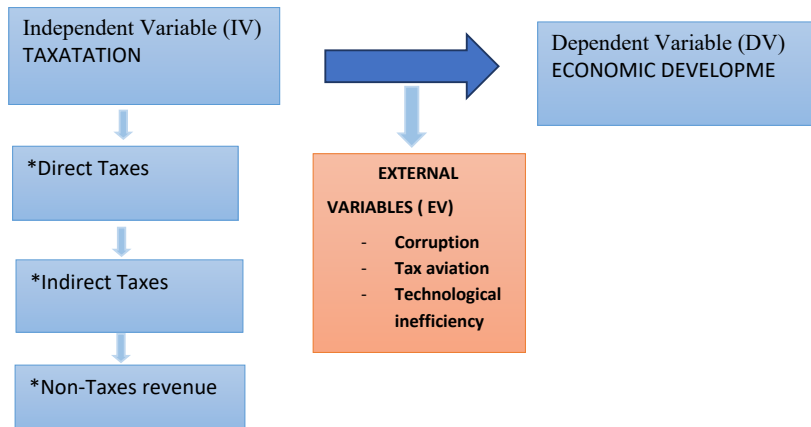
Economic development: as "a process of creating and utilizing physical, human, financial, and social assets to generate improved and broadly shared economic well-being and quality of life for a community or region.

1.8: CONCEPTUAL FRAMEWORK

Conceptual framework is a written or graphic presentation that “explains either graphically, or in narrative form. The main things to be studied, the key factors, concepts or variables and the presumed relationship among them and it can also be defined as a set of broad ideas and principles taken from applicable fields of investigation and used to structure a subsequent presentation and the relationship between independent variable and the dependent variable(Gitar, 2017).

The figure below shows how knowledge and awareness the impact of taxation on economic development. So, tax compliance stands for the dependent variable which can be measured from the understanding and awareness of taxation in Mogadishu taxpayers in some selected sectors in a form of publications such as seminars and workshops, pamphlets, newspapers and magazines that conducted by Somali Revenue Authority.

Therefore, Consciousness of taxpayers and their subset views, which could be identified or defined in relation to these variables in this section.



1.1 Figure, Conceptual framework.

CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

This chapter reviews the related literature to the aim of this study, which was to assess the impact of taxation on economic development in Mogadishu, Somalia. The review is done in accordance with the objectives of this study. The literature was obtained from e-journals, reports, textbooks and paper presentations from university libraries and document centers. The literature will be based on the specific objectives of the study. This research work focuses on the impact of taxation on economic development in Somalia. Therefore, the study connects each objective and its literature review separately in order to get adequate reasoning before running statistical package.

2.1 Relationship between Taxation and Economic Development

Taxation is intended to raise the necessary funds for public expenditure, to redistribute income, to stabilize the economy, to overcome externalities, to influence the allocation of resources, while at the same time should be supportive to the economic development. The purpose of the efficiently designed taxation is to achieve desired fiscal policy objectives (allocation, redistribution, and stabilization) in the most efficient way, namely by limiting undesired distortions, minimizing the cost of tax collection and promoting economic development. The efficiency of taxation and particularly the tax structure plays an important role in achieving economic growth and fiscal consolidation.

Tax is a veritable source of government revenue; however, it is still debatable in the literature especially in determining the optimal tax to be imposed to enhance development without unjustly inflicting welfare cost.

According to the economic theory taxation (except for the lump sum taxes) creates distortions and in turn impact negatively on economic growth. Considering a simple production function, it is obvious that taxation can affect growth through its impact on (1) physical capital, (2) human capital and (3) through its effect on the total factor productivity. According to some researches corporate and personal income taxes are the most detrimental to growth, while consumption, environment and property taxes are less harmful(OECD, 2018).

Taxation is regarded as the main source of government earnings; revenue is regarded as the fuel of government machinery. In other words, it could be said that through taxation, public earns and spends it on providing multidimensional services such as security, social security, health care, highway, bridges, transportation, education, etc. This enormous power sometimes drives tax collectors into illegal exercise of state power to achieve personal benefits. Therefore, tax collectors are the richest, powerful and wealthiest segment of the society throughout the history.

Taxation refers to compulsory or coercive money collection by a levying authority, usually a government. The term "taxation" applies to all types of involuntary levies, from income to capital gains to estate taxes. Though taxation can be a noun or verb, it is usually referred to as an act; the resulting revenue is usually called "taxes." Taxation is differentiated from other forms of payment, such as market exchanges, in that taxation does not require consent and is not directly tied to any services rendered. The government compels taxation through an implicit or explicit threat of force.

Economic development refers to the process by which GNP per capital increases qualitatively and quantitatively over a very long period of time in the country. It can be measured by the increase in real per capital income and the increase in factors which

improve the quality of life of man. For instance, housing, medical care, food and others. The term development itself is wider than economic development or economic welfare or material wellbeing. The term goes further to include improvements in economic, social, and political aspect of the whole society, e.g. Social activities, political institution, security, culture. Therefore, economic development is bigger in context as compared to economic growth.

Economic development can be referred to as the qualitative increase in economic wealth of countries or regions. This concept supposes that legal and institutional adjustments are made to give incentives and motivation for innovation and investment so as to develop an efficient production and distribution system for goods and services. Alternatively, the term economic development can also be used to define a combination of economic growth and factors, which may bring about general cultural, social, educational, political and economic transformation of the district

In African countries, Taxation plays a key role in helping African countries to reach their Millennium Development Goals (MDGs). African governments aim to use taxation to Finance their social and physical infrastructure needs; Provide a stable and predictable fiscal environment to promote economic development and investment; Promote good governance and accountability by strengthening the relationship between government and citizens; and Ensure that the costs and benefits of development are fairly shared. The role of taxation goes further than promoting economic growth. Tax evasion and the siphoning of funds to tax havens deprive African countries of the fiscal benefits of growth. The development of effective tax responses to counter these challenges is also central to Africa's development agenda.

Taxation is central to the current economic development agenda. It provides a stable flow of revenue to finance development priorities, such as strengthening physical infrastructure, and is interwoven with numerous other policy areas, from good governance and formalizing the economy, to spurring growth. Fundamentally, tax policy shapes the environment in which international trade and investment take place. Thus, a core challenge for African countries is finding the optimal balance between a tax regime that is business and investment friendly, and one which can leverage enough revenue for public service delivery to enhance the attractiveness of the economy. A significant share of the tax revenue increase in Africa stems from natural resource taxes, while non-resource-related revenue has increased by less than 1% of GDP over 25 years. This disparity becomes even more challenging against the backdrop of the global economic crisis (with economic growth in Africa expected to decline from 5.7% in 2008 to 2.8% in 2009) and the decrease in commodity prices.

To achieve an optimal tax policy, African policymakers are challenged by the need to balance the following imperatives: Mobilizing domestic resources and broadening the tax base to secure steady revenue streams for development financing and to diversify the revenue sources, especially in a context of tariff liberalization that impacts strongly on tax revenue; Fighting Tax evasion, spurred by tax havens, regulatory weaknesses, and some corporate practices; Improving the investment climate for enterprise development, largely shaped by the tax regime; and Promoting good governance, underpinned by effective taxation that promotes the accountability of governments to citizens and the investment community. The OECD (Organization for Economic Co-operation and Development) can support African countries in addressing these challenges in various ways, from leading global efforts to countering cross- border tax evasion, to working closely with the African

Tax Administration Forum (ATAF). The OECD also encourages deeper dialogue with development agencies and donors to transform widespread recognition of the central importance of taxation into effective action.

In modern system of governance, tax system is important because it provides governments with reliable and sustainable means of revenue collection; reduces dependency on foreign aid, increase financial autonomy; enables government to provide various cash support to deserving citizens; encourages good governance, accountability, and transparency; helps formalize the economy and promote economic growth etc. It is government's rights to collect taxes, but at the same time government must remember that, it is tax payer's right to know how efficiently government is spending their money for the welfare of the entire nation. It is also a tax payer's right to pay the tax without hassle or nay sorts of anxiety.

Finally, we can state that a fearless, transparent, reasonable and justified tax regime has a direct positive impact on the economic development of a country like Bangladesh. But tax collectors have to remember that, they are not the owner of the country and tax payers are not their peasants. They are two parts of the same coin and contributing into each other's legal wellbeing.

2.1: Impact of Indirect Tax on Economic Development:

An indirect tax, also known as spending tax, is a form of tax collected by mediators who pass taxes to the government and also perform functions related to the filing of tax returns. Indirect taxes are levied on manufacturers by the government-but depending on the price elasticity of demand and the elasticity of supply for the commodity, the burden of the tax can be passed on to consumers. An example of this is the domestic air passenger obligation per flight. When the final price is released, many airlines move it straight on to the user and

the customer pays the full weight. It cannot be overemphasized the major effect of indirect taxes on the nation's growth.(D & D, 2019).

Many developing countries have been particularly focused on indirect tax as a way of rationalizing the tax system. They include; Nigeria, Senegal, Ivory Coast, Morocco, Tunisia, and so on. In more than 130 countries around the world, indirect tax is levied on almost all business transactions because it is meant to have a neutral effect on companies.

Value Added Tax is a tax levied on the value of goods and services during their production or distribution. It is an indirect tax, the responsibility or occurrence of which is levied by the final consumer of such products. The purpose of this tax was to increase government revenue base and provide funds for development purposes (Oseni, 2008).

Several studies have explored the relationship between indirect taxation and economic development with mixed results. Scalet, (2011), updated Jamaica's fiscal policy and economic. The researcher used data from 1990-2010 on a quarterly time series.

In the auto-regressive distributed delay, the analysis followed generic growth functions. The study result showed a strong and optimistic long-term relationship between indirect tax and economic development(D & D, 2019).

Harberger (1964), who found that the degree of impact of indirect tax on investment is inadequate to stimulate economic growth, is the earliest work on the growth effect of indirect taxes. The changes in the taxation components in the model tested do not affect labor supply and investment, resulting in insignificant economic growth changes.

The Herberger study's main emphasis was on the impact of indirect tax on growth in labor supply. In the same vein, Koch, Schoeman and Van-Tonder (2005), using time series data from South Africa for the period 1960-2002, studied, first, the relationship between taxes and economic growth and, second, the effect on economic growth of the ratio of indirect

taxes to total tax revenue. Indirect tax proponents as a growth engine promoted the case of buoyancy and versatility. That is, indirect tax is capable of generating higher tax revenue with improvements in the tax rate and base (buoyancy). Thus flexibility refers to the tax system's ability to generate higher tax revenue with tax base adjustments. For the period 1970 to 1995, Kneller, Bleaney and Gemmell (1999) concentrated on 22 OECD countries. They used the annual data on average for five years to circumvent the effect of the business cycle. To investigate the relationship between fiscal policy and growth, they used static panel econometric technique. The study's result found a significant and positive relationship between non-distortionary (indirect tax) taxation and economic growth. We argued that indirect taxes are less harmful to the economy because they do not limit investment returns relative to direct taxes. (Ilaboya, 2012).

The bulk of government revenue in developing countries such as Nigeria is generated mainly from indirect taxation, while the bulk of government revenue is derived from direct taxation in developed countries such as the United States (Igweonyia, 2011).

2.2: Impact of Direct tax on Economic Development:

Direct taxes are levied on individuals and institutions according to their income levels, the debtor of which is also the same on this subject as the borrower, and the taxpayer cannot pass his tax burden to others. Examples of direct taxes are income tax and corporation tax.

Direct taxes consisting of income tax, property tax and corporate tax, indirect taxes consisting of domestic and foreign exchange taxes have different functions and impacts on economies. Direct taxes result in high income groups that are inclined to high savings and investment, as well as low marginal consumption propensity. On the other hand, for low-income groups, indirect taxes provide consequences. The basic purpose of taxation is to

generate resources to cover both developed and developing countries ' public expenses. (Paper, 2017)

Engen and Skinner (1996) demonstrated that long-term economic growth is affected by taxes at moderate levels. But this moderate effect on living standards can have a large cumulative effect. Lee and Gordon (2005) found that corporate tax rates have a negative relationship to economic growth and that there is no connection between manpower-related tax rates and economic growth by analyzing 27-year data set from 70 countries between 1970 and 1997. In the research of Anastassiou and Dritsaki (2005) for Greek economy, the relationship between economic growth and tax revenue for the period 1965-2002 was checked. There are relationships between total tax revenue, marginal direct tax rates, savings income levels, and long-term economic development, according to their findings. They identified a one-way causal relationship to short-term economic growth from total tax revenue and marginal direct tax level (Sarajevo, 2012).

Durkaya and Ceylan (2006) studied the relationship between tax revenue and economic growth for Turkey and used the co-integration method of Engle-Granger to search for long-term relationships between direct and indirect tax revenue and economic growth. For the years 1980-2004, the Vector Error Correction Model (VECM) and the Granger causality test were used to investigate short-term relationships between direct and indirect tax revenue and growth. The findings show that direct tax and growth are causally related. Temiz (2008) analyzed the relationship between 1960-2006 years of public tax revenue and economic growth. To search for long-term relationships, Temiz used the Johansen co-integration test and VECM to search for short-term relationships. The findings show that the relationship between total tax revenue and economic growth is causal in two ways. Açıkgöz (2008) used

the analysis of causality and the functions of impulse-response to determine the causal relationship between tax types and economic growth.(Paper, 2017).

The findings are that from the rate of economic growth to the proportion of direct tax revenue in total tax revenue and the proportion of indirect tax revenue in total tax revenue, the direction of casual relationships is. In addition, a one-way causal relationship has also been reported from direct tax burden (proportion of direct tax revenue to GDP) to growth rate (Sarajevo, 2012).

Many empirical studies appear to be concerned primarily with understanding the effect on economic growth of changes in the tax revenue system and, secondly, the impact of each type of tax on economic growth. There are many empirical studies that describe the effect of direct or indirect taxes on economic growth through economic models as a concern that the structure and rate of tax revenue are part of a country's fiscal policy aimed at contributing to stability, increasing public income, maintaining public expenditure, financing investments made by the governments, And lead to economic growth as a consequence.(Bâzgan, 2018)

A recent empirical study conducted by Dasislava (2017) established an econometric model for the period 1996-2013 based on regression over a pooled panel data on EU-28.The econometric model showed that production taxes and import taxes have a greater positive effect on economic growth than property taxes that are economic growth-neutral.

Individual taxes also have a positive impact on economic growth, but contribute less than the taxes applied to exports, as an example. The econometric study used the Gross Domestic Product ("GDP") growth rate as a dependent variable and as independent variables: total government spending, total tax revenue, social contributions, and budget balance. (Bâzgan, 2018)

Mura (2015) applied an empirical model to study the impact of the tax structure over the 1995-2012 period on the evolution of economic growth based on panel series related to six Eastern European countries. In particular, the study is based on the effect on economic growth of the different dynamics of tax revenue (direct and indirect taxes as a percentage of total tax revenue). Empirical output suggested that direct taxes are significantly negatively correlated with economic growth, while indirect taxes generate a positive influence on economic growth's dependent variable.(Bâzgan, 2018).

2.3: impact of Non-Tax Revenues on Economic Development:

Non-tax income is characterized by exclusion: all non-tax government income may be counted as falling within this broad category. Despite its importance to fiscal policy, it is a field that has been scarcely studied, especially from a cross-country perspective, for developed economies. Non-tax revenue may include a wide variety of sources of income, such as dividends paid by government-owned companies, fees charged against the provision of public health services, road and bridge tolls, and government land and building rental income.(Mourre& Reut, 2017).

Analysis of the panel data is used to examine whether economic and fiscal variables can contribute to the differences between Eurozone countries in non-tax revenue.

The results show that higher government spending is associated with increased use of sources of non-tax income, whereas lower tax collections are associated with higher non-tax income. Both variables can explain nearly a third of the cross-sectional variance in non-tax revenue together with the scale of financial assets held by the government.

On the other hand, there are no variations in fiscal decentralization across EU Member States to clarify the non-tax revenue variability. The results show large non-observed

country-fixed effects, highlighting the importance of country-specific factors and the need for country-specific complementary analysis on the nature and key determinants of non-tax receipts. The panel data analysis also revealed a statistical association between variables that could, if any, be highly endogenous with a theoretically uncertain direction of causality. Granger causality tests are used to analyze whether unidirectional causality occurs from tax receipts and government spending to non-tax revenue, and in which Member States. (Mourre & Reut, 2017).

2.2.1 Review of Literature, Theoretical and Empirical

In a developed country, through economic stabilization, stimulation of investment activity and so on, public expenditure maintains a rate of growth, which is a smooth one. In an underdeveloped country, public expenditure has an active role to play in reducing regional disparities, developing social overheads, creation of infrastructure of economic growth in the form of transport and communication facilities, education and training, growth of capital goods industries, basic and key industries, research and development and so on (Bhatia, 2002).

Public expenditure on infrastructural facilities has a great role to play in the form of stimulating the economy. The mechanism in which government spending on public infrastructure is expected to affect the pace of economic growth depend largely upon the precise form and size of total public expenditure allocated to economic and social development projects in the economy. When public expenditure is incurred, by itself it may be directed to particular investments or may be able to bring about re-allocation of the investible resources in the private sector of the economy.

This effect, therefore, is basically in the nature of re-allocation of resources from less to more desirable lines of investment. An important way in which public expenditure can accelerate the pace of economic growth is by narrowing down the difference between social and private marginal productivity of certain investments. Here, public expenditure on social and economic infrastructural like education, health, transport, communication, water disposal, electricity, water and sanitation etc., has the potential of contributing to the performance of the economy based on Promotion of infant industries in the economy; Reduction in the unemployment rate; Stabilization of the general prices in the economy; Reduction in the poverty rate and increase the standard of living of the people; Promotes economic growth by attracting foreign investment; and Promotes higher productivity In tracing the work of Rostow and Musgrave, where they put forward development model under the causes for growth in public expenditure.

Under this model, public expenditure is a prerequisite of economic development. The public sector initially provides economic infrastructures such as roads, railways, water supply and sanitation. As economic growth take place, the balance of public investment shift towards human capital development through increase spending on education, health and welfare services. In this model, the state is assumed to grow like an organism making decision on behalf of the citizens. Society demand for infrastructural facilities such as education, health, electricity, transport etc. grow faster than per capita income(Rostow & Musgrave, 2004).

2.2.2 Theoretical Review Public expenditure theory

Traditionally, received only a scanty attention till recently. Partly, this lop-sided interest in the theory of public finance is explained by a general acceptance of the philosophy of laissez-fair and belief in the efficacy of free market mechanism. However, with the advent

of welfare economics the role of the state has expanded especially in the area of infrastructural provision and theory of public expenditure is attracting increasing attention. This tendency has been reinforced by the widening interest of economists in the problems of economic growth, planning, regional disparities and distributive justice(Bhatia, 2002).

The theory of public expenditure may be discussed in the context of increasing public expenditure, the range of public expenditure and/or in terms of the division of a given amount of public expenditure into different items like recurrent and capital expenditure. The later of the two parts may also be conceived in terms of allocation of the economy's resources between providing public goods on the one hand and private goods on the other(Bhatia, 2002).

2.2.3 Conceptual Framework

Government spending as a fiscal instrument serves useful roles in the process of controlling inflation, unemployment, depression, balance of payment equilibrium and foreign exchange rate stability. In the period of depression and unemployment, government spending causes aggregate demand to rise and production and supply of goods and services follow the same direction. As a result, the increases in the supply of goods and services couple with a rise in the aggregate demand exalt a downward pressure on unemployment and depression.

In the case of persistent rise in price (inflation) and the depreciation in the value of money, it is expected that reduction in government expenditures discourages aggregate demand and inflation and falling in the value of exchange rate are controlled. It is worth to note that these two tools may be adopted simultaneously in the economy. A rise in the government expenditure has the same effects as a reduction in the tax rates on aggregate demand.

Similarly, the effects of a reduction in the government expenditures are the same as increases in tax rates.

2.4 The role of analysing Effective Tax system by the Government and Economic of the country.

Problems of taxation, in connection with economic development, are generally discussed from two different points of view, which involve very different, and often conflicting, considerations: the point of view of incentives and the point of view of resources. Those who believe that it is the lack of adequate incentives which is mainly responsible for insufficient growth and investment are mainly concerned with improving the tax system from an incentive point of view through the granting of additional concessions of various kinds, with less regard to the unfavorable effects on the public revenue. Those who believe that insufficient growth and investment is mainly a consequence of a lack of resources, are chiefly concerned with increasing the resources available for investment through additional taxation even at the cost of worsening its disincentive effects.

As well-functioning revenue system is a necessary condition for strong, sustained and inclusive economic development. However, the revenue systems in some developing countries have fundamental shortcomings. And challenges that face to create effective tax system include The Centrality of Taxation to Economic Development and Poverty Reduction. The challenges that face to create effective tax system for Somalia have to address these basic problems: (1) the structure of the economy, which makes it difficult to impose and collect taxes. (2) The limited capacity for tax administration. (3) The poor quality of basic data and. (4) The Political Economy of Taxation, the fact that the political setup is less amenable to rational tax policy than it is in advanced countries.

The Challenge of structure economy that is an obstacle to tax policy is the low registration rate of taxpayers. Taxpayers register in low numbers either because they do not understand their obligations or because they are deliberately evading tax. The main objectives of tax administration should be to identify and bring tax evading entities into the system. They further explain that each taxpayer should be assigned a unique number and contact details should be noted and validated. Other government agencies like the police, land registrars, and licensing departments should also be involved in finding tax evaders. The writers do not elaborate exactly how the registration should be achieved, but at least they provide a starting point. Private companies such as mobile companies that cater to a wide range of the population could be enlisted in the search for tax evaders. It might be expensive, but there is a dire need for the government to identify all absentee taxpayers.

The second challenge facing tax policy in developing countries is the lack of efficient tax administration. Administrations face major problems: a large proportion of the economy is at a subsistence level; many taxpayers do not keep records, and even where records are kept, they are not necessarily reliable. Taxpayer cooperation is also low because of chronic shortages of trained officials, traditions of corruption, and lack of visible improvements in government services. Presumptive taxation this form of taxation refers to the use of simplified methods of assessing complicated taxes. Presumptive assessment methods are designed as administrative expedients, Presumptive taxes are a good way to tax hard-to-tax groups but they can also be used to promote efficiency and equity goals.

To solve the third to decrease poor data entering challenge must use Technology can be used to perform routine tasks more efficiently, such as sorting reports, gathering statistics and using available data for tax revenue forecasting. Computerization of the tax collection system allows for easy identification of defaulting persons and also helps to reduce

corruption by reducing personal interaction between tax officers and taxpayers needed by inefficient manual systems.

Political and social factors create additional challenges in devising tax policies for developing countries. Lack of political will to support tax reforms in developing countries has oftentimes led to unsuccessful reforms. Lessons learned from successful reform programs suggest that the key factor is strong political will, demonstrated by a commitment from leaders at all levels of government.⁶² Additionally, most developing countries suffer from military dictatorships, corruption, civil wars, underdevelopment, deep poverty, disease, and famine. All these challenges have inevitably led to low tax revenue yields in developing countries.

2.5 Conclusion

In this chapter the researcher found some relevant information as secondary because most literature agree that Economic development can have effect on the taxation. However, when the taxpayer knows tax matters it is easy to follow the tax rules and regulation that is why all tax evidence activities are practiced those who ignorance in primary level. Therefore, to increase tax knowledge will have important role to the revenue department from the ministry of finance of federal government of Somalia.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter focuses on developing methods of analysis that was address the objectives of the study. This research seeks to explore the impact of taxation on economic development in Somalia 201`-19.

This chapter explored the different methods adopted in gathering and interpreting data related to the study by discussing choices and reasons to support them. Such choices related to: Research Design, study population, sampling strategies, data variables, research model, and period of data, data collection method, source of data, data quality control and data analysis and also presented in this chapter the diagnostic test: Multicollinearity, autocorrelation, and Heteroscedasticity problem and also test model specification and normality.

3.1 Research Design

According to Trochim (2005), research design "provides the glue that holds the research project together. A design is used to structure the research, to show how all of the major parts of the research project work together to try to address the central research questions."

The research design is like a recipe. Just as a recipe provides a list of ingredients and the instructions for preparing a dish, the research design provides the components and the plan for successfully carrying out the study. The research design is the "backbone" of the research protocol.

A research design is a plan, structure and strategy of investigation so conceived as to obtain answers to research questions or problems. The plan is the complete scheme or programmer of the research. It includes an outline of what the investigator will do from writing the hypotheses and their operational implications to the final analysis of data (Kerlinger, 1986).

3.2 Study population

The study population of this study is whole population in Somalia taxes and HDI

3.3 Sample size

The sample size of this study is time series analysis extending over the period of 2011 to 2019 with 9 years with different variables. The data were sourced from the publications of World Bank, Ministry of Finance Somalia, Economic Trading and other source.

3.4 Data variables

Table 3.4.1 Data variable

Serial no	Variables	Time period	Data type	Source of data
1	Direct Tax	2011-2019	Time series	MOF, WB
2	Indirect Tax	2011-2019	Time series	MOF
3	Non-Tax	2011-2019	Time series	MOF
4	HDI	2011-2019	Time series	Trading economics

3.5 Research model

In this study, the headline economic development is regarded as the dependent variable while taxation is considered as independent variable. The model will be used Secondary Data in this study is expressed as;

$$HDI_t = f(\beta_1 + Dt_t + IndT_t + Ntr_t + \mu_t) \dots\dots\dots (3.1)$$

HDI_t: Human development Index, Dt_t: Direct Tax revenue, Indt_t: indirect Tax Revenue,
Ntr_t: Non tax, and μ_t: Error term

The model described above can be written in the regression form as follows;

$$HDI_t = \alpha + \beta Dt_t + \beta_2 Indt_t + \beta_3 NnT_t + \mu_t \dots\dots\dots (3.2)$$

Where; α,= intercept, β - Slope of the Dependent variables.

As (Gujarati and Porter, 2009) stated converting variables to logarithms is it is important in order to reduce the heteroscedasticity before comparing with standard regression. Thus, the log-linear specification model is as follows:

$$LHDI_t = \alpha + \beta DiT_t + \beta_2 InDT_t + \beta_3 NonT_t + \mu_t \dots\dots\dots (3.3)$$

Where; L represents natural log.

LEI = Log Human development index

LDiT = Log Direct Tax

LinDT= Log indirect tax

LNonT=Log non tax

3.5.1 Empirical strategies

For the effectiveness of this study, both descriptive and analytical techniques we will employ. For the analysis of the time series data, certain statistical techniques we will use. This includes multiple regression analysis of a multiple – equation model based on method of Ordinary Least Squares (OLS).

3.5.2 Stationary test

For any long run economic analysis, it is important that variables in the regression equations be stationary” (Gujarati, 2009). In a time series analysis, a great deal of attention is given to stationary of the variables in order to get rid of the problem of spurious regression. A stochastic process is said to be stationary if its mean and variance are constant over time and the value of the covariance between the two time periods depends only on the distance or gap or lag between the two time periods and not the actual time at which the covariance is computed (Gujarati, 2009).

Let Y_t be a stochastic time series with these properties:

Mean: $E(Y_t) = \mu$ (3.4)

Variance: $Var(Y_t) = E(Y_t - \mu)^2 = \sigma^2$(3.5)

Co-variance: $\gamma_k = E[(Y_t - \mu)(Y_{t+k} - \mu)]$ (3.6)

Where, Y_t is a series of random walk

γ_k is the auto covariance at lag k

If one or more of the above conditions fail, the stochastic process Y_t is said to be non-stationary exhibiting a unit root problem. According to (Koop 2009: 180 – 3), the time series in macroeconomic variables are mostly non-stationary.

3.5.3 Unit root test

To test the stationary unit root test became widely popular in time series econometric analysis. The first step involves testing the order of integration of the individual series under consideration. The most popular ones for the test of order of integration are *Augmented Dickey-Fuller (ADF)* test and the *Phillip-Perron (PP)*. Augmented Dickey-Fuller test relies on rejecting null hypothesis of unit root (the series are non-stationary) in favor of the

alternative hypotheses of stationary. The tests are conducted with and without a deterministic trend (t) for each of the series.

To start with, a random walk model (RWM) that resembles the Markov first order autoregressive model is assumed. The RWM can be given as in the following equation:

$$Y_t = \rho Y_{t-1} + u_t \quad -1 \leq \rho \leq 1 \quad \dots\dots\dots (3.7)$$

Where, Y_t is a given time series u_t is the white noise error term.

If $\rho=1$ the equation given is said to exhibit unit root and the series is said to be a non-stationary. If, however, $|\rho| \leq 1$, that is if the absolute value of ρ is less than one, then it can be shown that the time series Y_t is stationary, (Gujarati, porter & Gunasker).

We manipulate equation (7) as follows: Subtract Y_{t-1} from both sides of (7) to obtain:

$$Y_t - Y_{t-1} = \rho Y_{t-1} - Y_{t-1} + u_t = (\rho - 1) Y_{t-1} + u_t \quad \dots\dots\dots (3.8)$$

We can write above equation as the following

$$\Delta Y_t = \delta Y_{t-1} + u_t \quad \dots\dots\dots (3.9)$$

Where $\delta = (\rho - 1)$, Δ is the first-difference operator.

By using equation (9), we can say: if the estimated slope coefficient in the regression (δ) is negative, then it can be concluded that Y_t is stationary. If, on the other hand, the estimated slope coefficient (δ) is zero then the series can be considered as non-stationary. Under the null hypothesis $\delta = 0$ the estimated t-value follows the tau (τ) statistic. The tabular values for the τ -statistic are given by Dickey and Fuller (1979). The critical points in the statistic distribution are larger than those of the t statistic. Interestingly, if the hypothesis that $\delta = 0$ is

rejected (i.e. the time series is stationary), we can use the usual (Student's) t test. (Gujarati book of Econometrics).

To allow for the various possibilities, the DF test is estimated in three different forms, That is, under three different null hypotheses.

Y_t is a random walk: $\Delta Y_t = \delta Y_{t-1} + u_t$(3.10)

Y_t is a random walk with drift: $\Delta Y_t = \beta_1 + \delta Y_{t-1} + u_t$ (3.11)

Y_t is a random walk with drift

Around a stochastic trend: $\Delta Y_t = \beta_1 + \delta Y_{t-1} + \beta_2 t + u_t$ (3.12)

Where t is the time or trend variable. In each case the hypothesis is:

Null hypothesis: $H_0: \delta=0$ (i.e. there is a unit root or time series is non-stationary, or it has a stochastic trend)

Alternative hypothesis: $H_1: \delta < 1$ (i.e. the time series is stationary, or it has deterministic trend).

3.5.5 Error correction Mechanism (ECM)

If $HDI_t = \alpha + \beta_1 DiT_t + \beta_2 InDT_t + \beta_3 NonT_t + \mu_t$ are co-integrated; that is, there is a long term or equilibrium, relationship between the two variables so in short term may be disequilibrium.”

The error correction mechanism (ECM) developed by Engle and Granger is a means of reconciling the short-run behavior of an economic variable with its long-run behavior” (Gujarati 2009).

Vector Error Correction Model (VECM) examines the dynamic adjustment of variables both in the long and short run to their equilibrium state. Short term dynamics which is a measure of deviation from steady state is determined by Error correction model.

If the series are co-integrated, it means there is a long-term equilibrium relationship between them so VECM is applied in order to evaluate the short run of the co-integrated series. A negative and significant coefficient of the ECM (i.e. t-1) indicates that any short-term fluctuation between variables will give rise to a stable long run relationship between the variables.

3.5.6 Diagnostic test

The researcher uses various hypotheses testing to test the model because it might have econometric problem. Firstly, check the whether the model is free from multicollinearity, autocorrelation and heteroscedasticity problems. Besides, researcher also needs to test model specification and normality test.

3.5.7 T-test Statistic

Similarly, t-test statistic is considered as one of the Statistical Data Analysis procedures that generally used for hypothesis testing. It tests the methods related with two explanatory samples (Lucey, 2002). The T-test statistic also examine if the impacts differences in the two samples have happen by chance. Other than that, the sample populations are assumed to have equivalent variances and have normal distribution. According to Lucey (2002), interval or ratio data is required in the T-test statistic in term of data collection. Specifically, statistics T-test analyzes the data collected by using the t-test by way of determining a P-value that indicating the likelihood that people willthe result by chance. Hence, the researcher was reject null hypotheses when the P-value of T-test falls below 0.01, 0.05, or

0.1, and concludes that independent variable and dependent variable are statistically significantly.

3.5.8 F-test Statistic

F-test statistic is one of the statistical tests to measure the whole significance of regression. There is F-distribution of the test statistic under the null hypothesis. F-test statistic takes place when the particular model consists of more than three or multiple parameters. Generally, it is applicable whenever make comparison among the statistical models given that the models fit to its data set in the purpose to select the best-fit model to the population. Specifically, it analyzes the data collected by analysts inherent with F-test statistic by way of determining the value of probability which indicates the probability that the one could achieve the result by opportunity. Thus, if the value of probability falls below 0.01, 0.05, or 0.10, researcher was taking the alternative hypotheses into account and indicates that the endogenous variable can be significantly explained by the whole model.

3.5.7 Model Specification and Normality test

Model specification error is referring to a model that have correctly specified because heteroscedasticity and autocorrelation may be a potential problem in misspecification model. In order to make sure that model specification is correct or good mode, researcher should choose the relevant explanatory variables that should be consist in the model. Besides, selected independent variable is uncorrelated with error term.

The researcher also should select an appropriate form of variables. The stable estimated parameter value is important. There is three type of model specification error which is omitting a relevant independent variable that plays important role in the determination of dependent variable. Besides, model specification error occurs when including an unnecessary, irrelevant or non-economic growth independent variable.

When the researcher wrongly specifies a model, the problem might be arising. Gujarati and Porter (2009) state that, model specification error occurs if there consists of ellipsis of related variable or include not related variable. Lastly, wrong functional form of explained and explanatory variables is also a type of model specification error. The researcher can use Ramsey's RESET test to detect the model specification error. Ramsey (1969) state that if the result of Ramsey's RESET test shows that there is a model specification error it means that the presence of autocorrelation and heteroscedasticity problem is unable to solve. The researcher needs to changes the model in order to solve the problem.

3.5.8 Multicollinearity

Multicollinearity arises when there was some or all of the explanatory variables are highly correlated with one another. If it is present, the regression model has difficulty telling which explanatory variables are influencing the dependent variables. There were five practical consequences of multicollinearity which is large variances and covariance of OLS estimators, wider confidence interval, and insignificant t ratio, a high R-squared but few significant t ratio and sensitivity of OLS estimators and their standard error to small changes in data. The multicollinearity problem may cause an effect on the regression model. If there is any correlation among the explained variable and explanatory variables it may causes the researcher enable to interpret the result correctly due to it may have opposite sign to the actual relationship.

Thus, in order to detect multicollinearity problem, there are several methods to apply such as by evaluating a low R² value, observe and predict this by observing and analyzing the reliability of the T-test, variance inflation factor (VIF) and tolerance (TOL). If the VIF of a

variable exceeds 10, which the variable is said to be highly collinear. Besides, if the TOL is closer to zero, the degree of collinearity of that variable with other explanatory variables will be greater and vice versa (Gujarati & Porter, 2009).

3.5.9 Heteroscedasticity

Researchers do the heteroscedasticity test in order to test for the constant variance of error terms. Researchers use Breusch-Pagan-Godfrey test to determine the heteroscedasticity problem in this research. Gujarati and Porter (2009) despite that when heteroscedasticity problems arise in a model which has error terms that have an inconstant variance. There might be larger variance while quantities of some explanatory variables contribute larger or smaller. Therefore, heteroscedasticity problem in the model will no longer have minimum variances and cause an incorrect result. If heteroscedasticity arises in the model, it will be difficult to solve the problem.

3.5.10 Autocorrelation

According to Gujarati and Porter (2009), autocorrelation refers to correlation in error terms among components of observation order in period or space. In this research, researchers using time series data and may cause correlation among disturbance terms. In the other hand, autocorrelation also might occur when researchers include too many irrelevant variables or omitted some important variables from the model. Researchers might get biased results when autocorrelation occurs in the model. Autocorrelation problems may arise in the model when the error term for any observation is related to the error term of another observation, thus researchers will run Breusch-Godfrey Serial Correlation LM Test to check for autocorrelation problems.

3.6 Data period

In study we will employ time serious data generated annually from 2011 to 2019. The data covers the period of the seventeen years 2011 to 2019. The study chose this period because of our country economic and political situation are changed due to lack of strength governments.

3.7 Data collection method

The data collection instrument is Time serious data that can be categorized monthly, quarterly semi-annually and annually. And I was used in this research by data from 2011 to 2019.

3.8 Source of data

The study uses the secondary data gathered the World Bank, African development bank, world Meters, trading economics, MOF, IMF, world economic outlook data base

3.9 Data analysis

Data from public documents is analyzed to derive inferences from the findings. This analysis is chosen due to the relative ease that it offered in explaining the relationship between the variables. This is done by analyzing the degree of correlation which is a measure of the degree of association between two or more variables that have been obtained from the same group of subjects(s). This is useful because it helps to predict and describe the association in terms of magnitude and direction. This also helps in forecasting and providing guidance to facilitate further research studies once the relationship between taxation on economic development is established to be existent.

The techniques used to analyze data were by use of E-views however personal coding and categorizing data was done computerized. Data analysis was conducted on respondents' data in two perspectives: Descriptive data analysis and inferential data analysis. According to Amin (2005) Descriptive statistics provides us with the techniques of numerically and tables presenting information that gives an overall picture of the data collected.

3.10 Data Quality Control

This section was important in assuring the validity and reliability of the instruments and thus controlling data generated through time series data file analysis and interviews

3.10.1 Validity

Validity is the quality of the test doing what is designed to do, so the researcher was econometric and statically model that was checked the data validity before any steps.

3.10.2 Reliability

The reliability of the research instruments concerns with the degree to which the research instrument will give the same result under similar conditions. Therefore, this study researcher was used secondary data that most reliable in research field.

3.11 inclusion and exclusion criteria

3.11.1 Inclusion criteria

This include economic indicators specially the effect of taxation on economic development holding other factors constant. The data were collected from sources of World Bank, UN Somali Economic Indicators and IFM.

3.11.2 Exclusion criteria

The researcher excluded all materials that that are not related variables like demographic information marital status and education level.

3.11 Limitations of the Study

During the study under taking, the researcher has faced the following limitations: shortage of time, lack of sufficient finance to take physical observations as put in the proposal of this thesis, unavailability of up-to-date data on the achievements of the institution since the head quarter of Minister of Finance Somalia. From its objectives and principles, it is difficult to see each of them problem had encountered over the period of two decades within the scope of this papers. The researcher faced a problem Due to financial constraints, to find and secures a relevant data from resource persons in the field of taxation Somalia, to this problem the researcher is going to use or limited to secondary sources including MOF Archives. Incidentally interview has made with some concerned body. were difficult to access as easy as you want, and second some time may it faces many econometrics problems such as Co-integration test error, Heteroscedasticity, Autocorrelation, Multicollinearity, and model specifications, and stationary of data.

CHAPTER FOUR
RESULTS, FINDINGS AND DISCUSSION

4.0 Introductions

In this chapter, the methods of analyzing relationships between the effect of taxation on economic development in Somalia. Also, the interpretations of results found in the study have shown below.

In this research The Engle - Granger Co-integration test method was used for estimation of relationship between model variables because of consideration of convergence vector between variables. In this study, at first the reliability of time series variables is examined by augmented Dicky-Fuller descriptive statistics F test table. Besides the diagnostic test checking are both included, such as Multicollinearity, autocorrelation, heteroscedasticity, model specification test and normality test. Clarification will be provided based on the outcomes presented in the tables.

4.1 Descriptive statistics

Table4.1. Descriptive analysis

Date: 12/10/19 Time: 22:33
Sample: 2011 2020

	LDIT	LDR	LEXPT	LHDI	LNTR
Mean	18.12375	15.71704	19.10237	-1.351162	16.89263
Median	18.26305	15.74542	19.13842	-1.343969	17.11742
Maximum	18.77345	16.94227	19.96718	-1.114742	18.18369
Minimum	16.86003	14.07727	17.42643	-1.604450	15.22650
Std. Dev.	0.671670	0.985139	0.760254	0.172753	0.959546
Skewness	-0.984458	-0.159295	-0.895806	-0.155520	-0.496023
Kurtosis	2.621040	1.875622	3.377033	1.677123	2.119600
Jarque-Bera	1.675100	0.569052	1.396679	0.769479	0.733025
Probability	0.432769	0.752371	0.497411	0.680628	0.693148
Sum	181.2375	157.1704	191.0237	-13.51162	168.9263
Sum Sq. Dev.	4.060262	8.734483	5.201869	0.268592	8.286559
Observations	10	10	10	10	10

Descriptive statistics are used to describe the basic features of the data in a study. The function of the descriptive statistics is providing the simple summaries about the sample and the measures. Together with the simple graphics analysis, it forms the basis of virtually every quantitative analysis of data. The objective of descriptive statistic is used to present quantitative descriptions in a manageable form. In a research we can know that there have four major types of estimates of central tendency which are mean, median and STD dev. Min and max.

The mean or average is probably the most commonly used method of describing central tendency. According on we can observe that the mean of Direct Tax in Somalia is 15.71704 and It show that Somalia have good result in Tax. On the other hand, we can observe that the maximum of Direct Tax is 15.94227 and the minimum is 14.07727. In addition, after run the test the result showed that the standard deviation of Direct Tax 0.985139.

Besides, according to table we can also know the descriptive statistic of Indirect tax. The table shows that the mean Indirect tax is 18.12375. The maximum of idt is 18.77345 and the minimum of indt is 15.85003. In addition, the amount of standard deviation is 0.671770.

Moreover, the mean of non-tax in Somalia is 16.89263. In addition, the maximum non-tax in Somalia is 18.18369, and the minimum non-tax revenue is 15.22650. The standard deviation of non-tax revenue is 0.959546. Furthermore, according to the table we also can know the descriptive statistic of HDI. On the table show that the mean of HDI is 0.255111. The maximum of import is 0.312000 and the minimum of import is 0.201000 in addition, the amount of standard deviation is 0.040489. The mean or average is probably the most commonly used method of describing central tendency.

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4.2 Correlation Analyses

Table 4. 2 Correlation among Independent variables

	LDR	LNTR	LIDT	HDI
LDR	1.000000	0.623311	0.855683	0.918075
LNTR	0.623311	1.000000	0.577595	0.803684
LIDT	0.855683	0.577595	1.000000	0.830029
HDI	0.918075	0.803684	0.830029	1.000000

Source secondary data,

Decision rules:

There is no serious correlation among the independent variables if the correlation is less than 0.8.

Conclusion:

Since the correlation among the variables is not exceeding 0.8, we have sufficient evidence to conclude that there is no serious correlation among the independent variables.

4.3 Regression Results

Regression analysis generates an equation to describe the statistical relationship between one or more predictor variables and the response variable. Table 4.3.1 Regression Results

Dependent Variable: HDI
 Method: Least Squares
 Date: 12/13/19 Time: 11:00
 Sample: 2011 2019
 Included observations: 9

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.747208	0.140061	-5.334885	0.0031
LDR	0.036095	0.014158	2.549357	0.0513
LIDT	0.004510	0.009669	0.466503	0.6605
LNTR	0.016745	0.006705	2.497261	0.0547
R-squared	0.933359	Mean dependent var		0.255111
Adjusted R-squared	0.893374	S.D. dependent var		0.040489
S.E. of regression	0.013221	Akaike info criterion		-5.512896
Sum squared resid	0.000874	Schwarz criterion		-5.425240
Log likelihood	28.80803	Hannan-Quinn criter.		-5.702056
F-statistic	23.34283	Durbin-Watson stat		1.554456
Prob(F-statistic)	0.002279			

Source: secondary data,

The study results revealed that there is a Positive relationship between as shown table above all variables effects in explain independent variable estimate 90%

As above table shows The coefficient of determination (R^2) is 0.9333 that showed 93.33 percent of variation in HDI of the country is explained by independent variables such as direct tax, indirect, Non taxes revenue, while 7% of remaining is explained by other factors exclude in the model. And it's common to see many econometric Time series Data to have higher or weaker (R^2)

Durban Watson (DW) value of 1.55 shows no autocorrelation among disturbances.

HDI= - 0.747208+0.03690DR+0.00450IDT+0.01674NTR

SE= (0.140001) (0.014158) (0.009669) (0.006705)

T-statistics table 4.4

T-test will be used in this study in the purpose of determining whether the explanatory variables is significant to the explained variable by assuming the model is normally distributed at $\alpha = 0.10$

Hypothesis1:

$H_0: \beta_1$ (Slope) = 0 (β Direct Tax is not significant)

$H_1: \beta_1$ (Slope) \neq 0 (β Direct tax is significant)

Decision rules:

We reject H_0 if the probability value for t-test is less than 0.10. Otherwise, we do not reject

According to the table 4.4.1 our p-value of 5.13% is less than 10%, so we can reject our

Null hypothesis that direct tax is significant to influence our HDI.

4.4. 2 F-statistics

F-test is used in this study to determine the overall significance of the economic model (Spanos, 1986).

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Hypothesis3:

H0: β_1, β_2 (Slopes) =0 (no linear relationship HDI)

H1: β_1, β_2 (Slopes) $\neq 0$ (at least one independent variable affects HDI)

Conclusion:

We reject H_0 because the probability value of F-test is 0.002274, which less than 0.10. Therefore, there is sufficient evidence for us to conclude that our independent variables are significant to explaining the dependent variable (Gujarati & Porter, 2009).

4.6 Diagnostic Check for Econometrics Problems

4.6.1 TESTS FOR UNIT ROOT

To avoid estimating a spurious regression model, we check for the stationary of the series before doing any analysis. To check for stationary, we apply the unit root test that includes the Augmented Dickey Fuller (ADF) methodology.

Hypothesis:

Ho: Variables Have unit root problem

Ha: Stationary

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Table 4.6.1 ADF test Results at Levels

Variable	ADF at level	Remark	Variable	ADF AT 1st DIFERENCE	Remark
HDI	0.964	Non stationary	HDI	0.0023	Stationary
IDrt	0.023	stationary	Ldrt	0.0638	stationary
Indt	0.052	stationary	Lindt	0.0139	stationary
Ntr	0.020	stationary	Lntr	0.0201	stationary

Source: secondary data.

Hypothesis

HO variables has unit Problem

HA variables are Stationary

Role of Decision

Reject Ho if P value is less then critical Value 10% otherwise do not

Conclusion

as the shown above table 4.5.1 all four variables only HDI was not stationary at level , and all variables become Stationary at First Difference, our model is clear from any unit problems

4.6.2 Multicollinearity

Hypothesis:

Null: Multicollinearity problem does not exist.

Alt: Multicollinearity problem exists.

Table 4.6.2 Multicollinearity

Variance Inflation Factors
Date: 12/11/19 Time: 09:34
Sample: 2011 2020
Included observations: 10

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.019057	1083.417	NA
LDR	8.79E-05	1239.487	4.367219
LDIT	0.000195	3649.979	4.506214
LNTR	4.09E-05	665.8518	1.927960

Decision rules:

- 1) We do not reject if VIF less than 10, indicating that there is no serious multicollinearity problem.
- 2) We reject if VIF more than 10, indicating that there is a serious multicollinearity problem (Baum, 2006)

Conclusion:

Since the VIF for each independent variable is less than 10 as a thumb of rule, there is adequate evidence to indicate that **no** serious multicollinearity suspected among independent variables at the significance level of 0.10.

Heteroskedasticity

Hypothesis:

Null: Heteroscedasticity problem does not exist.

Alt: Heteroscedasticity problem exists.

Table 4.6.3 Heteroskedasticity Test: Breusch-Pagan-Godfrey

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.409340	Prob. F(3,6)	0.3289
Obs*R-squared	4.133763	Prob. Chi-Square(3)	0.2474
Scaled explained SS	1.273508	Prob. Chi-Square(3)	0.7354

Test Equation:

Dependent Variable: RESID^2

Method: Least Squares

Date: 06/08/20 Time: 17:12

Sample: 2011 2020

Included observations: 10

Source secondary data

Decision rules:

1) We do not reject if P-value of F-stat more than 0.10, indicating that there is no heteroscedasticity problem.

2) We reject if P-value of F-stat less than 0.10, indicating that there is a heteroscedasticity problem (Spanos, 1986).

Conclusion:

We do not reject H_0 since P-value of F-stat is 0.3289, which is more than 0.10; hence, there is sufficient evidence to conclude that there is no heteroscedasticity problem at the significance level of 0.10.

4.6.4 Autocorrelation

Hypothesis:

Null: There is no autocorrelation problem.

Alt: There is an autocorrelation problem.

Table 4.6.4 Breusch-Godfrey Serial Correlation LM Test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.188295	Prob. F(2,4)	0.8353
Obs*R-squared	0.860465	Prob. Chi-Square(2)	0.6504

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 06/08/20 Time: 17:15

Sample: 2011 2020

Included observations: 10

Presample missing value lagged residuals set to zero.

Source Secondary data

Decision rules:

- 1) We do not reject H_0 if P-value of the Chi-squared more than 0.10, indicating that there is no autocorrelation problem.
- 2) We reject if P-value of the Chi-squared LESS THAN 0.10, indicating that there is an autocorrelation problem (Stock & Watson, 2006).

Conclusion:

Since the value of probability for Chi-square 0.8353 shown in the table 4.6.4 is more than 0.10, we do not reject H_0 . Thus, we have sufficient evidence to conclude that there is no autocorrelation problem in the model at the significance level of 0.10.

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4.6.5 Model Specification Test

Hypothesis:

Null: The model is correctly specified.

Alt: The model is not correctly specified.

Table 4.6.5 Ramsey RESET Test

Ramsey RESET Test

Equation: UNTITLED

Specification: HDI DIRECT_TAX INDIRECT_TAX NON_TAXES_REVENUE

C

Omitted Variables: Squares of fitted values

	Value	df	Probability
t-statistic	1.252236	5	0.2659
F-statistic	1.568096	(1, 5)	0.2659
Likelihood ratio	2.727861	1	0.0986

F-test summary:

Source secondary data

Decision rules:

- 1) We do not reject if P-value of F-stat more than 0.1, indicating that the model is correctly specified.
- 2) We reject if P-value of F-stat less than 0.1, indicating that the model is not correctly specified (Gujarati & Porter, 2009).

Conclusion:

We do not reject H_0 as the probability value of F-statistic **0.2659** is more than 0.10. Hence, we have enough evidence to conclude that the model is correctly specified at the significance level of 0.10.

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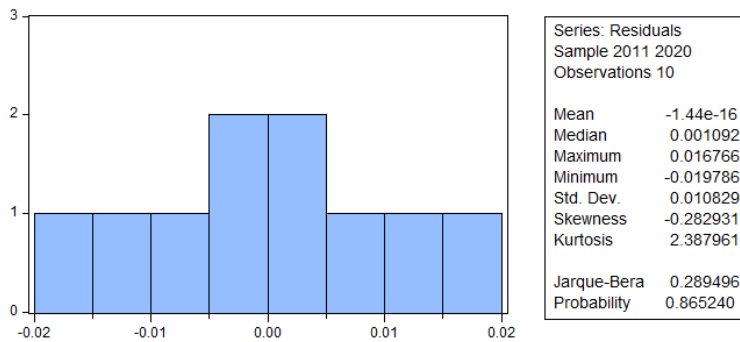
4.6.7 Normality Test

Hypothesis:

Null: Error term is normally distributed.

Alt : Error term is not normally distributed.

Table 4.6.7 Normality Test



Decision rules:

- 1) We do not reject if the P-value for JB-stats is more than 0.10, indicating that the error term is normally distributed.

2) We reject if the P-value for JB-stats is less than 0.10, indicating that the error term is not normally distributed (Brooks, 2008).

Conclusion:

As value of probability for JB stat is 0.289496, which is more than 0.10, we do not reject H_0 . Therefore, there is sufficient evidence to conclude that the error term is normally distributed at the significance level of 0.10.

4.7 Major Findings and Discussion

This study has been an attempt to empirically explore the effect of Taxation on economic development in Somalia, Time series data were collected annually for important variables for the period of 2011-2019. The study made use of the Augmented Dickey fuller (ADF), Phillips Peron (PP) unit root tests. The results generated empirically for the ADF unit test showed that at the level form, all the variables are non-stationary but after first differencing the variables showed that they were stationary and integrated of order one. Engle - Granger co-integrated test was employed to check if there exists relationship the variables, results from this test showed that the variables were co-integrated after 1st differencing, meaning relationship exists between the variables.

The outcome of diagnostics checking is in the last chapter. After completing the diagnostics checking, researchers found the model does not have serial correlation and heteroscedasticity problem. The model is also correctly specified and the normal distribution of error term in the model is confirmed. However, the model was found to have multicollinearity problem. On this context, researchers have included one variable in the model to solve this problem. So there is assumption said that do nothing the problem is nature. All the empirical results are clearly shown in the form of tables. The explanations are also provided in the manner of clear and precise

CHAPTER FIVE CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

In this chapter, the research findings would summarize, and then conclusion and recommendations to the study will draw for future studies. The study aimed to explore effect of Taxation on Economic Development. This also summarize basic findings that from the research questions and how the research done in this context. There this chapter should conclude the significance of the whole study from introductory section to the last of this chapter.

5.1 Conclusion

The main objective of this study is to empirically evaluate the effect of taxation on economic development of Somalia through finding out the existence relationship between macroeconomic variables. The research studies attempt to further explore the effect of explanatory variables toward the HDI. This study consists of 9 years' Time series data which is from year 2011-2019 and it obtains on annual basis. The findings showed that both explanatory variables have related to the HDI. In the result of diagnostic checking in OLS model, all explanatory variables of Direct tax, Indirect tax and non-tax revenue was significant to determine Economic development of Somalia. As has shown above table, the coefficient of determination R-squared R^2 is 0.9333%. This result implies that on the average about 93.3% of variations of economic development in Somalia within the period under review is systematically explained by changes in these explanatory variables. While 7% of remaining, the unexplained variations are attributed to other external factors not

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included in the model unfortunately, there was autocorrelation in OLS model, but other diagnostic checking were solved, This was done by examining the relationship between Direct tax, indirect tax and non-tax revenues. It goes further to find the relation between the dependent variable HDI and the other independent variables. To capture this, time series data were sourced from 2011-2019. The OLS multiple regression analysis confirms that there exist positive and significant relationships between HD and tax variables.

5.2 Recommendation

The study recommends as follows:

Firstly, Somalia government should free the system from corruption by utilizing revenues generated in providing effective tax system such as single account and etc. The government must have strong finance policy by improving tax system to achieve self-sufficiency and income security Government must increase its efficiency; corruption must be eliminated through upgrading tax employee's knowledge and providing them enough salary. This will help curtail insurgency, tax evasion and encourage tax compliance.

Secondly, the economy should be urgently diversified to expand the revenue base of the state's taxes laws and administration should be harmonized to reduce the cost of paying tax.

Thirdly, the study strongly recommends that the Federal Government of Somalia continues to mobilize domestic revenue by expanding these reforms to federal member states, and builds both the country's tax system in general and the capacity of subnational governments in particular. The authors also urge the government to improve discussions within the intergovernmental fiscal forum committee, which is responsible for finalizing the fiscal pillars of the newly adopted federal system.

In order to be able of any administration to satisfy the needs of its citizens depends on the mobilization of its domestic resources. And Building the capacity to raise revenue through taxes reduces dependence on aid and helps to finance service delivery.

Fourthly it was recommended that the economy should be diversified to enhance revenue base of the country, to rid corruption from the system, investing in economic activities that will generate jobs, harmonize our tax laws and administration to acceptable global standard. In addition, the study has also recommends that the Somali authorities further develop policies related to the expansion of tax bases in states and build tax relations with federal member states more effectively through fiscal federalism discussions. This will contribute to the efforts being made to mobilize domestic resources beyond the capital city.

Finally, Somalia faces significant long-term challenges in accelerating economic growth and reorienting government spending toward public investments to boost human capital. And also, to fix good tax system, public service delivery that will contribute overall of country. Government must obtain public confidence through making maximum tax return and efficiently allocating income. Since taxation is an inevitable source of government revenue, the problem of double taxation should be avoided, tax incentives in the form of tax cut should be provided to tax payers.

This study encourages further study on the empirical study on the effect of taxation and economic development of Somalia.

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APPENDIX A

THESIS BUDGET

Table Budget plan

S/N	Thing to be incurred	Reason	Amount	Total
1.	Related Articles	Download from Internet	\$60	\$60
2.	Internet bill cost home	ADSL service	7*30	210
3.	Coffee and meetings	Meeting supervisor, advisor and classmate	10	10
4.	Transportations	Bus Bajaj and taxi	50	60
5.	Computer repair	Windows, Anti-virus and charge	40	40
6.	Address	Thesis defend address	100	100
			Total	\$480

APPENDIX B

RESEARCH WORK PLAN

This part concerns the researcher's timetable during his work of the dissertation. From the topic selection which was Feb 2019 and to the end of the study Dec 2019. In that period the researcher writes this book in step by step, below table shows the schedule of the research.

Table Time frame

TIME TABLE/RESEARCH SCHEDULE 2019/2020		
S/N	Length of the time	Work to be done in that given period
1.	From 1 st Feb to March 30 th in 2019	Setting up research topic and variables
2.	From 1 st April to 31 st June in 2019	Extracting, searching and reading all relevant materials including papers, article and conferences about Economic Development
3.	From 1 st July to 31 th August in 2019	Writing research proposal and using Mendeley desktop for referencing.
4.	From 1 st August to 31 th Sep in 2019	secondary data collection
5.	From 1 st Sep to 5 th Oct n 2019	Data entry to the E-views
6.	From 6 th Oct to 28 th Oct in 2019	Data analysis, Discussions and interpretations in chapter four
7.	From 1 st Nov to 20 th Nov in 2019	Conclusions and recommendations in chapter five and end
8.	From 24 th Nov to 27 th Dec in 2019	Proofreading, decoration, shaping and matching to the SNU guideline book
9.	From 7 st March to 20 th May in 2020	Ready to defend the whole thesis, this late comes Crona Virus (COVID-19).

APPENDIX C

Null Hypothesis: D(DR) has a unit root
 Exogenous: None
 Lag Length: 1 (Automatic - based on SIC, maxlag=1)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.099127	0.0425
Test critical values: 1% level	-2.937216	
5% level	-2.006292	
10% level	-1.598068	

*MacKinnon (1996) one-sided p-values.
 Warning: Probabilities and critical values calculated for 20 observations
 and may not be accurate for a sample size of 7

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(DR,2)
 Method: Least Squares
 Date: 12/11/19 Time: 09:03
 Sample (adjusted): 2014 2020
 Included observations: 7 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(DR(-1))	-0.812732	0.387176	-2.099127	0.0899
D(DR(-1),2)	0.510103	0.380259	1.341462	0.2375
R-squared	0.470871	Mean dependent var		-335000.0
Adjusted R-squared	0.365045	S.D. dependent var		5686351.
S.E. of regression	4531117.	Akaike info criterion		33.72579
Sum squared resid	1.03E+14	Schwarz criterion		33.71034
Log likelihood	-116.0403	Hannan-Quinn criter.		33.53478
Durbin-Watson stat	1.585669			

Dependent Variable: LHDI
 Method: Least Squares
 Date: 12/11/19 Time: 10:11
 Sample: 2011 2020
 Included observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LDIT	0.156456	0.046165	3.389083	0.0147
LDR	0.014452	0.030986	0.466398	0.6574
LNTR	0.067743	0.021137	3.204933	0.0185
C	-5.558218	0.456119	-12.18588	0.0000

R-squared	0.957104	Mean dependent var	-1.351162
Adjusted R-squared	0.935656	S.D. dependent var	0.172753
S.E. of regression	0.043821	Akaike info criterion	-3.128240
Sum squared resid	0.011522	Schwarz criterion	-3.007206
Log likelihood	19.64120	Hannan-Quinn criter.	-3.261014
F-statistic	44.62415	Durbin-Watson stat	1.761899
Prob(F-statistic)	0.000170		

Group unit root test: Summary
 Series: NUM2011, NUM2012, NUM2013, NUM2014, NUM2015, NUM2016,
 NUM2017, NUM2018, NUM2019, NUM2020
 Date: 12/08/19 Time: 15:53
 Sample: 1 4
 Exogenous variables: Individual effects
 Automatic selection of maximum lags
 Automatic lag length selection based on SIC: 0
 Newey-West automatic bandwidth selection and Bartlett kernel
 Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
<u>Null: Unit root (assumes common unit root process)</u>				
Levin, Lin & Chu t*	3.00838	0.9987	9	27
<u>Null: Unit root (assumes individual unit root process)</u>				
ADF - Fisher Chi-square	13.4898	0.7617	9	27
PP - Fisher Chi-square	11.6420	0.8652	9	27

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Null Hypothesis: D(HDI) has a unit root
 Exogenous: Constant
 Lag Length: 1 (Automatic - based on SIC, maxlag=1)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.049219	0.0233
Test critical values:		
1% level	-4.803492	
5% level	-3.403313	
10% level	-2.841819	

*MacKinnon (1996) one-sided p-values.
 Warning: Probabilities and critical values calculated for 10 observations
 and may not be accurate for a sample size

2

Null Hypothesis: D(LNTR) has a unit root
 Exogenous: Constant
 Lag Length: 1 (Automatic - based on SIC, maxlag=1)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-11.43312	0.0000
Test critical values:		
1% level	-4.803492	
5% level	-3.403313	
10% level	-2.841819	

*MacKinnon (1996) one-sided p-values.
 Warning: Probabilities and critical values calculated for 10 observations
 and may not be accurate for a sample size of 7