KAMPALA INTERNATIONAL UNIVERSITY

THE EFFECT OF GOVERNMENT EXPENDITURE ON AGRICULTURAL OUTPUT IN UGANDA. A CASE STUDY AT UGANDA COFFEE DEVELOPMENT AUTHORITY (UCDA)

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ABSTRACT

This study examined the effect of Government expenditure on coffee output and productivity in Uganda over the period 2005-2015 with time series data collected from Uganda Coffee Development Authority (UCDA), Uganda Bureau of Statistics (UBOS) and Bank of Uganda (BOU). The present study applied ADF Ordinary Least Square (OLS) technique as an analytical tool to analyze the data. The results of significance testing showed that there exists a long-run relationship among Government expenditure on coffee output, agricultural output and economic growth in Uganda. On the other hand, the empirical results of regression analysis revealed that Government expenditure has an insignificant effect on coffee output of Uganda. It was also found out that the coffee sector is still confronting some challenges like; inadequate funding, underdeveloped infrastructure, poor agriculture marketing, and shortage of irrigation etc. In conclusion, variables such as the tax revenue, grants & donations, public debt and external reserves account not for the variations in coffee output, due to lack of comprehensive time series data, other variables that are likely to influence coffee production were not incorporated in the models for statistical analysis.

Therefore the Government of Uganda should increase its expenditure in the development of the coffee sector since it would enhance coffee productivity

DECLARATION

I, Mike Odeke, hereby declare that the contents of this dissertation report are my original work, and that it has not been submitted in any other University for an award of similar type. I have also acknowledged all the referenced work that I referred to while undertaking my study.

Sign.....

Date.....13/09/2019.....

APPROVAL

I, as undersigned, declare that I have been the supervisor of the student in this study titled, 'The effect of Government expenditure on agricultural production in Uganda.'

Mr. Moses Okello

Sign..... Date.14/09/2019.....

ACKNOWLEGDEMENT

I would like to admit and unfeignedly appreciate all and sundry who assisted me in making this study a success. I feel greatly obligated to my Overlooker Mr. Moses Okello for the implausible stewardship, guidance, encouragement and first-come-first-serve support around the course of this study.

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DEDICATION

I consecrate this piece of work to my obscure heroes Dad **Mr. James Peter** and Mum **Mrs. Annet Okwi**, you have been the soundless heroes whose simple lives and committedness to leaving a lasting bequest is engraved on all the hearts of I and my brother Emmy, Sisters; Beatrice, Rose, Teddy and Patience to whom I'm appreciative for being the best Family Chaparajos. In conclusion but not to the lowest degree to the Family of My Uncle **Eng.G.W. Okurut** and my friend S.A Cherop, You bless me so much.

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LIST OF ACRONMY'S

BOU	Bank of Uganda
DDA	Dairy Development Services
ECD	Early Childhood Development
MAAIF	Ministry of Agriculture Animal Industry and Fisheries
MFPED	Ministry of Finance, Planning and Economic Development
NAADS	National Agricultural Advisory Services
NAGRIC-DB	National Animal Genetic Research Center and Data bank
NARO	National Agricultural Research Organization
UBOS	Uganda Bureau of Statistics
UCDA	Uganda Coffee Development Authority
UCDO	Uganda cotton Development Organization
USS	Uganda Statistical Society
OLS	Ordinary Least Squares
IMF	International Monetary Funds
FAO	Food and Agricultural Organization
UN	United Nations
NGO	Non-Governmental Organization
PAC	Public Accounts Committee
NPPAs	National Priority Program Areas
CFO	Chief Finance Officer
PPP	Private Partnerships
CGs	Central Governments
LGs	Local Governments

CHAPTER ONE
INTRODUCTION

1.0 Introduction

This chapter gives a premise of the effects of Government expenditure on the agricultural output including; the background of the study, the statement of the problems, research objectives, research questions and the significance of the study. It also contains the conceptual framework, explanation to the conceptual framework. The chapter concludes by expounding on the scope of the study.

1.1Background of the study

1.1.1Historical Background

Globally, the year 2000 saw the inception of the Millennium Development Goals (MDGs) by United Nations (UN) member states. One of these goals was to eradicate extreme poverty and hunger by 2015 (UN, 2015). To assist in achieving the MDGs, the African Union (AU) heads of state established the Comprehensive African Agricultural Development Program (CAADP) in 2003. The overall objective of CAADP is to improve food security and reduce poverty through agricultural-led development strategy. To achieve this overall goal, governments targeted a 6% annual agricultural growth rate by 2015 (NEPAD, 2014). The AU member states also pledged to increase their share of public expenditure on agriculture up to 10%.

Agricultural spending is one of the direct and effective tools for enabling sustainable economic growth in developing countries (Fan et al., 2008; Ngene et al., 2012; Bahta et al., 2014). Countries that adopted CAADP since its inception in 2003, by investing 10% of their national budgets to the agricultural sector experienced an annual increase in their agricultural productivity of around 5.9% to 6.7%. On the contrary, those countries that did not implement the CAADP goals had farm productivity growth of less than 3% (Badiane, Benin, and Makombe, 2016). Therefore, agricultural spending has a bigger role to play in transforming the African communities in the decades to come. However, government interference in agricultural markets through spending depends on a country's wealthy as well as the government's objectives. The major investment areas in the sector include input subsidy programs, price support programs, agricultural research and extension as well as infrastructure development programs. In low-income countries, governments mainly intervene

In Africa's context, as agriculture remains the economic engine of rural Africa, promoting economic transformation in Africa will depend largely on stimulating agricultural growth. The underlying premise is that through broad-based smallholder-led structural transformation, Africa can achieve the derived level of poverty-reducing growth (Mashindano et al., 2011; Kimenyi et al., 2012; Tomsik et al., 2015). This notion that agricultural sector is the engine of economic growth can be traced back to the 1950s. Mellor (1976) indicated a development strategy for rural and developing countries with increasing agricultural productivity as the starting point. However, it was only until the 1990s that policy makers prioritized agriculture and by 2000, it became a key area when discussing development and growth.

Like many developing countries, Uganda's agricultural sector plays an important role in Uganda's economy. The population largely depends on the sector either directly through food consumption and employment or indirectly through agro processing and trade. The sector employs about 66 percent of the population. Further, with 80 percent of the population residing in rural areas and largely dependent on agriculture for sustenance, investment in the sector is the key for poverty reduction efforts. It is therefore not surprising that the recently adopted National Development Plan (NDP) recognizes agriculture as a primary growth sector of the economy. Enhancing the performance of the sector in part calls for earmarking considerable public resources for this purpose. Under the current configuration, the agriculture sector covers crop husbandry, animal husbandry and fisheries. The sector has three key outcome areas namely; agricultural production and productivity, improved markets and increase in value addition and, improvement of the enabling environment and institutional strengthening. (WORLD BANK, 2011)

Public expenditure in support of agriculture and rural development is an important policy instrument for Uganda's agricultural sector development. Public expenditures foster the implementation of Government strategies for development tin general and agricultural production in particular. In that regard many programs under the Plan for Modernizing Agriculture (PMA) framework and Rural Development Strategy (RDGs) are managed by ministries and agencies that are not directly linked to agriculture (MAFAP, 2014). The total approved budget grew by 4%, in nominal terms from 2008 to 2018 reaching to UGX 4209.31 Billion. Although the approved budget exhibits a positive growth trend, it is rather marginal

implying that in real terms, it could have diminished. The total actual expenditure did not match the approved budget as the sector needs UGX 1.6Trillion compared to the only UGX 0.8 Trillion is available(Budget Framework Paper FY 2018/2019).). Therefore explaining that the funding pressures in the sector shows that the pressures double the resources available. Therefore the Government of Uganda has over time reduced commitment to increase spending in agriculture as approved budget allocations to the sector are more or less stagnant and actual spending is declining. The trend does not confirm to the objectives of heads of states during the Maputo declaration of 2003. When you compare the growth in the budget allocations or actual expenditure towards agricultural or rural development with the national budget allocations, it is clear that there is a reasonable discrepancy. The national budget grew at write the rate at which the budget has grown in the states time period (MFPED, 2018).

The Government of Uganda recognizes that for the country to accelerate into the middle income as stated in the NRM manifesto and the National Development Plan 2. For this reason therefore, the Government has continued to increase its funding in the sector either directly or indirectly through programs like NAADS. But though funds are increased by a large percentage, the output in this sector is seen to be growing at a very slow rate and this is attributed but not limited to the ever growing population since the sector employs 70% of the population (NDP 2).

The agricultural sector is primarily funded through the national budget, with additional resources coming from donors in form of project support. In spite of its significance, the sector has continued to receive less than 5 percent of the budget. Given that the implementation of the National Agricultural Advisory Services (NAADS) program, which is a major budget item, is through local Governments. However it should be noted that most of this funding is largely conditional. This top-down approach constrains Local Governments from setting and implementing agricultural development priorities. Administration costs, both at the center - ministry level (MAAIF) and the NAADS secretariat - have also been substantially increasing, especially which reduces the funds allocated to this sector. During the Asian revolution, Governments spent more than 15% of their budgets on the sector to increase and sustain growth. Government spending is therefore undoubtedly one of the most direct and effective tools for agricultural growth (MAAIF, 2018)

Given that agricultural sector is the most preponderant sector of the Uganda economy employing over 66% of the working population, it would be therefore of great importance if the Government, civil society and other stakeholders addressed the challenges within the sector in order to attain the middle income status (COEDEL, 2016)

This study will be guided by the Keynesian theory of unemployment "The general theory of Money, interest and Employment, 1936" which emerged after the Great depression (Patinkin 1982 & Tobin 1997) as a result of mismanagement of macroeconomics by the world economies who assumed the operations of invisible forces of supply and demand in the economy(s). John Maynard Keynes the founder of this theory found it relevant for Governments to intervene in the production process of an economy. Since the monetarist's view of the operation of the invisible forces of demand and supply failed and caused the Great depression (1929-1930) characterized by higher levels of inflation and unemployment. The Keynesian theory was adopted for this study because it assumes Government is the major player in determining the level of output in a given sector of the economy (Ogunrinola, 2011).

1.1.2 Theoretical Background

The study is built up on Keynesian theory; the classicalists believe that market forces bring the economy to long-run equilibrium through adjustment in the labor market. The classical and neoclassical economists deem fiscal policies as ineffective due to the well-known crowding-out effect. While the Keynesians say that Government expenditure does not obstruct economic growth instead it accelerates it through full-employment, increased aggregate demand and so forth. This study however will be modeled by the Keynesian theory which was found by John Maynard Keynes when he published his book entitled, "The general Theory of Money, Interest and Employment." in 1936, after the occurrence of the Great depression (1929-1930) among world economies. The Keynesian school of thought suggested that Government spending can contribute positively to sectorial growth (like the agricultural sector) in the economy. Thus, an increase in Government expenditure is likely to result into an increase in employment, profitability and investment through multiplier effects on aggregate demand. Consequently, Government expenditure increases the aggregate demand which brings about an increased output depending on expenditure multipliers. Keynes regards public expenditures as an exogenous factor which can be utilized as a policy instruments to promote growth.

1.1.3 Conceptual Background

Agricultural output conceptually is the production of food, feed, fiber and other goods by the systematic growing and harvesting of plants and animals. It is the science of making use of the land to raise plants and animals (Olorunfemi, 2008). It is the simplification of nature's food webs and the channeling of energy for human planting and animal consumption. Uganda's economy largely depends on agriculture. Government spending or expenditure includes all government consumption, investment, and transfer payments (Tweedy, 2016). In national income accounting the acquisition by governments of goods and services for current use, to directly satisfy the individual or collective needs of the community, is classed as government final consumption expenditure. Government acquisition of goods and services intended to create future benefits, such as infrastructure investment or research spending, is classed as government investment (government gross capital formation).

Ikala (2010) opined that agriculture is the profession of majority of humans. The United Nations Organization (2008) estimated that the world as a whole, over 50% of the world population is engaged in agriculture or dependent of it for a living, this is a general description of the sector. The other hand, it includes farming, fishing, animal husbandry and forestry. Oji-Okoro (2011), stated that agricultural sector is the largest sector in the Ugandan economy with its dominant share of the GDP, employment of more than 66% of the active labour force and the generation of about percentage of Uganda's agricultural earning from foreign trade expressed as a percentage of the GDP foreign exchange earnings. According to Ngene et al (2012) agricultural output in the agriculture sector is witnessed over the past years is mainly due to the poor levels of investment. This low agricultural growth has made African economies to be more dependent on imports. Africa is still the only continent with an increase in food aid, about 45% of its population is living under a $1 per day and the number of food emergencies has tripled since the 80s (NEPAD, 2009; Ngene et al., 2012). The IFDC (2013) paper identified many hurdles to the agriculture sector, especially for smallholders. According to Taddeo (2011) Government spending can be a useful economic policy tool for governments. Fiscal policy can be defined as the use of government spending and/or taxation as a mechanism to influence an economy. There are two types of fiscal policy: expansionary fiscal policy, and contractionary fiscal policy. Expansionary fiscal policy is an increase in government spending or a decrease in taxation, while

contractionary fiscal policy is a decrease in government spending or an increase in taxes. Expansionary fiscal policy can be used by governments to stimulate the economy during a recession.

1.1.4 Contextual Background

The study will focus on the agricultural output being influenced by the government expenditure of Uganda. In the regard of many programs under the Plan for Modernizing Agriculture (PMA) framework and Rural Development Strategy (RDGs) are managed by ministries and agencies that are not directly linked to agriculture (MAFAP 2014). The total approved budget grew by 4%, in nominal terms from 2008 to 2018 reaching to UGX 4209.31 Billion. Although the approved budget exhibits a positive growth trend, it is rather marginal implying that in real terms, it could have diminished. Government Spending in Uganda decreased to 4061.31 UGX billion in 2017 from 4768.85 UGX billion in 2016. Government Spending in Uganda averaged 4462.80 UGX billion from 2008 until 2017, reaching an all-time high of 5365.36 UGX billion in 2015 and a record low of 3168.80 UGX billion in 2008. (UBOS, 2018) With a fluctuating government spending in agricultural sector, the researcher intends to carry a study on the effect of government expenditure on agricultural output.

1.2 Statement of the problem

Coffee is Uganda's top-earning export crop. In 1989 Uganda's coffee production capacity exceeded its quota of 2.3 million bags, but export volumes were still diminished by economic and security problems, and large amounts of coffee were still being smuggled out of Uganda for sale in the neighbouring countries (Nakawesi 2013)

Revenue from coffee exports reduced to $418m (Shs 1.5 trillion) between April 2018 to April 2019 compared to $521b (Shs 1.9 trillion) between April 2017 and April 2018 (UCDA, 2019).

Coffee farming in Uganda has been a significant economic activity contributing to the creation of employment opportunities, income earning to about 4.7 percent of the country's population as well as earning foreign exchange to the country. (UBOS, 2019). Coffee remained an important product earning an average of 60 percent of the annual export revenues during the period 2000 (Baffes, 2006). However, the share of coffee on total merchandise exports in the country has

been shrinking over the years from about 35% to 20% in 2001and 2010 and further to 15% in 2018 (FAO,2018)

Despite the increasing Government expenditures and funding towards coffee production, levels of decreasing actual expenditure in coffee production have been reducing over time which shows declining Government commitment to coffee production which needs to be addressed. In Uganda today we see Operation wealth creation (OWC) and NAADS as major players in the agricultural sector with the aim of improving on the productivity of the sector but unfortunately there is no measurable impact that has been realized during this operation. Furthermore, the current level of spending does not meet the CAADP recommendations of allocating 10 percent of the overall budget as expressed in the Maputo 2003 Declaration. But due to the fact that Uganda relies on agriculture, the Government expenditures still play a major goal in the agricultural sector and this greatly calls for Government intervention to address the endogenous and exogenous factors that limit the performance and growth of coffee production as a major cash crop.

1.3 Objectives of the study

The main aim of this study is to investigate the effect of Government spending on agricultural output over the period 2010-2018 is guided by the following objectives;

a) To analyze the effect of donations and grants received towards coffee production.
b) To analyze the effect of tax revenue on coffee production.
c) To find out the relationship between Government spending on coffee production in Uganda.

1.4 Research questions

The study was guided by the following questions;

(a) What is the effect of donations and grants received towards coffee production?
(b) What is the effect of tax revenue on coffee production?
(c) What is the relationship between Governments spending on coffee production in Uganda?

1.5 Significance of the study

The study aims to contribute in the following ways;

Enable Policy makers to review public spending to the agricultural sector, improve the level of productivity in cash crops (coffee) to the maximum output, and increase the level of exports in the country in order to improve on the GDP.

Educate scholars concerning the limiting and favorable factors that determine coffee output in the economy and enable policy makers analyze on the effectiveness of other Government policies towards the agricultural.

Also, the research report will aid farmers in decision making regarding the determinants of the level of coffee output for effective production.

1.6 Scope of the study

1.6 .1 Geographical scope

This study on the effect of Government expenditure on agricultural output will be conducted in Kampala district targeting coffee procurement data from UCDA. The choice of this area was mainly because of the interest in development partners like UBOS, MFPED, Government and Kampala International University; College of Economics and Management. This was coupled with the student's desire to practice coffee export from the Country made it a better option.

1.6.2 Time scope

It's a time series study for the period from 2005 to 2016considering secondary data.

1.6.3 Content Scope

The study conducted used secondary procurement data for a period 2005 to 2015 from Uganda Coffee Development Authority (UCDA), Ministry of Finance, Planning and Economic Planning (MFPED), Bank of Uganda (BOU) and Uganda Revenue Authority (URA). The choice of the areas was because of the reliable secondary data that is needed to establish the relationship between coffee production accounts and the funds issued by the Government.

1.6.3 Contextual Scope

The study will seek to determine the effect of local revenue, external reserves, pubic debts and grants on the productivity and level of agricultural output.

1.7 Operational Definition of Key words

Government Expenditures

Public expenditure is the main instrument used by Governments especially in developing countries to influence economic growth which is an essential ingredient for sustainable development. Economic growth brings about a better standard of living of the people through provision of better infrastructure, health, housing, education services and improvement in agricultural productivity and food security (Loto 2012). Nearly all the sectors in the national economies of developing countries demand more budgetary allocations every year. For instance, the agricultural sector under the Maputo Declaration of 2003 requires African Governments to increase expenditure on agricultural sector to at least 10 percent of the national budgetary resources (New Partnership for Africa's Development (NEPAD), 2011).

Agricultural output

Conceptually, Agriculture is the production of food, feed, fiber and other goods by the systematic growing and harvesting of plants and animals. It is the science of making use of the land to raise plants and animals. It is the simplification of nature's food webs and the channeling of energy for human planting and animal consumption (Olorunfemi 2008). Uganda's economy largely depends on agriculture. Ikala (2010) opined that agriculture is the profession of majority of humans. The United Nations Organization (2008) estimated that the world as a whole, over 50% of the world population is engaged in agriculture or dependent of it for a living, this is a general description of the sector. The other hand, it includes farming, fishing, animal husbandry and forestry. Oji-Okoro (2011), stated that agricultural sector is the largest sector in the Ugandan economy with its dominant share of the GDP, employment of more than 66% of the active labour force and the generation of about percentage of Uganda's agricultural earning from foreign trade expressed as a percentage of the GDP foreign exchange earnings.

CHAPTER TWO
LITERATURE REVIEW

2.1 Theoretical Framework

There have been contributions from various schools of thought such as the classical, neoclassical, Keynesian etc. on whether Government should intervene to short-run and long-run fluctuations in economic activity. The classicalists believe that market forces bring the economy to long-run equilibrium through adjustment in the labour market. The classical and neoclassical economists deem fiscal policies as ineffective due to the well-known crowding-out effect. While the Keynesians say that Government expenditure does not obstruct economic growth instead it accelerates it through full-employment, increased aggregate demand and so forth. This study however will be modeled by the Keynesian theory which was found by John Maynard Keynes when he published his book entitled, "The general Theory of Money, Interest and Employment." In 1936 after the occurrence of the Great depression (1929-1930)in world economies. The Keynesian school of thought suggested that Government spending can contribute positively to sectorial growth (like the agricultural sector) in the economy. Thus, an increase in Government expenditure is likely to result into an increase in employment, profitability and investment through multiplier effects on aggregate demand. Consequently, Government expenditure increases the aggregate demand which brings about an increased output depending on expenditure multipliers. Keynes regards public expenditures as an exogenous factor which can be utilized as a policy instruments to promote growth (The general theory of Money, Interest and Employment, 1936)

Musgrave Theory of Public Expenditure Growth; Musgrave (1997) argued that what matters most for Government spending is how effective it is. If the so called "productive" category of Government spending is not effective, it can have a negative impact on growth. This theory was propounded by Musgrave as he found changes in the income elasticity of demand for public services in three ranges of percapita income. He posits that at low levels of per capita income, demand for public services tends to be very low, this is so because according to him such income is devoted to satisfying primary needs and that when percapita income starts to rise above these levels of low income, the demand for services supplied by the public sector such as health, education, transport and agriculture starts to rise, thereby forcing Government to increase

expenditure on them. He observes that at the high levels of percapita income, typical of developed economics, the rate of public sector growth tends to fall as the more basic wants are being satisfied

The Wagner's Law/ Theory of Increasing State Activities; Wagner's law (1885-1917) postulates that: (I) the extension of the functions of the states leads to an increase in public expenditure on administration and regulation of the economy; (ii) the development of modern industrial society would give rise to increasing political pressure for social progress and call for increased allowance for social consideration in the conduct of industry (iii) the rise in public expenditure will be more than proportional increase in the national income and will thus result in a relative expansion of the public sector.

The Neoclassical Growth Theory. The neoclassical that based their research on Solow (1956) growth model were of the view that Government expenditure is detrimental to economic growth in the long-run. It is as such because of the argument they brought forward. To them, Government expenditure engenders the crowding out effect and in times of budget deficit, taxes are raised which increases production costs and leads to increased price and low demand or the Government results to borrowing. Also, Government spending discourages private investments. Robert Solow and T.W. Swan introduced the Solow's model in 1956. Their model is also known as Solow-Swan model or simply Solow model. In Solow's model, other things being equal, saving/investment and population growth rates are important determinants of economic growth. Higher saving/investment rates lead to accumulation of more capital per worker and hence more output per worker. In the absence of technological change & innovation, an increase in capital per worker would not be matched by a proportional increase in output per worker because of diminishing returns. Hence capital deepening would lower the rate of return on capital.

The Endogenous Growth Theory; the basic improvement of endogenous growth theory over the previous models is that it explicitly tries to model technology (that is, looks into the determinants of technology) rather than assuming it to be exogenous. Mostly, economic growth comes from technological progress, which is essentially the ability of an economic organization to utilize its productive resources more effectively over time. Much of this ability comes from theprocess of learning to operate newly created production facilities in a more productive way or

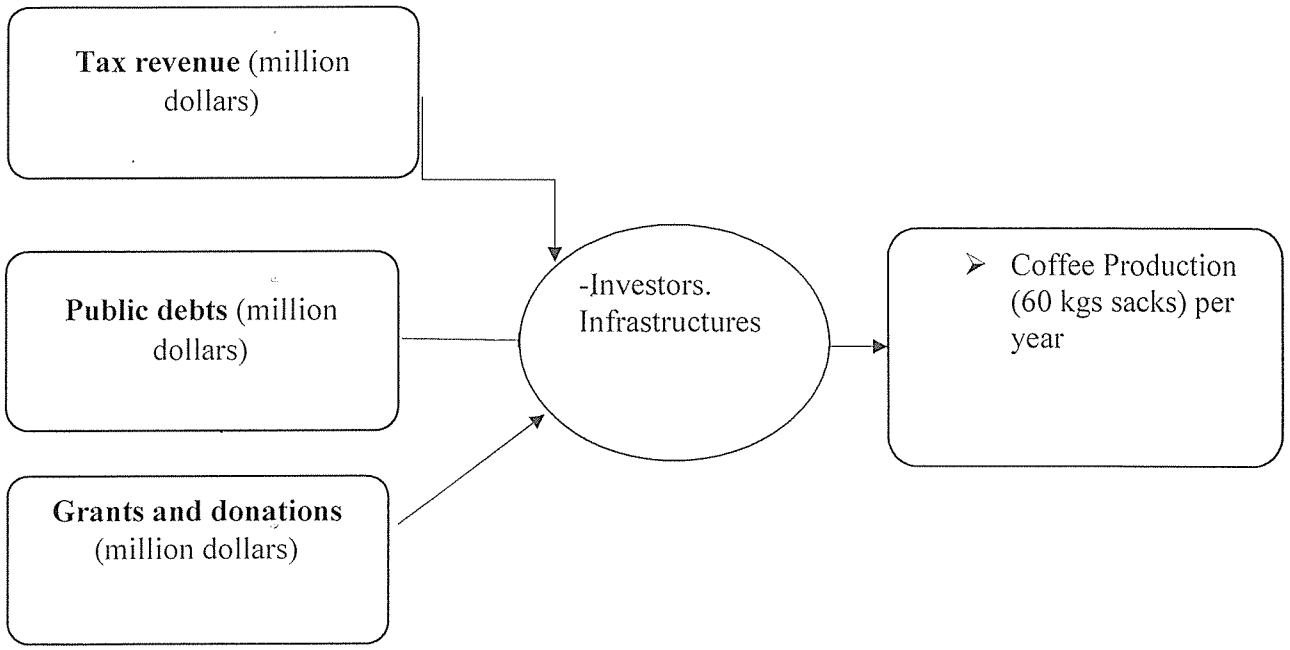
more generally from learning to cope with rapid changes in the structure of production which industrial progress must imply (Verbeck, 2000).

2.2Conceptual framework

The conceptual framework shows a diagrammatic representation between the independent variable and the dependent variable

Independent Variable **Dependent Variable**

Government Expenditures **Agricultural Output**



Source: Adapted from literature review of;-Chakra borty (2006);Leroy (2012); Premaratne (2002); Lechneret al. (2006) and Watson (2011); Harvey et al. (2012).

Explanation of the conceptual framework

Ideally, Government expenditure is the deliberate Government attempt to influence the level of economic activities in an economy. Governments in most of the developing countries tend to use donations, grants and external borrowing to finance their expenditures since the revenue from the taxes is never enough. On the other side, we see how these expenditures are capable of impacting

the sub-sectors within the agricultural sector of which they are categorized into; Fisheries, Apiary, crop and animal husbandry.

2.3 Related Studies in relation to each Objective

Empirically, Were et al. (2002) determine factors that have impacted coffee production. Using error correction model (ECM), they found out that investment hasa positive and significant impact on the volumes of coffee produced. Their results further reveal that other non-price factors such as the cost of inputs, labour costs, and access to credit play a vital role in coffee production and export supply response in the country. In the same vein, Gebreyesus (2015) uses ECM and Vector Autoregressive approaches to investigate the determinants of coffee exports in Ethiopia. The results indicate that real export price of coffee and competitor production had significant on coffee export. The study also finds out that coffee production also contributed heavily to the country's GDP growth. Crentsil and Boansi (2013) investigate the drivers and performance of coffee exports, production and price in Ethiopia. Their findings indicate that Ethiopia has a comparative advantage in coffee exports. Nonetheless, the results do not reflect the same on its overall performance on the international market. Keeping other factors into considerations such as high transaction cost, price shocks, supply chain and the many actors and processes within, problems with quality control, the incidence of smuggling, and small scale production. International trade in the products such as coffee is a product of both classical and neoclassical theories of trade (Sen, 2005; Meini, 2013). Absolute advantage theory of trade, which was coined by Adams Smith in 1776 offered an explanation as the best in producing a product than the rest should concentrate on it. The theory provides many frameworks and policies that facilitate a successful trade (Sen, 2005). Smith concluded by saying that for nations to do well in the international markets, they should regulate their systems. David Ricardo (1817) stresses that countries can mutually benefit from each other even in the presence of absolute advantage over the other in the production of all the goods and services. Ciuriak et al. (2015) stress that trade is greatly supported and influenced by trade policy and negotiations. This facilitates market access, multilateral agenda and services, standards, trade, procurement and innovation in the industries and firms. They emphasized the need for trade policy, and models that shape international trade. They also went ahead towarn of multifaceted impacts of trade policy. Kee, Nicita and Olarreaga (2009) stress thatpoor countries face higher trade barriers for

their exports because they also tag further restrictive trade policies. Hence explains why developing countries may or have continuously performed poorly in the world market are higher trade barriers in raw agricultural products from poor countries, some tropical commodities such as cocoa and coffee have been partially liberalized. However, the prices of these products in the global markets are not stable and have been dwindling in recent years.

2.3.1 Relationship between Agricultural Public Spending and Agricultural productivity

In developing countries like Uganda, there exists a positive relationship between public spending and agricultural productivity (Alston, J.M., B.J. Craig and P.G Pardey.). It follows that in developing countries spending to agriculture is one of the most important government instruments for promoting economic growth and alleviating poverty in rural areas (Fan and Sarkar, 2006).An empirical analysis by (IAAE, Beijing, 2009) on government spending, growth and poverty supported the view that government spending enhances agricultural productivity. The analysis further showed that additional government expenditures on agricultural research and extension have the largest impact on agricultural productivity growth. The research concluded that a one percent increase in public spending on agriculture was associated with a 0.15 percent increase in agricultural labor productivity, with a benefit-cost ratio of 16.8. However, the research noted that implications are drawn for prioritizing additional or future public resources.

An empirical analysis by Institute of Economic Affairs in 2013 on public spending on agriculture in Uganda revealed that public spending on agriculture was exceedingly low. Less than the 10% was allocated to agriculture which contravenes the goal set by African leaders in the 2003 Maputo agreement (budget 2013/14). In the face of such budget constraints faced by countries like Uganda, it is suggested that the government would need to find ways to maximize the impact of their large and increasing expenditures in social sectors on agricultural labor productivity. One way to do that is to first recognize that the mix of social expenditures is not growth-neutral and then, to try and target such expenditures to areas where they have the biggest and most immediate impact on productivity (Summer A., Ousmane B., 2014).

2.3.2 Relationship between Agricultural Commercial Bank Loans, advances and coffee production

In both developed and undeveloped economies, there exists a profound positive relationship between commercial bank loans and advances and the level of agricultural output (Ekpebu, 2006). Federal government capital expenditure contributed positively to the growth of agricultural output in Nigeria.

Stephen Akroyd& Prof. Lawrence smith, 2007 argued that insufficient funding or credit facilities are among the key factors contributing to the continued underperformance of the agricultural sector. They concluded that credit facilities are significant to agricultural productivity. In their study on measuring and analyzing agricultural productivity in Uganda note that the contraction of credit schemes in the agricultural sector is one of the key factors contributing to the decline in both labour and land productivity. In their study, an often-mentioned impediment to agricultural productivity in Uganda especially among small-scale farmers is the lack of credit. To them, it might be argued on the basis of the above findings that increased access to credit can positively influence productivity by increasing the farm's capital base. More directly, access to credit enables farmers to purchase farm materials such as fertilizers, improved seeds, and herbicides that are important for enhancing productivity.

In a discussion about credit availability issue stating that "Making credit available and ensuring its productive use should therefore form the basic planks of any credit policy to foster agricultural productivity". (Pervaiz, 2003). In the study of credit access by dairy farmers in Ntungamo district, Uganda (tweheyo, 2015), it was noted that inaccessibility to agricultural credit by Dairy farmers has contributed to the low and declining use of farm inputs resulting in a fall in agricultural productivity. She further notes that there is need for facilitation of access to agricultural credit, in order to raise amount of productive investment thereby playing a crucial role in elimination of farmers" financial constraints for investment in farm activities, increasing productivity and improving farm technologies. She further states that agricultural credit enhances productivity and promotes standard of living by breaking a vicious cycle of poverty for small-scale farmers. It can therefore be concluded that agricultural commercial bank loans and advances have the potential to substantially improve agricultural productivity but needs to be

expanded if considerable positive impact to the sector are to be realized. This provides the need for its inclusion in the model.

2.3.3 Relationship between Agricultural Donor Spending and coffee production

Due to the food price crisis, donors have re-focused on agriculture in recent years. The upward trend is largely concentrated in the region's larger countries—Nigeria, South Africa, Kenya, Ghana, Uganda, Ethiopia, and Sudan, which together accounted for 70% of public R&D spending in 2008 (Beintema, N.M. &Stads, G.J. IFPRI, 2011).

Morton, J, 2010 estimated donor funding for agricultural R&D, a key influence of agricultural productivity, in Sub-Saharan Africa in 2009 at approximately $450 million. David S., Fatima Z., Kathleen F, 2011 places the 2008 figure at about $245.6 million (in constant 2007 prices). Kay C, 23 (6): 1073–102, 2002 using data for 98 less developed countries between 1970-1985 and using variations of grouping these countries (by relative size of agricultural sector, income levels, relative external debt) found that donor spending has improved agricultural productivity in Asia, which is not surprising given the egalitarian nature of land reforms in most Asian countries. Agricultural productivity in Sub-Saharan Africa has been affected to a lesser extent. This evidence, however, has not been found for Middle Eastern and Latin American countries, where land reforms were restricted in scope with distorted goals prompted by government malpractice and unequal distribution of land. Likewise, donor spending has been less effective in boosting agricultural productivity in countries with high levels of external debt.

Mellor, J, 1988 a proponent of "agricultural –first" approach, recognizes the importance of foreign aid with emphasis on agriculture and states that it has stimulated development in a number of Asian and Latin American countries. The success of the Green Revolution has substantially increased food production in Asia in the late 1960s and 1970s. In this regard, foreign aid intervention has emphasized the importance of agricultural production in tackling food bottlenecks as well as improving social welfare.

2.3.4 Contributions of the Agricultural sector to GDP

Agricultural share in national income is often used as one of the structural factors that can explain tax effort especially in cross country studies. Countries that are highly dependent on agricultural sectors are usually under developed with their agricultural sectors usually smallholder and subsistent in nature making them potentially hard to tax (Joseph Mawejje, 2016). It's not surprising therefore, that many cross-country studies find a negative relationship between agriculture share in GDP and tax revenue performance (Pession. &Fenochietto 2010; Gupta 2007). Furthermore, it is possible that for political rather economic reasons some countries exempt a large share of agricultural activities from taxes (Bird & Martinez-Vazquez 2008) and this affects the tax revenue performance. Generally, the level of development of the economy is expected to positively influence tax revenue performance and large nonagricultural sector, urbanization and high per capita income levels are all expected to positively influence tax revenue mobilization (Moore 2013).

2.3.5 Agriculture for economic development

Potentially; agriculture can be a fundamental instrument for sustainable development and poverty reduction, and agricultural growth can be a powerful mean for reducing inequalities. The inequality has been growing in Uganda, both within rural areas and between rural and urban areas, and the agricultural growth can and should contribute to reverse that trend. The key question is, however, what the effective instruments in using agriculture for development are, which is in Ugandan context is how to move from subsistence to commercial agriculture. This Policy Note concludes that the government's current approach to promote commercialization through more inputs through the National Agricultural Advisory Services (NAADS) and other projects of the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), as well as targeting larger farms, are insufficient and often unsuitable to unleash the constraints to inclusive agricultural growth. To attain the structural transformation through a smooth process of smallholder agricultural commercialization, policy and strategy interventions are urgently needed to improve investment climate, develop rural infrastructure, make land market more flexible, improve access of smallholders to rural finance, enhance the provision of agricultural services, and invest in the north. It is a complex multi-sectorial agenda but with high pay-offs.

2.3.6 Agriculture and inclusive growth in Uganda

Agriculture is a fundamental instrument for sustainable development and poverty reduction, and agricultural growth can be a powerful mean for reducing inequalities. The 2008 World Development Report found that growth originating in the agricultural sector is two to four times as effective as growth originating in the non-agricultural sector in increasing incomes of the bottom third of the income distribution (see WDR, 2007). Agricultural growth has been the main instrument of rural poverty reduction in the most developing countries in the recent past, and this is not a surprise that agricultural growth also has a much more direct impact on hunger than general economic growth does (Binswanger-Mkhize et al., 2009). Because of that, no country has been able to sustain a rapid transition out of poverty without raising productivity in its agricultural sector, according to the recent study of Timmer and Akkus (2008). While in the long run, the way to raise rural productivity is to raise urban productivity (unless the non-agricultural economy is growing, there is little long-run hope for agriculture) and out-migration to these growth areas, historical record is very clear on the important role that agriculture itself plays in stimulating growth in the nonagricultural economy in the short and medium run (Barrett et al., 2010).

The agricultural growth has slowed down to 1.1 percent a year during 2004-08, compared to 5.4 percent during 1998-02, according to the national accounts. It was then announced in the key national development documents that more targeted interventions are required to enhance agricultural growth, going beyond a broad-based development approach. More targeted interventions are indeed required because the agricultural sector requires not only "prices to be right" but also access to technologies as well as adequate private and public goods in order to produce marketable surplus and commercialize. Yet, the current focus on the public provision of private goods instead of facilitation of the private sector to provide those goods is not a sustainable solution. It is based on a number of incorrect assumptions, including the recent sectorial performance, spatial differences, and better performance of large vs. small farms.

2.3.7 Agricultural research and advisory services.

This has been acknowledged around the world and also in Uganda, which continues to allocate significant resources for these public functions. They are not only critical to raise agricultural productivity but also reduce various risks faced by smallholders ranging from weather and

climate events to pests and diseases. Past investments in research and advisory services in Uganda have yielded significant benefits, but the increasing demands for more inputs from NAADS may negate those earlier benefits. The success of research and advisory services in raising agricultural productivity and reducing smallholder risks (and thus increasing commercialization) will depend on (i) the success in empowering farmers; (ii) collaboration between research and advisory services, in particular at the local level; (iii) greater focus on quality advisory services rather than inputs; (iv) defining the arrangements for delivery of veterinary services outside of NAADS; and (v) the high-quality regulations for inputs market.

2.3.8Agricultural commercialization

The issue being increasingly centered in the policy discussions on structural transformation and development in the country. Whereas peasant agriculture may mitigate migration to urban slums, commercialization is essential if agriculture is to make any contribution to development. Commercialization may be good for inclusive growth; yet it may lead to income disparities and adverse effects on poor if it bypasses smallholder farmers. In Brazil, for example, where agricultural growth has been mostly driven by large-scale commercial agriculture, the relationship between agricultural growth and poverty reduction is much weaker than in China, Vietnam, and Thailand, where agricultural growth has been driven by commercialization of small-scale farms.

CHAPTER THREE:
RESEARCH METHODOLOGY

3.0 Introduction

This chapter shows the research methodology that was employed when conducting the study. The chapter indicates the procedure, the analytical and statistical tools that were used. The chapter also renders the research design, target population, and the sample design. Furthermore the chapter shows how the variables of the study were measured, the process followed when developing the survey instrument, collecting the data and analyzing that data. Finally the chapter expounds on the challenges encountered when carrying out the study.

3.1 Research design

A research design is defined as the overall pattern that defines the conduct of a research (Bryman & Bell, 2011). It is the overall plan and strategy that informs the key decisions that are adopted in research. A researcher can choose from an exploratory, descriptive explanatory, case study, cross sectional studies, longitudinal or time series research designs. This is informed by the overall objective of the study or research. The study adopted a case study; a case study involves the application of intensive, descriptive and holistic analysis of a single entity: the bounded case (Oso &Onen, 2005). A case study was adopted for cost effectiveness and data management in terms of obtaining and merging data from different units within the agricultural sector. And in addition this kind of data being a time series data requires more time and more resources in order to conduct the remuneration. The general objective of the study is to establish the effect of government expenditure on the level of coffee output in Uganda. Accordingly, the study describes how tax revenue, public debt, donations and external reserves control the amount of coffee that is produced in Uganda today.

3.4 Data source or evidence to be collected

No new surveys or data collection tools were implemented for this research. Rather, I will rely on gathering existing numerical data (secondary data), as well as studies and interpretation to address my problem and sub problems. Data gathered was limited to that collected no earlier than 2008. This data includes:

- √ Past and present local revenue(s) collected by Uganda Revenue Authority.

- √ External reserves by the Government of Uganda from Bank of Uganda.
- √ Government expenditures and Public debt data in the Agricultural sector from the Ministry of finance and Economic Planning.
- √ Coffee Market Procurement data from Uganda coffee Development Authority.

The data mainly used time series data collected for the period 2008 to 2018. Secondary data was used given its availability and cost effectiveness and convenience (Financial Times and Prentice Hall, 2000). Also, secondary data enables the generation of new insights from previous analyses (Fàbregues, Sergi (sfabreguesf), 2013). A rapid verification process was undertaken to remedy the lack of control over the quality of the secondary data used (Saunders, M. N., Saunders, M., Lewis, P., & Thornhill, A. (2011). It is believed that this process not only enhanced the reliability but also the findings and conclusions of the study

3.5 Data Analysis

Data was analyzed using STATA and SPSS where several tests were made. Such tests included the following; Normality tests, Stationary (Unit root tests and linearity among the variable in the study. An analytical model of a linear multiple regression equation of the form shown below was developed as:

$$Y=\alpha+\beta1X1+\beta2X2+\beta3X3+\beta4X4+e1$$

Where by: Y= agricultural output (coffee output) (proxy for agricultural productivity); α = Autonomous factors; X1= Agricultural public spending (tax revenue); X2 = Agricultural donor spending; X3 = public debt; X4 = external reserves. $\beta1$ = Coefficient for Agricultural public spending; $\beta2$ = Coefficient for Agricultural donor spending; $\beta3$ = coefficient of public debt; $\beta4$ = coefficient of external reserves; e= Error term - Captures all other explanatory variables which influence agricultural productivity but are not captured in the model.

The socio-economic indicators were analyzed and were established by computing the F-values together with ANOVA tables. ANOVA is an analysis technique that compares individual and group differences of subjects that are exposed to different treatments. Treatments in this study were the different statutes of government expenditure (tax revenue, public debt, donations and external reserves

3.6 Limitations of the study

The major limitations of this study were; inaccessibility of the final user(s) of funds within the agricultural sector to ensure the right interpretation, unalteration of primary data, unavailability of standard indicators/ measures of the level of output within the agricultural sector and delay in response to data requests made to Government agencies and the concerned bodies. If all factors were kept constant, the researcher would have accesses to the particular units within the sector that are responsible for the process of this information, i.e. on district level. But certain several factors such as the "in efficiency of Government agencies", alteration of primary data in exchange of bribes and corruption and low levels of monitoring and evaluation could lower the reliability and validity of the study. But this is the most suitable technique in the circumstance because under regression analysis, the level of significance of this data (model) can be determined. Hence discovering whether some variables contribute or not to the level of agricultural output. However, the researcher endeavored to complete the research though some limitations were encountered.

3.7 Ethical Considerations

In light of the climacteric importance to adhere to ethical norms in research work (Shamoo& Resnik, 2009), the researcher strived to carry out with utmost reckon to soaring professional and honorable standards. A researcher is bound to respect noetic property and authorship, and to exercise carefulness to avoid errors and negligence.

In the process of conducting the research, the researcher identified himself by a university ID in personal engagements, chats and email exchanges. In this study, the researcher made formal requests to the Authorities, and ministries or their representative who allowed their statisticians, analysts and managers to be briefed and participate.

To ensure anonymity of the participants, no name has been recorded in this study that present the existent identity of the participants.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION.

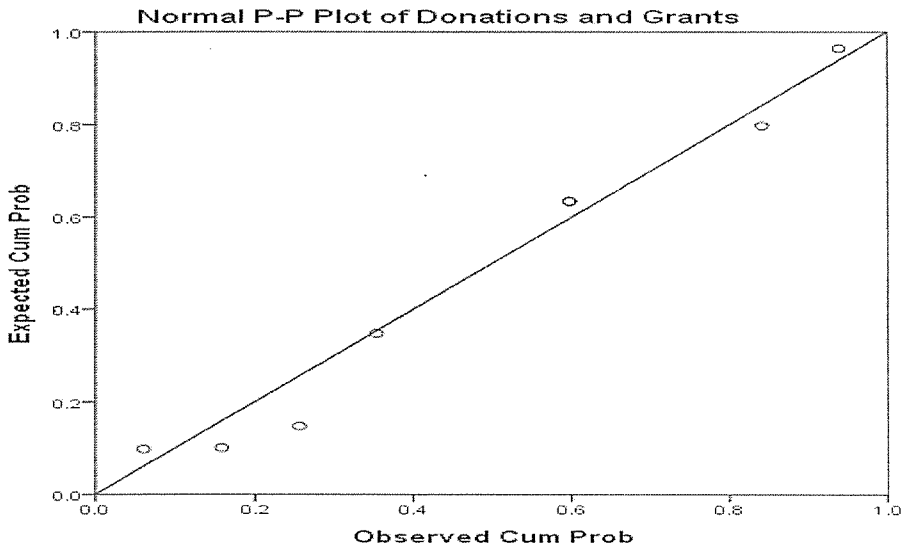
4.0 Introduction

This chapter presents the findings of the quantitative study. The chapter included the statistical tests such as normality, stationary and linearity. The study contained the background information of the particulars, the correlation and regression results. The general characteristics of data include, the coffee market Procurement information, funders of the Authority as an independent variable.The general characteristics try to elaborate the features of data including coffee output, Donations and grants, local tax revenue, external reserves and also the public debt for the financial year 2005/06 to 2015/16. It therefore tells us more about the variables that were considered in the study.

4.1 The effect of donations and grants received towards coffee production

To analyse the effect of the donations and grants received towards the coffee production was the first objective of this study. The analysis under this objective looked on the normality and stationary.

Figure 4.1.1: Normality of Donations and Grants



Source: SPSS output

Figure 4.1.1 shows that the data about donations and grants is normally distributed. This is because the plots are nearing the line of regression. Thus the data was considered to be relevant and usable.

Figure 4.1.2: Unit root test for Grants and Donations

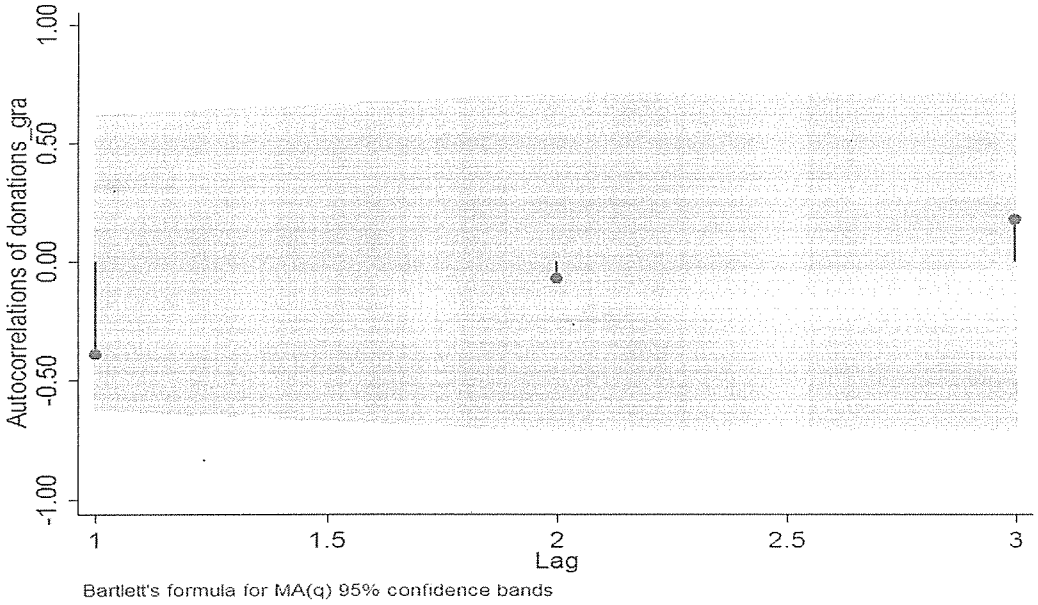


Figure 4.1.2 shows the unit test criterion using AC correlogram. The criterion is that when the plots are inside the shade, the data is termed to be trending. Therefore, the data about Donations and Grants is not stationary.

Table 4.1.3: Stationarity about Coffee production

The unit root test was made using the Dickey-Fuller test to test whether there data about the variable is stationary or not.

Dickey-Fuller test for unit root Number of obs = 9

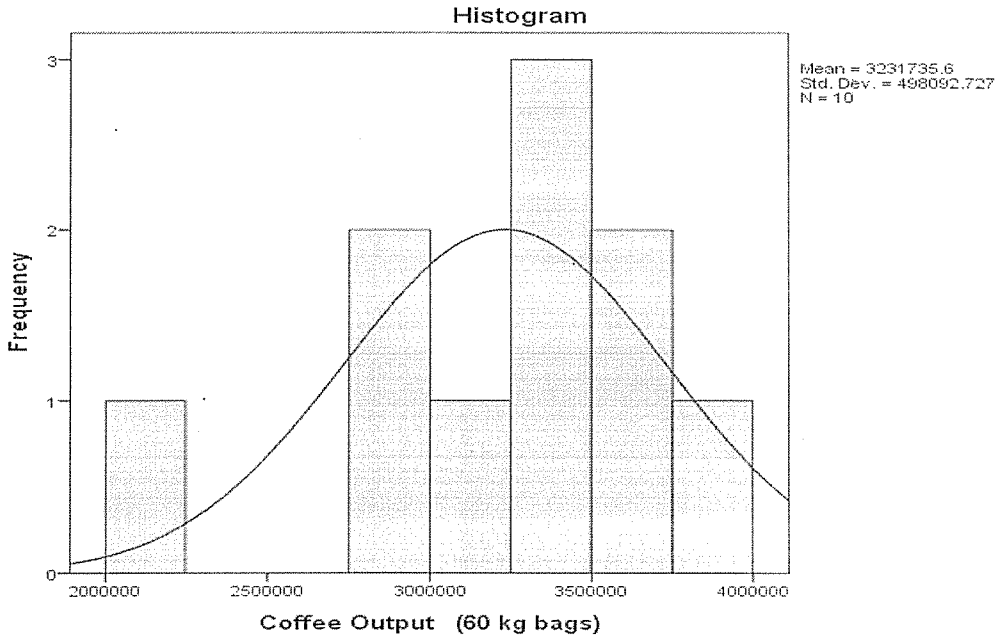
	Test Statistic	Interpolated Dickey-Fuller 1% Critical Value	5% Critical Value	10% Critical Value
Z(t)	-2.140	-3.750	-3.000	-2.630

MacKinnon approximate p-value for Z(t) = 0.2289

Source: SPSS output

At 5% level of significance, the criterion is that when the test statics on Dickey fuller test has got fewer negatives than the critical value, the data about the variable is not stationary. According to the output in table 4.1.3 above, the static test (-2.140) has less negatives than the critical value (-3.000)

Figure 4.1.4: Normality about the Coffee production



Source: Researcher, 2019

Table 4.1.4 shows the normality test using the super imposed normal curve on the histogram. According to the output above in table 4.1.4 shows that data about coffee production is normally distributed. This implies that the data about coffee output is taken relevant in this study.

Table 4.1.5: Linear relationship between coffee production, Grants and Donations.

Theme	Coffee Output	Donations & Grants
Coffee Output	1	0.488
Donation and Grants	0.488	1

Source: Researcher, 2019

Table 4.1.5 shows the Pearson's coefficient of 0.488. This implies that grants and donations have got a positive moderate relationship towards the production of coffee in Uganda.

4.2 The effect of tax revenue on coffee production

In this study, the second objective was to analyse the effect of tax revenue on the production of coffee production as an indicator of agricultural output. Normality test was done to ensure the kind of data to be used in the study.

Table 4.2.1: Normality test for tax revenue

```
. swilk  tax_revenue

                    Shapiro-Wilk W test for normal data

    Variable |   Obs        W           V         z       Prob>z
-------------+--------------------------------------------------
 tax_revenue |    10     0.97016       0.460    -1.239    0.89237
```

Source, Researcher, 2019

Table 4.2.1 shows the normality test for tax revenue. The criterion is that when the Shapiro Wilkson test value is approximately equal to 1, the data is normally distributed. From the above table, the Swilk value (W= 0.97016) is nearly approximated to 1, thus the data about tax revenue by the government is normally distributed

Table 4.2.2: The strength of Tax Revenue on Coffee Production

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.407[a]	.166	.062	482522.451

Source: researcher, 2019

Table 4.2.2 shows the strength of tax revenue towards the coffee production. The table shows a week strength impacted on coffee production by the tax revenue.

4.3. The relationship between Government expenditure and Agricultural output.

To assess the relationship between government expenditure and the agricultural output was the third objective of this study. The government expenditure was categorized with different indicators such as tax revenue, local government revenue, public debt and reserve requirements. Also, the agricultural output (dependent variable) was shown by Coffee production as its indicator

Table 4.3.1: Coefficients of Coffee production

Table 4.3.1 shows the relationship between government expenditure indicators and coffee production as an indicator of agricultural output in Uganda.

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	2685428.010	593033.404		4.528	.006
Donations and Grants	.000	.000	.588	1.840	.125
Local Revenue(gov't and authority)	2.916E-005	.000	.570	1.514	.191
External Reserves (US $ millions	1.563	6.774	.074	.231	.827
Public Debt (US $ million)	-50.285	163.703	-.114	-.307	.771

Source: SPSS output

Coffee output varies directly with donor spending, tax revenue, external reserves and public debt. When the independent variable(s) are considered not significant to the model, then coffee output is estimated at 2685428.01 units. Keeping tax revenue, external reserves and public debt constant, a unit change in donor spending causes the coffee output to change by 0.019 units. A unit change in the tax revenue keeping; donor spending, external reserves and public debt constant, the coffee output increases by 2.91608 units. A unit change in external reserves whilst making donor spending, tax revenue and public debt constant will increase coffee production by

1.56 units. Finally a unit change in Public debt(s) keeping donor spending, tax revenue and public debt constant, coffee production will reduce by 50.28 units.

Also, using the Sig value analysis, the criterion is that when the Sig value is less than 0.05(level of significance), reject the null hypothesis. The sig values for Donations and Grants (0.125), Local Revenue (0.191), External Reserves (0.827) and Public Debt (US $ million) with 0.771 Sig value. Basing on the set criterion, all the variables under the government expenditure were not statistically significant enough to determine the level of coffee production. This implies that there are other several factors which determine the level of Agricultural output other than the level of government expenditure.

Table 4.3.2: ANOVA table of results

	Df	*SS*	*MS*	*F*	*Significance F*
Regression	4	1.1497	2.8743	1.3268	0.37488
Residual	5	1.0831	2.1662		
Total	9	2.2329			

Source: Researcher, 2019

Table 4.3.2 shows the ANOVA table results in relation to the overall model. The criterion is that when the Significance Of value is less than 0.05(level of significance), the model is said to be significant. From the output above in table 4.3.3 shows the Significance F-value (0.37488) which is greater than the level of significance (0.05). This therefore concludes that, the model under the study using government spending as independent variable and Agricultural output as a dependent variable is not statistically significant. This brings to the agreement that there are other factors which determine the level of agricultural output especially coffee production. Using the OLS regression, the results show the coffee production has a negative relationship with the Government expenditure in the country thus an inverse relationship. The paper concludes that ceteris peribus, all the determinants in the model may not influence the level of coffee produced in Uganda. Therefore the government of Uganda should as a matter of necessity implement the

already made coffee policies and if necessary, make some reforms to improve production and promote the product in the international markets for competitiveness and maximum earnings.

CHAPTER FIVE
SUMMARY FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

The study aimed at finding the effect of government spending on the level of agricultural output in Uganda. The level of government spending was categorized by its indicators such as Tax Revenue, Grants and Donations, Public Debt and External Reserves. Also the agricultural output was measured using the Coffee Output in Uganda from the financial year 2004/2015 to F/Y 2014/2015.

5.1 Summary of finding

The study found out that the data about the grants and donations by the government towards the coffee output. Also, the sig values for Donations and Grants (0.125), Local Revenue (0.191), External Reserves (0.827) and Public Debt (US $ million) with 0.771 Sig value. Basing on the set criterion, all the variables under the government expenditure were not statistically significant enough to determine the level of coffee production. This implies that there are other several factors which determine the level of Agricultural output other than the level of government expenditure.

The study found out that model under the study using government spending as independent variable and Agricultural output as a dependent variable is not statistically significant. This brings to the agreement that there are other factors which determine the level of agricultural output especially coffee production.

Relationship between tax revenue and coffee production.

The results indicated that tax revenue enhances coffee production. In essence, the results showed that when the local revenues are allocated to the authority (UCDA)and coffee farmers, the key financial institutions representatives, and people who are respected in the society who can be trusted with coffee growing and development funds they can easily be obtained by the respective customers which highly improves the productivity of coffee. Further, a good relationship with key financial institutions and people in the society like the LCs, and other members of the

community whose advice is sought on the potential farmer's character and ability by coffee growing unit's officials gives them a chance to give a good evaluation.
The findings therefore indicate it is hard for coffee farmers who isolate themselves and have no close relationship with other people to be considered worth to receive government funding. When such people operate like an island they rarely get a chance to know what it takes to apply for the funds and also fails to get people to act as guarantors when required.

Also in the study it was revealed that the coffee farmers with a wide experience on handling the coffee, the one who understands the better breeds of the coffee and the general business of coffee farming demonstrates the ability to be able to manage the business and increase on the amount of coffee that is produced. These are the farmers who perform well in demonstrating to the authority how practical it will be for them to utilize the money they seek well and be able to repay the agreed installments to finance their loans. On the other hard farmers lacking wide experience in coffee farming find it difficult to convince the authority that their business will raise adequate amount to repay the funds, incase borrowed from the authority.

The result findings support other scholarly works that has been done to establish the drivers to coffee production among the farmers and other entrepreneurs. Such works as one byPandula (2011) established that social capital was instrumental in helping many SMEs acquire funds. The scholar observed that that SMEs that had close ties with SMEs representative societies and were part of such unions as Chamber of Commerce acquired more legality in the eyes of the bankers and were considered more viable and therefore more creditworthy.

Also supported by the findings are the works of various scholars who found that tax revenue also helps in enhancing coffee production of business owners. Schuller (2002) for instance observed that a person who has accumulated wide range of skills and knowledge also present a good sign that they are effective since they appear knowledgeable on the entity they engage in. Similarly Barbosa and Moraes (2004) observed that among the borrower-specific factors that influence creditworthiness of entrepreneurs is managerial competencies which, can also be translated into skills and experience, are a key human capital that banks are interested in when determining if loan seekers are worth. Also, Shane and Stuart (2002), Rudez and Mihalic (2007) and Mahembe

et al.(2013) had concluded their studies by observing that the higher the level of managerial competency exhibited by the owners of firms the greater the viability and survival of the new SME, and these were a pointer of creditworthiness of such a venture.

It was interesting that the findings, especially from the qualitative study did not relate academic qualif. The reasoning behind this was attributed to the fact that what was important was to assess the coffee farmers on their ability to manage their businesses and repay the loans, which the loan officers believe did not entirely rely on the level of academic qualification. Indeed they felt that managerial skills, experience, and also their life history in terms of the way they organized issues were important.

Relationship between donations and coffee production

The findings indicate that donations have an inverse proportionality with coffee productions. The results reveal clearly that external pressures have no influence to the amount of coffee that is being produced in Uganda. Such donations and grants that are received are mainly directed to the authority and target projects not particularly coffee farmers which limits the level of coffee output. According to the study, these donations are used in developing of third party structures like nursery beds, organizing meetings for farmers and also meeting the costs of the Authority. Such expenditures are indirectly affect the level of coffee that is produced.

Relationship between public debt and coffee production

The findings indicate a direct proportionality between the public date and coffee output, considering the value of regression, there exists a significant relationship between the public debt and coffee production. To a smaller extent public debts increase the level of spending of the Government which makes available the funds for spending within the Authority and coffee production at large. Public debts makes available funds in financial institution and at low interest rates, this attracts the farmers to borrow and use such funds for coffee production. Being a growing economy, public debt is a major source of funding for some sectors of the economy. The findings further indicate that for the years the public debt has been high, there has been increased level of coffee production and the reverse is True. Therefore for the Uganda's economy to increase on coffee production, there should be more capital from abroad directed towards this sector.

Relationship between external reserves and coffee production.

There exists a negative relationship between coffee production and external reserves. This is simply because the money or the profits which was supposed to be re (invested) in coffee production is saved in terms of reserves. The findings also reveal that as the country continues to save more and more money, the funds ready for farmers to use keep on reducing thus lowering the levels of total coffee production. Furthermore, the results reveal that there is a insignificant relationship between the variables meaning for high productivity levels of coffee to be revealed, the Government should reduce its external reserves just above the recommended standard.

5.2 Conclusions and Recommendations

The government of Uganda through the local governments should venture its capital in other fields not only in Agriculture. According to Regulation 24 of the LGFARs 2007, the authority for revenue collection (URA) is given to the council every year through the approved estimates. On approval of the estimates by the Local Government council, the administration may collect revenue. Therefore, council must budget for its revenues every year. Local Government Authority requires each to draw up a comprehensive list of all its local revenue sources from which it expects to collect revenue during the financial year and to maintain data on total potential collectable revenues. However, the bill is yet to be passed by Parliament (Parliament Act Release, 2013).

Furthermore, setting of rates/ amounts to be paid should be well taken as a major concern as per agricultural output is concerned. Taxes are legislated upon and passed by Parliament from time to time. Other local revenues like fees, rent and permits are already provided for in the Constitution and LG Act, Chap 243. Under the same provision, there is a clause that allows a LG to identify a new source of revenue and recommend it to the Minister of LG for approval (Mucosa, 2018). The LGs make charging policies with guidance from the Ministry of Local Government and other Ministries/ Agencies like Ministry of Trade and Cooperatives and publicize them for use by the LGs and private firms working on behalf of the local government.

Also, the government should advocate for the annual reports towards the several contributors of coffee production especially from the Uganda Coffee Development Authority. This will help the government to determine which factor increases the output of agriculture and coffee at large Management of local revenues includes the following should engage in Ensuring equity and fairness in fixing rates. Also, sensitization: This is usually the first activity before introducing an approved rate. It involves holding workshops and seminars for the revenue collectors and the taxpayers and other forms of awareness campaigns on the importance of paying taxes say, radio announcements, advertising, drama in order to advocate for improved agricultural outputs among the farmers both at the local basis or those on National basis.

Finally, I conclude that, variables such as the tax revenue, grants & donations, public debt and external reserves account not for the variations in coffee output, due to lack of comprehensive time series data, other variables that are likely to influence coffee production were not incorporated in the models for statistical analysis. I recommend future researchers to incorporate other determinants of coffee production such as cultivated area, investors, labor force engaged in coffee farming and domestic producer price. In the same vein, future researchers should also incorporate indicators such as trade openness and real exchange rate to determine their effects on coffee exports in Uganda.

5.3 Areas for further Research

According to the results in this study, the researcher recommends other researchers to carry out studies on the effect of climate towards the level of agricultural output in Uganda.

Also the researcher recommends other researchers to carryout studies on the effect of government spending on another crop grown such as maize, cotton among others in Uganda.

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