BALANCE OF PAYMENT AND ECONOMIC GROWTH IN UGANDA (1985-2019)

BY

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**A RESEARCH REPORT SUBMITTED TO THE COLLEGE OF ECONOMICS AND MA
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DECLARATION

I Abdisalam Aden Mohammed a student of Kampala International University Uganda do here by declare that this is my own research work and it has never been submitted to any other university or institution for academic purposes.
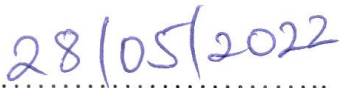
Sign: ………………………………………

Date: ………28/5/2022…..

APPROVAL

This is to certify that this research has been done under my supervision and guidance and is ready for submission to the university with my approval.

Name: Dr. John Mutenyo

Sign: ....

Date:...28|05|2022..........

DEDICATION

I dedicate this project report to my family and friends who have been a source of inspiration and support all through my life. To you all-you are truly cherished for without you, I would not have accomplished this feat.

ACKNOWLEDGEMENT

In the first case I would like to accord gratitude to almighty Allah who has accorded me all I possess.

I am profoundly grateful to all these personalities who assisted in various ways to make this project a success.

 I wish to however still first and foremost to express the great deal that I owe to Dr. Mutenyo John my supervisor, whose priceless criticisms, suggestions and patience helped me greatly to bring this project to a successful completion.

Secondly, I wish to say special thanks to my special brother and mother. I acknowledge contribution of my friends among others for their moral support throughout my education and especially during the writing of this project work.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ACRONYMS

ADF   Augmented Dickey- Fuller

AIC   Akaike Information Criterion

ARDL   Autoregressive Distributed Lag

BG   Breusch–Godfrey

Gross   Domestic Product

IMF   International Monetary Fund

MDG   Millennium Development Goal

OECD   Organization for Economic Corporation and Development

SBC   Schwarz Bayesian (or Information) Criterion

US   United States

BOU   Bank of Uganda

GDP   Gross domestic product

LDCs   Least Developed Countries

WDI   World Development Indicators

ABSTRACT

This paper explores the impact of balance of payments on economic growth in Uganda. The objectives of the paper was to establish the connection between the balance of payments and economic growth in Uganda , to examine the effect of export on economic growth in Uganda and to find out the effect of import on economic growth in Uganda. Secondary data was gathered from the World Bank and international monetary fund (IMF) from 1985 to 2019. The Augmented Dickey-Fuller (ADF) test were used to test for stationarity, the results reveal that all the variables were statistically significant after first differencing also the study found that ther is cointegration using ARDL method. The study concludes that balance of payment and import are statistically significance while export is not significant.

The study recommended that the imports of Uganda were high though significant in growth need to be checked through establishment of import substitutions industries to reduce imports, this is because the presence of imports lead to depreciation of the Ugandan currency hence imports substitution policy will strengthen the currency of Uganda. There is need for the development of the exports for the country, exports were insignificant and hence seem to be low. The quality of the exports needs to be enhanced and the functionality of the country export system need to be developed.

CHAPTER ONE

INTRODUCTION

1.0 Introduction.

This chapter covered the background of the study, statement of the problem, purpose of the study, objectives of the study, research questions, and scope of the study and significance of the study.

1.1 Background of the study

1.1.1 Historical perspective

From the early 19th century, international trade was heavily regulated and accounted for a relatively small portion compared with national output. In the middle Ages, European trade was typically regulated at municipal level in the interests of security for local industry and for established merchants. Economic growth remained at low levels in the mercantilist era; average global per capita income is not considered to have significantly risen in the whole 800 years leading up to 1820, and is estimated to have increased on average by less than 0.1% per year between 1700 and 1820. With very low levels of financial integration between nations and with international trade generally making up a low proportion of individual nations' GDP, BOP crises were very rare.

The concept of balance of payment was discussed in 1960s and 1970s by Mundell (1961), Fleming (1962) and Johnson (1972). It was an improvement on the Keynesian model of income determination in an open economy. Balance of payments account is composed of four main elements namely; current account balances, capital and financial account balances, balancing items (Errors and Omissions) and reserves balances. Current account balances are further subdivided into trade balances, income balances and transfers balances. Trade balances record the value of exports and imports of both goods and services. Examples of goods are final consumer goods, raw materials and intermediate capital goods while services include transportation, construction services, communication services banking, insurance, tourism, travel services, financial services, computer and information services, royalties and license fees, personal, cultural and recreational services, government services and expenses on education. Income balances are comprised of items such as compensation of employees, interest, rent, profits, dividends and royalties received from foreign countries and paid out to foreign countries. Items that make up transfers account balances are gifts, grants and reparation receipts and payments to foreign countries. Transfers can be

government transfers or private transfers. Government transfers are normally given either for economic, political or humanitarian reasons (H.G. Mannur, 2012).

Globally, According to the International Monetary Fund in its World Economic Outlook (WEO) for April 2018, the global economic growth strengthened to 3.8 percent in 2017 and was expected to reach 3.9 percent in both 2018 and 2019 in its continued upward momentum. Favourable market sentiment, accommodative financial conditions together with international spin-offs resulting from expansionary fiscal policy in the United States will support global growth. Global growth in 2019 has been downgraded to 2.6 percent0.3 percent below previous forecasts, reflecting weaker-than expected international trade and investment (World Bank, 2019). Growth in the United States (U.S.) is expected to slow to 2.5 percent in 2019 and further decelerate to 1.7 and 1.6 percent in 2020 and 2021 respectively. Tariff increases and associated retaliatory actions are expected to weigh on trade and investments, whilst the effects of the recent fiscal stimulus also wane. On the other hand, growth is being supported by more accommodative monetary policy than previously assumed and by sustained increases in productivity growth and labor force participation. Economic conditions in the Euro area, one of Uganda's main export markets, have deteriorated rapidly since mid-2018. This slowdown, particularly in the manufacturing sector, also reflects a decline in exports, especially to China, Europe and Central Asia. Euro area growth is projected to slow from 1.8 percent in 2018 to 1.2 percent in 2019 and then edge up to an average of 1.4 percent in 2020-21 (World Bank, 2019).

Sub-Saharan Africa has existed with ups and downs in their economic life. Uganda's economy still faces serious challenges to further improvements of sustained economic growth performance and elimination of poverty and reduction of inequality (Kirsten and Davies 2008). Although economic growth performance improved significantly since the late 1990s and overall poverty levels have declined, inequality in income distribution has increased (Krueger & Mikael, 2001).Africa registers high degree of the balance of payment problems in the bid to execute their duties as their exports are lower compared to the imports. Currently, most developing countries like Kenya, Zambia, Mozambique, Malawi, Nigeria etc, are entangled in spiteful sphere of poverty. Most of these African countries have insufficient basic capital resources. People's income in these

countries is very low and this makes savings very difficult, hence the level of saving and investments is very low.

In Uganda According to World Bank (2018) Uganda's economy is considered to be more vulnerable to both internal and external shocks like oil price, export price fluctuations, poor harvest and domestic instability. In order to reduce a large and widening current account deficit, the government resorts to use of International Monetary Fund (IMF) credits to support the balance of payment and reduction in international foreign reserves. External borrowing was found harmful as it resulted in an increase in external debt and cost of servicing the debt. After rebounding to 6.2 percent in FY17/18, real GDPgrew faster than had been anticipated at 6.5 percent in FY18/19. This is 0.3 percentage points higher than the forecast in the May 2019 Economic Update and is asa result of the new GDP estimates released in October2019. Nominal GDP for FY18/19 was revised upwards from USh 109,945 billion to USh 128,499 billion or a 17 percent increase. The annual growth rate has also changed, including the better than initially forecast growth in FY18/19. However, these growth levels are still not adequate for Uganda to meet its aspirations of reaching lower middle-income status by 2020. The state of the economic strife in Uganda continue to derail the country from meeting its short term and mid-term gains such as becoming a middle incomes status in 2020 which failed (BOU, 2019).

1.1.2 Theoretical perspective

The study was based on The Thirlwall's model which emphasized that, the Dynamic Harrod Foreign Trade Multiplier determines long-term economic growth. The model stresses that demand factors induced economic growth. In an open economy, the dominant constraint on demand is balance of payments. The basic idea of Thirlwall's approach is how balance of payments affects the growth performance of an economy. This model links trade to growth because exports pull demand. Apparently, trade represents a vital constraint to economic growth when there are balance of payments problems. The original Thirlwall (1979) model to estimate the balance of payments constrained growth rate starts with the balance of payments equilibrium condition. The model content that balance of payment problems affects the economic growth of a country.

1.1.3 Conceptual perspective

Balance of payments (BOP), also known as balance of international payments, summarizes all transactions that a country's individuals, companies, and government bodies complete with individuals, companies, and government bodies outside the country. These transactions consist of imports and exports of goods, services, and capital, as well as transfer payments, such as foreign aid and remittances (Moreno and Juan, 2003). Balance of payments (also known as balance of international payments and abbreviated B.O.P. or BoP) of a country is the difference between all money flowing into the country in a particular period of time (e.g., a quarter or a year) and the outflow of money to the rest of the world. These financial transactions are made by individuals, firms and government bodies to compare receipts and payments arising out of trade of goods and services (Vera, 2006).

Coricelli (1997) defined Economic growth is the increase in the level on goods and services of a country within a fixed period of time, in this case economic growth will be measured in term of Gross Domestic Product. Therefore GDP is defined by Jeff Holt (2007) as the total market value of all final goods and services produced annually within the boundaries of the country whether by national or foreigner-supplied resources. This study adopted Jeff Holt definition and the GDP growth will be measured in billion of US$ dollars. Economic growth is the increase in the level on goods and services of a country within a fixed period of time, in this case economic growth will be measured in term of Gross Domestic Product expressed in the percentage change Hausmann Rodrik and Velasco (2008). In this study economic growth is measured in the economic in the strands of the economic strands of GDP growth rate.

1.1.4 Contextual Perspective

The economic growth of Uganda over the period of 1985 to 2015 has been growing and decreasing, for example the economic growth in the annual growth was -3.3% in 1985 while in the years 1990 it increased to 6.5% annual growth this was followed by increases and decreases in up to 1995 at 11.5% of the economy, this was followed the growth and decreases to 3.1% as decrease in 2000, the situation was followed by 6.3% slight increase in 2005. The state of the economic growth decreased to 5.6% in 2010 and finally to 5.2% decrease in 2015, this was followed by a subsequent increase in 4.7% in 2016.

This sluggish and uneven growth resulted in government failing to meet its desired 7.2% annual growth rate which was the target for the National Development Plan I (NDP I) over the five year period 2010/11 to 2015/16. This trend of slow growth has continued during the current five year period of NDP II. The current NDP II is the second in a series of five-year plans, which are designed to achieve Uganda's Vision 2040. The goal of Vision 2040 is to transform Uganda from a predominantly peasant and low-income country to a competitive upper middle income status over a 30-year period. NDPII prioritizes agriculture, tourism, infrastructure, mineral, oil and gas and human capital development (World Bank. 2016).

Following the release of new GDP estimates, nominal GDP for FY18/19 increased and the structure of the economy has changed. In October 2019, the Uganda Bureau of Statistics (UBOS) released new GDP estimates, updating the base year for estimating economic activity to 2016/17 from 2009/10. As a result, nominal GDP forFY18/19 was revised upwards from USh 109,945 billion to USh 128,499 billion. Furthermore, the share of industry in GDP has increased from about 20 percent to almost 30percent. At the same time, there has been a drop in the share of services from about 58 percent to 46 percent. Drilling down further, manufacturing has doubled its share from about 8 percent to over 16 percent of GDP, whilst information and communications (IC) has fallen from 12percent to just under 2 percent of GDP (World bank group (2020).

Real GDP grew by 6.5 percent in FY18/19, maintaining the rebound in economic activity over the last two years. This has been driven by strong levels of domestic consumption and sustained levels of public and private investment. Net FDI inflows shot up to 5.1 percent of GDP in FY18/19 from 3 percent of GDP the previous year. The construction sector continues to grow at double-digit levels. There has been a jump in manufacturing growth supported by recent expansions in the sector, including investments in new factories. Agriculture was boosted by another decent harvest and a strong rebound in fisheries (BOU, 2019).

The current account deficit almost doubled to 9.8 percent of GDP in FY18/19 from 5.4 percent last year, but remains manageable as it is financed by large net FDI inflows. Aided by real exchange rate appreciation, total imports grew by 20 percent in FY18/19. Merchandise exports also grew by 12 percent over the FY18/19 period, surpassing last year's 8 percent growth in exports. The rise in exports of goods occurred despite export volumes of coffee falling by over 6

percent in FY18/19, and coffee prices declining by 10 percent. Export growth will likely continue but will not be enough to offset the increase in imports of oil, machinery, vehicles and chemical products related to the investment drive. Hence, the current account deficit will likely decline only modestly to around 7 to 8 percent of GDP over the medium term (UNCTAD, 2019)

The overall balance of payments position weakened in the 12 months to October 2019. The current account deficit increased by 45.1 percent to US$3,290.2 million, largely driven by higher private sector imports that grew by US$801.9 million during the year. The trade deficit rose by 21.7 percent to US$ 2,783.9 million, largely on account of the US$850.2 million increase in the import bill that surpassed the US$352.9 million growth in exports receipts. On a quarterly basis, the current account deficit widened slightly by US$9.3 million to a deficit of US$820.5 million during the quarter ended October 2019. This was mainly driven by increased services deficit, largely on account of payments for technical services (public infrastructural projects). The capital account increased by US$ 20.7 million to US$ 28.4 million in the quarter ended October 2019. The financial account inflows increased by US$1,119 million in the 12 months to October 2019 supported mainly by an increase in FDI inflows and significant drawdown of deposit abroad by banks and the private sector. However, on a quarterly basis, the financial account surplus deteriorated by US$203.3 million in the quarter ended October 2019. This decline was largely on account of lower direct and other investment flows, specifically lower loan disbursements to both the private and government sector. The financial account surplus was insufficient to finance the deficit on the current account, resulting in a drawdown in reserve assets of US$ 32.8 million during the quarter to October 2019. On an annual basis, the increased financial account surplus in the 12 months to October 2019 was also insufficient to finance the high current and capital account deficit recorded in the year, leading to a drawdown in reserve assets by US$ 34.6 million. The stock of reserves as at the end of October 2019 stood at US$ 3,155.5 million – equivalent to 4.1 months of future imports of goods and services. In terms of outlook, the current account deficit is projected to improve marginally during FY2019/20, relative to the previous year, resulting in a deficit of US$3.2Bn (from 9.7 percent to 9 percent of GDP, y-o-y). However, the financial surplus (on account of FDI and project loans) is projected to reduce to US$2.9 billion. The FDI projection has been revised downwards on account of the low investor confidence stemming from uncertainty in

the oil sector and the delayed Final Investment Decision (FID) on oil-related investments (bank of Uganda, 2019).

1.2 Statement of the Problem

Ugandan economy has been experiencing slows and downs in the economy since independence. In 2011, Uganda's economic growth (GDP) decreased in 2011 to 3.8 percent in 2012. Inflation averaged 18.8%, up from 4.1%, the currency depreciated 6.2% against US dollars (USD), and the trade deficit rose from 9.6% to 10.8% of GDP. Uganda's (GDP) economy has faced problems and still has a low rate of real GDP growth. Although Uganda's macroeconomic performance is still impressive, it still outlines higher poverty and very low living standards for the majority of the population (UBOS, 2014).

Uganda's GDP growth was low from 2011 to 2014 was: 6.2%, 3.8%, 5.8%, and 5.9% respectively, followed by 5.2% in 2015, 4.8% changes in 2016, 3.8%, though increased to 6.2% in 2017 and 2018, in 2019 was 6.8% and finally 3.6% in 2020. This low GDP rate negatively affected balance of payment and national economic efficiency and thus deserves to be investigated. Uganda's (GDP) economy has faced problems and still has a low rate of real GDP growth.

The general occurrence of BOP since 1985 has continued to be poor in this form up-to now since the imports have been higher than the exports (World Bank, 2019).Earnings for export decreased by 8.0% relative to February 2020. Exports revenue was 352,91 million USD in February 2020, smaller than those reported at 383,61 million USD in January 2020. Exports that have deteriorated over the month from February to October 2020, such as coffee, fish and goods, tea, maize and beans. Decreasing external demand and trade delays after the outbreak of corona virus reduced export profits, with occurrence of economic stifle in the country over the period of time, the status of economic performance could be affiliated to the poorly performing balance of payment problem, its incumbent to this that a study on balance of payment on economic growth of Uganda from 1985 to 2019.

1.3 Purpose of the study

The purpose of the study was to establish the relationship between balance of payment and economic growth of Uganda from the year 1985 to 2019.

1.4 Objectives of the study

    i) To examine the effect of import on economic growth of Uganda from 1985 to 2019

    ii) To find out the effect of export on economic growth of Uganda from 1985 to 2019

    iii) To establish relationship between balance of payment and economic growth of Uganda from 1985 to 2019.

1.5 Research Questions

    i) What is the effect of import on economic growth of Uganda from 1985 to 2019

    ii) What is the effect of export on economic growth of Uganda from 1985 to 2019

    iii) What is the relationship between balance of payment and economic growth of Uganda from 1985 to 2019

1.6 research hypothesis

H_{01}: There is no significant effect of import on economic growth of Uganda from 1985 to 2019

H02: There is no significant effect of export on economic growth of Uganda from 1985 to 2019

H03: There is no significant relationship between balance of payment and economic growth of Uganda from 1985 to 2019

1.7 Scope of the study

1.7.1 Theoretical scope

The basic idea of Thirlwall's approach is how balance of payments affects the growth performance of an economy. This model links trade to growth because exports pull demand. Apparently, trade represents a vital constraint to economic growth when there are balance of payments problems.

8

The original Thirlwall (1979) model to estimate the balance of payments constrained growth rate starts with the balance of payments equilibrium condition.

1.7.2 Geographical scope

This study was carried out in Uganda. The study covered Uganda's economy from 1985 to 2019. Republic of Uganda is a landlocked country in East Africa. It is bordered on the east by Kenya, on the North by South Sudan, on the West by the Democratic Republic of the Congo, on the Southwest by Rwanda, and on the South by Tanzania. Uganda is the second most populous landlocked country. The southern part of the country includes a substantial portion of Lake Victoria, shared with Kenya and Tanzania, situating the country in the African Great Lakes region. Uganda also lies within the Nile basin, and has a varied but generally equatorial climate

1.7.3 Content scope

This study focused on balance of payment and economic growth of Uganda from 1985 to 2019. The study assessed the effect of import on economic growth of Uganda, assess the effect of export on economic growth of Uganda and finally establish the relationship between balance of payment and economic growth of Uganda.

1.7.4 Time scope

The study was conducted as a time series data for a period of 35 years that is to say from 1986 to 2019. The time is chosen because it represents significant trends in the balance of payment and economy of Uganda.

1.8 Significance of the study

This study will explore the current status of balance of payment for Uganda and how the trends has affected the economic growth of the countries.

The study will provide avenues through which government can intervene in enhancing the balance of payment and increase the purchasing capacity of Uganda . The study will device recommendation for handling the post COVID economic recovery.

The study also adds to the available literature of balance of payments in Uganda by showing the impact that different BOP positions have on the economic growth of the country including in the current period (COVID 19 period.

The results of the study will aid policy makers to design appropriate policies to improve and sustain economic growth of Uganda and the recovery in COVID 19 and post COVID 19 period.

1.9 Operational Definitions

Balance of payments (BOP), also known as balance of international payments, summarizes all transactions that a country's individuals, companies, and government bodies complete with individuals, companies, and government bodies outside the country. These transactions consist of imports and exports of goods, services, and capital, as well as transfer payments, such as foreign aid and remittances (Dowrick and Golley, 2004)

Blecker and Ibra (2013) argued that import. An import is a good brought into a jurisdiction, especially across a national border, from an external source. The party bringing in the good is called an *importer*. An import in the receiving country is an export from the sending country. Importation and exportation are the defining financial transactions of international trade.

Blecker and Ibra (2013) also defined exports shipping in the goods and services out of the jurisdiction of a country. The seller of such goods and services is referred to as an "exporter" and is based in the country of export whereas the overseas based buyer is referred to as an "importer

Hausmann and Velasco (2008) defined economic growth is the increase in the level on goods and services of a country within a fixed period of time, in this case economic growth will be measured in term of Gross Domestic Product expressed in the percentage change.

CHAPTER TWO

LITREATURE REVIEW

2.0 Introduction

This chapter is concerned with review of information that different authors have advanced on the topic in regard to study objectives, it therefore looks at the theoretical review, conceptual framework, related literature and related studies.

2.1 Theoretical Review

The study employs a theory of Thirlwall (1979), Thirlwall's law states that if long run balance of payments equilibrium on current account is a requirement, and the real exchange rate stays relatively constant, then the long run growth of a country can be approximated by the ratio of the growth of exports to the income elasticity of demand for imports (Thirlwall, 1979). The original Thirlwall (1979) model to estimate the balance of payments constrained growth rate starts with the balance of payments equilibrium condition.

If the real exchange rate varies considerably, but the price elasticities of demand for imports and exports are low, the long run growth of the economy will then be determined by the growth of world income times the ratio of the income elasticity of demand for exports and imports which are determined by the structural characteristics of countries. One important example of this is that if developing countries produce mainly primary products and low value manufactured goods with a low income elasticity of demand, while developed countries specialize in high income elasticity manufactured goods the developing countries will grow at a relatively slower rate (Davidson, 1991).

Thirlwall's balance of payments constrained growth model –or Thirlwall's Law- is often called the dynamic Harrod trade multiplier result following Roy Harrod's (1933) static foreign trade multiplier result that $Y = X/m$, where Y is national income; X is exports and m is the marginal propensity to import, which is derived under the same assumptions as Thirlwall's Law (O'Hara, 1999).

The assumption of balance of payments equilibrium on current account can be relaxed to allow capital flows (Thirlwall and Nureldin Hussein, 1982), but for reasonable values of sustainable

11

flows (e.g. 3% of GDP), capital flows make little empirical difference to the growth predictions of the basic model.

Since 1979, the model has been extensively tested (for surveys of the literature see McCombie and Thirlwall 1994, 2004) with broad support for both developed and developing countries. The model provides an alternative to the supply side models of neo-classical growth theory which are close economy models with no demand constraints. In the Thirlwall model the ultimate constraint on growth is a shortage of foreign exchange or the growth of exports to which factor supplies can adapt. It is changes in growth that equilibrate the balance of payments, not changes in relative prices in international trade.

2.2 Conceptual framework

The conceptual framework gives a researcher's conceptualization of variables of the study. The interaction between the independent variables and dependent variable. That is the researcher identifies mechanisms under which the Balance of payment and economic trends can be displayed and measured.

Figure 2.1: Conceptual framework showing the relationship between balance of payment and economic growth

Independent Variable   **Dependent variable**

Balance of Payment   **Economic growth**

- Imports
- Export
- Balance of payment

- GDP in growth rate
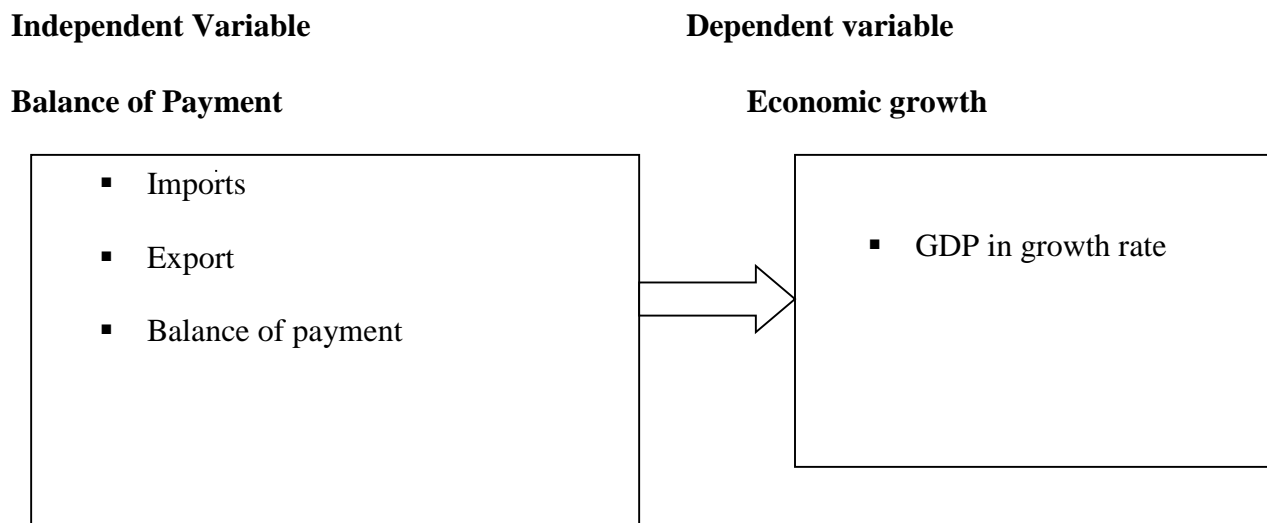
Source: Adopted from Thilwall, 2013 and modified by the researcher.

The balance of payment the focus will be on the differences between the exports and imports of Uganda for the time of study. The focus will be on the rate of balance of payment in percentages

12

with imports and exports. The dependent variable is GDP growth rate that is a determinant of economic growth.

2.3 Review of Related Literature

2.3.1 Effect of import on economic growth of Uganda

Bakari & Mabrouki (2020) investigated the relationship between imports and economic growth in Panama, annual data for the periods between 1980 and 2015 were tested using the Johansen cointegration analysis of Vector Auto Regression Model and the Granger-Causality tests. According to their result of the analysis, it was determined that there is no relationship between exports, imports and economic growth in Panama. On the other hand, they found that there is strong evidence of bidirectional causality from imports to economic growth and exports to economic growth.

Kotishwar (2020) their paper shows that Short-run causality result shows the presence of short-run causality between exports, domestic investment and exchange rate to GDP, running from the variables to GDP.

Lawal & Ezeuchenne (2020) showed that there is a long-run relationship between international trade and economic growth, import and trade openness are both insignificant in the short-run but significant in the longrun while export and balance of trade are significant in both the short and long-run. The granger causality test showed that economic growth is independent of imports, exports and balance of trade but economic growth is unidirectional with trade openness economic growth

Ali, Yassin, Ali, & Dalmar (2018) investigated the impact of exports and imports on the economic growth of Somalia over the period 1970-1991. They applied econometric methods such as the OLS (Ordinary Least Squares) technique. The Granger Causality and Johansen Co-integration tests were also used for analyzing the long-term association. It was found that economic growth does not Granger Cause Export but was found that export Granger Cause GDP. So, this implies that

there is unidirectional causality between exports and economic growth. Also, there is a bidirectional Granger Causality between import and export

Saunders (2008) investigated the role of imports in India's impressive economic growth using the annual data ranging from 1970 to 2005. The empirical results indicate that imports have impacted positively India's economic growth in the short run and thus, conclude that the imports may have played an important role in India's recent economic growth. Islam et al. (2011) empirically investigated the import-led growth hypothesis in the case of 40 nations dividing them into high, upper-middle, lower-middle and low-income nations. They found the evidence of long-run bi-directional causality in high income nations except Japan, and for other nation categories they found mixed results (either import-led growth or growth-led imports)"

"In the study done by Ahmet Ugur (2008), shows the relationship between imports and economic growth in Turkey. Velnampy (2013); Based on the overall study, in the Sri Lankan context, the export and import have the significant positive relationship, and also, both export and import have the significant impact on the economic growth. Further, the export and import have been associated by 98 percent, which denotes that, there is a strong positive association between export and import."

"Another study done by Mushtaq, Nazir, Bashir, Ahmed and Nadeem (2014) tested the relationship of two figures, import-export by using VAR Analysis. According to the study it was determined that there were causality relationship between these variables, the variable import influenced GDP, and GDP influenced the variable export. Between export and import, two way Causality relationships released mutually. In the same way, the results of causality overlap with variance decomposition test."

"Mehdi, Masoumeh, Elham and Hadi (2012) studied the Iran economy from 1962-2011. VAR Analysis was applied between the variables of annual economic growth, import, and export. When regarding to these results, it is implied that the export increases as the country grows and the import indicates a decrease economic growth. When regarding to the data used in the study, they indicate a difference proportionally, it is seen that increases or decreases in the import, export, and GDP

always occur in the same period. This case indicates that the relationships between three variables are very strict."

Barbara and Alberto (2011), the nexus between trade and economic growth in Italy has been widely debated by historiography. The outcome suggests that three variables, GDP, import, export commove in the long run but the direction of causality varies across time. However, there are also other studies that do not support the relationship between these variables. There is no causal relation between exports and economic growth, namely exports and economic growth are both the result of the development process and technological change.
"
Kogid, Mulok, Ching, Lily, Ghazali and Loganathan (2011) analyzed the relationship between the economic growth and the import in Malaysia from 1970 to 2007. Results show that there is no co integration exists between economic growth and import, but there exists bilateral causality between economic growth and import. Results also show that import could indirectly contribute to economic growth, and economic growth could also directly contribute to import. These findings may be vital for future economic growth policies".

Francisco (2000) investigated the Granger-causality between exports, imports, and economic growth in Portugal over the period 1865 - 1998. Findings revealed that, more interestingly, there is no kind of significant causality between import- export growth. "Further, researcher concluded that the growth of output for the Portuguese economy during that period revealed a shape associated with a small dual economy in which the intra-industry transactions were very limited."

Akhter (2015) investigate the relationship between import, and GDP growth. "They conclude that the impact of exports on economic growth is positive and an opposite scenario is found in the case of import. All these research investigated the relationship between import, and GDP growth by taking of different control variables like import and remittance." But no evidence found in the literature that considered government expenditure and inflation which is the key elements of GDP.

Bbaale and Mutenyo (2011) demonstrated that a sample of 35 Sub-Saharan African countries was included in the capital goods imports into the Cobb-Douglas production function with exports,

GDP per capita, labor force, credits to the private sector, government consumption, and gross capital formation. "Capital goods imports, which embody knowledge and technology can enhance productivity. Bbaale and Mutenyo (2011) found that one unit percentage increase in the capital goods imports will increase 0.03% GDP per capita at 1% significance level. The literature strongly supported the theoretical view that capital goods imports, especially from the technologically advanced countries contain the most current technological knowledge."

According to Sun and Heshmati (2010), empirically there appears to be good evidence that international trade affects economic growth positively by facilitating capital accumulation, industrial structure upgrading, technological progress and institutional advancement. "Increase in imports of capital and intermediate products, which are not available in the domestic market, may result in the rise in productivity of manufacturing. More active participation in the international market by promoting exports leads to more intense competition and improvement in terms of productivity. Learning-by-doing may be more rapid in export industry thanks to the knowledge and technology spillover effects." In addition, the benefits of international trade are mainly generated from the external environment, appropriate trade strategy and structure of trade patterns.

Sun et al (2010) examine the effects of international trade on China's economic growth, applying econometric and non-parametric techniques on six (6) years data of 31 provinces in China from 2002 to 2007, their finding reveals that an increase participation in international trade helps stimulate rapid national economic growth in China. Thus, international trade volume and China's trade structure on technological exports positively affects China's regional production"

Omoju and Adesanya (2012) investigate international trade and growth in developing country using Nigeria as a case study. "They make use of secondary data from 1980 – 2010 and applying the Ordinary Least Square (OLS) regression method, they find out that exports, imports and exchange rate have a significant positive impact on economic growth in developing countries. Empirically, there appears to be good evidence that international trade affects economic growth positively by facilitating capital accumulation, industrial structure upgrading, technological progress and institutional advancement. Specifically, increased imports of capital and intermediate

products, which are not available in the domestic market, can result in the rise in productivity of manufacturing.

2.3.2 Effect of export on economic growth

Malefane and Odhiambo (2018) did a bivariate regression analysis to investigate the export-growth nexus and found evidence in favor of exports acting as a stimulus for economic growth. Krueger (1978) used a simple log-linear specification to analyze the impact of exports on growth in 10 countries using data for 1954-1971. She found that real gross national product depended more on export earnings than on total foreign exchange availability. Ogbokor and Meyer (2017) tested the long run relationship between external trade and economic performance in South Africa. Their results indicate cointegration relationships between the investigated variables and also show that exports contributed more to economic performance as compared to the openness of the economy and exchange rate. Based on these results, they concluded that external trade will remain one of the key propellers of economic growth in South Africa

Malefane and Odhiambo (2018) investigated the dynamic impact of trade openness on economic growth in South Africa. Their long run empirical results show that trade openness had a positive and significant impact on economic growth when the ratio "total trade-*GDP"* was used as proxy of trade openness, but not when other proxies were used.6 Their short run empirical results showed that when the first three proxies of openness were used, trade openness had a positive impact on economic growth, but not so when the trade openness index was used. Based on these results, they concluded that promoting policies that support international trade was relevant for the South African economy

Moyo and Khobai (2020) investigated the empirical relationship between trade openness and economic growth in sub-Saharan Africa (SSA). Their results showed that there was a significant positive relationship between trade openness and economic growth. Based on these results, they concluded that openness to international trade had a significant positive impact on economic growth in SSA.

Tinta et al. (2020) examined whether countries should develop strategies to increase international trade through an increase in the degree of openness or whether countries should develop policies

to strength community or regional trade through potential value chains within regional integration. For this, they estimated two models with fixed-effects panels

Moyo and Khobai (2020) investigated whether trade openness had a positive effect on economic growth in SADC by doing a panel data analysis for 11 countries for the period 1990-2016. Their results showed that trade openness had a negative impact on economic growth in the long-run. Based on these results, the authors concluded that trade openness jeopardized growth in SADC countries in the long-run.

Sheridan (2014) uses ordinary least squares and fixed effect estimation as well as regression tree technique to explore the potential relationship between disaggregated exports and economic growth in a panel of 117 developed and developing countries over the period 1960 to 2009. The study finds that manufacturing exports are more highly correlated with economic growth than primary exports, conditional on a country having attained a threshold of human capital. Hence, concluding that investing heavily in the manufacturing sector in a country without the necessary skilled workforce is likely to be an inefficient use of resources.

Barış (2012) investigates potential Granger causality among the real GDP, real exports and inward FDI in 18 least developed countries for the period between 1970 and 2009. The results indicate one-period-ahead, unidirectional causality from exports to GDP in Haiti, Rwanda and Sierra Leone, and from GDP to exports in Angola, Chad and Zambia."

Mushtaq *et al* (2014) explore association among government spending, exports, imports and economic growth proxied using GDP for eight countries (China, Indonesia, Japan, Malaysia, Pakistan, Philippines, Sri Lanka and Thailand) over a period of 1995 to 2011 using panel cointegration test and fixed effects model. The results show that government spending, exports and domestic private investment affect economic growth positively and significantly while imports affect economic growth negatively and significantly."

Yüksel and Zengin (2016) analyse six developing countries (Argentina, Brazil, China, Malaysia, Mexico and Turkey) over the period 1961 to 2014 using Engle Granger cointegration analysis (Engle and Granger, 1987) and vector error correction model similar to Kim, Lim, and Park (2007)

as well as Toda Yamamato causality analysis (Toda & Yamamoto, 1995) to examine the relationship between imports, exports and economic growth. The results find support for the export-led growth hypothesis for Argentina only and no causal relationship between imports and economic growth in any of the other countries." The study also finds a causal relationship from imports to exports in China and Turkey and from exports to imports in Malaysia.

Yee Ee (2015) examines the validity of export-led growth hypothesis in four Sub-Saharan African countries (Botswana, Equatorial Guinea and Mauritius) over the period 1985-2014using fully modified ordinary least square (FMOLS) and dynamic OLS (DOLS). The results find that the effect of export led growth is positive and significant, indicating that exports explain not only the cyclical changes in output (short term) but also in the long run trend."

Keho (2015) analyses the relationships between exports, FDI and economic growth in 12 selected Sub-Saharan countries over the period 1970 to 2013. Multivariate cointegration analysis suggests that the three variables are cointegrated in ten countries. However, the results show a weak support for export led growth hypothesis as a causal relationship between exports and economic growth was found only in Ghana."

Bbaale and Mutenyo (2011) examined ELGH along with ILGH by analysing the relationship between economic growth and exports using agricultural and manufactured components, and imports using capital goods imports in 35 Sub-Saharan African countries over the period of 1988 to 2007. "The study using generalized methods of moments estimation finds that growth in agricultural exports is positively and significantly associated with per capita income growth for the sampled countries while the contribution of manufactured exports to per capita income growth is insignificant; supporting the study's main hypothesis that it is not exports *per se* that matter, but that different export components differently influence economic growth. Thestudy also finds support for ILGH and it infers that one per cent unit growth in capital goods imports results in 0.03 per cent GDP per capita growth at 1% significance level."

 "Songwe and Winkler (2012) estimate the effects of exports and export diversification on economic growth using a panel of 30 selected Sub-Saharan African countries over the period 1995-2008. The fixed effect estimation method finds a positive relationship on growth from both exports

and export diversification; and that export diversification of products and markets increase value-added and labour productivity. They thus conclude that resource based economies need to concentrate on improving productivity in areas where they have a comparative advantage and on moving up the value chain in those commodities."

Mehrara and Firouzjaee (2017) also used Granger causality relationship between non-oil export and economic growth to investigate panel cointegration analysis for 73 developing countries during the period 1970-2007. "Their sample countries are categorized into two groups of oil dependent countries and non-oil developing countries. They reported results which show that in both bi- and tri- variate models, there is bi-directional long-run causality between export and GDP growth for both groups of countries. Also, in the bi-variate model, there is bidirectional short-run causality between export and GDP growth for nonoil developing countries. However, for oil countries, there is no short run causality relationship between the oil exports and economic growth, in any of the two models."

Biyase and Zwane (2011) applied five panel data models: pooled ordinary least square (OLS), fixed effects model (FE), random effects model (RE), Two-Stage Least-Squares (2SLS) and generalized methods of moments (GMM) to investigate the link between growth and export for 30 African countries between the period 1990 to 2005. Their results from these models provide evidence that exports cause growth for African countries. Specifically, they estimated that a 1 percent increase in export leads to 0.056 percent increase in economic growth."

Jamal (2010) examines the ELG hypothesis for eight Middle East and North African(MENA) countries. The study utilized Johansen and Juselius cointegration procedure and error correction modeling to test the ELG hypothesis. The empirical evidence supports the existence of a "stable" long-run equilibrium relationship among real output, real exports, terms of trade, and finds strong support for the ELG hypothesis in all but one of the MENA countries analyzed.

Kundu (2013) also investigated the export-led growth (ELG) paradigm for South Asian Association for Regional cooperation (SAARC) countries11 using panel data for the period 1971 to 2011. The paper applied pooled ordinary least square (OLS), fixed effects model (FEM),

Random Effects model (REM) and Hausman test. Fixed effects and random effects model lead to conclusion that, there is no significant relationship between the size of GDP growth rate and export rate for these countries. On the other hand, panel unit root test simply that there is strong evidence of stationary process for both GDP and export at level."

"Ugochukwu and Chinyere (2013) used data covering the period of 1986 to 2011 to study the export-led growth hypothesis in Nigeria. They employed Ordinary Least Squares (OLS) and Granger Causality test econometric techniques to determine the level of impact export has on growth, or vice versa as well as the direction of causality between them. The result arising from the findings indicates that oil export positively and significantly impacted on the growth of Nigeria's economy for the period under review. It was also shown in the result that non-oil export has a positive and significant impact on GDP. The result of the granger causality test indicates that there is unidirectional causality between oil export and GDP."

Enu et al (2013) examined the effect of foreign trade on economic growth in Ghana by using a Johansen cointegration analysis. "The results of Johansens's co integration test indicated that there exist a long run and short run relationship among real gross domestic product, foreign direct investment, exports, imports and foreign direct investment in Ghana. The study also indicated that in the long run, exports had a positive effect on real gross domestic product. Imports and foreign direct investment had a negative effect on real gross domestic product, respectively."

Waithe et al (2011) studied a case of economic growth in Mexico against the backdrop of export-oriented policy reforms in that country in the mid-1980s. "Using an export-augmented neoclassical production function, the validity of the Export-led Growth Hypothesis for Mexico was tested over the period 1960-2003. The study employed the multivariate cointegration techniques of Johansen (1988) and Johansen and Juselius (1990), Augmented Dickey-Fuller (ADF) test by Dickey and Fuller (1979, 1981), the Phillips-Perron (PP) test by Phillips and Perron (1988) and the KPSS test by Kwiatkowski et al. (1992) to examine this hypothesis. Evidence offers support for the Hypothesis in the short run; however, contrary to the Hypothesis, long-run results suggest an inverse relationship between exports and GDP. A likely explanation offered by the authors is the high import content and diminishing local content of exports, and weak linkages with domestic

suppliers, thus reducing possible spillover or multiplier benefits. The study concludes that if Mexico is to succeed in its quest to achieve high and steady economic growth, current incentive schemes that allow tax-free entry of imported inputs and raw materials for export purposes must be reconsidered." Also, it was suggested that policies that promote technological innovation in manufacturing and linkages with local suppliers are imperative.

"Yifu Lin and Li (2011) states that many studies, based on the accounting identify of gross domestic product (GDP), found that the contribution of foreign trade to China's economic growth over the past 20 years was very small. The study re-examined the issue and find that those studies underestimate the contribution of exports to GDP growth by overlooking the indirect impacts of exports on domestic consumption, investment, government expenditures and imports. The study proposed and used a new estimation method including Ordinary Least Squares (OLS), Two-Stage Least Squares (2SLS), Three-Stage Least Squares (3SLS) and Seemingly Unrelated Regression (SUR); and find that a 10% increase in exports resulted in a1 percent increase in GDP in the 1990s in China, when both direct and indirect contributions are considered."

Baliamoune-Lutz (2010) provides empirical evidence in support of the impact of exports by destination on economic growth. "He employed Arellano-Bond GMM estimation technique using panel data over the period 1995-2008 and explores the growth effects of exports from Africa to China. The results indicated that exports to China do not enhance growth unconditionally. Additionally, the results suggest that export concentration enhances the growth effects of exporting to China, implying that countries which export one major commodity to China benefit by a greater proportion than countries that have more diversified exports. He also indicated that contrary to the widely held view that increasing imports from China would have a negative effect, empirical results show that the share of China in a country's total imports has a robust positive effect on growth. The study concludes that results seem to lend credence to the ELG hypothesis, and given that he found strong evidence that exporting to OECD countries has a positive effect on growth in Africa, then export destinations matters."

Barboni et al (2013) studied the effect of export destinations on Total Factor Productivity (TFP) of manufacturing firms in Uruguay for the period 1997-2006, and found that, just like national and

international evidence, exporting firms exhibit higher productivity levels than non-exporting ones. Additionally, the evidence found that the differentials in productivity are higher for those firms that have developed countries as their main export destination. Such firms are argued to be characterized by higher export propensity and size with respect to those firms exporting to markets of similar or lower level of development than Uruguay.

Cebeci (2014) evaluates the role of export destinations on productivity, employment, and wages of Turkish firms by comparing the performance of firms that export to low-income destinations and high-income destinations with firms that do not export. "Cebeci (2014)concludes that exporting per-se results in persistently higher firm TFP and employment starting from the year of entry into export markets but in a moderate wage effect that start sonly after the second year of exporting. The study additionally observes that unlike exporting to high-income destinations, exporting to low- income destinations does not result insignificantly higher TFP and wages."

2.3.3 Relationship between balance of payment and economic growth

Moreno-Brid (2003) applied the basic balance-of-payments constraint model (BPC model), developed by A.P. Thirlwall, analysing Mexico's economic growth in 1950-96. With the use of unit-root tests and cointegration analysis the study estimated the long-run association between the growth of Mexico's real exports and real output in 1950-96 and selected sub-periods. The results tended to show significant and positive cointegration between these two variables, thus giving support to the BPC-model as a relevant hypothesis to explain Mexico's long-term economic growth.

Nell (2003) generalised the balance of payments constrained growth model to include many countries. The study applied a 'generalised' version of Thirlwall's balance-of-payments (BOP) constrained growth model by testing for long-run relationships between the output growth rates of OECD countries and two neighboring regions; South Africa (SA) and the rest of the Southern African Development Community (RSADC). The empirical results found strong support for the 'generalised' BOP growth model, which stresses the mutual interdependence of the world economy where one country's growth rate depends on others.

Razmi (2005) applied the Balance of Payments Constrained Growth (BPCG) model to India, a large developing country with a relatively low trade to GDP ratio. Instead of assuming similar elasticities of substitution between goods produced in different regions, the study extends the model to relax these assumptions. Johansen's co integration technique was employed to estimate trade parameters. Short-run adjustments were explored within a vector error correction framework. Various forms of the BPCG hypothesis predicted average growth rates and these are found to be close to the actual average growth rate over the period 1950-1999, although individual decades display substantial deviations

Britto and McCombie (2009) used the balance-of-payments-constrained model to estimate the determinants of the long-run rate of growth of Brazil. The regression results, apart from providing renewed support for the thesis that the country's growth rate has been constrained by the balance of payments, allowed the study to argue that Thirlwall's law is associated with a notion which is fundamentally distinct from that of mainstream economics, of long-run equilibrium growth rate

Jeon (2009) empirically tested the validity of Thirlwall's law in China during the reform period of 1979-2002. For the income elasticity of import demand, an aggregate import demand function for the Chinese economy was estimated using ARDL – UECM model and the bounds test. The study found out that for 1979-2002, the Chinese economy grew on average as fast as Thirlwall's law predicts and that the growth of GDP and of exports are co integrated. Both outcomes provide strong support for Thirlwall's law in China during the reform period after 1978.

Anega (2010) empirically tested the validity of the simplified version of the balance of payment-constrained economic growth model for Ethiopia during the period 1971-2008. The finding showed that the average economic growth over the sample period was 2.84 percent, whereas the economic growth as suggested by Thirwall's law is 7.42 percent. Ethiopia's economy has been growing at a low rate as compared to the model's predicted growth rate as shown by the findings.

Gouvea and Lima (2010) contributed to the literature on balance-of-payments-constrained growth by investigating how structural change, identified with changes in the sectoral composition of exports and imports, affects the external constraint. The study tested both the original and a multisectoral version of Thirlwall's law for a sample of Latin American and Asian countries. The original Thirlwall's law was found to hold for all sample countries except South Korea, whereas the multispectral analogue holds for all of them. As the sectoral composition of exports and imports

is found to matter for growth, the study analyzed the evolution of each country's weighted trade income elasticities.

Bagnai, Rieber and Tran (2012) using a multi-country generalization of Thirlwall's law, investigated the contribution to the growth performance of Sub-Saharan Africa (SSA) countries of trade with the low and lower-middle income countries in SSA and South Asia in the last two decades. The generalized law was estimated using a panel cointegration approach on a sample of 20 developing SSA countries, using annual data from 1990 to 2008 and considering three partner areas: SSA, developing Asia, and the rest of the world. The generalized law was found to perform better than other versions of the law. Moreover, the empirical analysis showed that although each partner area contributed to the relaxation of SSA countries" BOP constraint, these contributions have occurred through different channels of transmission.

Anoka and Takon (2014) examined balance of payments constrained growth in Nigeria. The analysis was based on the theoretical underpinnings of the Original and Expanded Thirlwall's model derived from the Harrods Foreign Trade Multiplier. The study adapted the Ordinary Least Squares (OLS) econometric technique to analyze empirical data. The results showed that, all the variables in the model contributed 71 per cent to changes in economic development.

Lanzafame (2014) synthesised the two growth literatures on the Harrod (1939) natural rate of growth and the balance of payments constrained growth model. Using 22 OECD countries for the 1960 to 2010 period, the study provided evidence that the natural rate of growth was equal to the balance of payments constrained rate of growth. Significant support for Thirlwall's Law was found. Granger-causality methods results indicated the existence of unidirectional long-run causality from BOP-constrained growth rate to the natural rate of growth, thus reinforcing the view, embodied in Thirlwall's Law, demand-determined is the long-run growth and constrained by the BOP.

The relevance of a demand-led growth model for long run economic growth is tested for the sub-Saharan African region by Sumra (2016) using an augmented balance of payments constrained growth model which permits for sustainable debt accumulation, interest rate payments and the terms of trade movements. An autoregressive distributive lag (ARDL) model was used to estimate the model for 22 sub-Saharan African economies. The region was balance of payments constrained between the 1960 to 2014 period as indicated by the results. In addition, the growth experience of

25

the region is best explained by the model which allows for sustainable debt accumulation and interest rate payments abroad.

Emmanuel (2017) applied the adjusted balance of payment (BOP) constrained growth framework modified by Thirwall and Hussain (1982) on Nigeria's economic growth to estimate the determinants of the long run rate of growth in Nigeria. The study applied cointegration test on time series data to estimate the long-run relationship between Nigeria's real GDP (output) and its real export. Results signify cointegration between the variables, lending support to Thirwall's BOP constrained model as a suitable framework.

Elish (2018) examined the Thirlwall Balance of Payment (BOP) constraint growth model in the case of Egypt for the period of 1980 to 2016 using the bounds testing Auto Regressive Distributed Lag (ARDL) model. A long run relation between imports, gross domestic product (GDP) and relative prices having a negligible effect as suggested by the model validates Thirlwall"s assumption. The actual growth rate was found to be equal to the calculated potential growth rate given the BOP constraint assumption. The empirical results support the historical development of the Egyptian BOP analysis which shows how the external balance was and remains a major factor affecting Egypt"s growth rate.

Lélis, Silveira, Cunha and Haines (2018) analysed the balance-of-payments-constrained growth in Brazil considering Thirwall"s Law (1979). The study estimated export and import demand functions using two econometric models: vector error correction and structural state space model for the period of 1995–2013. The results suggest that the balance of payments is a constraint to the Brazilian economic growth

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This is based on the research design, mode specification, variable measurement, data sources, data analysis and ethical considerations in the research.

3.1 Research Design

A time series analysis adopted an Ex-post facto design based on quantitative techniques to analyze secondary data scientifically to critically conclude the research objectives, secondary data was collected from different ministries. Ex post facto design is a quasi-experimental study examining how an independent variable, present prior to the study, affects a dependent variable. A true experiment and ex post facto both are attempting to say: this independent variable is causing changes in a dependent variable. This is the basis of any experiment one variable is hypothesized to be influencing another. This is done by having an experimental group and a control group. The design is Ex post facto designs are used because the designs do not use random assignment. Because the study will use the already available published random data. The design is intended to provide an elaborative assessment of the trend and the association of the variables (Onwuegbuzie and Turner, 2007).

3.2 Model Specification

The study employed the Cobb–Douglas production function. is a particular functional form of the production function, widely used to represent the technological relationship between the amounts of two or more inputs (particularly physical capital and labor) and the amount of output that can be produced by those inputs. The Cobb–Douglas form was developed and tested against statistical evidence by Charles Cobb and Paul Douglas between 1927–1947

Production function expresses the relationship between the quantities of productive factors (such as labour and capital) used and the amount of product obtained. It states the amount of product that can be obtained from every combination of factors, assuming that the most efficient available methods of production are used.

Firms use the production function to determine how much output they should produce given the price of a good, and what combination of inputs they should use to produce given the price of capital and labor. The production function also gives information about increasing or decreasing returns to scale and the marginal products of labor and capital.

Increasing marginal costs can be identified using the production function. If a firm has a production function $Q=F(K,L)$ (that is, the quantity of output (Q) is some function of capital (K) and labor

(L)), then if 2Q<F(2K,2L), the production function has increasing marginal costs and diminishing returns to scale. Similarly, if 2Q>F(2K,2L), there are increasing returns to scale, and if 2Q=F(2K,2L), there are constant returns to scale. One very simple example of a production function might be Q=K+L, where Q is the quantity of output, K is the amount of capital, and L is the amount of labor used in production. This production function says that a firm can produce one unit of output for every unit of capital or labor it employs. From this production function we can see that this industry has constant returns to scale that is, the amount of output will increase proportionally to any increase in the amount of inputs.

Consider an aggregate production function of the form,

$$Y = AL^{\beta}K^{\alpha}$$

Where:

Y = total production (the real value of all goods produced in a year or 365.25 days)

L = labor input (the total number of person-hours worked in a year or 365.25 days)

K = capital input (the real value of all machinery, equipment, and buildings)

A = total factor productivity

α and β are the output elasticity of capital and labor, respectively. These values are constants determined by available technology.

Consider an aggregate production function in which balance of trade, exports and imports is an input into the aggregate production function thus, there is an optimal level of Balance of payment which maximize the growth rate. If Balance of payment levels are too low, the growth in exports especially of majorly agricultural products fall whereas if its high growth in industrial sector will rise. Aggregate output produced using balance of payment at time t is expressed as: Subjecting the production function to the factors as exchange rate, Balance of payment, exports, imports are taken to have a combined effect and contribute to the economic growth and development of the country since the labour and capital was e catered for.

In carrying out the linear combination of the variables in the model an alternative approach, which certainly has more advantage over both the single equation and Johansen maximum likelihood procedures is adopted for this study. This approach was by Stock and Watson, (1993). This approach improves on others by correcting for repressors endogeneity and serial correlation which is the major criticism of single equation method and the Johansen maximum likelihood procedure by including leads and lags of first differences of the regressors and also used the GLS procedure to correct for plausible serial correlation among the errors. In addition, the Stock-Watson method has asymptotic optimality properties like the Johansen procedure. This is expressed below as:

$$Y_{t} = \alpha_1 + \alpha_2 LnK_t + \alpha_3 LnL_t + \alpha_4 LnE_t + \alpha_5 LnIP_t + \alpha_6 LnBoP_t + + \alpha_7 LnRer_t + e_1$$

K= Capital, L = Labor, E= Export, IP= Import, Bop= Balance of Payment, Real exchange rate.

Based on the discussion on the measurement of Balance of payment, exports, imports and Balance of trade are adopted as the three proxy for balance of trade. These three measures are adopted because of their relevance in the production process that can lead to increase in economic growth of country. For instance exports generate foreign currency, positive balance of payment is determinant of country health and real exchange rate determines the economic growth, low imports improve growth of the economy.

3.3 Data Sources

The data was obtained from secondary sources which included World Bank, International Monetary Fund (IMF) and the data base of the World Bank. The data covered the period from 1985to 2019.

3.4 Data analysis

3.4.1 Descriptive Analysis

Under this, the variable assessment involves the assessment of the descriptive statistics for the variables in the study. The descriptive measures the levels of central tendency and spread for the data sets that are presented for the data in the preliminary assessment for the event and nature for

the inference for the general populations in the results that were conducted based on the sample for the data in the organization.

3.4.2 Jarque -Bera Tests

J-B test shall be used to ascertain whether the errors of regression are normally distributed. The normal distribution has a skewness coefficient of zero and kurtosis coefficient of three. J-B test is optimal in the sense that the Lagrange Multiplier test (LM) for the null hypothesis of normality against the maintained hypothesis is generated by Pearson family of distributions. LM test has the maximum asymptotic power, which means that the departure of road infrastructure, education infrastructure, health infrastructure, labour, capital, interest rate and economic growth from the normal distribution except employment was suggested with the use of p-values associated with Jaque-Bera test statistics. Kurtosis variables are all less than three, the distribution of variables exhibit non stationarity (Stock and Watson, 2006). The positive signs of the skewness for all the variables are indicative of variables with long tails.

3.4.3 Unit roots test

The study used Augmented Dickey–Fuller test and Philip Perron Unit root to check the presence of unit roots in an autoregressive model. The tests for ADF fuller test hence forth reveal that the null hypothesis that is determined. This study was therefore, employ the stationarity analysis to test whether the mean and variance of the stochastic term will be constant over time. The Augmented Dickey- Fuller (ADF) test is appropriate.

3.4.4 The Augmented Dickey-Fuller Tests

The ADF tests the null hypothesis that there exists a unit root in the time series (non-stationary time series), which is H0: $\alpha=0$ against the alternative hypothesis, H1: $\alpha <0$, that the time series is stationary (no unit root). A rejection of the null hypothesis under these tests means the series does not have a unit root. The focus assumes that the regression model determine the independent and dependent variables for stationary and errors for the means to variance. Non stationary assessments establish the effect of High 2 for the low Durbin Watson statistics and F statistics for the establishment of the significant determination for determination of results in the economic senses (Verbeek, 2000). The focus of the assessments for the estimates in the consistence for the statical determinations

3.4.6 Phillip Perron Unit test

The study used Philip Perron Unit root test based on the data that was attained. The decisions are made basing on the t-statistic, that is to say, if the absolute value of t-statistic is more than the critical values, then we reject the null hypothesis and conclude that the series is stationary. On the other hand, if the absolute value of the t-statistic is less e than the critical values, we fail to reject the null hypothesis and conclude that the series is non-stationary. The critical values for this t-statistic are given in Mackinnon (1991).

3.4.7 Co-integration Analysis

The focus of the long run effect of balance of trade on economic growth of the country. The study therefore assess that the long run equilibrium relationship for the variable determination in the variables for co-integration. Engle and Granger (1987) argued that co-integration of the variables has to have the long run relationship. The main reason for the popularity for the co-integration assessment that is provided for the background in testing the estimates for the short-run and long-run relationships for the economics of the variables.

3.4.8 Johansen Co-Integration

After the co-integration tests, this study employs the Fully-Modified Ordinary Least Square (FMOLS) as proposed by Phillips and Hansen (1990) to determine the long-run effect/coefficients of infrastructural investments on economic growth. The FMOLS is used because it has some interesting characteristics which make it better than ordinary least squares (OLS). Firstly, the FMOLS modifies the ordinary least squares to account for serial correlation and endogeneity in regressors as a result of cointegrating relationships by presenting an asymptotically unbiased and fully efficient estimates. In addition, the FMOLS provides optimal coefficients for co integrating regressions when the variables in the models are full ranked i.e. integrated of order one (Phillips, 1995). The Johansen ML approach has a number of advantages over the Engle-Granger two stage approach to cointegration. As this is a VAR based technique, less concern is needed over whether the explanatory variables are exogenous or endogenous (Babajide & Taofik, 2016). Restrictions can be applied to the cointegrating vectors, which is not possible with the Engle-Granger approach Time series data spanning the period 1985 to 2019 was used for analysis. Data was obtained from the World Bank, World economic outlook and International Monetary fund 2019.

3.5. Diagnostic Tests

3.5.1 Normality Test

To test the normality of the variables, study employs Anderson–Darling and Jarque–Bera tests for the study. The Jarque - Bera test is a test based on OLS residuals mainly used in a large sample test. First, it requires calculating the Skewness and Kurtosis and then measures the OLS residuals as. In this case, we use the JB test to determine whether the residuals are normally distributed or not. The null hypothesis and the alternative hypothesis are given as

H0: Residuals are normally distributed

H1: Residuals are not of normal distribution

In the null hypothesis the determination of the residual values are provided for distribution context, in the presence of p-values for the statistics provide sufficiency is low and low for the level of significances that is therefore rejected. The P-values established that established that normal distribution assumptions are rejected. In this case the normality assumption is not rejected mostly when the value of the statistic is close to zero. The test follows a chi-square distribution with two degrees of freedom (Jarque & Bera, 1987).

3.6 Ethical Considerations

The researcher credited and precisely recognize the sources of information in an effort to celebrate the works of previous intellectuals or researchers. The researcher labored and work in line with generally acceptable standards of research were attained time series data was not manipulated rather it was used as attained.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

4.0 Introduction

In this chapter, the researcher presents analyses and interprets the data. The presentation, analysis and interpretation of the data are dependent on the objectives of the study. The purpose of the study is to establish the relationship between balance of payment and economic growth of Uganda from the year 1985 to 2019. The first objective was to examine the effect of import on economic growth of Uganda from 1985 to 2019, to find out the effect of export on economic growth of Uganda from 1985 to 2019 and to establish relationship between balance of payment and economic growth of Uganda from 1985 to 2019. The analysis for the findings for the study is presented in the findings provided in the study.

4.1 Descriptive summary statistics for the variables

Table 4.1: Descriptive summary statistics for the variables

	EXPORTS	**IMPORT**	**BOP**	**LABOUR**	**CAPITAL**	**EG**
Mean	22.05457	12.74686	-11.28286	3.362857	19.29143	6.060857
Median	21.56000	12.81000	-11.50000	3.300000	19.90000	6.300000
Maximum	31.90000	24.24000	-1.300000	4.300000	27.60000	11.50000
Minimum	13.64000	7.060000	-16.60000	3.000000	8.400000	-3.300000
Std. Dev.	4.520272	3.745817	3.237963	0.318162	5.660096	2.800355
Skewness	0.148875	0.597370	1.169843	1.823740	-0.322512	-0.918469
Kurtosis	2.468118	3.843970	5.139334	6.279334	2.087358	5.273651
Jarque-Bera	0.541848	3.120379	14.65754	35.08478	1.821414	12.45975
Probability	0.762675	0.210096	0.000656	0.000000	0.402240	0.001970
Sum	771.9100	446.1400	-394.9000	117.7000	675.2000	212.1300
Sum Sq. Dev.	694.7171	477.0590	356.4697	3.441714	1089.247	266.6277
Observations	35	35	35	35	35	35

Source: Researcher's estimation, 2021

Table 1 show that the average results for exports was 22.05% while imports averaged to 12.7%, the balance of payments had an average of -11.28286% changes while GDP for Uganda had an average of 6.06%, on average the mean changes were more on exports than other variables although capital and labour also had 3.3% and 19% changes respectively. Of all the variables, exports had the highest standard deviation of 21.6 while BOP had the smallest standard deviation with the values being in negative, the study results indicate that the state of the exports, imports, Bop, labour and capital had been increasing although this could have had an influence on the economic growth rate of Uganda for the period of the study.

4.1.1 Tests for Stationarity with Constant and Time Trend, Sample 1985-2019

Table 4.2: Tests for Stationarity with Constant and Time Trend, Sample 1985-2019

Variable	Levels	First difference	Critical value (5%)	Critical value (1%)
LN Exports	-2.230164	-4.355026*	-2.951125	-3.639407
LN Imports	-1.909031	-4.290477*	-2.951125	-3.639407
LNBOP	-5.337157	-5.321728*	-2.954021	-3.646342
LN Labour	-1.678066	-4.229988*	-2.960411	-3.661661
LN Capital	-1.614772	-4.128729	-2.951125	-3.639407
LN Economic growth	-0.165701	-4.134287	-2.957110	-3.653730

Source: Researcher's Estimation (2021)

Results in table 4.2 provide a summary of the augmented dicker fuller test, it shows all variables are not stationary. However, stationarity is achieved through first difference. Mackinnon (1996) critical values for rejection of hypothesis of a unit root ** Denotes significance at 1% level; * Denotes significance at 5% level. The results indicate that the results were generally unit root hence all are converted to first difference before model developments are undertaken.

4.1.2 Test for Long-run Equilibrium

This study used the Johansen co-integrating equation to determine the long-run equilibrium relationships among the set of variables. From the Trace and Maximum-Eigen values, we have evidence of at least one co-integrating equation irrespective of the choice of model presented in table 4.3. Results in table 4.1 showed that all the variables are integrated of the order one I (1) hence having established that he variables stationary, then the long run equilibrium is analyzed as below.

Table 4.3: Cointegration Results (with a Linear Trend)

Hypothesized		Trace	0.05			
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**		
None *	0.854555	209.7827	125.6154	0.0000		
At most 1 *	0.799885	146.1601	95.75366	0.0000		
At most 2 *	0.678041	93.06761	69.81889	0.0002		
At most 3 *	0.660760	55.66765	47.85613	0.0078		
At most 4	0.341280	19.99312	29.79707	0.4233		
At most 5	0.168581	6.217064	15.49471	0.6699		
At most 6	0.003768	0.124567	3.841466	0.7241		
LEXPORTS	LIMPORTS	LBOP	LCAPITAL	LLABOUR	LER	LEG
1.000000	0.061559	-0.012796	-1.301506	1.285795	0.108499	-0.467895
	(0.20321)	(0.17734)	(0.23211)	(0.43638)	(0.03803)	(0.07159)

Source: Researcher's Estimation (2021)

The table report show the long run relationship among the study variables of the study, the panel of the table reports both trace and maximum eigen value statistics for the co-integration tests using Johansen techniques while the panel 2 reveal the estimates for the cointergrating vectors.

The results in panel 1 of the table 4.3A reports both trace and maximum eigen values statistics for the cointergration tests, the hypothesis for the no co-integrations can be rejected based on λ -max or the trace statistics. The results of the study are both above the critical value at 5% significant level; this means that there exists a unique co-integration vector among the variables in the study. The co-intergrating equation normalized on exports, imports showed that Bop and capital had a negative sign while the rest of the variables in the study are positive. This means that the existence of cointergration is confirmed amongst the variables.

4.2 Effect of import on economic growth of Uganda from 1985 to 2019

The first objective of the study was to assess the effect of import on economic growth of Uganda from 1985 to 2019. The results based on the study intended to determine the effect between imports and economic growth of Uganda is determined based on automatic selection model selection method of Akakaike info criterion (AIC). The assessment was based on auto regressive distributed lag models.

Table 4.4: ARDL on import on economic growth of Uganda from 1985 to 2019

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LEG(-1)	0.154028	0.154812	0.994932	0.3293
LIMPORTS	-0.653171	0.390184	-1.674006	0.0166
LER	0.140120	0.095302	1.470271	0.1540
LER(-1)	0.228186	0.088888	2.567132	0.0166
LCAPITAL	3.615491	1.186118	3.048171	0.0054
LLABOUR	-0.094997	1.048873	-0.090570	0.9286
C	0.258019	1.545692	0.166928	0.8688

R-squared	0.508123	Mean dependent var		1.742329
Adjusted R-squared	0.350722	S.D. dependent var		0.571448
S.E. of regression	0.460460	Akaike info criterion		1.508746
Sum squared resid	5.300588	Schwarz criterion		1.912783
Log likelihood	-16.64868	Hannan-Quinn criter.		1.646534
F-statistic	3.228215	Durbin-Watson stat		1.912620
Prob(F-statistic)	0.011625			

Source: Researcher's Estimation (2021)

From table 4.4 regarding the effect of import on economic growth of Uganda from 1985 to 2019, the value of R squared is 0.50 on the regression coefficient between imports and economic growth of Uganda from 1985 to 2019, the regression coefficient expresses that 50% of change in the dependent variable (i.e economic growth rate) is caused by in imports. The adjusted R^2, 0.35 on the other hand expresses that for this change; 35% of the data are accounted. In this case imports account the changes in economic growth by 35%. The standard error estimate of shows close scatter of the data.

From the coefficient of the independent variables that is; β1 (imports) is statistically significant at 5% level of significance in explaining variations in economic growth in Uganda because their p-values 0.0166 for imports, the other variables of capital and exchange rates in the model were also significant and the variable of labour has no significant effect on the economic growth in Uganda from 1985-2019. From the above regression table, the following equation can be derived;

$$Economic\ growth = 0.25801 - -0.653171\ Imports$$

The interpretation of the above equation is that a unit increase in imports reduces the economic growth rate by 0.653 units. The results imply that the economic growth is highly affected negatively by the imports in Uganda.

4.3 Effect of export on economic growth of Uganda from 1985 to 2019

The second objective of the study was to find out the effect of export on economic growth of Uganda from 1985 to 2019. The study findings for the study are based on the assessment of the based on auto regressive distributed lag models ARDL.

Table 4.5: ARDL on import on economic growth of Uganda from 1985 to 2019

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LEG	0.070330	0.172538	0.407617	0.6869
LEXPORTS	0.752694	0.807270	0.932395	0.3597
LER	0.160820	0.098412	1.634150	0.1143
LCAPITAL	2.981976	1.289769	2.312024	0.0290
LLABOUR	0.724681	1.060207	0.683528	0.5003
C	-0.302862	2.126763	-0.142405	0.8879

R-squared	0.446782	Mean dependent var	1.742329
Adjusted R-squared	0.297839	S.D. dependent var	0.571448
S.E. of regression	0.478845	Akaike info criterion	1.567446
Sum squared resid	5.961613	Schwarz criterion	1.926590
Log likelihood	-18.64658	Hannan-Quinn criter.	1.689924
F-statistic	2.999681	Durbin-Watson stat	1.897213
Prob(F-statistic)	0.019008		

Source: Researcher's Estimation (2021)

From table 4.5 regarding the effect of exports on economic growth of Uganda from 1985 to 2019, the value of R squared is 0.446 on the regression coefficient between exports and economic growth of Uganda from 1985 to 2019, the regression coefficient expresses that 44.6% of change in the dependent variable (i.e economic growth rate) is caused by exports. The adjusted R^2, 0.29 on the other hand expresses that for this change; 29.0% of the data are accounted. In this case exports account the changes in economic growth by 29%.

From the coefficient of the independent variables that is; β1 (exports) is statistically non significant at 5% level of significance in explaining variations in economic growth in Uganda because their p-values 0.3597 for exports, the other variable of exchange rates in the model was significant and while the variable of labour and capital were insignificant, had no significant effect on the economic growth in Uganda from 1985-2019. The interpretation of the above is that a unit increase in exports does not significant lead to economic growth of Uganda.

4.4 Relationship between balance of payment and economic growth of Uganda from 1985 to 2019.

The third objective of the study was to find out the effect of balance of payment on economic growth of Uganda from 1985 to 2019. The study findings for the study are based on the assessment of the based on auto regressive distributed lag models ARDL.

Table 4.6: ARDL on import on economic growth of Uganda from 1985 to 2019

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LEG(-1)	0.155790	0.135334	1.151154	0.2601
LBOP	0.860793	0.249723	3.446997	0.0019
LER	0.085103	0.083919	1.014108	0.3199
LCAPITAL	2.382850	1.069630	2.227733	0.0348
LLABOUR	0.324692	0.845094	0.384208	0.7039
C	-0.095560	1.230262	-0.077675	0.9387

R-squared	0.607605	Mean dependent var	1.742329
Adjusted R-squared	0.501961	S.D. dependent var	0.571448
S.E. of regression	0.403282	Akaike info criterion	1.223962
Sum squared resid	4.228542	Schwarz criterion	1.583106
Log likelihood	-12.80735	Hannan-Quinn criter.	1.346440
F-statistic	5.751405	Durbin-Watson stat	2.013651
Prob(F-statistic)	0.000424		

Source: Researcher's Estimation (2021)

From table 4.6 regarding the effect of balance of payment on economic growth of Uganda from 1985 to 2019, the value of R squared is 0.60 on the regression coefficient between BOP and economic growth of Uganda from 1985 to 2019, the regression coefficient expresses that 60% of change in the dependent variable (i.e economic growth rate) is caused by in BOP. The adjusted R^2, 0.50 on the other hand expresses that for this change; 50% of the data are accounted. In this case BOP accounts for the changes in economic growth by 50%.

From the coefficient of the independent variables that is; $\beta1$ (BOP) is statistically significant at 5% level of significance in explaining variations in economic growth in Uganda because their p-values 0.0019 for BOP, the other variable of capital was also significant in the model while the variable of labour, exchange rate has no significant effect on the economic growth in Uganda from 1985-2019. From the above regression table, the following equation can be derived;

$$Economic\ growth = -0.09556 + 0.860793\ BOP$$

The interpretation of the above equation is that a unit increase decrease in balance of payment increases the economic growth rate by 0.860 units. The results imply that the economic growth is highly affected negatively by the BOP of Uganda.

Table 4.7: Variable inflation factors

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
LBOP	0.207473	178.2666	1.149618
LER	0.041045	340.4237	5.974553
LCAPITAL	0.485986	653.2231	6.062997
LLABOUR	2.141285	440.1887	2.116302
C	2.817225	406.4445	NA

Source: Researcher's Estimation (2021)

The diagnostic tests for the regression model show that there exist no instances of collinearity as the VIF statistics associated with each of the independent variables in the model were within the acceptable range. Further tests reveal that under the assumption that there is constant variance (homoscedasticity) there is no sufficient evidence for rejection of the null hypothesis as per **Breusch-Godfrey Serial Correlation LM Test**, Breusch-Pagan / Cook-Weisberg test for heteroscedasticity as summarised in table 4.7. The tests of auto-correlation also show that under the assumption that there is no serial auto-correlation in the data, we fail to reject the null hypothesis as implied by the Durbin Watson statistic summarised in table 4.8.

Table 4.8: Breusch-Godfrey Serial Correlation LM Test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.120539	Prob. F(1,25)	0.7314
Obs*R-squared	0.163146	Prob. Chi-Square(1)	0.6863

Test Equation:

Dependent Variable: RESID

Method: ARDL

Date: 10/15/21   Time: 23:56

Sample: 1986 2019

Included observations: 34

Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LEG(-1)	0.046358	0.191794	0.241706	0.8110
LBOP	-0.013319	0.256936	-0.051838	0.9591
LER	-0.002182	0.085607	-0.025494	0.9799
LCAPITAL	0.162397	1.184464	0.137106	0.8920
LLABOUR	0.008916	0.860143	0.010366	0.9918
C	-0.052398	1.260678	-0.041564	0.9672
RESID(-1)	-0.102862	0.296271	-0.347187	0.7314

R-squared	0.004798	Mean dependent var	-2.51E-15
Adjusted R-squared	-0.313666	S.D. dependent var	0.357963
S.E. of regression	0.410280	Akaike info criterion	1.277976
Sum squared resid	4.208252	Schwarz criterion	1.682012
Log likelihood	-12.72558	Hannan-Quinn criter.	1.415764
F-statistic	0.015067	Durbin-Watson stat	1.889802
Prob(F-statistic)	0.999999		

Source: Researcher's Estimation (2021)

The tests results show that of auto-correlation also show that under the assumption that there is no serial auto-correlation in the data, we fail to reject the null hypothesis as implied by the Breusch-Godfrey Serial Correlation LM Test statistic summarised in table 4.8 above.

Table 4.9: Heteroskedasticity Test: Breusch-Pagan-Godfrey

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.151943	Prob. F(7,26)	0.9923
Obs*R-squared	1.336198	Prob. Chi-Square(7)	0.9874
Scaled explained SS	1.208937	Prob. Chi-Square(7)	0.9907

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 10/16/21   Time: 00:02
Sample: 1986 2019
Included observations: 34

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.645254	0.748056	0.862574	0.3963
LEG(-1)	0.032216	0.082289	0.391495	0.6986
LBOP	-0.061873	0.151843	-0.407479	0.6870
LER	0.021746	0.051027	0.426168	0.6735
LCAPITAL	-0.310014	0.650385	-0.476663	0.6376
LCAPITAL(-1)	0.125566	0.697007	0.180151	0.8584
LLABOUR	-0.062901	0.513856	-0.122410	0.9035

R-squared	0.039300	Mean dependent var	0.124369
Adjusted R-squared	-0.219350	S.D. dependent var	0.222066
S.E. of regression	0.245214	Akaike info criterion	0.228954
Sum squared resid	1.563379	Schwarz criterion	0.588098
Log likelihood	4.107782	Hannan-Quinn criter.	0.351432
F-statistic	0.151943	Durbin-Watson stat	2.316787
Prob(F-statistic)	0.992250		

Source: Researcher's Estimation (2021)

The findings from the Breusch-Pegan test for heteroscedasticity above indicate that the model does not suffer from the problem of non-constant variance. This is because the p-value were greater than 0.05 thus we fail to reject the above stated null hypothesis in table 4.9 and conclude that there is constant variance in the model.

Figure 4.1: Showing Normality tests for the variables

Series: Residuals	
Sample 1986 2019	
Observations 34	
Mean	-2.51e-15
Median	0.047655
Maximum	0.739501
Minimum	-1.042201
Std. Dev.	0.357963
Skewness	-0.500207
Kurtosis	4.094382
Jarque-Bera	3.114541
Probability	0.210710
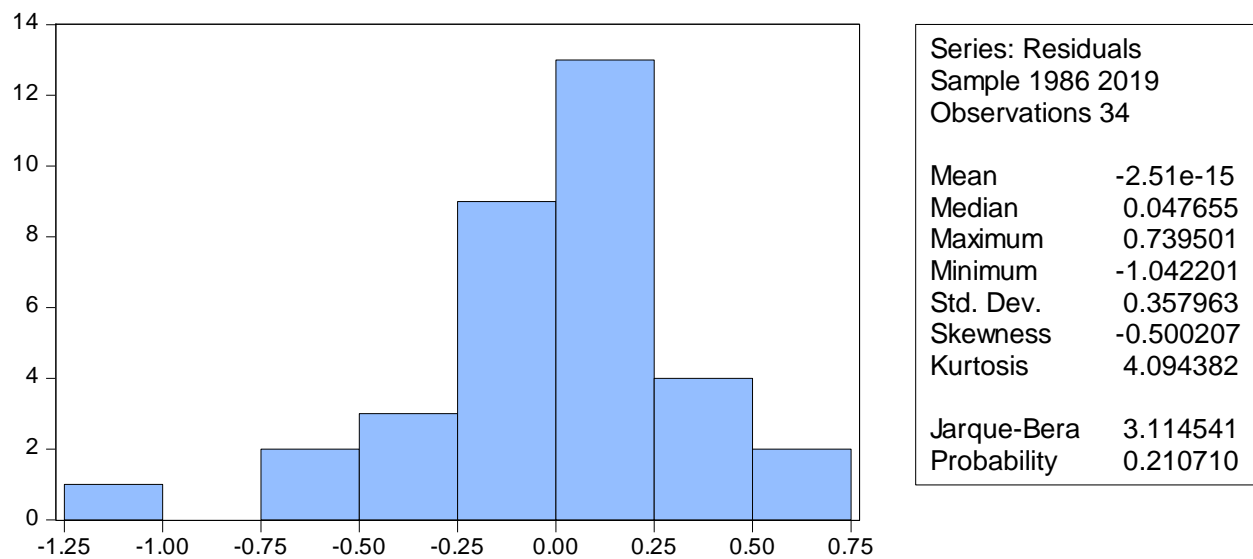
Source: Researcher's Estimation (2021)

Null hypothesis of normality is Ho: Residuals are normally distributed. We reject the null hypothesis for normality if the p-value is less than 0.05. In our model since the p-value of 0.21 is greater than 0.05, we reject the null hypothesis and thus conclude that the residuals of the model are not normally distributed.

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presents a discussion of findings, conclusion and recommendation of the research.

5.1. Discussions and Conclusions

The aim of this study was to examine the effect of Balance of payment and economic growth in Uganda for a period of 1985 to 2019. Since this study involved time series data, there was need for Stationarity tests to be carried out and since it involved a long run relationship analysis, Co-integration using Johansen test was also required. Finally, regression analysis was used to establish the balance of payment and economic growth in Uganda

5.1.1 Effect of Import on Economic Growth of Uganda from 1985 to 2019

The study findings reveal that there was a statistically significant relationship between imports and economic growth of Uganda from 1985 to 2019. The results indicate that the occurrence of imports by Uganda induce economic growth rate for Uganda over the period of the study. The results are in agreement with those of Akhter (2015) investigate the relationship between import, and GDP growth. "They conclude that the impact of exports on economic growth is positive and an opposite scenario is found in the case of import. Even Omoju and Adesanya (2012) investigate international trade and growth in developing country using Nigeria as a case study. "They make use of secondary data from 1980-2010 and applying the Ordinary Least Square (OLS) regression method, they find out those exports, imports and exchange rate have a significant positive impact on economic growth in developing countries although in disagreement with those of Kogid, Mulok, Ching, Lily, Ghazali and Loganathan (2011) analyzed the relationship between the economic growth and the import in Malaysia from 1970 to 2007. Results show that there is no co integration exists between economic growth and import, but there exists bilateral causality between economic growth and import. Results also show that import could indirectly contribute to economic growth, and economic growth.

5.1.2 Effect of Export on Economic Growth of Uganda from 1985 to 2019

The research findings also show that exports have a non significant effect on economic growth of Uganda, the results indicate that exports have no sufficient contribution to the economic growth rate of Uganda over the period of the study. Even in disagreement with those of Sheridan (2014) uses ordinary least squares and fixed effect estimation as well as regression tree technique to explore the potential relationship between disaggregated exports and economic growth in a panel of 117 developed and developing countries over the period 1960 to 2009. Although in agreement with those of Yee Ee (2015) who examined the validity of export-led growth hypothesis in four Sub-Saharan African countries (Botswana, Equatorial Guinea and Mauritius) over the period 1985-2014using fully modified ordinary least square (FMOLS) and dynamic OLS (DOLS). The results find that the effect of export led growth is positive and significant, indicating that exports explain not only the cyclical changes in output (short term) but also in the long run trend. The results also agree with those of Mehrara and Firouzjaee (2017) also used Granger causality relationship between non-oil export and economic growth to investigate panel cointegration analysis for 73 developing countries during the period 1970-2007. However, for oil countries, there is no short run causality relationship between the oil exports and economic growth, in any of the two models."Ugochukwu and Chinyere (2013) used data covering the period of 1986 to 2011 to study the export-led growth hypothesis in Nigeria. The result arising from the findings indicates that oil export positively and significantly impacted on the growth of Nigeria's economy for the period under review

5.1.3 Relationship between balance of payment and economic growth of Uganda from 1985 to 2019.

The study results show that balance of payment has a significant relationship with the economic growth of Uganda from1985 to 2019. The study findings show that reduction in balance of payment induces the economic growth of Uganda. In agreement with those of Anega (2010) empirically tested the validity of the simplified version of the balance of payment-constrained economic growth model for Ethiopia during the period 1971-2008. The finding showed that the average economic growth over the sample period was 2.84 percent, whereas the economic growth as suggested by Thirwall's law is 7.42 percent. The results also agree with Emmanuel (2017) applied the adjusted balance of payment (BOP) constrained growth framework modified by

Thirwall and Hussain (1982) on Nigeria's economic growth to estimate the determinants of the long run rate of growth in Nigeria. The study applied cointegration test on time series data to estimate the long-run relationship between Nigeria's real GDP (output) and its real export. Results signify cointegration between the variables, lending support to Thirwall's BOP constrained model as a suitable framework. In agreement with Lélis, Silveira, Cunha and Haines (2018) analysed the balance-of-payments-constrained growth in Brazil considering Thirwall's Law (1979). The study estimated export and import demand functions using two econometric models: vector error correction and structural state space model for the period of 1995–2013. The results suggest that the balance of payments is a constraint to the Brazilian economic growth

5.2 Conclusion

The study was set to establish the relationship between balance of payment and economic growth of Uganda from the year 1985 to 2019. The study set to examine the effect of import on economic growth of Uganda from 1985 to 2019, to find out the effect of export on economic growth of Uganda from 1985 to 2019 and to establish relationship between balance of payment and economic growth of Uganda from 1985 to 2019.

The study findings reveal that there was a statistically significant relationship between imports and economic growth of Uganda from 1985 to 2019. The results indicate that the occurrence of imports by Uganda induce economic growth rate for Uganda over the period of the study. The study concludes that increase in the imports would generate the economic growth of Uganda.

The research findings also show that exports have a non significant effect on economic growth of Uganda; the results indicate that exports have no sufficient contribution to the economic growth rate of Uganda over the period of the study. The study concludes that exports have not generated the economic growth of Uganda; this could be because the exports are low and hence not sufficient to attain the economic growth.

Thirdly results show that balance of payment has a significant relationship with the economic growth of Uganda from1985 to 2019. The study findings show that reduction in balance of payment induces the economic growth of Uganda. The results indicate that the reduction in balance of payment generates more the economic growth of Uganda. The study indicate that increasing the Bop significantly leads to enhancement of the economy.

5.3 Recommendations

Firstly, The study revealed that the imports of Uganda were high though significant in growth need to be checked through establishment of import substitutions industries to reduce imports, this is because the presence of imports lead to depreciation of the Ugandan currency hence imports substitution policy will strengthen the currency of Uganda

Secondly, there is need for the development of the exports for the country, exports were insignificant and hence seem to be low. The quality of the exports needs to be enhanced and the functionality of the country export system need to be developed. Uganda need to established highly regulated quality export based industries to raise the amount of the supplies and services for the exports.

Thirdly balance of payment if reduced generate the economic growth, there is need for government to increase on the debt servicing, increase their participation to the international trade unions such as world trade organization necessary for the inducement of the growth. The policy development on the economy need to be enhanced for the growth of trade.

Lastly, the government of Uganda should improve on the domestic economic structure to stabilize the balance of payments in the long term. As a component of the economic adjustment Programme, several things must be done to make improvements on the balance of payments status. The Ugandan industry must first become more efficient and more productive. As a result, it is anticipated that the balance of payments will at least partly recede on itself.

5.4 Areas of further study

During this study, i have learnt that no single study is exhaustive enough to show the effect of balance of payment on economic growth therefore; further research can be done on the impact of balance of trade on economic growth also another study is eminent on international trade and economic growth of Uganda.

5.5 Contribution to knowledge

Several analyses have dealt with the growth prospects for Uganda. A lot of this studies are inclined towards supply oriented models, with economic growth prediction based on macro production functions and assumptions about technological, resource and institutional development. This study presents a model for Uganda, where growth is demand driven and constrained by balance of payments concerns. Several literatures have tested and verified the BOP model in both developing and developed economies. This study expands the trend by testing the Thirwall BOP model on Uganda economy from 1985-2019 using time series data.

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APPENDIX I ; DATA

Year	Exports (% of GDP)	Import (% of GDP	BoP (% of GDP	Real exchange rate	Domestic labor measured population growth rate (annual %)	Domestic capital measured gross fixed capital formation (% of GDP)	Economic Growth (Annual Growth)
1985	13.64	13.73	-1.3	6.72	3.3	8.7	-3.30
1986	14.32	12.81	-2.4	14	3.4	8.4	0.40
1987	15.00	8.24	-9.8	42.8	3.5	9.7	4.00
1988	15.32	7.57	-10.2	106.2	3.5	10.8	8.30
1989	18.04	7.95	-10.1	223.0	3.5	11.1	6.40
1990	17.77	7.24	-12.1	3.040943	3.4	12.7	6.50
1991	18.09	7.46	-14.5	960.82	3.3	15.2	5.60
1992	18.09	8.76	-15.5	1201.82	3.3	15.9	3.40
1993	19.36	7.06	-15.5	1102.7	3.2	15.2	8.30
1994	21.17	8.74	-10.4	932.53	3.1	14.6	6.40
1995	19.09	11.79	-9.0	1012.82	3.1	16.4	11.50
1996	20.83	11.96	-11.5	1058.08	3.0	17.0	9.10
1997	23.42	13.35	-7.4	1149.65	3.0	16.9	5.10
1998	20.79	9.63	-10.8	1223.58	3.0	15.9	4.90
1999	20.40	12.25	-11.5	1335.41	3.0	19.3	8.10
2000	23.77	10.65	-11.4	1606.23	3.1	19.2	3.10

2001	22.09	11.51	-12.3	1732.86	3.2	19.0	5.20
2002	23.81	11.21	-13.9	1806.15	3.3	20.0	8.70
2003	25.06	12.69	-13.8	1993.77	3.3	20.7	6.50
2004	22.76	14.17	-10.1	1756	3.4	19.9	6.80
2005	24.81	14.17	-10.6	1851.4	3.4	22.2	6.30
2006	28.35	15.27	-13.1	1811.46	3.4	20.9	10.80
2007	30.05	16.72	-13.3	165O.90	3.4	21.9	8.40
2008	31.9	24.24	-7.7	1628.38	3.4	22.7	8.70
2009	28.57	18.69	-12.4	2074.65	3.3	24.7	6.80
2010	24.55	13.88	-11.5	2227.73	3.3	25.2	5.60
2011	27.01	12.91	-14.8	2614.37	3.3	26.8	9.40
2012	28.13	15.55	-12.8	2476.89	3.3	26.5	3.80
2013	26.71	16.58	-10.3	2589.33	3.3	27.5	3.50
2014	21.15	15.01	-10.1	2604.48	3.3	26.4	5.10
2015	24.91	12.93	-15.2	3379.86	3.5	27.6	5.18
2016	18.86	12.48	-16.6	3437.7	4.3	23.6	4.78
2017	20.17	16.66	-13.1	3437.7	3.1	22.8	5.79
2018	21.56	15.09	-9.8	3727.	4.2	24.5	6.18
2019	22.36	17.19	-10.1	3704.0	4.3	25.3	6.80