DETERMINANTS OF EXPORT GROWTH IN UGANDA (1991-2016)

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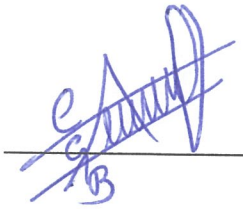
DECLARATION

This Research thesis is my original work and has not been presented for a Degree or any academic award in any University or Institution of Learning.

Signature  Date: 31-05-2019

APPROVAL

I confirmed that work reported in this Research thesis was carried out by the candidate under my supervision.

Supervisor

DR ABUGA ISAAC

Signature .....

Date: 31/05/2019

DEDICATION

I dedicated this work to my parents and family members for their moral support and the encouragement that they gave me during the study.

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LIST OF ABREVIATIONS

BOU	Bank of Uganda
COMESA	Common Market for East and Southern Africa
ECGF	Export Credit Guarantee Fund
ERP	Economic Reform Programmes
EAC	East African Community
GDP	Gross Domestic Product
RER	Real Exchange Rate
NTE	Non Traditional Exports
TOT	Terms of Trade
UBOS	Uganda Bureau of Statistics
UEPB	Uganda Exports Promotions Board
UNBS	Uganda National Bureau of Standards
USAID	United States Agency for International Development
UTB	Uganda Tourism Board

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ABSTRACT

Agriculture in Ugandan, accounts for about half of GDP, it contributes about 85% of exports, and employs 80% of the work force. Statistics show that the value of traditional exports remained minimal compared to the other sectors of the economy. This study examined factors affecting export performance in Uganda between 1991 and 2016. Secondary data were employed using time series to analyze the influence of macroeconomic factors such as Foreign Direct Investment (FDI), Real Exchange Rate (RER) and Terms of Trade (TOT). The study found out that real exchange rate foreign direct investment and terms of trade were significant to export performance. Gross Domestic Product was also found positively related to export growth. However, Inflation Rate was found negatively related to exports. The study concludes that improved export performances for both traditional and nontraditional exports, as well as to diversify export base of the country by formulating good trade policy, attract more Foreign Direct Investment, improve infrastructure and create good business environment. This study also recommended that Uganda's economy must try to attract more foreign direct investment not only to improve its exports, but also to bring in foreign exchange, capital, technology & other important resources such as market knowledge.

CHAPTER ONE
INTRODUCTION

1.0 Introduction

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

1.1 Background to the Study

This section focuses on historical perspective, theoretical perspective, conceptual perspective and contextual perspective.

1.1.1 Historical Perspective

Peasant agricultural production has been the predominant economic activity since pre-colonial times. Despite an active trade in ivory and animal hides linking Uganda with the east coast of Africa long before the arrival of Europeans, most Ugandans were subsistence farmers. After declaring Uganda, a protectorate in 1893, Britain pursued economic policies that drew Uganda into the world economy primarily to serve Britain's late nineteenth -century textile industry (Alvarez, 2013). Cotton cultivation increased in importance after 1904, and once it became clear that cotton plantations would be too difficult and expensive to maintain, official policy encouraged smallholder farmers to produce and market their cotton through local cooperative associations.

By 1910 cotton had become Uganda's leading export. In the following decades, the government encouraged the growth of sugar and tea plantations. Following World War II, officials introduced coffee cultivation to bolster declining export revenues, and coffee soon earned more than half of Uganda's export earnings (Cline, 2014).

Uganda enjoyed a strong and stable economy in the years approaching independence (Edwards, and Golub, 2014). Agriculture was the dominant activity, but the expanding manufacturing sector appeared capable of increasing its contribution to GDP, especially through the production of foodstuffs and textiles. Some valuable minerals, notably copper, had been discovered, and water power resources were substantial. In 1967

Uganda and the neighboring countries of Kenya and Tanzania joined together to form the East African Community (EAC), hoping to create a common market and share the cost of transport and banking facilities, and Uganda registered impressive growth rates for the first eight years after independence (Alvarez, 2013).

The economy deteriorated under the rule of President Idi Amin Dada from 1971 to 1979. Amin used nationalist, militarist rhetoric and ill-chosen economic policies to eliminate foreign economic interests and build up the military establishment (Fugazza, 2014). In 1972 he expelled holders of British passports, including approximately 70,000 Asians of Indian and Pakistani descent. Many Asians had been active in agribusiness, manufacturing, and commerce. Their mass expulsion and Amin's efforts to expropriate foreign businesses undermined investor confidence in Uganda. Amin also increased public expenditures on military goods, a practice that contributed to escalating foreign and domestic debt during the 1970s. Relations with Uganda's neighbors soured, the EAC disbanded in 1977, and Tanzanian troops finally led a joint effort to overthrow the unpopular Amin regime in 1979. By 1980 the economy was nearly destroyed.

Following Amin's departure, successive governments attempted to restore international confidence in the economy through a mixture of development plans and austere government budgets (Fugazza, 2014). Beginning in 1980, the second government of Milton Obote obtained foreign donor support, primarily from the International Monetary Fund (IMF), by floating the Uganda shilling (USh), removing price controls, increasing agricultural producer prices, and setting strict limits on government expenditures. In addition, Obote tried to persuade foreign companies to return to their former premises, which had been nationalized under Amin (Alvarez, 2013). These recovery initiatives created real growth in agriculture between 1980 and 1983. The lack of foreign exchange was a major constraint on government efforts, however, and it became a critical problem in 1984 when the IMF ended its support following a disagreement over budget policy. During the brief regime of Tito LutwaOkello in 1985, the economy slipped almost out of control as civil war extended across the country.

After seizing power in January 1986, the new NRM government published a political manifesto that had been drawn up when the NRM was an army of antigovernment rebels (Fugazza, 2014). Several points in the Ten-Point Program emphasized the importance of economic development, declaring that an independent, self-sustaining national economy was vital to protect Uganda's interests. The manifesto also set out specific goals for achieving this self-sufficiency: diversifying agricultural exports and developing industries that used local raw materials to manufacture products necessary for development (Fugazza, 2014).The Ten-Point Program also set out other economic goals: to improve basic social services, such as water, health care, and housing; to improve literacy skills nationwide; to eliminate corruption, especially in government; to return expropriated land to its rightful Ugandan owners; to raise public-sector salaries; to strengthen regional ties and develop markets among East African nations; and to maintain a mixed economy combining private ownership with an active government sector.

The NRM government proposed a major Rehabilitation and Development Plan (RDP) for fiscal years (FY) 1987-88 through 1990-91, with IMF support; it then devalued the shilling and committed itself to budgetary restraint (Fugazza, 2014). The four-year plan set out primarily to stabilize the economy and promote economic growth. More specific goals were to reduce Uganda's dependence on external assistance, diversify agricultural exports, and encourage the growth of the private sector through new credit policies. Setting these priorities helped improve Uganda's credentials with international aid organizations and donor countries of the West, but in the first three years of Museveni's rule, coffee production remained the only economic activity inside Uganda to display consistent growth and resilience. When coffee-producing nations failed to reach an agreement on prices for coffee exports in 1989, Uganda faced devastating losses in export earnings and sought increased international assistance to stave off economic collapse (Alvarez, 2013).

1.1.2 Conceptual Perspective

Uganda's export sector is dominated by export of primary commodities which include agricultural products mainly coffee, cotton, flowers, simsim, fish, unprocessed minerals such as gold, live animals to mention a few (Fugazza, 2014).At the time of independence in 1962, Uganda's traditional exports constituted of agricultural commodities and unprocessed minerals and by the end of the 70s, coffee was the largest foreign exchange earner accounting for about 51% of total export earnings.

The European Union and Common Market for East and Southern Africa (COMESA) states are Uganda's major trading partners and this has been ongoing since 2001. In 2005, the European Union constituted 31.1% of total export share followed by COMESA which accounted for 30.7%. North America and Asian continents constituted 2.3% and 7.5 % respectively (UBOS, 2006).

In the early 1990's, Uganda initiated significant reforms in the economy and one of objectives of these reforms was to boost the export sector. These reforms included among others, the liberalization of foreign exchange rate regime and the elimination of export taxes along with the abolition of taxes on import inputs meant for the export sector (Musinguzi, 2013). This led to the creation of agencies like Uganda Investment Authority, which was established, by an Act of Parliament-investment code of 1991. It was mandated to contribute to the development of the country through promotion and facilitation of private sector initiatives by prioritizing sectors targeting both local and international potential people. It was also charged with attracting export oriented investments. Another agency that was established as a result of the above reforms was the Uganda Exports Promotions Board (UEPB), which came into existence in 2016 also by an Act of Parliament. It is charged with the promotion, coordination and development of exports on a sustainable basis. Other agencies include the Uganda National Bureau of Standards (UNBS), which enforces quality of the country's exports and the Uganda Tourism Board (UTB), which is responsible for marketing the country's tourism facilities to outside world. In the early 1990s, the government's initiative to promote the export sector also led to the replacement of export licenses with export

certificates which greatly simplified the processing of export promotion applications (UEPB, 2005).

Government of Uganda has also actively participated in regional integration matters in a bid to gain access to regional markets. Uganda is presently a member of the African regional body, Common Market for East and Southern Africa (COMESA) and the East African Community (EAC). Uganda has also signed a number of treaties with member states in the East African Community, one of them being the East African Community Customs Union under which traders are supposed to pay equal tax as their counterparts in the region despite Uganda being a land locked country.

These developments led to considerable diversification of the exports which led to the emergence of items like Fish and Fish products, simsim, maize and cut flowers classified as Non Traditional Exports (NTE). Fish and maize, which prior to the above reforms were insignificant, currently constitute a substantial proportion of the country's foreign exchange earnings. Some of the traditional exports such as copper which in the past were major imports have now disappeared from the market. The Non Traditional Exports have taken over traditional exports as the main source foreign exchange since 2001. Their share of total export earnings rose from 14% in 1991 to 67.1 % in 2005 (UBOS, 2006).

1.1.3 Theoretical Perspective

This study will mainly be guided by the Heckscher-Ohlin version of international trade theory; which is called the mutual interdependence theory; it attempts to assess the basic cause of trade by putting emphasis on commerce between regions. The theory states that a region tends to export items the production of which requires relatively large amounts of the factors of production that the region possesses in relative abundance. It imports items which embody the scarce factors of production. The relative differences in factor endowment among regions result in variations in international costs and thus provide a basis for trade between areas (Salvatore 1993).

1.1.4 Contextual Perspective

Uganda's exports mainly comprise of agricu'tural products which include coffee, cotton, tea, flowers, processed fish and fish products and vanilla among others. Prior to the 1990s, the country's poor export performance was largely due to policy induced factors. These included controls of foreign exchange market (rationing of official exchange rates), high tariffs, import bans, quotas, and taxes on exports (Rudaheranwa, 2014).

However, trade policy reforms (trade liberalization) in the 1990's decontrolled producer prices and dismantled the monopoly power of former marketing boards both of which reinforced the exchange rate policy reform. The reforms also ended the payment of fixed margins to participants in production, marketing and distributional channels which led to increased competition hence efficiency. These trade policy reforms also led to considerable improvements in price incentives that resulted into positive supply responses both in terms of volume and composition of exports. Since 1991, commodity composition of Uganda's exports has increased significantly with traditional exports coffee, cotton, tea and tobacco contributing about 53% and 38% in 2017 and 2003 respectively to total exports, a decline from just less than 86% in 1992 (MFPED,2003). There have also been improvements in export foreign exchange earnings. For example, Uganda's export earnings increased from about US$ 258 million in 1981 to a peak of about US$ 889.8 million in 2005 (BOU, 2006). Figure 1.1 shows the trend of export earnings in Uganda since 1997 (Alvarez, 2013).

According to united nation's statistical division common database the export sector in Uganda has been characterized by fluctuations in export earnings since 1987. It portrays that earnings stagnated from 1997 to 2013 and increased marginally in 2003 before increasing steadily from 2014 to 2007. In 2008, there was a drop in earnings while in 2011, export earnings increased till 2017 when there was a decline. The above trend is attributed to the fact that our exports are dominated by agricultural products which frequently experience price fluctuations on the world market (Baak et al., 2013). The export sector has still not attained stable growth in the aftermath of the 1991 Economic Reform Programmes (ERP) and where there has been increase in the growth

rate and earnings, it has been marginal hence the need to identify the factors responsible for export growth for Uganda's economic development.

1.2 Problem Statement

Uganda's export sector has been characterized by fluctuating export earnings for the past two decades. Since independence, coffee has been the leading export accounting for more than 50 % of the total export earnings until recently when it was overtaken by Non-Traditional Exports. Some of the traditional exports such as copper disappeared in 1997 and commodities like fish and maize, which previously were not among the traditional exports, emerged and presently constitute a significant proportion of total exports. The government has attempted to promote the export sector through establishing agencies to help exporters by providing them with incentives and advice but the export growth rate has remained low, Musinguzi (2013) .

Musinguzi, Stryker and Obwona (2017), using an export growth function, found out that Uganda's export growth rate is significantly and positively affected by its previous growth rate and terms of trade but is not significantly affected by real exchange rate. A similar study by Ngeno (2016) in neighboring Kenya, using export growth as a function of output and real exchange rate found out that both output and real exchange rate significantly affect export growth. The contradictions on the factors responsible for export growth as shown by the findings of the studies above prompt the need for further research on factors affecting export growth so that information is provided to aid in the formulation of corrective policies to address the problem.

1.3 Purpose of the Study

The purpose of the study was to identify the determinants of export growth in Uganda from 1991-2016.

1.4 Objectives of the Study

1. To examine the effect of Real Exchange Rate (RER) on export growth of Uganda from 1991-2016

2. To establish the effect of Foreign Direct Investment (FDI) on Export Growth of Uganda from 1991-2016

3. To determine the effect of Terms of Trade (TOT) on Export Growth of Uganda from 1991-2016

1.5 Research Questions

1. What is the effect of Real Exchange Rate (RER) on Export Growth of Uganda from 1991-2016?

2. What is the effect of Foreign Direct Investment (FDI) on Export Growth of Uganda from 1991-2016?

3. What is the effect of Terms of Trade (TOT) on Export Growth of Uganda from 1991-2016?

1.6 Hypotheses

$H0_1$: There is no significant effect of real exchange rate (RER) on export growth of Uganda from 1991-2016

$H0_2$: There is no significant effect of Foreign Direct Investment (FDI) on export growth of Uganda from 1991-2016

$H0_3$: There is no significant effect of Terms of Trade (TOT) on export growth of Uganda from 1991-2016

1.7 Significance of Study

Export instability affects the general performance of the economy. Uganda being a primary commodity exporter is faced with a challenge of price fluctuations on the world market.

Identifying the factors responsible for export growth will help provide information to the policy makers to enable them come up with the appropriate policies regarding the growth of the export sector and the economy as a whole.

Findings from the study will enrich existing literature on export performance and also broaden the understanding of factors responsible for export growth in Uganda.

1.8 Organization of the Study

The study comprises of five chapters. Chapter one presented the background, problem statement, objectives, hypotheses and significance of study. Chapter Two reviewed the theoretical and empirical literature on the determinants of export boom whilst the specification of the empirical model, data sources, data analysis strategies and all the different tests to be carried out are discussed in Chapter three. Chapter four interpreted the empirical findings and of outcomes whereas summary of findings, conclusion and recommendations are in Chapter five.

CHAPTER TWO
LITERATURE REVIEW

2.0 Introduction

This section reviewed both theoretical underpinnings and the empirical work that has been undertaken on the factors determining export growth. This literature includes; export promotion, impact of liberalization on key markets in Sub-Saharan Africa, Uganda trade policy and export performance, monetary and exchange rate policy, Uganda coffee supply response and export demand and supply response of selected commodities in Uganda.

2.1 Theoretical Review

The policy of openness to the external world, more specifically the impact of international trade on the development process has increasingly become popular. This has led to numerous theoretical studies. Although the direction of causality between economic growth and export earnings remains controversial, there is a relatively strong positive correlation between exports and real income growth across the Sub-Saharan countries (Svedberg, 1991).

The Heckscher-Ohlin version of international trade theory; the mutual interdependence theory, attempts to assess the basic cause of trade by putting emphasis on commerce between regions. The theory states that a region tends to export items the production of which requires relatively large amounts of the factors of production that the region possesses in relative abundance. It imports items which embody the scarce factors of production. The relative differences in factor endowment among regions result in variations in international costs and thus provide a basis for trade between areas (Salvatore 1993).

According to Wakelin (1998) 'neo-endowment' models, export performance is determined by the firms' competitive advantage based on factor endowments and, 'technology-based' models in which competitive advantage derives from the quality of firms' products or services. Studies in the neo-endowment tradition argue that factor-

based advantages may be important if the firm has either a natural monopoly of a particular factor or is, for example, located in a particular region where a factor is plentiful.

According to Branchi, *et al.* (1999) these effects may be magnified by the existence of a set of productive techniques, the most advanced of which require a certain non-labour investment and some additional skills on the part of the producer, as well as a suitable market, infrastructure, and technological and informational environment, and hence are not available altogether in the more backward areas and countries.

The price of the commodity that influences the producers' decision to increase or decrease their supply is the real price they receive, that is the purchasing power that can be obtained by the sale of one unit of coffee (World Bank, 1994). The real producer price (RPP) is got by multiplying the real international price (pb), real exchange rate (RER) and the nominal protection coefficient (NPC). According to the small country assumption, pb (the ratio of the nominal international price of coffee over the world price index)can be taken as exogenously given.

Edwards (1989) contends that the RER reflects the average competitiveness of the country vis-àvis the rest of the world. Any rise in the value of RER corresponds to a real depreciation of the domestic currency. Under the absence of supply constraints, this improvement in the country's competitiveness tends to translate into an increase in the supply of all exportable commodities, including coffee.

RER and NPCare key indicators of the impact of the economic policy pursued by the national governments in the realm of prices. NPC can be considered as an indicator of the influence of direct, sectoral price policies, and RER as an indicator of the indirect effect of the exchange rate policy, which is passed down to farmers through its impact on the real producer price (World Bank, 1994).

According to Ackah and Morrissey (2005), factors external to an individual country, such as world prices are typically more important determinants of the volume and value of

exports than a country's own trade policies. This is because small country producers have no capacity to determine these prices on their own.

Price volatility together with rigidities of production and the consequent distribution of costs, make it extremely difficult for producers and policy-makers alike to determine optimal production strategies. Meanwhile, fiscal uncertainty at the local and national levels places a significant constraint on the generation of a stable economic base for development. World Bank (1984) noted that in most cases, governments widely intervened in markets and maintained a fixed exchange rate to acquire political support. However, the low producer prices and overvalued exchange rates led to under production for markets and withdrawal from industrial production by manufacturers. In most cases the overvalued exchange rates resulted into deterioration in agriculture and external accounts of African countries.

Cushman (1986) shows that an increase in exchange rate volatility has adverse effects on the volume of international trade, by increasing the riskiness of trading activity. Viaene and de Vries (1992) and Franke (1991) have demonstrated that increased exchange rate volatility can have ambiguous effects (negative or positive) on the volume of trade. They go on to say that an increase in risk has both a substitution and an income effect. The substitution effect decreases export activities as an increase in exchange rate risk induces agents to shift from risky export activities to less risky ones. The income effect on the other hand induces a shift of resources into the export sector when the expected utility of export revenues declines as a result of the increase in exchange rate risk.

Barkoulas *et al.* (2013) noted that the direction and magnitude of importers' and exporters' optimal trading activities depend upon the source of the uncertainty (general microstructure shocks, fundamental factors driving the exchange rate processes, or a noisy signal of policy innovations). And that exchange rate uncertainty emanating from general microstructure shocks and fundamental factors reduces the variability of trade

flows, while that related to a noisy signal of policy innovation increases variability of trade flows.

Furthermore, the ability of a country to increase exports (its export supply response) is constrained by structural rigidities in production capacity, and infrastructure and institutional barriers to trade (trade costs). This is especially true in SSA, where exports are predominantly of primary commodities subject to world prices and demand determined elsewhere and, in the case of agriculture, affected by weather and other natural phenomena (Ackah and Morrissey, 2005).

Requirements associated with selling on international markets also present significant barriers to higher revenues for smaller producers. For example, export license, minimum volume and quality requirements can operate as bottlenecks that effectively reduce the ability of producers to reap the benefits of the international trading system. Also, tariffs on processed forms of coffee in importing countries can also have an effect on the revenue captured by producer countries from the supply chain. The imposition of such tariffs effectively restricts producing country access to the higher value added associated with processing activities (United Nations Conference on Trade and Development, 2013).

2.2 The Empirical Evidence

The export supply function is important that numerous empirical studies have focused on this question over a period of time (last two decades or so). Some of the numerous empirical studies that have investigated the determinants of export supply include; small farmers participation in export promotion, impact of liberalization on key markets in Sub-Saharan Africa, Uganda trade policy and export performance, monetary and exchange rate policy, the effects of exchange rate policy on Cameroon's agricultural competitiveness, export performance of Sub-Saharan Africa, among others.

2.2.1 Relationship between Foreign Direct Investment and Export Growth

Hoekman and Djankov (1998) analyzed the magnitude of change in the export structure in Central and Eastern European countries. They investigated the relative importance of subcontracting trade, imports of input, and FDI as determinants of the countries' export performance in European Union markets. A statistical analysis of the extent to which these variables are associated with the countries' export composition during 1990-95 was undertaken. The findings of this study suggested that of all the countries looked at, only Poland had a significant positive association between FDI and exports structure.

Alvarez (2013), Wignaraja (2013), Sarpong (2014) and (Van Dijk 2013) conducted Studies analyzing firm-level export performance in developing countries of Chile, Mauritius, Ghana and Indonesia respectively. In the Chilean firms, factors affecting the decision to export and the determinants of export success were identified. The study concluded that productivity, firm size and human capital increase the sustainability of export while foreign technical licenses and foreign capital participation positively improve export performance. In Ghana, the relationship between export performance and investment behavior of private firms was tested using a simultaneous equation model. The study did not find any positive or significant relationship between the two variables. The study of Van Dijk (2013) attempted to determine the factors affecting export performance for Indonesian manufacturing firms. It highlighted the importance of sectoral variation in determining export activities and concluded that relative size, foreign ownership and age were significant factors across all sectors.

Amelia and Santos (2017) studied the effect of trade liberalization on export performance in selected developing countries. Using pooled cross sectional and time series data for 48 African countries and an export demand function with share of exports to Gross domestic Product as a dependent variable, Foreign Direct Investment was found to significantly impact on export volumes. Export performance was highly negative with price and real exchange rate exerted a significant negative impact on export volumes.

Hoekman and Djankov (1997) investigated the relative performance of trade. Imports of inputs, foreign direct investment (FDI) and entrepreneurs' response to changed incentives were major determinants of a country's export performance. Growth of exports in Central and Western Europe was found to be a consequence of entrepreneurial response to new incentives which caused them to restructure their production in order to capture new markets. Lack of changes in export structure and foreign direct investment had insignificant effects on export performance. FDI sometimes chooses sectors in the economy in which the country may not have relatively specialized under central planning which may affect export performance. Imports of intermediate inputs and machinery were also found to be important determinants of changes in export structure.

Vinod and Nash (1991) postulated that the poor performance in African countries exports was due to trade policies which did not contribute to acceleration in industrialization growth. They indicated that import restriction policies often bias exporters. High tariff and non-tariff barriers significantly raise prices of input products in the manufacturing sector and greatly affect the potential of exporters' to compete in foreign markets.

2.2.2 Relationship between Terms of Trade and Export Growth

Svedberg (1990) commented on the sluggish export performance of sub-Saharan Africa countries from 1980 to 1985. Factors which influence exports were identified and categorized as external and internal. Unfavorable terms of trade which had a negative effect on the exports and the limited change in export structure facing sub-Saharan Africa countries were cited as the major external factors. The internal factors which lead to poor export performance identified were domestic policies including overvalued exchange rates and high taxes on producers' exports that reduce export supply.

Ministry of Finance, Planning and Economic Development (1995) reported that exports increased from the period 1991to 1994 due to the dramatic improvement in the terms of trade for coffee. The price of coffee tripled because the Brazilian coffee crop was hit

by frost. This significantly reduced the Brazilian coffee supply on the international market and during the same period, exports improved due to domestic policies. Liberalization of foreign exchange payments which removed the anti-export bias from the official exchange rate and the abolition of export taxes were some of the policies credited for this performance.

According to World Bank (2016), Uganda's predominantly agricultural primary commodity exports suffer from declining terms of trade especially coffee exports and high price volatility in the international prices. In addition, the production of these commodities tends to be susceptible to adverse supply shocks such as unexpected changes in weather and attacks from pests and diseases.

Kasekende and Atingi-Ego (1999) studied the impact of trade liberalisation on key markets in SubSaharan Africa focusing on the case of Uganda. Using annual data (1970-2016), they modelled Uganda's exports as a function of real effective exchange rate, terms of trade, and income of trading partner countries. Uganda's exports were found to be positively and significantly correlated with both the terms of trade and the error correction term (*ecm*) lagged three periods but real effective exchange rate was not significantly related to exports.

Musinguzi, Obwona and Stryker (2017) using an export growth function disequilibrium model, theoretically specified exports as a positive function of the terms of trade, exchange rates and capacity to produce commodities for export sector. Output was measured in terms of industrial output. Exports were significantly and positively affected by the previous year's export performance and current performance of the real economy but were marginally increased by an increase in the terms of trade though it was significant. Real exchange rate did not significantly boost exports.

Bank of Uganda (2001) reported that in May 2001, the external sector of Uganda continued to operate under pressure owing to deteriorating terms of trade and poor

export sector performance as a result of a further decline in the prices of coffee compared to the corresponding period in 2017.

2.2.3 Relationship between Real Exchange Rate and Export Growth

Sharma (2001) investigated the factors determining export growth in India using annual data for 1970-98. The study used the simultaneous equation framework and the results of study suggested that demand for Indian exports increased when its export price fell in relation to world prices. The appreciation of the rupee adversely affects Indian exports and exports supply is positively related to the domestic relative price of exports and higher domestic demand reduces export supply.

Bahmani and Ltaifa (1992) analyzed the effects of exchange rates on exports and results showed that exchange rates adversely affect exports. Sivri and Usta (2001), while studying the factors responsible for export growth in Turkey found that real exchange rate does not appreciably account for changes in exports. Oztang (2017) postulated total exports to be a function of foreign income and real exchange rate and results revealed that real exchange rate is a statistically significant determinant of export performance.

Nowak *et al* (2007) used an extended version of gravity model for Turkey covering 1988-2013 while investigating the trade effects of Turkey's trade integration into European Union. Sectoral trade flows to the European Union were examined based on panel data. Real exchange rate, a proxy of price competition turned out to be statistically significant in explaining export performance. The depreciation of real effective exchange rate was also found to significantly increases the level of Turkish exports.

Edwards and Golub (2014) examined the determinants of export supply in South Africa and found out that foreign prices, domestic prices and the exchange rate have a strong impact on manufacturing export performance in South Africa. Using an econometric model, results showed a positive and significant coefficient on the relative price variable and the real effective exchange rate. A conclusion was drawn that a 1 % increase in the

relative price of exports is estimated to raise average manufacturing export volumes by to 2.5% in the long-run.

Baak, Mahmood, and Vixathep (2013) studied the impact of exchange rate volatility on exports in four East Asians countries (Hong Kong, South Korea, Singapore, and Thailand). Findings revealed that exchange rate volatility has negative impacts on exports in both the short run and long run periods.

Chowdhury (1993) investigated the impact of exchange rate volatility on the trade flows of the G-7 countries in context of a multivariate error-correction model. Exchange rate volatility was found to have a significant negative impact on the volume of exports in each of the G-7 countries.

Granberg (1998) suggested that the exchange rate is not the only or even major factor at play in promoting exports to other policies. Moderate devaluation and appreciation have marginal impacts on exports and trade in general.

Schnitzer (1991) argued that inflation has an influence on the economy. When there is inflation, domestic products become expensive than the imported commodities and people find it easier to purchase foreign goods than domestic goods. Consequently, exports decrease since they become more expensive to importers.

Fosu (1992) analysed the effect of real exchange rates on agricultural exports in Ghana. Between 1960 and 1982, it was observed that there was a decline in nominal exchange rate which led to the reduction of total export volume of coffee and cocoa. On the contrary, the 1983 to 1989 period was characterized by a real exchange rate increase as well as the implementation of World Bank (WB) and International Monetary Fund (IMF) structural reforms which resulted into an increase in real total agricultural exports. An economic model that estimated both aggregate and sectoral supply functions with elasticities of agricultural price incentives with respect to changes in real exchange rate was employed. The results showed that the elasticities of agricultural

exports were less than unit (inelastic) and only significant with coffee and cocoa but insignificant with cashew nut exports and aggregate agricultural exports.

Lyakurwa (1998) expressed concern that export performance of sub Saharan Africa over the last three decades was below par and consequently the region had lost a share of world exports by over 250% in the last 30 years. This was attributed to the import compression particularly in the 1980's when their participation declined and their place was taken over by fastest growing economies of East Asia and Latin America. Both institutional and policy factors had affected the export performance of the sub Saharan African countries. Ordinary regression for all the categories of exports from sub Saharan African countries showed that real exchange rate, government expenditure, gross investment and freight cost in case of manufactured exports influenced the growth rate of exports.

According to Helleiner (2013), a competitive real exchange rate is associated with Non traditional exports success. Using time series, a study on Tanzania's non traditional exports revealed a statistically significant relationship between real devaluation and non traditional exports growth.

Goldstein and Khan (1985), and Senhadji and Montenegro (1999) estimated export demand elasticities for a large number of developing and industrial countries using time series techniques. Exports were found to react to both the income of trade partners and relative prices.The average long-run price and income elasticities for all countries were found to be approximately -1 and 1.5, respectively, but there was a wide diversity of experiences.

Edwards and Alves (2005) while studying South Africa's export performance, determinants of export supply found out that exchange rate depreciation on average positively affects export performance. Results showed that export growth is not predominantly dependent on the economic prosperity of South

Africa's trading partners or their ability to compete in the export market on the basis of price. Export volumes are determined by the profitability of export supply and factors which raise the output price and reduce the cost of production enhance export performance.

2.2.4 Relationship between Gross Domestic Product and Export Growth

Rodrik (1999) carried out a regression analysis on pooled cross section and time series data for 1964-1994. Using export growth rate as a function of a wide range of determinants including trade policies, income levels and geographic variables in a sample of 37 Sub Saharan Africa countries, it was established that GDP has a statistically significant effect on export growth.

Cline (2014) used Ordinary Least Squares regression for pooled data on 100 developing countries for the period 1981-2001. Export growth rate was expressed as a function of the share of manufacturing to exports, real effective exchange rate, Gross Domestic Product real growth rate and Per Capita Income. The effect of GDP growth rate and real effective exchange rate on export growth was statistically significant.

Kumar (1998) conducted a study on the determinants of export performance in the developing countries and confirmed that GDP has got a positive impact on exports. Increased level of production is the main cause of export expansion since surplus of output can be exhausted in international markets. However, in a closed economy, surplus production leads to fall in price which in turn creates pessimism among the producers where as in an open economy such surpluses create foreign reserves through exportation.

Ngeno (2016) studied the factors determining export growth in Kenya using an export growth equilibrium and disequilibrium model. Theoretically, export growth was specified as being positively related to output level since higher production should lead to increase in export growth. The coefficient of real exchange rate was postulated to be positive because depreciation of the domestic currency increases export earnings and therefore increases production for export. Empirical result suggested that an increase in

domestic output increased the export growth. Growth promoting policies were found to be insignificant in relation to export supply since Kenya is a price taker in the world market. It was also established that the use of the world price as a signal for exports was constrained by the quota system.

Fugazza (2014) studied export performance and its determinants, supply and demand constraints. The log of GDP (lagged) was highly significant across all periods and real exchange rate also had a significant effect on export performance. A 1 per cent real depreciation was found to increase exports by 6 percent. Results indicated that an overvalued currency is detrimental to export performance since an overvalued currency translates into a direct loss of price competitiveness for exporting firms. Foreign Direct Investment was also found to affect export performance positively and experience in a number of countries suggests that FDI strongly contributes to the transformation of the composition of exports.

2.2.5 Relationship between Foreign Price Level and Export Growth

The external trade environment and domestic products geared towards utilizing opportunities of trade and responding to constraints to trade influenced the growth and development of African economies significantly, Ndulu and Lipumba (1990). The policies involved those targeting the exchange rates, tariff structure, export taxation, import controls and administrative exchange allocation system, wage, pricing especially for agricultural products and adjustment policies to external conditions. The external factors were found to be world prices of the primary commodities, which for most small economies have to be taken as given. The export baskets of the African countries were also still concentrated on commodities which had a low growth rate of demand on the world market.

Rafik and Svedberg (1990) examined the export performance of sub-Saharan Africa countries and detected a decline during the 1970 to 1985 period. The major cause of the decline was the protection facing exports from the sub-Saharan countries.

Protection in terms of export quotas and price decline of primary products accounted for one third of the total world market share loss by sub Saharan Africa.

Musinguzi (1999) in his analysis of the factors that affect export earnings instability in Uganda, found out that Uganda's exports which are mainly primary products are faced with two major problems of declining quantity of exports and export price fluctuations.

BOU (2005) reported that coffee export earnings during the second half of 2014/05 amounted to USD 88 million up from USD 66.6 million realized in the corresponding period of 2003/04. It further revealed that export volumes fell from 1.39 (60kgs) million bags during the second half of 2003/04 to 1.28 million bags in the corresponding period of 2014/05. In the same period, there was an increase of 43.3% in average unit price which more than offset the decline in export volumes leading to the increase in coffee export earnings.

Primary commodities exhibit excessive short term and medium-term fluctuations and long-term declines, Jayant (2006). Erratic short-term movements in commodity markets hamper economic decisions while long term declines of primary products exacerbate deteriorations in terms of trade.

High degree of price instability of primary commodities coupled with worsening terms of trade leads to a contraction of export earnings and instability in the commodity depending developing countries. Burundi depends on coffee and tea to an extent of 87%. Its coffee and tea prices fell by 37% and 20% in 1986 and 1987 respectively and as a result, annual exports fell from USD 154 million to USD 90 million. Ministry of Finance Planning and Economic Development (2007), reported that coffee exports for the month of July shot to USD 28.3 million registering a 52.5% increase compared to July 2006 as a result of the average coffee prices rising by 36% vis a' vis the price in July 2006. The volumes for the coffee exports also increased by 106.7 % to 268,864 (60kgs) bags in July 2007 compared to July 2006 owing the favorable weather conditions and good husbandry practices. Coffee export earnings for May 2007

increased by 63.3% to USD 17.9 million compared to may 2006 as a result of a 9.1 % increase in export prices on the world market. The price was USD 1.62 per kilogram, the highest price since May 1998.

2.3 Research Gap

Past studies in this area such as Ndulu and lapumba (1990), Musinguzi (1999), Rodrik (1999) and Cline (2014), did not categorically focused on the same variables (Terms Of Trade, Real Exchange Rate and Foreign Direct Investment), in which this study is using as measurements. However, they are less emphasizing these variables which are in great importance in depicting the fluctuations of the export performance in Uganda, and this study was used to fill that gap.

CHAPTER THREE
METHODOLOGY

3.0 Introduction

This chapter presents the methodology that was used in the study, sources of data, variables that were used, scope, technique for data analysis and various tests that were carried out and the procedures for the interpretation of results.

3.1 The Model Specification

Macroeconomic model used by Musinguzi, Stryker and Obwona (2017) while studying the monetary and exchange rate policy in Uganda. The model lag export growth rate, Gross Domestic Product, Terms of Trade and real exchange rate as the predictors of export growth and this study included in its model, Foreign Direct Investment and foreign price level in addition to the above mentioned predictors. This export supply model is based on the assumption that in Low Developed Countries like Uganda which mainly export primary commodities, import and export prices are exogenously determined on the world market implying that their exports are constrained by more of supply bottlenecks than world demand. The conventional export function has exports related to incomes of foreign importing countries, but for small countries like Uganda, the external element is not a limiting factor as their exports constitute a very small proportion of the external World's commodity basket.

Therefore; the linear form of the model used in the study is stated as below;

$$EGR_i=\beta_o+\beta_1 RER+\beta_2 GDP+\beta_3 TOT+\beta_4 C+\beta_5 FDI+\beta_6 L+\beta_7 INF+\varepsilon_i \quad (1)$$

Where;

EGR = Export Growth Rate,

GDP = Gross Domestic Product,

TOT = Terms of Trade,

FDI = Foreign Direct Investment,

RER = real exchange rate computed as RER=E* P_f/P_d where E is nominal exchange rate,

C = Capital

L = Labor

INF = Inflation

Following the Goldstein and Khan (1985) Model, we consider the following specifications for import demand and export supply:

$RM = f(Y, Pm / Pd)$ (2)

$RX = g(Y, Px / Pd)$ (3)

Where; RM is the real quantity of imports, RX is the real quantity of exports, Y is the real domestic income or a variable that represents productive capacity, P_d, P_m and P_x are the domestic price, import price and export price respectively. The use of relative price ratio, instead of two separate price terms, stems from the assumption of homogeneity and it also conveniently reduces the collinearity that may occur between the price terms

Empirical implementation of equation (1) and (2) requires decisions with respect to functional form and variable decisions. We use Gross Domestic Product (GDP) as a variable that represents domestic income and productive capacity and Real Effective Exchange Rate (RER) as a variable that represents the relative price ratio.

There are no clear-cut criteria that can be relied on in choosing a functional form. The choice of the form is usually based on practical considerations and intuition. For both export supply and import demand equations, we utilize the standard log-log specification. After the linearization, the equations of import demand and export supply are:

$RM = a_0 + a_1GDP + a_2RER_2 + \varepsilon$ (4)

$RX = b_0 + b_1GDP + b_2RER_1 + u$ (5)

The import demand equation implies that import increases as the domestic purchasing power increases (GDP). On the contrary, when import prices increase, or when the real effective exchange rate increases (RER_2), demand of import become less profitable and, hence, importers will supply less. From equation (3) we expect a_1 to be positive and a_2 to be negative.

The export supply equation implies that supply of exports increases as the prices of exports increase, as the real effective exchange rate (RER) decreases and also when there is an increase in production (GDP). Therefore, we expect b_1 to be positive and b_2 to be negative in equation (4).

The analysis is based on small country assumption. Since Uganda's exports and imports represent a small fraction of total world exports and imports, her international price system is fully reflected by world market prices and therefore foreign trade prices are assumed to be exogenous. In the empirical part of this study, we will use the export supply and import demand equations specified in (3) and (4) to estimate aggregate export supply and aggregate and disaggregated import demand.

3.2 Data Sources

Secondary data is used for the study. It was obtained from Bank of Uganda (*https://www.bou.or.ug/*), Uganda Bureau of Statistics (*https://www.ubos.org/*). The variables that will be used are export growth rate (EGR), capital (C), labor (L), real exchange rate (RER), Gross Domestic Product (GDP), Foreign Direct Investment (FDI) and Terms of Trade (TOT).

3.3 Data Analysis

The data is analyzed using E-VIEWS to perform the Ordinary Least Squares regression in order to establish if the above variables significantly affect export growth rate as well

as the other tests which precede regression analysis. Annual data was obtained and in order to create more data points, it was converted to quarterly range using Eviews. The technique to be used is the quadratic match average which fits a local polynomial for each observation of the series in annual range. It then uses a polynomial to fill in all observations in quarterly range. The quadratic polynomial is formed by taking sets of three adjacent points from the source series and then fitting a quadratic so that the average of the quarterly observations matches annual data actually observed. The three points mentioned above are selected in a way that one point before and after the period currently being interpolated provide the three points.

3.4 Tests for Normality

The series to be used in the model was tested for normality by plotting a histogram for residuals and also using the Jarque-bera test statistic. The Jarque-Bera statistic is computed as per the formula below:

$$JB = \frac{n}{6}\left[(skewnessX_{s})^2 + \frac{(kurtosisX_{s})^s}{4} \right] \quad \text{..... (6)}$$

Where n, is the number of observations.

The statistic tests the null hypothesis that the series is normal against the alternative that the series is not normal. Where the probability of the statistic was less than 0.05%, the level of significance, the series was regarded not normal and otherwise; a series was regarded normal.

3.5 Tests for Stationarity

The series was tested for stationarity using the Augmented Dickey Fuller test. The reason for this test is the fact that macroeconomic variables are desired when they are stationary and on the contrary, regression on the series yields spurious results. The ADF statistic is computed using formula below;

$$\Delta y_t = \alpha_0 + \lambda_t + \delta Y_{t-1} + \sum_{j=1}^{l} \phi_i \Delta y_{t-1} + \varepsilon_t \ldots\ldots\ldots \ldots\ldots \ldots\ldots \ldots\ldots \ldots\ldots \ldots\ldots \ldots (7)$$

Where l, is the lag length

The ADF statistic tests the null hypothesis that the series are non-stationary against the alternative that the series are stationary. Where the absolute value of the computed ADF statistic is greater than the tabulated one, the null hypothesis is rejected and an inference drawn that the series is stationary at a given level of significance. The series which were found to be non-stationary were differenced to make them stationary.

3.6 Tests for Cointegration

The variables used in the study were tested for cointegration in order to establish if there existed a long run relationship between the series. The fundamental equation for testing for cointegration using Johansen's procedure is as below;

$$\Delta Y_t = \sum_{i=1}^{p-1} \pi_i \Delta Y_{t-1} + \pi Y_{t-p} + \varepsilon_t \ldots\ldots\ldots \ldots\ldots \ldots\ldots \ldots\ldots \ldots\ldots \ldots\ldots (8)$$

Where;

$\pi_i = -\left[1 - \sum_{j=1}^{i} A_j\right]$ is trace statistic,

$\pi = -\left[1 - \sum_{i=1}^{p} A_i\right]$ is Eigen value.

The key feature in Johansen's value is the rank (Π) which equals the number of independent cointegrating equations. The series were therefore tested for cointegration and after confirming its presence, when the absolute value of the likelihood ratio was greater than the tabulated value at a given level of significance for a given hypothesized number of cointegrating equations, an error correction model was constructed and later a parsimonious model of the series also developed.

3.7 Diagnostic Tests

The variables were subjected to the Whiteness test. This is a test which examines the series for constant variance and serial correlation. The test for serial correlation tests the null hypothesis that the series are not serially correlated against the alternative that the series are serially correlated whereas the test for constant variance tests the hypothesis that the series have a constant variance against the alternative that the series have a varying variance.

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: To examine the effect of Real Exchange Rate (RER) on export growth of Uganda 1991-2016 To establish the effect of Foreign Direct Investment (FDI) on export growth of Uganda 1991-2016 To determine the effect of Terms of Trade (TOT) on export growth of Uganda 1991-2016. The presentation, analysis and interpretation are shown below.

4.1 Descriptive Statistical Analysis of the Variables in the Model:

Further in determining the descriptive statistics of the determinants of export performance in uganda, the researcher carried out a descriptive analysis of the variables. The result by use of (E-Views) is shown in the table 4.1 below.

Table 4. 1: Descriptive Statistics on the Variables

Statistic	TOT	RER	FDI	GDP	INF	DL	DC
Mean	39.987	2.933	3.247	6.581	9.161	3.288	20.815
Median	36.435	2.941	2.890	6.365	6.350	3.300	20.350
Maximum	56.260	3.194	6.480	11.520	52.400	4.300	27.600
Minimum	27.840	2.733	0.030	3.140	-0.300	3.000	14.600
Std. Dev.	8.508	0.142	1.599	2.271	10.680	0.251	4.232
Skewness	0.315	0.247	0.133	0.420	2.850	2.383	0.166
Kurtosis	1.839	1.918	2.975	2.327	11.697	11.169	1.761
Jarque-Bera	1.890	1.533	0.077	1.254	117.163	96.911	1.782
Probability	0.388	0.464	0.961	0.534	0.000	0.000	0.410
Observations	26	26	26	26	26	26	26

Source: E-views 7 output

Where:

TOT: Terms of Trade

RER: Real Exchange Rate

FDI: Foreign Direct Investment

GDP: Gross Domestic Product

INF: Inflation

DL: Domestic Labor

DC: Domestic Capital

The mean trade openness in the study period was 39.987 percent, Maximum registered trade was 56.260 percent and the lowest was 27.840 percent. The standard deviation of health investment from the mean was 3.508 percent. The mean of real exchange rate in Uganda from 1991 to 2016 was 2.933 percent on average with the highest inflow recorded being 3.194 and the least 2.733 million dollars. The mean Foreign Direct Investment in the study period was 3.247 million dollars with the highest estimate at 6.480 million dollars and the least at 0.030. The average domestic capital in the period of study was 20.815 with the highest level being27.600 and least 14.600. The standard deviation from the mean domestic capital in the period was 4.232 The mean domestic labor was 3.288 with the highest 4.300 and lowest 3.000. The standard deviation from the mean domestic labor was 0.251. Inflation rate in Uganda has the mean 9.161 percent, the highest was 52.400 and least -0.300. The standard deviation was 10.680 for the entire period. The mean economic growth in the study was 6.581 with the highest 11.520 and the lowest -3.300, and the standard deviation was 2.965. The mean terms of Trade in the study was 37.211 with the highest 56.260 and the lowest 3.140, and the standard deviation was 2.271.

Symmetry of the distribution of the series around the mean is measured by skewness. For a distribution to be considered Symmetric it should have a zero-skewness value. Thus, by observing the row of skewness from the above table all variables seem to have symmetric distribution because their values are not far from zero.

The row under kurtosis in the above table, measures flatness and peakedness of the distribution measured by kurtosis of a series for a distribution to be considered normal it should have a kurtosis value of 3, and hence some variable under study have digits that are kurtosis, and that are 3 and above. Bu there is some variables that don't tend to 3 in absolute terms which is the condition for normality of any series.

4.2 Time Series Property of Data/ Unit Root Test

The study sought to determine the time series property of the data for the purpose of establishing if it is auto correlated or its autoregressive. This was done in order to convert the variables to stationary as a key assumption in multiple linear regression analysis and other inferential statistics. Besides, working with highly collinear variables would yield spurious result from which further inference is insignificant. Unit root tests were conducted on all the variables using both the Augmented Dickey-Fuller and Philips Perron test. In each case, the null hypothesis is that the variable has unit root and accepting it would imply the data is non-stationary. The alternative hypothesis is that the data has no unit root (stationary). The result of ADF and PP tests are summarized in Table 4.2. Both tests are tested at a 0.05 level of significance. The rejection criteria are that we reject the null hypothesis if the test statistic value is greater than their respective critical values of 0.05 level of significance and if the p-value is less than 0.05.

Table 4. 2: Stationarity Test Result/ Unit Root Test

Augmented Dickey Fuller (ADF) Levels			**Phillip-Perron (PP) Levels**		
Variables	**Constant**	**Constant and Trend**	**Variable**	**Constant**	**Constant and Trend**
Trade of Trade	-1.423	-2.796	Trade of Trade	-1.291	-2.768
Real exchange rate	-2.063	0.162	Real exchange rate	-1.853	-1.687
Foreign Direct Investment	-2.292	-1.616	Foreign Direct Investment	-2.313	-1.731
Gross Domestic Investment	-4.061	-4.116	Gross Domestic Investment	-4.061	-4.094
Inflation	-4.041	-4.006	Inflation	-4.040	-3.949
Domestic Labor	0.358	-0.779	Domestic Labor	0.116	-0.599
Domestic Capital	-0.818	-2.339	Domestic Capital	-1.257	-2.847
Augmented Dickey Fuller (ADF) First Difference			**Phillip-Perron (PP) First Difference**		
Variables	**Constant**	**Constant and Trend**	**Variable**	**Constant**	**Constant and Trend**
Trade of Terms	-5.820*	-5.686*	Trade of Terms	-6.705*	-6.504*
Real Exchange Rate	-4.397*	-5.889*	Real Exchange Rate	-4.473*	-5.076*
Foreign Direct Investment	-4.258*	-3.767*	Foreign Direct Investment	-4.238*	-4.638*
Gross Domestic Investment	-5.425*	-5.347*	Gross Domestic Investment	-8.496*	-8.638*
Inflation	-6.975*	-6.500*	Inflation	-9.645*	-9.647*
Domestic Labor	-6.154*	-6.040*	Domestic Labor	-6.735*	-6.580*
Domestic Capital	-6.356*	-6.176*	Domestic Capital	-6.356*	-6.176*

Source: output E-views 7

(*) indicate significant at 5% level

The null hypothesis (H_0) for the ADF and PP tests is that all the series have a unit root. The results indicate that GDP and INF are not stationary at levels when constant or trend is included in the ADF and PP tests. Since the series are not stationary at level, the variables were differenced at once before they became integrated of orders one I (1) when constant or constant and trend is included in the ADF and PP tests. The order of integration of a time series determines if linear combination would be stationary that is, integrated of order zero (0 Having known that at least one or two of our variables were non-stationarity at level but became stationarity at first difference, it implies that they qualified for co-integration to determine the long-run relationship.

4.3 Co-Integration Test Results

The Johansen (1991) procedure was used to determine the number of co-integrating relations in a vector of variables that are integrated of the same order. Given the result of the unit root tests above; the number of co-integrating vectors are tested on the variables; Foreign Direct Investment (FDI), Gross Domestic Product (GDP), Inflation (INF), Real Exchange Rate (RER), Terms Of Trade (TOT), Domestic Capital (DC) and Domestic Labor (DL) using Maximum Eigen value and Trace Statistics. Given that all variables become stationary at their first order, it became the most desirable case in order to continue with the Johansen's approach of co-integration test. To carry out co-integration analysis, it is pertinent to determine the optimal lag length of the Vector Autoregressive (VAR).

Table 4. 3: VAR Lag Order Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-291.1813	NA	54.03656	23.85450	24.19579	23.94916
1	-196.0236	129.4145*	1.583766*	20.16189*	22.89217*	20.91915*

Source: Output from EViews7

* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

The results of the lag selection criteria presented in Table 4.3 reveal that all the five different information criteria namely; Akaike Information Criterion (AIC), Schwarz Information Criterion (SIC), Hannan-Quinn Information Criterion (HQ), Final Prediction Error (FPE) and Sequential modified LR test statistic (LR) considered, suggest 1 as the optimal lag length.

Table 4. 4: Showing Co-integration Results of the Variables under study
Unrestricted Co-integration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
T.OPP *	0.976539	258.8789	125.6154	0.0000
RER 1*	0.928390	168.8210	95.75366	0.0000
INF 2 *	0.864509	105.5446	69.81889	0.0000
GDP 3 *	0.661063	57.57213	47.85613	0.0047
FDI 4 *	0.621068	31.60558	29.79707	0.0306
DL 5	0.286239	8.316016	15.49471	0.4322
DC 6	0.009251	0.223054	3.841466	0.6367

Source: Output from EViews7

The findings of Table 4.4 above from the Unrestricted Co-integration trace rank test using one (1) as the maximum lag length of the model, shows that there are 5 Co-integrating equations (TOT, RER, INF, GDP; FDI). Therefore, it is decided that we reject the null hypothesis of no co-integration at 0.05 level of significance. It is therefore

concluded that there is a significantly long run relationship between the variables in the model.

Table 4. 5: Unrestricted Co-integration Rank Test (Maximum Eigen value)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
TOT *	0.976539	90.05790	46.23142	0.0000
RER 1 *	0.928390	63.27645	40.07757	0.0000
INF 2 *	0.864509	47.97242	33.87687	0.0006
GDP 3	0.661063	25.96655	27.58434	0.0793
FDI 4 *	0.621068	23.28957	21.13162	0.0245
DL 5	0.286239	8.092963	14.26460	0.3693
DC 6	0.009251	0.223054	3.841466	0.6367

Source: Output from EViews7

The results from Maximum Eigen value of 4.5 indicate that there is a Co-integration among 4 variables. These findings confirm the results got from the first trace rank test hence by observing the p-values from the above table we reject the null hypothesis that there is a no Co-integration among these variables thus we conclude that there is a long run relationship between the variables in the study.

4.4 Regression Analysis of the variables under study

The transformed variables were used for the regression analysis so as to minimize the chances of a model suffering from the problems of autocorrelation, non-normal residuals as well as heteroscedasticity. The findings are presented in the table 4.6, 4.7, and 4.8 respectively.

Table 4. 6: Effect of Terms of Trade on export performance of Uganda 1991-2016

STATISTIC	Coefficients	Standard Error	t Stat	P-value
C	-13.172	9.422	-1.398	0.176
Capital	0.735	0.309	2.374	0.027
Inflation	-0.125	0.066	-1.892	0.072
Labour	0.141	0.118	1.192	0.246
GDP	0.038	0.024	1.575	0.130
TOT	0.446	0.132	3.381	0.002
R-squ ared 0.868				
Adj R-squared 0.842				
S.E. of reg 3.371				

Source: Researcher 2018

The effect of Uganda's GDP was found to be positive and statistically in-significant, which is in line with theoretical expectation. This result suggests that Uganda's GDP is a key determinant of the country's capacity to export, although this effect cannot solely cause that impact. A higher GDP means a higher production capacity which in turn translates into the ability of the economy to export more (supply side). This is consistent with the findings of Carrillo and Lee (2002) in their study of the effect of regional integration on both intraregional and intra-industrial trade in Latin America in the period 1980-1997. Using the gravity model, these authors found the exporter's GDP to be positive and statistically in-significant.

The effect of the inflation rate was found to be found to be negatively and statistically in-significant. This implies that the inflation rate had a negative effect on Ugandan exports during the period of study. The negative coefficient of inflation rate implies that Uganda's exports depend on its currency fluctuations. From the estimated results it is

evident that 1% currency devaluation leads to, other things being equal, a decrease of Uganda's exports by 12.5%.

The effect of terms of trade was found to be positive and statistically significant in the random changes in the export performance, which is in line with the predicted theory. Favorable terms of trade enhance bilateral trade between Uganda and her trading partners. Melitz (2007) posits that the absence of a favorable TOT and the consequent presence of trade barriers can be a major obstacle to foreign trade. This result is consistent with the previous findings of Achay (2006), Eita and Jordaan (2007), Foroutan and Lant (1993), Martinez-Zarzoso and NowakLehmann (2003) and Ram and Prasad (2000). In their empirical studies, these authors found a strong positive effect of the TOT variable and concluded that positive terms of trade had a significant impact on the pattern of trade in their study samples.

The effect of domestic capital was found to be statistically significant and in line with the predicted sign. Abundance of capital facilitates production and hence export performance. Thus, countries with natural endowment of capital like Uganda tends to have strong export excellence. This result is consistent with the findings of Carrillo and Li (2002) whose empirical study on capital contribution to the export performance in Latin American showed that it had a very strong effect on the export performance.

The regression results show that the effect of Uganda's labor capacity has positive and statistically in-significant. This implies that Uganda's labor market raises the capacity to produce and, resulting into higher exports. However, due to the lower skills and knowledge this effect id in-significant. This result is consistent with the findings of Foroutan and Lant (1993). In a study on the effect of labor endowment on export in Sub-Saharan Africa, these authors found that a higher skilled labor enhances exports.

Table 4. 7: Effect of Foreign Direct Investment on export performance of Uganda 1991-2016

STATISTIC	Coefficients	Standard Error	t Stat	P-value
C	0.060	3.188	0.019	0.984
Capital	0.121	0.110	1.093	0.287
Inflation	-0.044	0.022	-1.937	0.066
Labour	-0.009	0.123	-0.075	0.940
GDP	-0.847	1.012	-0.837	0.412
FDI	0.146	0.063	2.306	0.031
R-squared 0.619				
Adj R-squared 0.524				
S.E. of reg 1.103				

Source: Researcher 2018

The effect of Foreign Direct Investment was found to be positively and statistically significant, which is consistent with the expected sign. These results provide strong support for the hypothesis that FDI is an important determinant of export flows between Uganda and its trading partners. This implies that Uganda tended to trade more intensely with neighboring countries, where transportation costs are lower, than those that are further apart. This result is consistent with the findings of Orindi (2011). This author assessed the role played by FDI proximity in determining Uganda's exports, and found that foreign direct investment, among other factors, had a positive impact on the volume of exports in Uganda.

From table 4.7, it is evident that capital has positive and in-significant effect on export growth (0.121) the value of R squared is 61.9% on the regression coefficient between foreign direct investment and export performance in Uganda. From the coefficient of

the inflation, labor and trade openness variables are found to be negatively and is statistically in-significant in explaining variations in export performance in Uganda.

Table 4. 8: Effect of Real Exchange Rate on export performance of Uganda 1991-2016

STATISTIC	Coefficients	Standard Error	t Stat	P-value
C	7.909	5.655	1.398	0.174
Capital	-0.025	0.452	-0.056	0.955
Inflation	-0.015	0.049	-0.305	0.763
Labour	-0.599	0.3480	-1.721	0.100
GDP	-0.273	0.145	-1.881	0.074
RER	0.085	0.031	2.685	0.014
R-squared 0.898				
Adj R-squared 0.873				
S.E. of reg 1.507				

Source: Researcher 2018

Real exchange rate significantly and positively affects the export growth rate (0.085).

This finding is consistent with that of Jayant Parimal's findings of Burundi. He discovered that deteriorating and unstable exchange rates leads to contraction of export earnings and instability and the reverse is true. A number of other such studies suggests the same results. Musinguzi, et al. (2000), found out that exchange rate has significant effect to export growth rate. Furthermore, Kasekende and Anting-Ego while studying the impact of RER key market of sub-Sahara Africa found out that export volume are significantly correlated with exchange rates.

The value of R squared is 0.898 on the regression coefficient between real exchange rates and export growth of Uganda, the regression coefficient expresses that 89.8% of change in the dependent variable (i.e. export performance) is caused by real exchange rates. The adjusted R^2, 0.873 on the other hand expresses that for this change; 87.3% of the data are accounted. In this case real exchange rates account the changes in export rates by 87.3%.

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Discussions and Conclusions

The aim of this study was to examine the effect of Terms of Trade Real Exchange Rates and Foreign Direct Investment on export growth in Uganda for a period of 1991 to 2016. 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 effect of the above-mentioned determinants on export growth in Uganda.

5.1 Discussion of Findings

This study was meant to investigate the short run effects of terms of trade real exchange rate and foreign direct investment in Uganda 1991-2016. Under Tables 4.6, 4.7 and 4.8 it is evident all of the interested variables are positively and significantly contributing to the export levels in Uganda.

5.1.1 Effect of Terms of Trade on Export Performance of Uganda 1991-2016

As indicated in table 4.6, TOT the model's R-square is 0.868, suggesting that 86.8% of the variation in the performance of export was explained by the terms of trade. This implies that in Uganda export performance was more determined by terms of trade. Therefore, export performance increases 0.446 as a result of a unit change increase in terms of trade for the period under study, and the variables was found significant in explaining exports. This result was consistent with the expected sign. It was expected that favorable terms of trade are associated with increased export growth rates and unfavorable terms with low export growth rates. Therefore, according to the result terms of trade in Uganda is great importance to exports growth. This result is consistent with the previous findings of Achay (2006), Eita and Jordaan (2007), Foroutan and Lant (1993), Martinez-Zarzoso and NowakLehmann (2003) and Ram and Prasad (2000). In their empirical studies, these authors found a strong positive effect of

the TOT variable and concluded that positive terms of trade had a significant impact on the pattern of trade in their study samples.

5.1.2 Effect of Foreign Direct Investment on Export Performance of Uganda 1991-2016

Foreign Direct Investment was found positive and significant to export performance. This was as anticipated with regard to the formulated literature review. This result was also similar to the previous result of total exports. Moreover, the same was similar with the previous studies. Amelia and Santos (2000) and Hoekman and Djankov (1998) their studies concluded that FDI has a positive and is significantiy influences export performance. For the case of Uganda this result of FDI being significant to export performance is a good indicator that FDI performing well.

5.1.3 Effect of Real Exchange Rate on Export Performance of Uganda 1991-2016

Real exchange rate was found positively and significantly to export performance. This is in line with the literature reviewed. The stability of exchange rate has a great impact on Ugandan exports growth. However, this finding has found to be consistency with the previous studies like that of Sharma (2006) and Cline (2004). This finding is consistent with that of Jayant Parimal's findings of Burundi. the value of R squared is 0.898 on the regression coefficient between real exchange rates and export growth of Uganda, the regression coefficient expresses that 89.8% of change in the dependent variable (i.e. export performance) is caused by real exchange rates. The adjusted R^2, 0.873 on the other hand expresses that for this change; 87.3% of the data are accounted. In this case real exchange rates account the changes in export rates by 87.3%.

5.2 Conclusion

This study examined factors affecting export performance in Uganda using time series data for the period between 1991 and 2016. Specifically, the study analyzed the influence of macroeconomic factors such as Foreign Direct Investment, Gross Domestic Product, Inflation Rate, Real Exchange Rate, Trade Openness and Terms of Trade. The main proposition of the study was that macroeconomic factors significantly influence export performance.

Empirical results and analysis indicated that real exchange rate, terms of trade and Foreign Direct Investment were significant to export performance in Uganda's economy. Gross Domestic Product was also found positive in all situations except when FDI was the variable in question. However, Inflation Rate was found as negative determinant to total export in Uganda. Some of these results found to match with the findings reported in previous studies while other results raised a contradiction. The study concludes with a recommendation to improve export performances for both agricultural products and manufactured goods. This can be achieved by formulating good trade policy, attract more Foreign Direct Investment, improve infrastructure and create good business environment such maintain peace and harmony, political stability and minimize corruption, as well as to diversify export base of the country.

5.3 Recommendations

Based on the findings of the study the following recommendations are made.

1. Since Real Exchange Rates were found to be more sensitive with macro-economic variables mainly exports it is important for Uganda to concentrate on making exports more competitive in this sector by formulating good trade policies, and create good business environment for attracting more foreign currency or earnings. This could be done by creating more incentives in investing in agriculture sector, reduce red tape in land acquision and minimize corruption. Nontraditional sector is also important for export diversification.

2. Foreign Direct Investment inflow has been found to have a positive impact on export performance. Therefore, Uganda should attract more foreign direct investment. This can be done by creating good business environment such as maintaining peace and harmony, improve infrastructure, political stability and controlling macro- economic stability.
3. The Terms of Trade during the study period reveals that Uganda has been mainly exporting coffee whose demand is price and income inelastic. It also depicts that traditional exports were highly volatile during the study period. Two important lessons can be learned from this. Firstly, Uganda should increase its manufacturing exports and hence diversify its export base both to reduce export earnings volatility and also increase its export revenue. Secondly, due to its low manufacturing export base, the country is importing more manufactured products. Thus, increasing manufacturing exports is important not only for the export sector but also for the domestic sector.

5.4 Limitations of the Study

During the research period the researcher encountered the following challenges; data availability, budget constraints. Data availability was one of the challenges as most of less developing countries Uganda being one of them; it was difficult to get the right and reliable data. Never the less the researcher managed to accomplish this task by abiding to the available data and the use of international recognized publications such as World Bank and WDI.

5.5 Areas for Future Studies

In this regard with the above research result it is obvious that there are other possible factors contributing to the export performance in Uganda. Therefore, other variables to be considered for further research includes trade policy, fiscal policy, government consumption and foreign price. for the case of future studies, one could use Granger causality in order to oversee if there is a possibility of these variables to depend each other.

5.6 Contributions to Knowledge

Foreign direct investment terms of trade and real exchange rate has been found to have a positive impact on export performance in different countries, (Aggrawal (2001), Mold &Prizzon (2008), with Uganda inclusive. Uganda must try to attract more foreign direct investment not only to improve its exports, but also to bring in foreign exchange, capital, technology & other important resources such as market knowledge.

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APPENDIX 1: DATA USED IN THE STUDY

YEAR	TOT	RER	FDI	GDP	INF	DC	DL	TEX
1991	29.4	3.04	0.03	5.55	28.1	15.2	3.3	29.4
1992	33.05	3.08	0.1	3.42	52.4	15.9	3.3	33.05
1993	28.24	3.12	1.7	8.33	1.2	15.2	3.2	28.24
1994	27.84	3.17	2.21	6.4	10	14.6	3.1	27.84
1995	32.62	3.14	2.11	11.52	6.6	16.4	3.1	32.62
1996	35.39	3.19	2	9.07	7.2	17	3	35.39
1997	34.16	3.02	2.79	5.1	8.2	16.9	3	34.16
1998	30.04	2.94	3.19	4.91	0.1	15.9	3	30.04
1999	36.02	2.80	2.34	8.05	5.8	19.3	3	36.02
2000	32.75	2.82	2.59	3.14	3.4	19.2	3.1	32.75
2001	35.33	2.93	2.59	5.18	1.9	19	3.2	35.33
2002	36.28	3.06	2.99	8.73	-0.3	20	3.3	36.28
2003	36.59	2.77	3.19	6.47	8.7	20.7	3.3	36.59
2004	35.46	2.73	3.72	6.81	3.7	19.9	3.4	35.46
2005	38.99	2.75	4.21	6.33	8.4	22.2	3.4	38.99
2006	43.63	2.74	6.48	10.78	7.3	20.9	3.4	43.63
2007	46.78	2.81	6.45	8.41	6.1	21.9	3.4	46.78
2008	56.26	2.89	5.12	8.71	12.1	22.7	3.4	56.26
2009	46.74	2.84	4.63	6.8	13	24.7	3.3	40.05
2010	45.72	2.76	2.69	5.64	4	25.2	3.3	45.74
2011	52.94	2.78	4.43	9.39	18.7	26.8	3.3	52.08
2012	53.34	2.92	5.21	3.84	12.7	26.5	3.3	52.47
2013	50.9	2.94	4.46	3.59	4.9	27.5	3.3	50.32
2014	46.32	2.96	3.88	5.11	3.1	26.4	3.3	45.27
2015	47.66	2.96	2.72	5.19	5.4	27.6	3.5	45.93
2016	47.22	2.97	2.6	4.66	5.5	23.6	4.3	47.2