RELATIONSHIP BETWEEN EXPORTS AND GDP GROWTH IN UGANDA: (A CASE STUDY OF PERIODS BETWEEN 1992-2011).

BY
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A RESEARCH DISSERTATION SUBMITTED TO THE DEPARTMENT OF ECONOMICS AND APPLIED STATISTICS IN THE PARTIAL FULFILLMENT FOR THE AWARD OF A BACHELOR OF ARTS IN ECONOMICS OF KAMPALA INTERNATIONAL UNIVERSITY

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DECLARATION

I Uchamgiu Gerald do hereby declare that this dissertation titled the "Relationship between exports of (coffee, cotton and fish) and GDP growth in Uganda: (case study: periods between 1992-2011)" is my original work and has not been published and / or submitted to any University or institution of higher learning for any academic award.

Signature.....

UCHAMGIU GERALD (candidate)

Date.....23rd/ 1st/08/2014.....

APPROVAL

This is to certify that the dissertation titled, "Relationship between exports of (coffee, cotton and fish) and GDP growth in Uganda: (case study: periods between 1992-2011) has been under my supervision and is ready for examination with my approval as university supervisor.

Signature ..... Date. 12 AUG 2014

MR. MUTUMBA GEOFFREY

(Supervisor)

DEDICATION

I would like to dedicate this project to the Almighty God, who has guided me throughout my lives, granted me strength, knowledge and life. I also wish to dedicate this piece of work to my beloved parents/guardians who have worked so hard to give me an education, basic needs and support throughout my lives. I really appreciate you.

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ACRONYMS AND ABBREVIATIONS

BOU	Bank of Uganda
COMESA	Common Market for Eastern and Southern Africa
EU	European Union
FIRRI	Fisheries Resource Research Institute
GDP	Gross Domestic Product
GOU	Government of Uganda
GWP	Gross World Product
ICA	International Coffee Agreement
ICO	International Commodity Organization
IFPRI	International Food Policy Research Institute
IFS	International Finance Statistics
IMF	International Monetary Fund
LDC'S	Less Developed Countries
LVEMP	Lake Victoria Environmental Management Project
MAAIF	Ministry of Agriculture, Animal, Industry and Industry
MOFPED	Ministry of Finance Planning and Economic development
MTTI	Ministry of Trade, Tourism and Industry
NRI	Natural Resource Institute
PPP	Purchasing Power Parity
UBOS	Uganda Bureau of Statistics

UCDA	Uganda Coffee Development Association
UEPB	Uganda Export Promotion Board
UFPEA	Uganda Fish Production and Exporting Association
URA	Uganda National Authority
USAID	United States Agency for International Development
Ush	Uganda Shillings
WTO	World Trade Organization

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ABSTRACT

The study was conducted under the topic **"Relationship between Exports of and GDP growth in Uganda: (A case study: Periods Between 1992-2011)"**

The research instruments used for data collection are time series tests, observation, sampling and data Analysis.

The researcher made the following findings in accordance with the study objectives:

Gross Domestic Product has been showing a general increase over years under study in Uganda (1992-2011). An increase in the GDP growth is due to exportation of goods, high level of technology, favorable government policy and revenue among other factors which can lead to economic growth, high earnings from exports which lead to injections into the country, technology leads to high production of goods in quantity and quality which enables to promote trade, favorable government policy that encourages both exporters and importers which lead to favorable balance of payment, mean while taxation leads to high generation of revenue to the country which can be invested, and we that investment leads to economic growth.

The relationship between exports and GDP growth has been a significant relationship according to the fitted line and regression analysis, correlation and the use of time series tests, which were performed.

There has been a strong positive correlation between exports and GDP growth in Uganda (0.7295), the regression of Gross Domestic Products showed a significant relationship while a unit change in GDP growth as a result of exports has a significant relationship but the constant has no significant relationship, this is an indication of the growth of GDP without the exportation of goods may be un healthy to an economy like Uganda since it is still a developing country which cannot do without exportation of goods.

CHAPTER ONE

1.1 Introduction

Agriculture is an important economic sector in Africa that constitutes the backbone of most African economies provides 60 percent of all employment; accounts for about 40percent of the continent's foreign exchange earnings; and in most countries, it is still the largest contributor to Gross Domestic Product (GDP); and the dominant provider ofindustrial raw materials (NEPAD, 2003). Notwithstanding the importance, agriculturalProductivity is low and subsistence production is dominant in Africa, partly on accountof limited use of improved technologies in production (NEPAD, 2003; World Bank, 2007).

In Uganda, agriculture is the source of livelihood to about 73 percent of the country's labor force (UBOS, 2006), contributes 48 percent of formal exports and 23 percent ofthe gross domestic product (GDP) (MFPED, 2010). Besides, agriculture is the major source of raw materials for industry, and food for the nation. As such, the five-year National Development Plan (NDP) identifies agriculture as the primary growth sector to transform the economy from a peasant to a modern prosperous society (GOU, 2010).Despite the critical role, the future of Uganda's agriculture remains uncertain.

Agricultural growth rate is low and unstable, yet population growth is higher and appears to be on the rise (See Appendix 1). Growth of the agricultural sector is much lower than the 5.6 percent annual growth envisaged in the NDP and the 6 percent annual growth target of the African Union under the Comprehensive Africa Agriculture Development Program (CAADP) (African Union, 2003). Low growth in agriculture is blamed on declining productivity and commercialization, as yield of most crops is several times lower than potential and subsistence production that is estimated at about70 percent of smallholder agriculture is on the rise (MAAIF, 2010).Limited participation of farmers in the market due to subsistence production implies low Income, low saving and investment in productive assets, which is likely to perpetuate the Vicious cycle of low improved inputs use, low productivity and low commercialization.

Furthermore, limited investment in agricultural production leads to environmental Degradation (Pender et al., 2004). All these in turn limit national employment growth, food security, and economic growth, which further aggravate rural poverty.

An important source of potential growth for African economies in 2011 is through the exploitation of exports opportunities, both regionally and internationally. There is a Conesus that increased exports growth leads to overall economic growth. Indeed the experience of Asian tigers and more recently of Brazil, china, India and south Africa support this observation. Increasing exports is also associated with other gains, like access to larger markets which in turn enables exploitation of economies of scale, efficiency gains from technological spillovers and better resources allocation, employment generation and foreign exchange earnings by following the market and trade liberalization reforms of the 1980s, African exports rose from 22 percentage of GDP in 1983 to an average of 32 percent during the last two decades. Likewise real GDP growth rose from average of 3 percent in 1983 to average of over 4 percent during the past two decades. Over the entire period, Africa has on average only accounted for about 2 percent of total global exports of which 30 percent is attributed to South Africa (World Bank 2010).

Uganda as one of the developing countries in Africa heavily depends on the exportation of primary goods. Over the past two decades, Uganda has seen a remarkable turnover in economic performance, with growth averaging about 7.7 percent a year over the 1997-2007 periods. Impressive has been the sharp decline in poverty rates, which fell about 15 percent points over this period. Improved macroeconomic management and economic reforms contributed to the country's strong growth performance. During 2011, total merchandise exports stood at US$ 2,514.9million. The overall export earnings rose by 17.1 percent in 2011 after a decline of 9.3 percent recorded in 2010(MoFPED 2008).

Although the formal exports earnings increased significantly in 2011, informal exports receipts reduced drastically by 32.7 percent after having reduced by an almost similar magnitude in 2011. The general decline in informal merchandise exports could be attributed to increasing numbered traders formally declaring merchandise to customs authorities, especially goods destined to south Sudan which constituted the bulk of informal exports. Consequently, formal exports to south Sudan increased by 57.8 percent from US$ 208.6 million in 2011, while informal exports reduced by almost the same amount of 57.0 percent from US$ 196.9 million in 2010 to US$ 84.8 million in 2011(UBOS 2012).

GDP can be measured in three ways, which should give identical results. First expenditure approach which is equal to the total expenditure for all final goods and services produced within the specified period of time (usually 365-days). Second, value added approach and it is equal to the sum of the value added at every stage of production by all the sum of the income generated by production like taxes on production and imports less subsidies, and gross operating surplus(Rogers.2004)

1.2 Statement of the Problem

Agriculture is the primary growth sector in Uganda's transformation from peasant to a modern prosperous society (GOU, 2010). For successful transformation of the national economy however, it is essential for agriculture to post high and sustained growth of at least 5.6 percent per annum (GOU, 2010). Unfortunately, this is not the case, as growth in the sector is low, averaging one percent per annum, between 2002 and 2008. Weak growth in agriculture is generally attributed to low productivity and commercialization in the sector as a result of limited use of improved inputs (MAAIF, 2010). Uganda's export sector has been characterized by low and fluctuating export growth rates and exp[ort earnings from time of independence, coffee has been the leading export accounting for more than 50 percent of the total earnings until recently when it was overtaken by non-traditional exports like maize, electric current, beans and other legumes. Some traditional exports such as copper disappeared in 1977 and commodities like fish, maize that originally were part of the traditional exports, emerged and presently constitute the largest share of total exports (UEPB, 2010).

The government has embarked on promoting the export sector through establishing various bodies to help the exporters: by providing them with incentives and necessary advice but the export growth rate has remained below, consequently, there has been glaring contradiction on plausible determinant of export growth rates so that information is provided to concerned authorities hence therefore seeked to investigate the relationship between export and GDP growth in Uganda

1.3 Objectives of the study

The general objective of the study was to analyze the relationship between exports of coffee, cotton and fish and GDP of Uganda (1992-2011)

1.3.1 Specific objectives

The study followed these specific objectives:

i. To establish the trend of exports(coffee, cotton and fish) of Uganda
ii. To investigate the GDP growth trend in Uganda
iii. To workout the relationship between export earnings on coffee, cotton and fish and GDP in Uganda

1.4 Research questions

i. What is the export trend of Uganda?
ii. What is the GDP growth trend of Uganda?
iii. What is the relationship between export earnings and GDP growth in Uganda?

1.5 Scope of the study

1.5.1 Content scope

The study focused on relationship between exports and GDP growth in Uganda from the period (1992-2011)

1.5.2 Geographical scope

The Uganda Export Promotion Board established by the parliamentary statute No.2 of 1996 and it is under the Ministry of Tourism, Trade and industry. This board is mandated to facilitate the development, diversification, promotion and coordination of all export related activities that lead to export growth on a sustainable basis. (UEPB, 2011)

1.5.3 Time scope

The study will generate reference from books between 1992 to 2011 making 20 years past but the study will make use of two months from May to June 2014 to complete the research.

1.6 Significance of the study

Export instability affects the general performance of the economy. Uganda being a primary commodity exporting country is susceptible to price fluctuations on the world market which

justifies the government effort to promote the sector since early 1990's.analysing the relationship between exports of coffee, cotton and fish will help provide information to policy makers to enable them come up with the appropriate policies regarding the growth of the sector and the economy as a whole and will help broaden the understanding of relationship between exports and gross domestic product in Uganda.

1.7 Operational definition.

Gross domestic product (GDP)

Roger Leroy (2004) defined GDP as the market value of final goods and services produced in an economy during a year as flow of production using the available factors of production. Gregory Mankiw (1998), defined GDP growth as the value of final goods and services produced within a country in given period and was measured in billions of USD. This study adopted the definition of the latter.

EXPORTS

UBOS (2012). Defined exports as the outward flows comprising goods and services leaving the economic territory of a country it the rest of the world, Bradly et al (2005) defined exports as goods and services sold to international buyers and his study went by Bradley et al (2003) definition and was measured in millions of USD.

CHAPTER TWO

LITERATURE REVIEW

Concepts, ideas, opinions from authors/experts

2.1 Exports

Exports in Uganda decreased to 218.09 USD Million in April of (2014) from 236.63 USD Million in March of (2014). Exports in Uganda averaged 103.46 USD Million from (1993) until (2014), reaching an all-time high of 271.08 USD Million in May of 2013 and a record low of 12.40 USD Million in July of (1993). Exports in Uganda are reported by the Bank of Uganda.

Exports as a share of GDP have increased over time in Uganda. Before the liberalization of the economy and the emphasis on imports substitution and export diversification in the 1990s. Uganda depends mainly on coffee as its main export. This dependence on single commodity was a major constraint in terms of trade growth, especially when world coffee prices dropped as they did in the mid-1990s. To insulate the economy from adverse terms of trade and instantly in export earnings associated with commodity concentration, the government adopted a policy shift in 1987 that sought to diversity the exports base to include nontraditional (mainly) agricultural exports. Since then Uganda has diversified its exports base to include larger shares of flowers, fishing and other agricultural exports. Revenue from non-coffee exports increased by more than six fold between (1997/98) and (2008/09), rising from $189.6million to $1, 1996.6million (URA, 2010)

Uganda's year on year fourth quarter total value of exports of (2009) dropped by 7.9%, Uganda recorded a reversal in portfolio capital inflows, from a net inflow of $66.30 million in (2007-08) to target (7.1%instead of 8.5%) and lower than that of (2007/08).exports in Uganda decreased to 220.13 USD million in December of (2012) from 24o.46 USD million in November of 2012. Historically, from 1993 until 2012,uganda exports averaged 94.33 USD million reaching an all-time high of 260.40 USD million in August of (2012) and record low of 12.40 USD million in July of 1993(UBOS,BOU,2012)

Uganda mostly exports agricultural products (80% of total exports). The most important exports is coffee (22% of total exports) followed by tea, cotton, copper, oil and fish.

Uganda's main export partners are Sudan(15%), Kenya(10%),DRC, Netherlands, Germany and south Africa. nonetheless, Uganda's economic performance compared with other sub-Saharan African countries(and especially western countries) was very good. from September 2009,uganda began to rebound from the adverse effects of the war. The first signs were the appreciation of the local currency (CIA world fact book, 2010).

2.2 Cotton export earnings

In the (1950s) cotton was the second most important traditional cash crop in Uganda, contributing 25% of total agricultural exports. By the late (1970s), this figure had dropped to 3%, and government officials were pessimistic about reviving this industry in the near future. Farmers had turned to other crops in part because of the labor-intensive nature of cotton cultivation, inadequate crop-finance programs, and generally poor marketing system. The industry began to recover in the (1980s). The government rehabilitated ginneries and increased producer prices. In 1985,199,000 hectares were planted of cotton and production had risen from 4000 tons to 16,300 tons in five-year (ICAC, cotton production in Uganda, 1990)

Cotton exports earned US$13.4million in (1985). Earnings fell to US$5 million in (1986), representing about 4,400 tons of cotton. Production continued to decline after that, as violence plagued the major cotton-producing areas of the north, but showed some improvement in 1989(World Bank, commodity price data 1990).

Cotton provides raw materials for several local industries, such as textile mills, cotton oil and soap factories, and animal feed factories. Moreover, in the late 1980s, it provided another means of diversifying the economy. The government accordingly initiated an emergency cotton production program, which provided extension services, tractors and other inputs for cotton farmers. At the same time, the government raised cotton prices from Ush32 to Ush 80 for a kilogram of grade a cotton and from Ush 18 to 42 for grade B cotton in 1989. However, prospects for cotton industry in the 1990s were still uncertain as case today (UBOS, 1991).

2.3 Fish export earnings

According to Boaz B.KEIZIRE senior fisheries economists, Uganda in aril (2006) "sustainability impact assessment of proposed WTO negotiations': the fisheries sector. Country case study Uganda industrial fish processing is dominated by local and international companies of which some are individually owned while others are jointly owned. Currently, there are 17 fish processing establishments in Uganda, 15 of which are approved for exports. They operate at an average of 44% of the installed capacity (LVEMP, 2005).

The fish processing and export establishments are all organized under the umbrellas of Uganda fish processing and exporters association(UFPEA) out of the 15, 12 are members of UFPEA. The fish processing and export business from Uganda, and indeed from the rest of East African countries, Kenya and Tanzania , is eased by the number of importing agents who mainly transport fish and its products from Uganda to a number of markets destination. These firms include: Fiortial from Italy, Calderon form Spain, Nieterof from Holland, Anova from Holland, and Ice mark from Belgium. Two of these, Anova and Ice mark have operations on the ground in Uganda (NRI, 20003).

Most of these markets have different requirements. The European market, for example, prefers whole fillet sizes of 200 to 500g while the Japanese, the Middle East and Hong Kong prefers markets accept fillets of any size (Keizire, 2004).

FIRRI (2004) estimates indicated that global markets for internationally traded fishery products were valued at a cost of USD58 billion in (2002), and this brings Uganda's world market share to approximately 0.2%. The European Union dominates the market for Ugandan fish exports accounting for 73% of the total value of fishery product exports in (2004). In (2004), fishery products were consigned to 29 other destinations, none of which accounted for more than 7% each of the total value. Other sizeable markets for Uganda's fish include the USA, United Arab Emirates and Australia (WAGUDE, 2005)

2.4 Coffee export earnings

Coffee is Uganda's top-earning export crop. In (1989) Uganda's coffee production capacity exceeded its quota of 2.3 million bags, but export volumes were still diminished by economic and security problems, and large amounts of coffee were still being smuggled out of Uganda for sale in neighboring countries. Some coffee farmers cultivated cocoa trees on land already producing *Robusta* coffee. Cocoa production declined in the (1970s) and (1980s), however, and market conditions discouraged international investors from viewing it as a potential counterweight to Uganda's reliance on coffee exports. Locally produced cocoa was of high quality, however, and the government continued to seek ways to rehabilitate the industry. Production remained low during the late (1980s), rising from 1,000 tons in (1986) to only 5,000 tons in (1989). The Uganda Coffee Development Authority was formed in (1991) by government decree, in line with the liberalization of the coffee industry. Robusta coffee grows natively in the Kibale forest area. From 1999 to (2002) an effort was made to commercialize this coffee as a premium consumer brand, emulating and extending the success of shade grown in Central America. Revenue from the coffee production was intended to finance conservation management activities.

According to JOHN Seaman et al UK march (2004) save the children, "A study of coffee and household economy in two districts of Uganda that is Mbale and Mpigi districts," income from coffee currently contributes around 50% of Uganda's export earnings. These earnings have fallen steadily since the late (1990s). For example Uganda's coffee income in (2011) fell by $104.8 million (36%) on the previous year, despite a 5.4% increase in the volume of coffee produced (UCDA figures). The dilemma that faces both government and small holders in most coffee producing economies is that, although returns from coffee are falling, the lack of alternative income sources compels producers to maintain and even increase crop levels. The same drive to continue exporting coffee, which increases the problem of oversupply and contributes to further decline in prices. The government of Uganda (GOU) in response to this problem led by the Uganda Coffee Development authority (UCDA) has been to attempt to enhance the value and competitiveness of coffee harvest. The main strategy is to promote organic coffee, washed Robusta and 'gourmet 'coffee for specialty markets. The value of washed Robusta is 20%-30% above ordinary Robusta, specialty organic Arabian scan command prices that are 100% higher

than basic Robusta (UP TO 2,500 Ush per kg). Additionally, GOU is a signatory to (ICO) resolution 407, which aims to stem the international collapses of Robusta prices; Uganda liberalized its coffee sector in 1991. This resulted in the abolition of system organized around co-operatives and a central coffee marketing board. Under this system, farmers organized fixed advanced payments for their crop through the cooperative and additional payments based on quality. Independent buyers have almost universally replaced the role of cooperatives in farm level purchase and marketing. Although only a small proportion as little as 20% of the final value of their crop was paid to farmers before liberalization, quality based premium were paid direct lily to producers, and provided an incentive to maintain standards. Under the present systems, farmers receive a higher proportion of the final price up to 70% (UCDA, 2008).

However, with the exception of small minority of specialty producers, they have lost the quality incentive. Liberalization and the demise of the local cooperative monopolies, has led to a proliferation of local buyers, who tend to purchase all coffee accounted for, well over 60% of Uganda's export earnings from coffee(GOU). This is the strategy adopted by major donors including (DFID) and (USAID), and by the ICO. In September 2002, the (ICO) which represents producer and importing countries passed a resolution banning the export of Robusta that fails to meet basic quality standards. Note: the US government is not a member of (ICO). The impact of resolution 407, cannot be measured in the context of this study, as its unable to preserve the identity of small batches of coffee. At farm level, this removes the incentive in quality. The Uganda coffee development authority (UCDA) was established at the time of liberalization to deal with this problem, and maintain the export value of coffee crop. This however reduced the GDP of Uganda's economy and affected coffee as an export. Uganda is one of the largest producers of coffee in sub-Saharan Africa and exported 197,200, metric tons in 1998,second only to cote devoir. This provided USD 314 million in export earnings. Although his was a drop in earning from the 1996 level of 396USD million, the 1996 harvest had provided 81,511 metric tons more than in 19998(UBOS, 2000).

The country's high altitude, relatively high rainfall, and mild climate are suited to the growing of coffee. Robusta coffee is grown in areas near Lake Victoria and in some western districts. Arabica coffee is grown in the volcanic regions in Mbale and Kapchorwa where the cooler, higher altitude provides the increased rainfall necessary for the growth of this more profitable

crop. The dual process of the devaluation of the Ugandan shilling and its flotation was intended to provide an incentive to producers to take advantage of more competitive exports and thus expand their production of exportable goods. On face value, this process was a success as producer prices drastically increased. For example, coffee farmers received a 182 % rise paid for their product, and there was an annual average growth of coffee exports of 6.5% between 1990 and 1997(BOU, 2001).

However the apparent growth of Uganda's coffee exports does not take account of smuggling into the country from neighboring countries such as the war- torn democratic republic of Congo whose farmers often do not receive as good price for their crops as those in Uganda. Further, increased productivity was based upon an increase in the area cultivated rather than on higher yields. When there is a series in available cultivated land. Its acts as an increased drain on the country's environment resources. The 50 % projected rise in population by2015 more than likely will increase competition, and perhaps conflict, over ever-decreasing land plots (UBOS statistical abstract, 2012)

Regarding improvement to the agricultural sector, farmers simply lack the access to capital in order to merchandise production and increase agricultural productivity. Productivity per agricultural worker was an average of US$345 per annum over 1996-1998(MAAF working, paper, 2008). In consequence, farmers are unable to take full advantage of increased returns for the exports of coffee.

2.5 The GDP Trends in Uganda

According to projections for the 21012 African economic outlooks, suggested that the economy will improve in 2012 to 4.5% to 4.9% in 2013. The GDP in Uganda expanded 2.80 % in the third quarter of 2012 over the same quarter of the previous year.

Historically, from 2008 until 2012, Uganda GDP annual growth rate averaged 5.56 % reaching an all-time high of 12.20 % in June of 2009 and record of 0.90% in December of 2011 (UBOS annual report)

In Uganda, the annual growth rate of Uganda GDP measures the change in the value of the goods and services produced by the country economy during the previous year.

2.6 Over view of exports and GDP of Uganda

Uganda has substantial natural resources, including fertile soils, regular rainfall, small deposits of copper, gold and other minerals, and recently discovered oil. Uganda has never conducted a national mineral survey .agriculture is the most important export of the economy, employing over 80% of the work force. Coffee accounts for the bulk of exports revenues. Since 1986, the government with the support of foreign countries and international agencies has acted to rehabilitate and stabilize the economy by undertaking currency reform, raising producer prices on exports crops, increasing prices of petroleum products and improving civil wages. The policy changes are especially aimed at dampening inflation and boosting production and exports earnings. Since 1990 economic reforms ushered in an era of solid economic growth based on continued investment in infrastructure, improved incentives for production and exports, lower inflation, better domestic security, and the return of exiled Indian entrepreneurs. Uganda has received about 2$ billion for multilateral and bilateral debt relief. In (2007), Uganda received 10$ million for a millennium challenge account threshold program. The global economic downturn hurt Uganda's exports: however, Uganda GDP growth has largely recovered due to past reforms and sound management of the downturn. Oil revenues and taxes will become a larger source of government funding as oil comes on line in the next few years. Rising food and fuel prices in 2011 led to protests. Instability in south Sudan is a risk for the Ugandan economy because Uganda's mainly export partner is Kenya, and Uganda is a key destination for Sudanese refugees (MTTI, 2012)

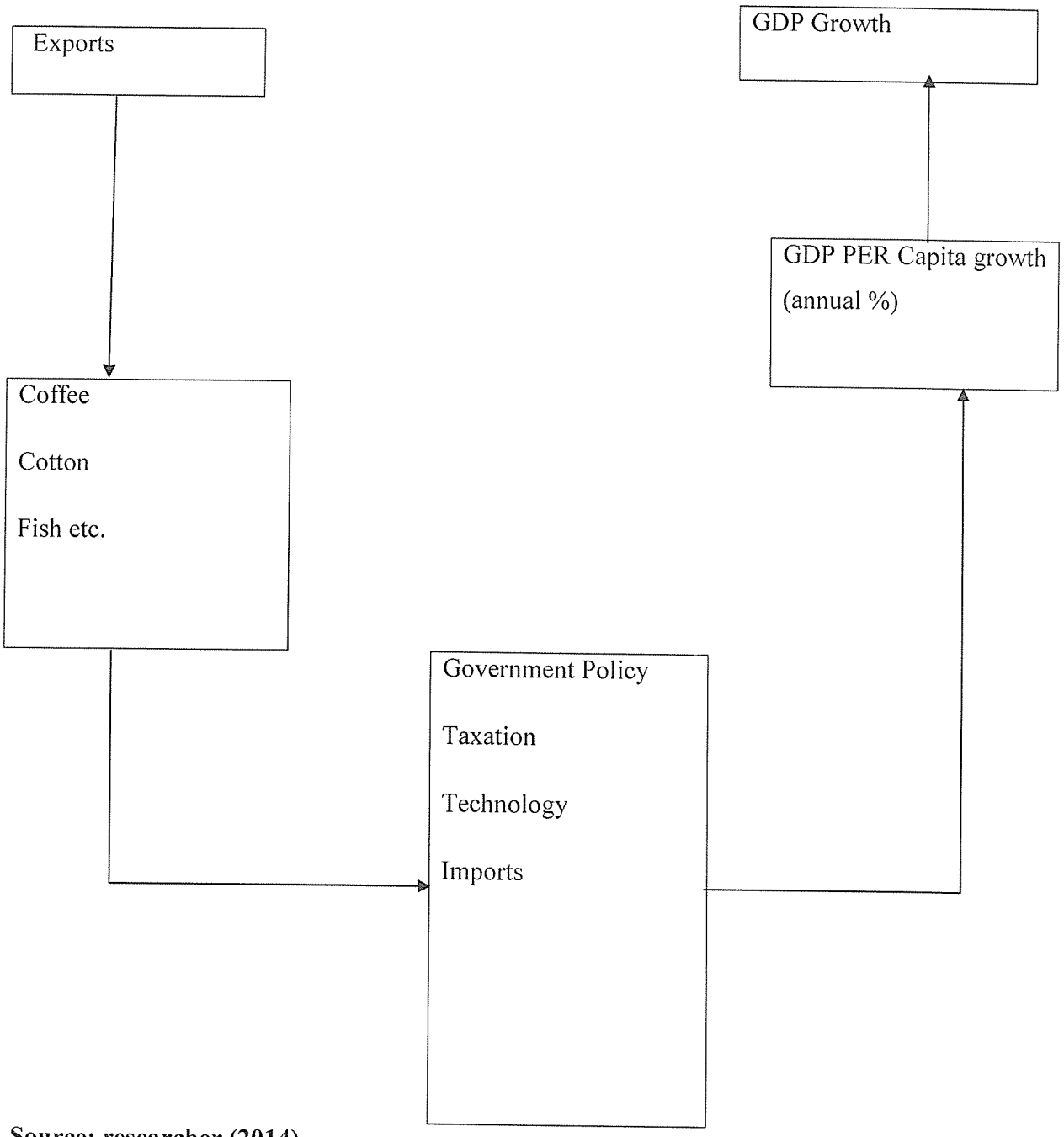
When they do arise, for instance, during the coffee boom of (1994-45) where the price in US cents to pound of coffee was 126.83. This failure to improve production is based upon a lack of investment and an assumption of the continuation of the usually relatively low paid by the volatile world market for primary commodities. For example, in 1999 the price in U.S cents to a pound of coffee was only 67.65. Considering the long term maturity of coffee plants, the instability of international markets does not provide much of an incentive for improved efficiency of production. It should also be noted that exports crops such as coffee are very susceptible to natural disasters, which further reduces their economic viability. For instance hurricane in 2000 pushed Uganda's national harvest back a year. It is upon this that Uganda's export earnings keep on fluctuating and hence affecting the GDP (UEPB, 2003).

2.7 Conceptual framework

The conceptual frame work shows the model of exports and GDP growth

Independent variable

Dependent Variable



Source: researcher (2014)

The conceptual framework above shows how the export earnings contribute to GDP growth. In addition the exports are broken down to three that is coffee, cotton and fish. Other factors which affect the GDP growth that is government policy, taxation, technology and imports are shown as intervening variables. GDP is measured annually.

2.8Theoretical perspective

The theory of comparative advantage stated by David Ricardo's (1817) that a country should export the commodity in which its relative cost advantage is similar will guide the study. This encourages a country export goods where by the cost advantage is greater domestically and abroad. The implication of this is that these countries will benefit if they produce goods which need relatively large amount of low skilled labor and exchange with a capital , and skilled labor intensive goods produced by their developed counter parts and as such it is argued that they have a comparative advantage in producing than its trading partners in almost everything there is a possibility of trade by specializing in a commodity in which its productivity disadvantaged is smaller and exchange with its trading partner. This process brings development by enabling countries to gain more through importation than could be achieved from domestic production (Humpage, 2000)

The policy of import substitution affects the export sector in less developing countries like Uganda and this policy has anti-export bias where the industry is import dependent(Lyakurwa 1991)

Even empirically, there is weak evidence that support import substitution strategy (Dornbush, 1992). However, formerly there was a support for import substitution strategy, currently the situation is changing. There appears to be an agreement that trade promotes growth by enabling countries to acquire goods that they have no capacity to produce.

Thus, liberalization of trade and payments removes anti-export bias and this promotes the export sector and therefore leads to the improvement of foreign earnings and growth of GDP. Therefore, import liberalization is important to help export sector, given the fact that a country like Uganda among the developing countries id highly dependent on imports from developed countries.

In the Heckscher-Ohlin (1990), which states that the pattern of international trade is determined by difference in factor endowments, predicts that countries will export those goods that make

intensive use of locally abundant factors and will import goods that make intensive use of factors that are locally scarce.

Singer (1950) who argued that too much specialization of developing countries implied trade p[partners characterized by reliance on exports of raw materials and agriculture commodities in exchange of consumer and investment goods manufactured in developed countries. Based on the prebish-singer hypothesis, free trade and its corollary specialization were to confine developing countries in the production of primary products, which are subject to short and long term detrimental effects for developing countries. Hence in order to stabilize export earnings, boost income growth, and upgrade, developing countries had to increase the variety of their exports basket. In the light of the dismal economic performance of many developing countries that implemented trade restrictive protectionist policies in the (1960s), and (1970s), many policy makers have since the (1980s) ,been seeking to expand their exports and have increasingly been recommending developing strategies based on outward orientation including reduction of trade barriers and opening of international trade to foreign competition . because export supply response following first generation of outward oriented trade policy reforms have been mixed, expanding and diversifying exports remains a major concern for policy makers in many countries.

2.9 Related Studies

Michealy (1997) used the spearman's rank correlation to detect the association between export growth and economic growth. The study finds evidence of positive relationship between export growth and economic growth while emphasizing the fact that export expansion contributes to economic growth only when countries achieve some minimum level of development. This did not show the result for the case of low developed countries and my study therefore tested for the relationship for the case of low developed countries.

Balassa(1987) argued that in inter country context the correlation between export growth and economic growth may capture the indirect effects of exports on economic growth the study developed several measures of exports and income to explore the relationship between export expansion and economic growth in a sample of 11 developing countries having a substantial industrial base. The overall results suggest that export growth favorably affects the rate of economic growth. This study covered so many developing countries and different goods they

export in terms of volume and value so my study was for one developing country that is Uganda to be exact which has a low industrial base.

Tyler (1981) analyzed the empirical relationship between economic growth and export expansion in a sample of 55 middle-income developing countries using inter-country cross section analysis. Bivariate correlation tests simple Pearson and spearman rank correlation tests) reveal a strong positive association between export economic growths. The study supplements the correlation analysis by estimating an aggregate production function relating output with traditional inputs (capital and labor) and exports. This analysis suggests that export performance is important, along with capital formation in explaining the inter-country variance in the rate of output growth. The time lag here is too long and therefore my study tested if the same result holds for Uganda with inclusion of regression analysis from (1992 to 2011).

Kavoussi (1984) examined the relationship between export expansion and economic growth in a sample of 73 developing countries. The correlation tests indicate that export expansion is associated with better economic performance in both groups of low and middle-income countries. The study also examined production function and concludes that export expansion has a positive impact on total factor productivity leading to higher economic growth, this study considered export expansion in relation to the level of factor productivity like labor characterized by poor skills and knowledge.

Gonclaves and Richtering(1986) conducted empirical analysis for a sample of 70 developing countries for the period (1960-1981) and find that export growth rate and change in export/GDP ratio are significantly correlated with GDP growth. The study finds no significant correlation between non-export output growth and export growth.

Jung and Marshall (1985) applied causality tests on time series data of 8 newly industrialized countries NICS to investigate the causal pattern between export growth in manufactured output. The study finds evidence of bi-directional causality in the case of Brazil, Hong Kong, Israel, Korea, Singapore, and Taiwan; and no causality in the case of Argentina. This finding is in sharp contrast to Jung and Marshall for six countries common in the two samples, namely Brazil, Korea, Mexico and Taiwan. More specifically, as opposed to Chow's evidence of dual causality between exports and economic growth, Jung and Marshall find no significant causality in Brazil

or Mexico and causality only from output to exports in Korea and Taiwan. The contrast in empirical findings of two studies may be partly explained by the fact that Chow uses output of the manufacturing sector as a measure of aggregate output as opposed to jug and Marshall who utilize GDP.

In study of four Asian NICs, (Hong Kong, South Korea, Singapore, and Taiwan), Darrat(1986) found no evidence of unidirectional causality from exports to output in all the four economies. In the case of Taiwan, however the study detects unidirectional causality from output growth to export growth. However, Ahmad and Kwan (1991) find no support for the export led growth hypothesis in their empirical study of 47 African developing countries.

Bahmani-Oskooee et al (1991) examined the relationship between export growth and economic growth for 20 LDCs countries by employing the Granger concept of causality in lag length. Through the study detects evidence of a casual association between export and of Indonesia, Korea, Taiwan and Thailand. Whereas the study confirms the finding of Jung and Marshall for Indonesia, the two studies reach different conclusions for Korea, Taiwan and Thailand. In a more recent study, Dodaro(1993) shows some support for the exported growth hypothesis seven out of a sample of 87 economies reveal a positive causality from exports to GDP.

Marin (1992), Bahmani-Osookee and Alse (1993), Henrique and Sadorsky(1996), Dun and Ghosh(1996), Al-Yousif(1997) and Xu(1996). In general, these studies have found empirical support for the export-led growth studies have found empirical support for the export led growth hypothesis for a major of economies. For instance, Bahmani-Oskooee and Alse re-examine the relationship between export growth and economic growth for 9 developing countries within the frame work of an Error correlation model, and find strong support for the exported-led growth hypothesis for all countries included in the sample.

Similarly, in a study of 26 low, middle and high-income countries, Dutt and Ghosh provide evidence in favor of the exported led growth hypothesis in roughly half of the countries.

Xu(1996) finds evidence of exported led growth in 17 out of 32 developing countries included in the analysis. Al-Yousif 1997 uses a multivariate model to examine the relationship in the case phenomenon. in a recent study, El-Sakka et al (2000) use a number of cointegration and causality tests and obtain mixed results regarding the direction of causality in 16 Arab countries. In all this

studies, it was carried out side Africa and we cannot be certain of the same result for Africa specifically Uganda within fewly exploited resources and hence my study tested to confirm this result.

Ram (1985), in a cross –section study of 88 countries using the production function methodology found that the role of exports in growth is predominantly positive. Greenway and Nam 1988 conduct empirical tests for a simple of 41 LDCs and suggest that outward oriented has been more conducive to growth in Pakistan, so my study was carried out in Uganda to know the results from (1992-2011).

Kwan and Kwok (1995) used exogeneity tests and find that current real export growth has a positive impact o output growth in china. Applying a vector auto-regressive model for Taiwan, USA and JAPAN, Ghartey (1993) observed that growth in the USA, and a feedback causal relationship exists in the Case of Japan. These studies used different method of data analysis like vector auto regression, exogeneity but this study used correlation and regression data analysis to tests for the relationship between the two variables that is exports and GDP

Ahamed and Harnhirun 1996 found no statistical evidence in support led growth hypothesis for five ASEAN economies. Gupta (1985) explores the link between exports and economic growth for Israel and South Korea using quarterly data for the period 1960-1979. The results reveal that the relationship between the two variables is bi-directional for both countries. The use of quarterly data may not be accurate enough to come up with a conclusion so my study used yearly data to come up with a conclusion on the relationship between the two variables for Uganda from (1992-2011).

Nandi (1991) applied the Granger causality tests to examine the export growth hypothesis for correlation modeling approach, and finds evidence of uni directional causality from export growth to economic growth. Based on a longer data set (1950-1993)

Bhat(1995) re-examined the export economic growth nexus for India by utilizing the error correlation modeling approach, and finds evidence of bi-directional causality between export growth and economic growth. This study did not specifyfish, coffee and cotton as components of exports, which contribute to GDP.

Ghatak and Wheatly(1997) concluded that export growth is Granger-caused by output growth in India. It is noteworthy that results are in sharp contrast to XU 1996, who obtains rejection of the export-led growth hypothesis for India For the period (1960-1990). This study used the level of output for measuring the export but my study measured exports of fish, coffee and cotton in million of USD for each year from (1992-2011)

For Bangladesh, begum and shamsuddish 1998 investigated the impact of exports on economic growth for the period (1961-1992) using a two sector model. The key finding of their study is that export growth has significantly increased economic growth of the country through its positive impact on total factor productivity. My studies used a four-sector model which includes government, imports since Uganda highly depends on imported goods and have an effect on the level of GDP.

Mollik (1996) provided evidence in favor of exported –led growth hypothesis within the conventional Granger causality framework. Mutairi 1993 adopts causality –testing framework to determine whether exports, the capital stock, or the labor force, cause output growth in Pakistan for the period (1959-91). The study finds that the impact of exports on output growth in the country is not significant for the sample period. This study was using exports, capital stock and labor force that determine growth but my study used coffee, cotton and fish earning s as components of exports that contribute GDP growth

Khan et al (1995) found strong evidence of bi-directional causality between exports growth and economic growth for Pakistan. Rana(1985)departs from the Granger causality approach by estimating an export-augmented production function for 14 Asian developing countries including Bangladesh, India,Nepal, Pakistan, and SriLanka. The results show that exports contribute positively to economic growth. All these countries cited here are developed characterized by high levels of technology and high capital accumulation and therefore this study was done in a developing country that is Uganda with low levels of technology and finds results for the current situation in Uganda.

Anwar and Sampath 2000 examined the export led growth hypothesis for 97 countries including India, Pakistan and Sri Lanka for the period (1960-1992) using cointegration and Granger

causality tests. They find evidence of unidirectional causality in the case of Pakistan and Sri-Lanka and no causality in t he case of India.

Ahamed et al (2001) undertook an examination of the relationship between exports, economic growth and foreign debt for Bangladesh, India. Pakistan Sri Lanka and south East Asian countries using a trivariate causality framework. The study found no evidence of joint feedback effect between export revenue, external debt serving and economic growth except in the case of Bangladesh where unidirectional causality is observed between exports and economic growth favoring the export led growth hypothesis. My study ignored the external debt serving as a factor that limits growth.

Fernando (1988) examined the relationship between exports and economic growth in Sri-Lanka through 1 supply side estimates based on Cobb-Douglas type production function, and 2 demand side estimates based on the Keynesian goods market equilibrium condition. Granger casualty tests was used in this study while the estimated supply side equations support the hypothesis that exports have been a major vehicle of economic growth in Sri-lanka, the study finds no such relationship based on the demand side equations. This study also used output as a measurement for exports but my study used value in terms of millions of USD to measure the export of cotton ,coffee and fish in Uganda from (1992-2011).

Abhayaratne(1996) employed the techniques of causality and cointegration to examine the relationship between exports and economic growth in Sri-lanka during the period (1960-92). Using the Johansen's test of cointegration and a seemingly unrelated regression SUR model, the study finds no evidence of any long-term cointegratiion relationship or short term relationship between the two variables and hence rejects the hypothesis of exports led growth. These results are in sharp contrast to XU (1996), who finds reserve causality running from output to exports. Contrary to this my study used correlation linear and multiple regressions for data analysis but not cointegration.

The study examining the relationship between exports and GDP found strong support for ELGH, which conclude that export promotion can greatly benefit LDCs by generating greater capacity utilization, economies of scale, improving allocation of scarce resources and technology progress (smith, 2001).

A study by Ghimay and others (2001) consisted of 19 LDCs found a long-run relationship between exports and economic growth in 12 of the 19 countries. Export promotion also attracted investment and increased GDP in 15 countries hence rapid development. This will increase the employment opportunities.

Khan and Saqib(1993) estimated positive relationship between real GDP, real exports, real manufactured exports, and real primary exports in a study for Pakistan. Lewis(1954) and Hirschman (1958) explained economic growth by emphasizing the role of agriculture and manufacturing. The basic economy model marks the agricultural sector as merely the basis of an economy. The sectorial growth study carried out in Ghana and Zimbabwe concluded that the importance of agriculture sector is apparent. It has an overall positive impact on manufacturing growth I Ghana.

In Zimbabwe, industry also has a positive impact on growth in the agricultural sector. This finding supports the existence of growth link between agriculture and industry (Blunch and Verner, 2006). For every two countries, there are significant long-run sectorial relationships amount manufacturing and agriculture sector.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This section describes the methods that were used for conducting the research. It dealt with the research design, area of study, sample selection, data management procedure, data collection, data analysis, and the anticipated constraints.

3.1 Research design

A time series analysis was adopted and the use of quantitative techniques to analyses secondary data scientifically and critically concludes the research objectives. Secondary data was collected from different ministries, some quantification was necessary because of the need to tabulate data and use of statistical techniques to arrive at a dependable conclusion. Also inferences were drawn by fitting the regression model and testing for its significance using the t-statistic .The researcher also correlated the two variables and tested for the relationship between the variables using the person's correlation coefficient of determination for exports coffee, cotton and fish and GDP growth in Uganda for twenty years 1992-2011.

3.2 Research population

The research took a twenty year time series of study that is from 1992-2011 using the data collected through various ministries like the Uganda export promotion board, Uganda revenue authority, bank of Uganda.

3.3 Sample size and Sample selection

The research sample consisted of employees of Uganda Export Promotion Board (UEPB), UBOS, and (MOFPED) who were determined using the approval sampling table of Kreijicie& Morgan (1970). A table of random numbers of Kreijicie& Morgan (1970) was used to select the random sample of 63 employees, making a list of 63 work place employees to be approached for study.

3.4 Research Instrument

The record sheet was used to enter the yearly data on exports and GDP growth in Uganda for twenty years that is from (1992-2011). This data was collected from various exports boards of Uganda which include; UCDA, UEPB, URA and through various ministries likes UBOS, MTTI, MOFPED.

3.5 Data Gathering procedure and Secure

3.51 Before data collection

After the proposal was approved, the researcher got an introductory letter from the department of economic and applied statistics Kampala international university, to introduce her to the responsive ministries. The researcher on area of interest of data to be collected informed them.

3.5.2 During data collection

Skilled research assistance under close supervision of the researcher ensured that all the information required was collected.

The domestic sources were the annual and quarterly bulletin of the bank of Uganda. Uganda bureau of statistics, the ministry of finance, planning and economic development .IMF'S, international finance statistics, World Bank and United Bank of Africa.

3.5.3 After data collection

The data was entered into the record sheet and complied; this was used to analyze the relationship between exports and GDP, and the contribution of exports on GDP growth in Uganda 1992-2011 with the help of computer-statistics package (STATA)

3.6 Data analysis

Time series data analysis

This involved time series analysis to tests for trend of both exports and GDP.

Data collected from a period of twenty years from 1992-2011 was entered into the excel and STATA statistics package, then cleaned and analyzed.

Objective 1 and 2 was analyzed by use of line graphs which showed the trend of exports and GDP, tables were used to summaries data.

3.6.1Correlation and regression analysis

This was used to analyze objective 3 of the research study

The researcher used Pearson correlation to determine the strength of the relationship between GDP and exports of Uganda.

The computational equation for Pearson correlation coefficient was given by;

$$r=\frac{n\sum xy=\Sigma x\Sigma y}{\sqrt{(n\Sigma x^2-(\Sigma x)^2\}\{n\Sigma y^2-(\Sigma y)^2)}}$$

The computed is given by

$$T_\theta=\frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

Rejected

H_θ if $T_e \geq \alpha$ at 0.05 level of significance

GDP = b_0+ export

Y= $b_0 + b_1x_1$+e

Where:

Y=GDP growth rate

x_1 = export

b_0 = GDP growth rate when there is no export earning

b_1 = an increase in GDP growth rate as a result of export

e= other variables that may lead to GDP growth rate apart from export

The researcher also used multiple regressions of exports to see the greatest contribution to GDP

The regression is:

y= $\alpha+\beta x_1+\beta_2x_2+\beta_3x_3$

y= GDP

3.7 Limitations of the study validity and Reliability

It was difficult to obtain secondary data that satisfied the topic at hand especially when most of the ministries with such data tried to withhold due to their own reasons like privacy and protection.

Existence of extraneous variables other factors apart from the exports which affected the accuracy of the results and could not be controlled hence made the study hard.

CHAPTER FOUR

4.0 PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

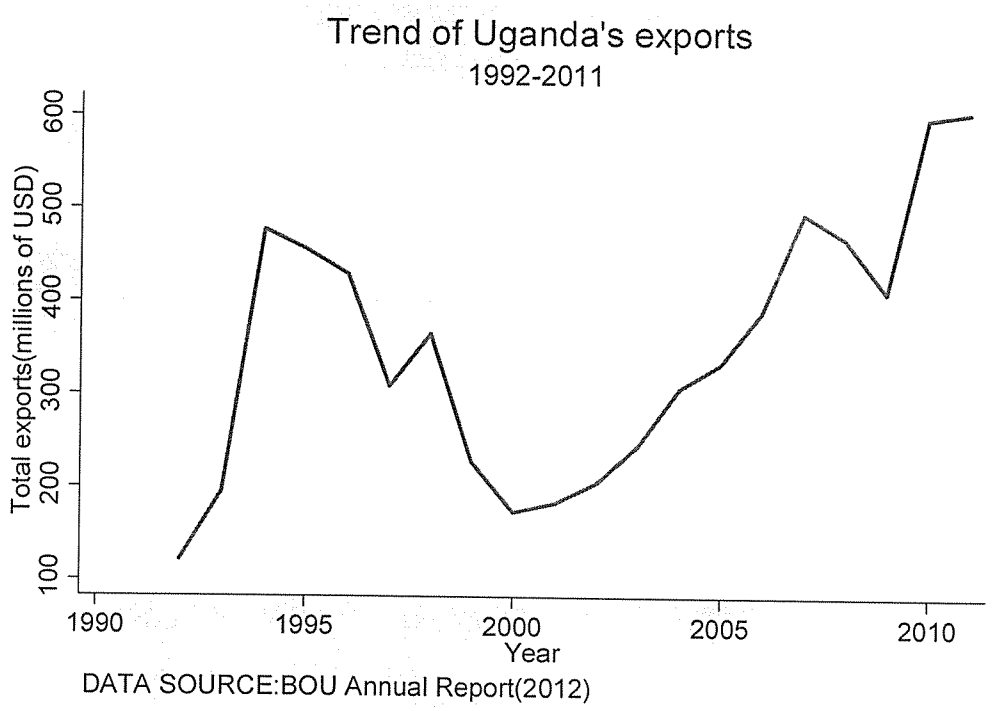
Data was presented using figures, graphs based on the research objectives and the corresponding research questions, testing the hypothesis and for implication of the findings (i) To establish the trend of exports (coffee, cotton and fish) in Uganda (1992 to 2011), (ii) to show the trend of GDP growth in Uganda (iii) to investigate the relationship between exports (coffee, cotton and fish) and GDP growth in Uganda (1992 to 2011).

4.1 The Trend of the Exports of Uganda (1992-2011).

Year	Export earnings			Total exports(millions of USD)
	Coffee	Cotton	Fish	121.09
1992	111.33	5.34	4.42	195.35
1993	179.97	4.29	11.09	476.93
1994	456.63	3.31	16.99	455.22
1995	404.37	13.26	37.59	428.88
1996	365.62	28.63	34.63	308.22
1997	268.86	11.38	27.98	365.14
1998	306.74	10.83	47.57	228.01
1999	186.87	22.5	18.64	173.83
2000	109.64	14.08	50.11	184.1
2001	85.25	18.00	80.85	205.75
2002	105.47	16.88	83.4	245.79
2003	114.13	42.84	88.89	307.1
2004	144.53	41.34	121.23	333.27
2005	173.37	12.86	147.04	388.86
2006	228.52	19.67	140.67	495.12
2007	348.63	19.9	126.59	468.23
2008	336.65	20.11	111.47	409.72
2009	262.13	17.03	130.56	121.09
2010	371.04	82.95	144.45	598.41
2011	396.74	80 .01	128.16	604.91

Source: BOU Annual Report (2012)

Figure 1: Trend of the Total Exports (Coffee, Cotton and Fish) of Uganda (1992-2011)



SOURCE: BOU ANNUAL REPORT (2012)

The export line above reflects logistic growth. In this case, as seen, the exports from 1992 had a drastic increase in value due to high prices and demand for coffee cotton and fish up to around 1995. In 1996 up to 2000 coffee lost market due to competition from other coffee in the rest of the world like Kenya, which out competed the one from Uganda, this led to a reduction in the total exports. The loss of market for coffee could have been caused due to governments less effort to support the farmers in terms of incentives. From 2001 the exports began to increase because coffee gained market and an increase in the exportation of other products like fish and cotton, which constituted to a big share of exports. The increase is also due to subsidies to the farmers by the government like reduction in the tax, provision of incentives like fertilizers, which led to high quality products hence gaining market.

The trend equation is:

Exports = 10.96 times +252.1

When the time is zero, it implies that the exports are 252.1 and a unit change in time increases the exports by 10.96.

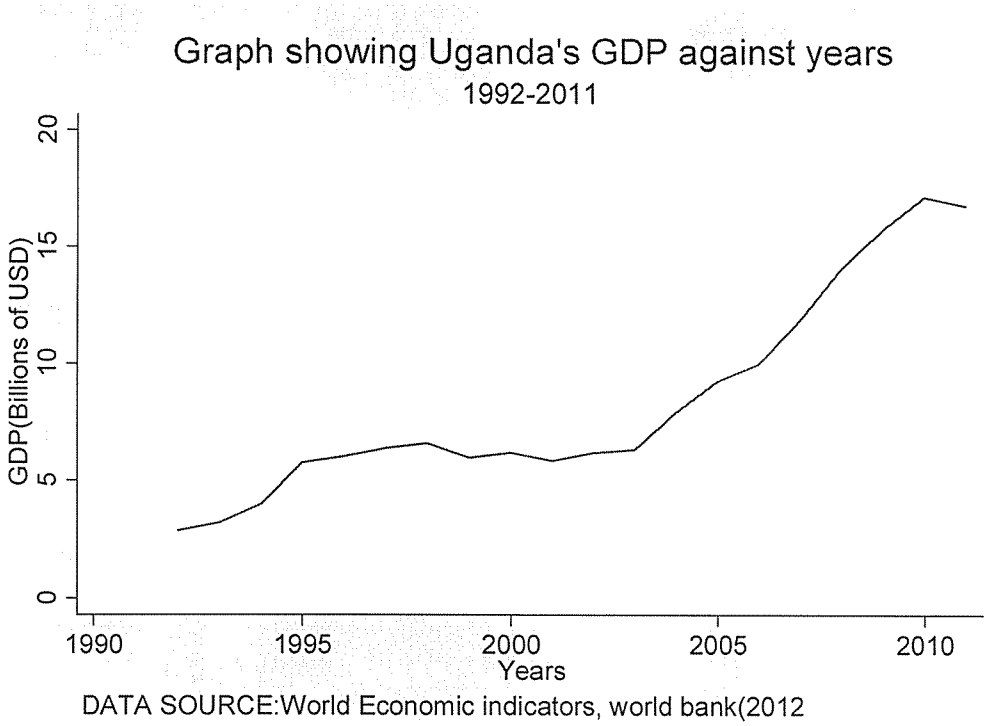
4.2 The Trend of the GDP Growth in Uganda (1992-2011)

Objective two was to show the level of trend of GDP growth in Uganda. Under this, the researcher used a line graph as can be seen below:

Years	GDP(Billions of USD)
1992	2.86
1993	3.22
1994	3.99
1995	5.76
1996	6.04
1997	6.37
1998	6.58
1999	5.99
2000	6.19
2001	5.84
2002	6.18
2003	6.33
2004	7.94
2005	9.24
2006	9.98
2007	11.92
2008	14.14
2009	15.8
2010	17.19
2011	16.81

Source: World Economic indicators, World Bank (2012

Figure 2: Trend of GDP Growth in Uganda (1992-2011)



Source: BOU Annual Report Researcher (2012)

The GDP line graph above reflects an exponential trend. From 1992 to around 1999, GDP has been having a mild increase due to low levels of exports and other factors affecting it like high importation of goods, which retards GDP increase. In 1999 up to around 2003, GDP was stationary due to constancy in the components of GDP like exports. From around 2004 GDP began to rise drastically due to high exports especially coffee and substitution of imports by locally made goods which reduced capital out-flow hence rising GDP.

The trend equation is:

GDP = 0.687 times + 1.195

When time is zero, it implies that GDP is 1.195 and a unit change in time increases the GDP by 0.687.

4.3 The Relationship between Exports (Coffee, Cotton and Fish) and GDP Growth in Uganda (1992-2011)

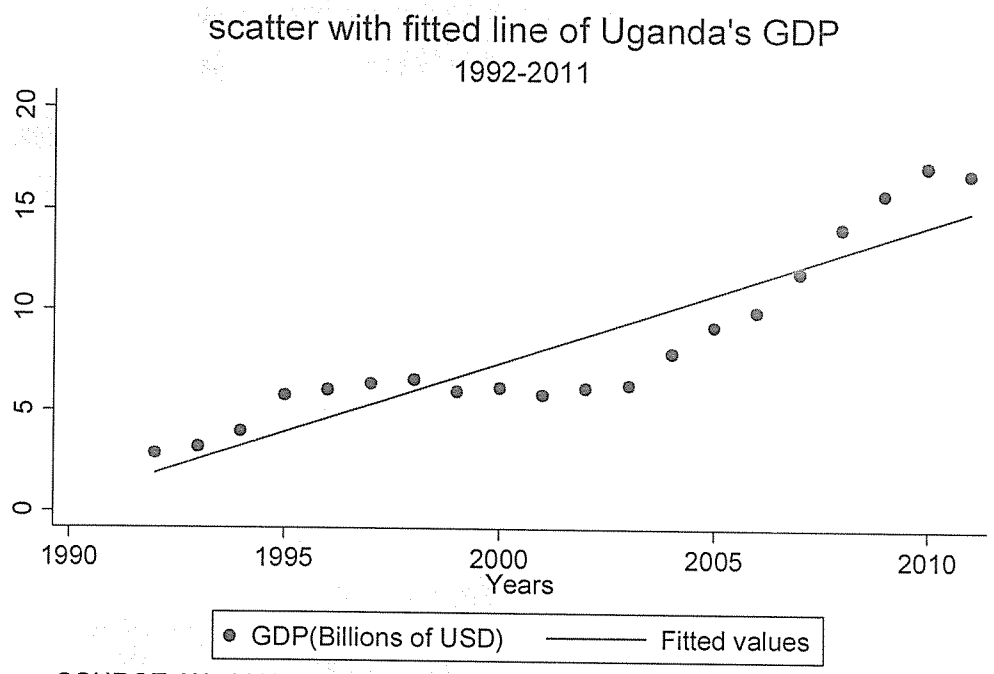
Objective three was to investigate the relationship between exports and GDP growth in Uganda, the researcher used scatter plot graph, correlation analysis, regression and analysis and time series analysis to establish this relationship as can be observed.

A scatter Plot of Exports and GDP Growth in Uganda (1992-2011)

To show the scatter plot of exports and GDP growth in Uganda, the researcher used the scatter plot as can be seen below:

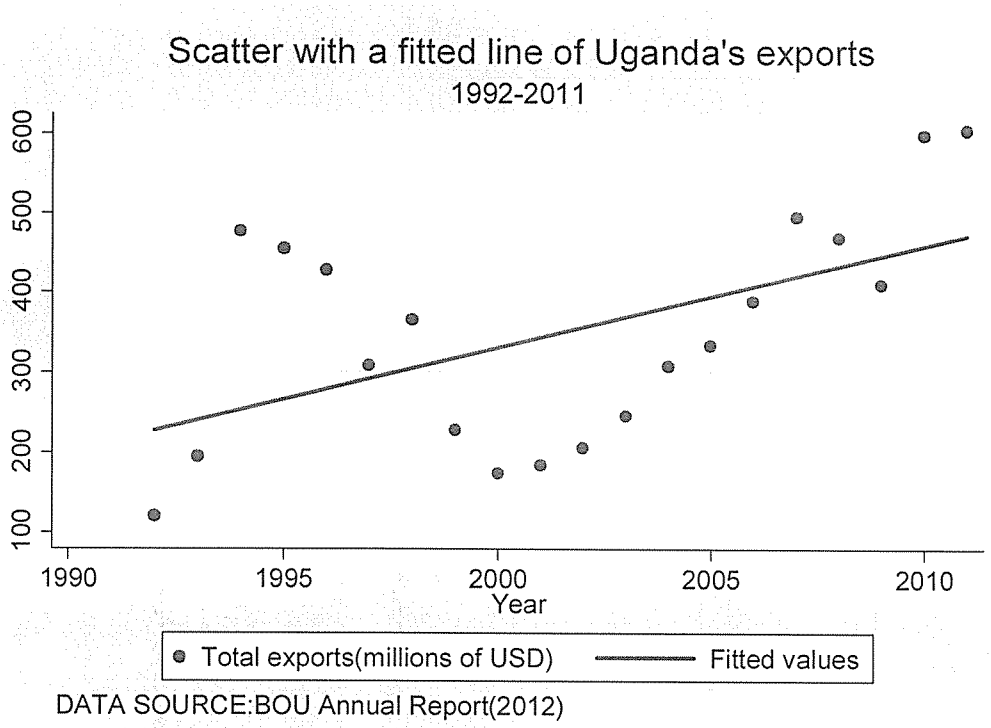
Figure 3 A scatter Plot of Exports and GDP Growth in Uganda

GDP



SOURCE: World Economic indicators, world bank(2012)

Figure 4: A scatter plot of Uganda's exports



SOURCE: BOU ANNUAL REPORT (2013)

Most of the points are close to the fitted line this implies there is a strong relationship between exports and GDP growth. Some points are far a way from the trend this might be as result some other factors, which determine GDP apart from exports, this might be due to importation of high level of technology which encourages industrialization which promote economic growth among others.

The Components of Exports and GDP Growth of Uganda (1992-2011)

Here the researcher used line graph to show the trend of the components of exports (Fish, Cotton and Coffee) in relation to GDP growth as can be seen below:

Table 1: Export Earnings of Uganda from (1992-2011) of Coffee, Cotton, Fish in Millions of Dollars.

Year	Export Earnings		
	Coffee	Cotton	Fish
1992	111.33	5.34	4.42
1993	179.97	4.29	11.09
1994	456.63	3.31	16.99
1995	404.37	13.26	37.59
1996	365.62	28.63	34.63
1997	268.86	11.38	27.98
1998	306.74	10.83	47.57
1999	186.87	22.5	18.64
2000	109.64	14.08	50.11
2001	85.25	18.00	80.85
2002	105.47	16.88	83.4
2003	114.13	42.84	88.82
2004	144.53	41.34	121.23
2005	173.37	12.86	147.04
2006	228.52	19.67	140.67
2007	348.63	19.9	126.59
2008	336.65	20.11	111.47
2009	262.13	17.03	130.56
2010	371.04	82.95	144.45
2011	396.74	80.01	128.16

Source: BOU Annual Report (2012)

Correlations Analysis of Exports (Coffee, Cotton and Fish) and GDP Growth of Uganda

The researcher used Pearson's correlation to establish the strength of relationship between Exports and GDP growth in Uganda.

Table 2: Correlation of Exports and GDP Growth rate in Uganda (0.05)

Variable Correlate	R-Value	Sign-Value	Interpretation	Decision
Export verse GDP growth	0.7295	0.00063	There is a relationship	Reject the null hypothesis

Source: Research (2013)

There is a strong positive correlation between exports and GDP growth as can be seen from the above table (r=**0.729**) the strength of the relationship between exports and GDP growth rate is determined by the coefficient of determination (r^2 = **0.5322**)This implies that the variation in GDP growth is explained by exports by 53.2 percent and the remaining percentage is explained by other variables apart from exports, since (**sig =0.0003 < sig = 0.05**).we reject the null hypothesis and conclude that there is significant relationship between exports and GDP growth in Uganda (1992-2011).

4.3.2 Regression Analysis of Exports Components and GDP Growth in Uganda

To investigate the relationship, the researcher used multivariate and simple linear regression analysis as can be seen in the table below:

Table 3: Regression of Exports Component and GDP Growth in Uganda (0.05)

Variable represented	**Adj.R^2**	**F-Value**	**Sign-value**	**Interpretation**	**Decision**
Exports components and GDP	0.7886	24.63	0.000	There is a relationship	Reject the null hypothesis
Coefficient	**Beta**	**T**	**Sign-value**	**Interpretation**	**Decision**

Constants	0.0482	1.272	0.909	No relationship	Accept the null hypothesis
Fish	0.0579	5.25	0.000	There is a relationship	Reject the null hypothesis
Cotton	0.048	1.86	0.081	No relationship	Accept the null hypothesis
Coffee	0.0117	2.86	0.011	There is a relationship	Reject the null hypothesis

Source: BOU Annual Report (2012)

The researcher fitted a multivariate model as can be seen below

Gross Domestic Product = 0.048+0.058 (Fish) + 0.048 (Cotton) + 0.012 (Coffee)

From the above it has indicated that amongst the component of exports, Fish leads to increase in GDP by 58000USD, Cotton increases GDP by 48000USD and Coffee increases GDP by 12000USD, this implies that Fish contribute highly to GDP growth followed by Cotton and lastly Coffee but further test is conducted to prove these. The sig of (**fish = 0.000 sig of coffee = 0.011**) <(**sig = 0.05**) we reject the null hypothesis and concluded that the exports components have significant relationship with GDP growth but for cotton (**sig cotton = 0.081**) > (**sig = 0.05**) we accept the null hypothesis and conclude that cotton has little influence on GDP growth. The Adj r^2=0.82 this implies exports affect GDP by increase of 82.2 percent.

3.4.3 Regression of Exports and GDP Growth Rate in Uganda (1992-2011)

Table 4: Regression of Exports and GDP Growth Rate in Uganda (0.05)

Variable represented	Adj.R^2	F-Value	Sigh-value	Interpretation	Decision
Exports and GDP	0.5322	20.48	0.0003	No relationship	Accept the null hypothesis
Coefficient	**Beta**	**T**	**Sign-value**	**Interpretation**	**Decision**
Constants	0.46522	0.808	0.808	No relationship	Accept null hypothesis
Exports	0.0227	0.0124	0.000	There is a relationship	Reject the null hypothesis

Source: Researcher (2014)

Legend

The researcher fitted the regression model using the information from table 2 above and this is represented by:

GDP growth = a+ (Export) ß

Fitting the model becomes

Y =0.465 + 0.0236X

This implies that GDP growth without export result into 0.465 and a unit change in exports lead to an increase of GDP growth by 0.0236.

$T_a = t_{0.05/2}$, 20-2 = 2.101

The calculated constant from the table is **t_0=0.808** and for the slope **t_1=0.0124**, decision rule if **$/t/ \leq t_a$**, accept **H_o**, **α = 05** level of significance, since **t_0 =0.808** is greater than **t_a =2.101** and **t_1 = -0.0124** is less than **t_α = 2.101**, we accept **H_0** and conclude that a constant has no significant relationship and reject the null hypothesis and conclude that **ß slope** has significant relationship, **Adj r^2 = 0.5322** affect exports and GDP growth by increase of **53.2** percent.

Time Series Analysis

Here the researcher used the Autocorrelation function and Partial Autocorrelation Function to test for the stationarity in Exports and Gross Domestic Product in Uganda as can be seen below

This analysis deal with univariate analysis

The coefficient of Autocorrelation function is denoted as:

$$\delta k = \frac{cov(Yk\text{-}Yk\text{-}1)}{var(Yk)}$$

δk Autocorrelation coefficient

The value of the autocorrelation coefficient lies between -1 and +1

The autoregressive of order is denoted by formulae

$$\delta k = \mu + \alpha_1(y1+1- \mu)+ \varepsilon_t$$

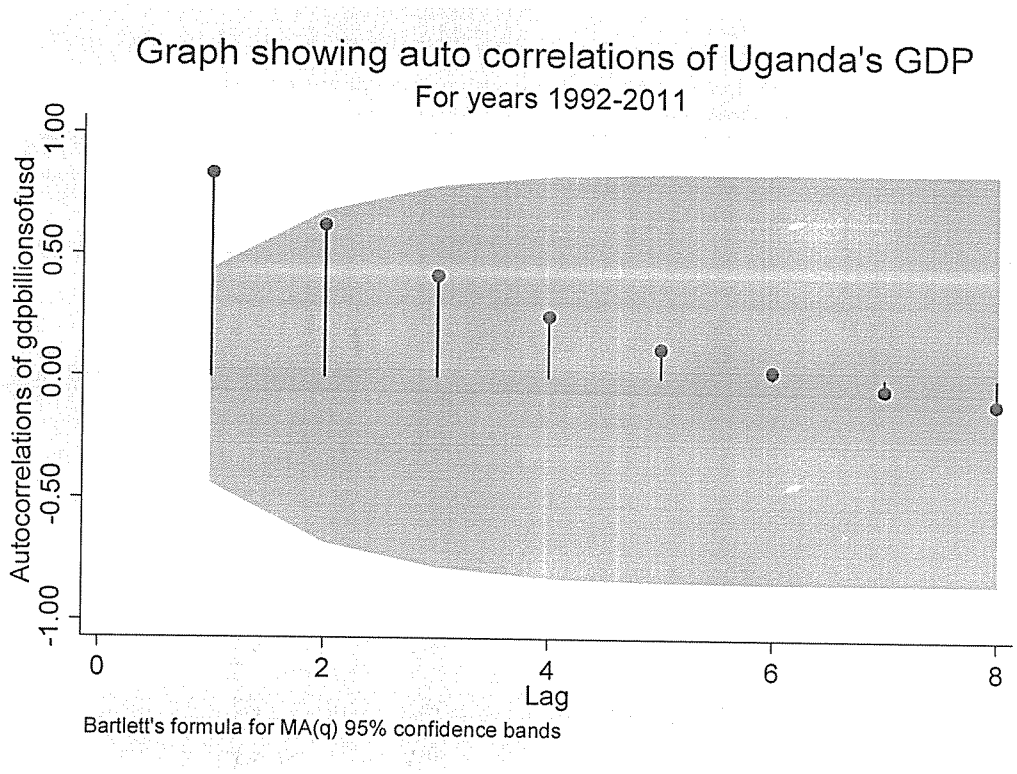
ε_t is the uncorrelated error term with zero mean and variance δ^2

Source: Researcher (2013)

The GDP had shown a normal distribution, this is because it has minimum variance as can be seen fri the appendix6. The standard error reduces as the number of lag increases. Also since the (sig = 0.000) < (sin = 0.05), we reject the null hypothesis and conclude the there is no stationarity in Gross Domestic Product in Uganda.

Figure 5: Partial Autocorrelation Function (ACF) of Gross Domestic Product in Uganda (0.05)

GDP



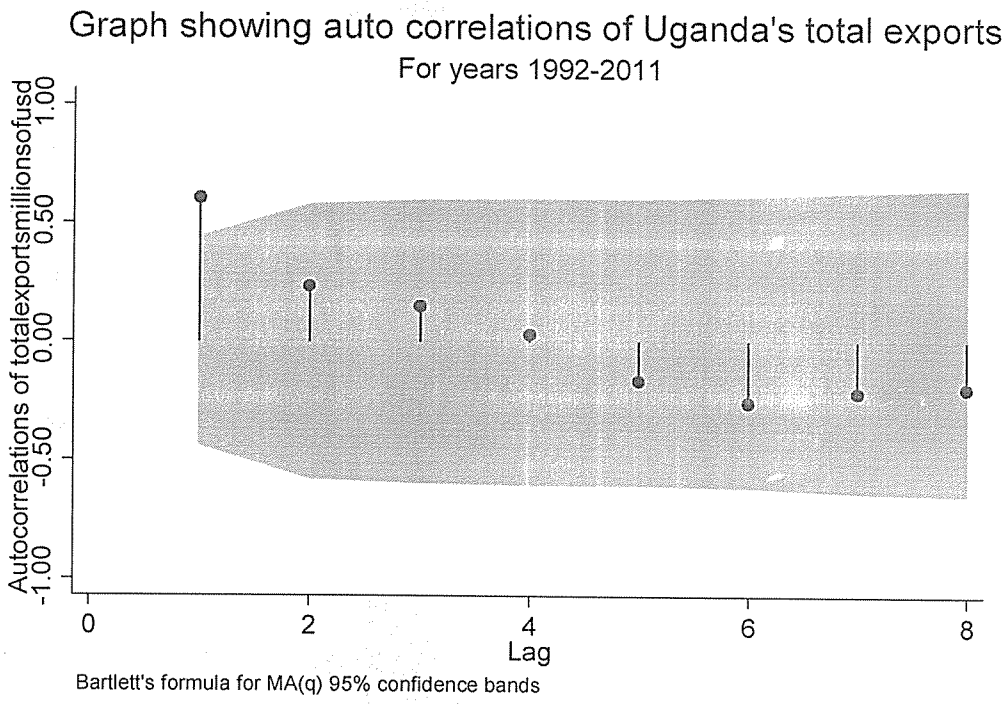
Lag Number

Source: Researcher (2014)

Since the (sig = 0.000) < (sin = 0.05), we reject the null hypothesis and conclude that there is no stationarity in GDP growth in Uganda.

Figure 6: Autocorrelation Function (ACF) of Exports in Uganda (0.05)

EXPORT



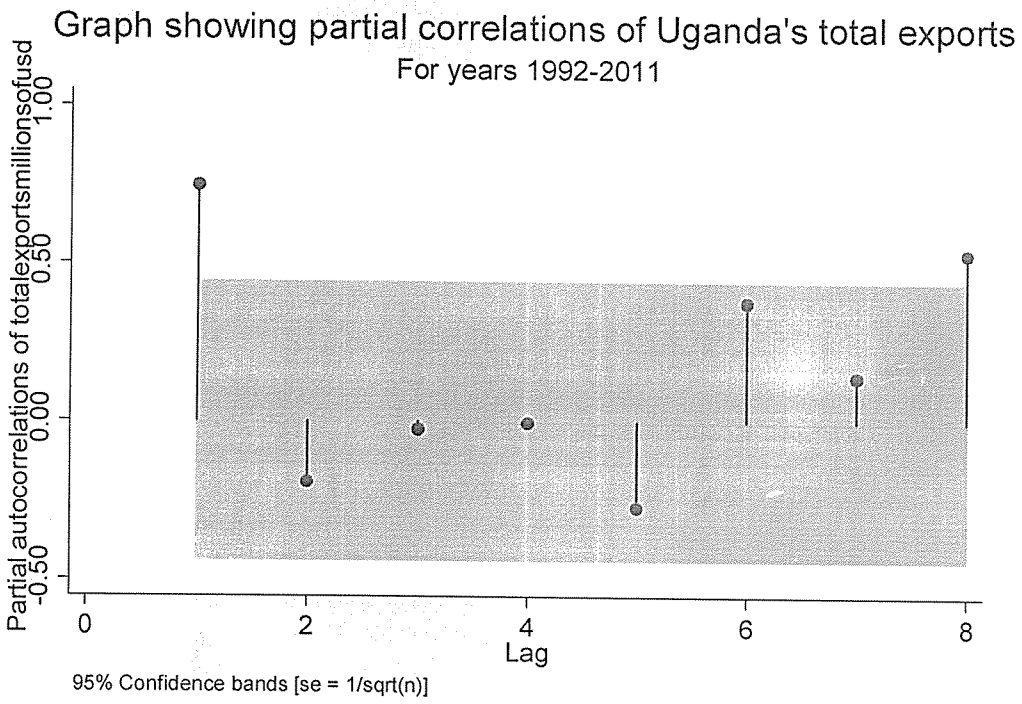
Lag Number

Source: Researcher (2014)

The Exports had shown a normal distribution, this because it has minimum variance as can be seen from the appendix4, the standard error reduces as the number of lag increases. Also since the (sig=0.000) < (sin = 0.05), we reject the null hypothesis and conclude that there is no stationarity in Exports in Uganda.

Figure 7: Partial Autocorrelation Function (ACF) for Export in Uganda (0.05)

EXPORT



Lag Number

Source: Researcher (2014)

Correlogram of partial and autocorrelation of Uganda's exports:

LAG	AC	PAC	Q	Prob>Q	-1 0 1 [Autocorrelation]	-1 0 1 [Partial Autocor]
1	0.6063	0.7471	8.5137	0.0035		
2	0.2294	-0.1945	9.8006	0.0074		
3	0.1475	-0.0260	10.363	0.0157		
4	0.0287	-0.0064	10.386	0.0344		
5	-0.1659	-0.2730	11.194	0.0477		
6	-0.2577	0.3780	13.281	0.0388		
7	-0.2160	0.1409	14.861	0.0378		
8	-0.1981	0.5362	16.299	0.0383		

ACF

ACF EXPORTS:

Maxlag = 8, chosen by Schwert criterion

ACF=0.5362

Dickey fuller unit test for stationarity (auto correlation):

Dickey-Fuller test for unit root Number of obs = 19

	Test Statistic	Interpolated Dickey-Fuller 1% Critical Value	5% Critical Value	10% Critical Value
Z(t)	-1.498	-3.750	-3.000	-2.630

MacKinnon approximate p-value for Z(t) = 0.5345

The Correlogram, partial and auto correlation graphs above give preliminary evidence of existence of both partial and auto correlation in the exports data. The dickey fuller test finally gave the quantitative revelation of its existence. The MacKinnon approximate p-value shown above (0.5345) means that under the null hypothesis that there is NO stationarity, we fail to reject it. Thus, the series is non stationary and marred by auto correlation and partial correlation.

Since the (sig = 0.000) < (sin = 0.05), we reject the null hypothesis and conclude that there is no stationarity in Exports in Uganda.

CHAPTER FIVE

DISCUSSION, SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1DISCUSSION

5.1.1The Trend of Exports in Uganda (1992-2011)

There is a general increase in the exports of Uganda over twenty years (1992-2011), this has been because of coffee boom in the world market since coffee was Uganda's leading export followed by fish then lastly cotton as can be seen from **Figure 1** above. The fluctuation in exports might be due to other factors that affect exports such as taxes, limited government support among others.

5.1.2The Trend of Gross Domestic Product in Uganda (1992-2011)

Gross Domestic Product has been showing a general increase over years under study in Uganda (1992-2011) as can be seen in **Figure 2**. An increase in the GDP growth is due to exportation of goods, high level of technology, favorable government policy and revenue among other factors which can lead to economic growth, high earnings from exports which lead to injections into the country, technology leads to high production of goods in quantity and quality which enables to promote trade, favorable government policy that encourages both exporters and importers which lead to favorable balance of payment, mean while taxation leads to high generation of revenue to the country which can be invested, and we that investment leads to economic growth.

5.1.3 The Relationship between Exports and Gross Domestic Product in Uganda (1992-2011)

The relationship between exports and GDP growth has been a significant relationship according to the fitted line and regression analysis, correlation and the use of time series tests, which were performed.

There has been a strong positive correlation between exports and GDP growth in Uganda (0.7295), the regression of Gross Domestic Products showed a significant relationship while a unit change in GDP growth as a result of exports has a significant relationship but the constant has no significant relationship, this is an indication of the growth of GDP without the exportation

of goods may be un healthy to an economy like Uganda since it is still a developing country which cannot do without exportation of goods.

The study was in line with those of Michealy (1977), Tyler (1991), Kavoussi (1984) Begum et al (1998) who carried the same research and there was a significant relationship.

The study was guided by the theory of comparative advantage stated by David Ricardo (1817) that a country should export a commodity in which its comparative cost greater and import a commodity in which its comparative cost advantages is less, because of insignificant relationship, the study has accepted the theory since Uganda cannot do without importation of goods.

5.2 SUMMARY OF FINDINGS

The main objective of this study was to investigate the relationship between exports (Coffee, Cotton and Fish) and GDP growth in Uganda (1992-2011). For the relationship between Exports and GDP growth, there has been a strong positive correlation between the two variables (0.7295) t-distribution was used based on a sample linear regression model at 0.05 level of significance (Sig = 0.00) < sig (0.05) this found significant relationship between exports and GDP growth in Uganda, for the test of trend performed using Autocorrelation function ad Partial Autocorrelation function, the results found that there is trend in exports and GDP growth in Uganda (1992-2011).

5.3 CONCLUSION

This study has established the trend of exports in Uganda (1992-2011) and found a logistic trend fluctuation over the period under study; it has established the trend of GDP growth rate in Uganda (1992-2011) and found an exponential trend over the period under study.

The study also shows that there is a significant relationship between exports and GDP growth in Uganda at 0.05 level of significance. The study has examined the theory of comparative advantages and confirmed it since the developing countries like Uganda cannot do without exportation of goods.

5.4 Area for further study

Further research should be carried out on the following;

- More analysis should be done on the relationship between export earnings and GDP growth in Uganda.
- More data needs to be availed on exports and GDP for easy access in ministries like UBOS Ministry of Finance, Bank of Uganda, and Uganda Export Promotional Board among others.
- Further analysis needs to be done on the trend concerning exports and GDP growth in Uganda.

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APPENDIX I: TIME FRAME

Activity	APRIL	MAY	JUNE	JULY
1. Conceptual Phase				
Chapter 1				
2. Design & Planning Phase				
Chapter 2-3				
3. Dissertation Proposal				
4. Empirical Phase				
Data Collection				
5. Analytic Phase				
Chapter 4-5				
6. Final Book Bound				

APPENDIX II: BUDGET

Item	Quantity	Unit Price	Total (UGX)
Ream of Paper (A4)	1	15,000	15,000
Pens	5	500	2,500
Kaki Envelopes	5	500	2,500
Internet Surfing	40 hours	1000	40,000
Communication	10 cards	10,000	100,000
Typing and printing	Lump sum	100,000	100,00S0
Final Copy binding	5 copies	10,000	50,000
Miscellaneous	Lump sum	50,000	50,000
Grand Total			**360,000**