MAKERERE UNIVERSITY

COLLEGE OF BUSINESS AND MANAGEMENT SCIENCES (COBAMS)
(SCHOOL OF STATISTICS AND APPLIED ECONOMICS)

Contribution of coffee exports on Uganda's GDP

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A RESEARCH REPORT SUBMITTED TO THE SCHOOL OF STATISTICS AND PLANNING IN PARTIAL FULLFILMENT OF THE AWARD OF THE DEGREE OF BACHELOR OF SCIENCE IN QUANTITATIVE ECONOMICS OF MAKERERE UNIVERSITY

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DECLARATION

I ATUHEIRE LABAN declare that this research report is my original work and has never been submitted to any other institution of learning for a similar award.
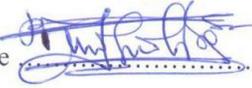

Sign..   Date....06/10/2017

ATUHEIRE LABAN

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APPROVAL

I hereby certify that this research report by **Atuheire** Laban entitled "the Contribution of coffee exports on Uganda's GDP" has been done under my supervision and is now ready for submission with my approval

Signature .... 　　　　　Date. 06/10/2027.

Mr. Byamugisha Jimrex

Supervisor

DEDICATION

I dedicate this work to my dear parents **Mr. Fred Sabiiti** and **Mrs. Jackline Sabiiti** for the support you have extended to me throughout my studies may the almighty God rewards you abundantly.

ACKNOWLEDGEMENT

I would like to glorify the Almighty God who enabled me to successfully complete this report. This research endeavor has been supported by different individuals and organizations to whom lam greatly indebted taking consideration of UBOS were i obtained the secondary data.

I also extend my sincere thanks to Makerere University staff for the cooperation and inspiring knowledge that has made me to succeed in understanding the procedures that led to the completion of this report.

In the same way, I wish to extend my sincere heartfelt appreciation to my supervisor **Mr. Byamugisha Jimrex** for his precious time for encouraging me and guiding me during this study which enabled me to produce this work may the lord reward you abundantly.

I also extend my sincere gratitude's to my sisters **Prossy,** Sonia, Savior, my brothers **Boaz, Rodgers**, **Junior, Believe** and **Elijah.** Not forgetting my friend Abraham for giving me courage may the lord reward you abundantly.

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LIST OF ACRONYMS

SSA	-	Sub Saharan Africa
ADF	-	Augmented Dickfuler Value
GDP	-	Gross Domestic Product
CPI	-	Consumer Price Index
LNEX	-	Coffee Exports
LNXNT	-	Non-traditional exports
LNPSC	**-**	Private Sector Credit
LNCP 1	-	Consumer Price Index

ABSTRACT

The study analyzed the Contribution of coffee exports on Uganda's GDP. This study was guided by the three objectives which included Testing whether GDP and Coffee exports data are stationary, Testing the direction of the relationship between coffee exports and GDP in Uganda and identifying the effect of other macro-economic variables on the country's GDP. The study employed a quantitative research approach using secondary data. The findings revealed that since the absolute T test statistic on the GDP data was (3.4935) in absolute terms is less than the critical value (6.595170) in absolute terms concluded that gross domestic product data was stationary which implied that the gross domestic product evolved around the mean value, similarly the findings on the other macroeconomic variables revealed that the coefficient of consumer price index (-0.304611) implied that a unit increase in the consumer price index on average lead to 0.304611 decreases in the country's GDP holding other factors constant and since the P- value (0.0013) was less than 0.05 the confidence level which implied that GDP is dependent of consumer price index, also the coefficient of inflation (0.925953) implies that a unit increase in the level of inflation will on average lead to 0.925953 increases in the country's GDP holding other factors constant and its P- value (0.0000) was less than 0.05 the confidence level, I we reject the null hypothesis and conclude that GDP is dependent of the level of inflation, the study recommends that the Government should give financial support to the small scale industries processing coffee for export as this will improve on the quality of the coffee exported thus improving on the country's Balance of trade, that tax holidays should be granted to new investors in the country as this will create a conducive environment for the investors willing to invest in the coffee sector and that the Government should encourage export of manufactured commodities than intermediate goods, since intermediate goods fetch less foreign exchange compared to manufactured goods.

CHAPTER ONE

INTRODUCTION

I.1 Background to the Study

Agriculture is a core sector of Uganda's economy. It contributed about 23% of GDP at current prices in 2011. Agricultural exports accounted for 48.5% of total exports in 2012. The sector provides the basis for growth in other sectors such as manufacturing and services. About 60 percent of Uganda's population is engaged in agriculture, forestry and fishing. Agriculture has grown at an average rate of 2.8% per year in the last 8 years. Uganda is one among the largest producing and exporting countries of coffee products in the world. Coffee production has heavily contributed to both domestic and foreign earnings in the country. Moreover, coffee also serves as a primary source of labour, especially for the rural smallholder farmers (Nahanga, 2015).

The economic structure of Uganda, just as other East African economies, is dominated by the agricultural sector. Agriculture is the key determinant in the country's efforts to reduce poverty and hunger as well as foreign earning. Given that over 50% of Ugandans engaged in the sector and as a major source of government income, the growth and development of the country is closely linked to its production and exports. Chuhan-Pole (2011) stress that agrarian sector in the country still characterizes by low productivity, partly as a result of inadequate modern farm inputs, low public and private investment and undeveloped value chains. Export growth is often considered to be a main determinant of the production and employment growth of an economy which is shown in Gross Domestic Product (GDP) growth (Ramos, 2001). According to Bradford et al., (2011), the Ugandan coffee sub-sector employs over 5 million people, both in the farms and post-harvesting processes. It remains a primary source of income for the poor rural inhabitants in over 30 Districts and the major contributor to the country's Gross Domestic Product. The commodity plays a leading role in the economy, contributing substantial foreign exchange earnings over the decades and improvement in the country's GDP.

Uganda is among top major coffee producers in the world. Coffee production in Africa increased by 16% from 15.7 million bags during crop year 2011/12 to 16.7 million in 2012/13, accounting II.5 % of the total world production. The major producing nations in the region showed increases in production. For instance, the largest producing country in Africa remains Ethiopia with 6.4 million bags in 2012/13, followed by Uganda (3.7 million) and Cote D'lvoire with 2 million (International Coffee Organization, 2014).

According to MFPED (2009), the share of exports to GDP is rising over the past two decades. The expanding regional market for Uganda's coffee and manufactured products has partly boosted exports during the past five years, a reflection of the dividend enjoyed by Uganda's neighbors, whose demand for Ugandan goods has increased UBOS (2010). Exports as a share of GDP have increased over time in Uganda. Before the liberalization of the economy and the emphasis on import substitution and export diversification in the 1990s, Uganda depended mainly on coffee as its main export.

According to Byanyima (2011), the informal export sector earnings were estimated at US$200.3 million and the official export earnings stood at about US$812.9 million. Overall, export earnings from trading arrangements fetched the country about US$1.01 billion. In the informal export sector, Uganda is an exporter of coffee, beans, maize, sugar, other grains, bananas, fish, industrial products and other agricultural commodities. Kenya is the main informal trading partner with a total informal trade estimated at US$151.3 million, followed by DR Congo with estimated trade of US$94.5 million and Sudan comes in third with total informal trade standing at US$9.9 million in 2011 (UEPB,2012).

1.2 Problem Statement

Internationally on the economic side, coffee was one of the most important export items, generating hard currency and having a major impact on the gross domestic product. The coffee sector was one of the pillars of the economy of Brazil. For example, around 1925, coffee represented around seventy percent of Brazil's total exports and around eighty percent of Colombia's total exports. According to International Coffee Organization (2014), Uganda ranked the fourth position after Burundi, Ethiopia and Honduras in the share of total coffee export

earnings with an average of 18% for the period between 2000 and 2012. According to Bradford et al. (2011), the Ugandan coffee sub-sector employs over 5 million people, both in the farms and post-harvesting processes. It remains a primary source of income for the poor rural inhabitants in over 30 Districts and the major contributor to the country's Gross Domestic

Product. The commodity plays a leading role in the economy, contributing substantial foreign exchange earnings over the decades and improvement in the country's GDP. despite of the importance of coffee to the country's GDP, the coffee sector in Uganda is confronted by a number of problems which have affected its growth and expansion among them include Inadequate supply of farm inputs like fertilizers and insect sides to improve productivity, Poor transport network especially in the remote areas where most farmers are found, Lack of research and extension services to improve on the quality of coffee for international competitiveness. Thus, despite the prominence of coffee export led growth to developing countries, Sub-Sahara African (SSA) countries are still characterized by low per-capita income, high unemployment rates, large output gaps among others which this study intend to investigate. The Ugandan Government is putting so much effort into supporting value addition for coffee producers purposely to increase foreign markets for her products and yet the economy is still dwindling with high levels of unemployment, poverty among others. Therefore it is against this background that the study intends to investigate the Contribution of coffee exports on Uganda's GDP.

1.3 Objective of the Study

The general objective of this study was to investigate the contribution of coffee exports to the GDP in Uganda.

Specifically, the study intend;

   i.   To Test whether GDP and Coffee exports are stationary

  ii.   To Test the direction of the relationship between coffee exports and GDP in Uganda,

 iii.   To identify the effect of other macroeconomic variables on economic growth (GDP).

1.4 Research hypotheses

In order to achieve the above stated objectives, the study tested the following research hypotheses;

i.   The relationship between GDP and Coffee exports

ii.   There is an inverse relationship between (GDP) and coffee exports,

iii.   Non-traditional exports have a significant positive effect on Uganda's (GDP).

1.5 Scope of the Study

The study investigated the effect of Coffee exports on economic growth (GDP) in Uganda. The investigation covered both the coffee exports and non-traditional exports. The study utilized data from Uganda Bureau of Statistics and Bank of Uganda for the period 1997 to 2014 compiled on a quarterly basis. The choice of this study period was guided by two considerations. First is the need to cover a period long enough so as to make meaningful statistical inference. The second relates to consistent data availability.

The unit root test and cointegration technique was used to verify the stationary of data and long run relationships respectively among the variables. Also, Error Correction Model (ECM) was applied to examine the speed of adjustment towards the long run equilibrium. The study focused on both coffee exports and non-traditional exports in Uganda.

1.6 Significance of the Study

This study will be useful as regards policy analysis and also adding to the existing stock of knowledge. Thus, researchers and academicians are expected to use this as a point for further research.

The findings of this study may also raise government awareness to the effect of coffee exports. The government will be able to know whether Uganda's economy is dependent on the export sector or not. This will enable them to come up with appropriate policies to boast Uganda's economy. This will go a long way to drive Ugandans to improved living standards.

This research is to contribute to the existing empirical literature on the coffee export sector, by testing the causality between coffee exports and economic growth in Uganda, using the recent data. It is particularly envisaged that the findings of this study will not only help assess whether the intermediation role of exports stimulates the growth of the Ugandan economy but also indicated the direction of causality.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviews related literature on various issues which serve as basis for this work. It provides the empirical literature review that looks at work done by various authors in the field of the contribution of coffee exports to Uganda's GDP.

2.1 Review of Literature

GDP is the measure of value of goods and services produced in an economy. It was used as a | proxy for supply capacity. Other factors constant, the greater the supply capacity, the faster the f growth of the export sector. This is supported by Eita (2009) who contend that high level of GDP indicates a high level of production in the exporting country which increases the availability of exports. GDP is expected to have a positive relationship with Quantity supplied. However, use of GDP is limited by the fact that some components of it (non tradables) do not directly influence coffee export volumes.

Several studies address the importance of exports on economic growth. The findings of these studies indicate that coffee exports have a statistically significant positive impact on economic growth (GDP).

Coffee continues to be Uganda's most important cash crop. It accounts for the largest individual share of export earnings. Two types of coffee are produced in the country, namely, Robusta and Arabica in the ratio of 4:1. Robusta coffee is the predominant type constituting about 80 percent of the total coffee production. Unlike Robusta whose native habitat is the Lake Victoria Crescent, Coffee is harvested and dried (in most cases), after which it is taken to be milled locally. It is then cleaned, screened, graded and bagged ready for export. The industry is dominated by major exporters like Volcane/Kyagulanyi coffee Ltd 13.8 percent, Ugacof 13.5 percent, Kawacom 12.0 percent, Savannah commodities takes slightly over eight percent, Job coffee exports eight percent.

Accordingly the study turned to the nonlinear methods to evaluate Granger causality between exports and GDP. It used Panchenko (2005) nonlinear Granger causality tests and found a unidirectional causality from GDP to exports. However, using the Diks and Panchenko (2005) test, the study found evidence of significant bidirectional causality between GDP and exports.

Kirn and Lin (2009) examined the impact of export composition on economic growth, indicated that not all exports contribute equally to economic growth. In particular, many developing countries depend on exports of primary products, which are subject to excessive price fluctuations. In most cases, this category of exports had negligible impact on economic growth, while manufactured exports had a positive and significant effect on economic growth

According to International Coffee Organization (2014) , Uganda ranked the fourth position after Burundi, Ethiopia and Honduras in the share of total coffee export earnings with an average of 18% for the period between 2000 and 2012. According to Bradford et al., (2011), the Ugandan coffee sub-sector employs over 5 million people, both in the farms and post-harvesting processes. It remains a primary source of income for the poor rural inhabitants in over 30 Districts and the major contributor to the country's Gross Domestic Product. The commodity plays a leading role in the economy, contributing substantial foreign exchange earnings over the decades and improvement in the country's GDP.

According to Uganda National Export Strategy report (2012 - 2017), Coffee is one of the 12 major export development sectors that the country set out to support because of its historical importance, but also because it is the largest employer and highest export revenue earner for the country. It is also an effective tool in improving household incomes and alleviating poverty. Coffee is a very important export sector in the Ugandan economy. It contributes 17.9 % of the country's foreign exchange earnings. The coffee sector strategy has been fortunately reviewed ahead of other sectors, thanks to the support of the Netherlands Government through the Centre for the Promotion of Imports from Developing Countries (CBI) and the International Trade Center (ITC). Uganda was the 20th largest coffee exporter in 2010 in terms of value which boosted the country's GDP. Uganda's coffee exports amounted to 1.2 per cent of the world's total coffee exports by value. Uganda exported US$ 446 million worth of coffee in 2011. This figure represented 22 per cent of Uganda's total exports.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter presents the methodology that was used in the study in examining the contribution of coffee exports on (GDP) in Ugandan economy. The chapter comprises four sections. Section 3.1 describes the data and its source. Subsection 3.2 presents the diagnostics tests that were carried out before estimating the model such as unit root tests and 3.3 the data analysis techniques.

3.1 Data and Source

The study used secondary data which was obtained from Uganda Bureau of Statistics Quarterly data from 1997 to 2014 on the volume of exports both traditional and non- traditional exports.

3.2 Diagnostic tests

This was done to test the study variables for appropriateness such as unit roots and lag structure. Unit Root test was conducted to ascertain the stationarity of the data set using the Augmented Dicky Fuller (ADF) test. It is crucial to test for the statistical properties of variables when dealing with time series data. Regression involving non stationary time series often lead to the problem of spurious regression. This occurs when the regression results reveals a high and significant relationship among variables when in fact none exist.

Also the usual test statistics (t, F, DW, and R) will not possess standard distributions if some of the variables in the model have unit roots and are thus non stationary. Thus, to eliminate the possibility of these spurious regressions and erroneous inferences, the study determined the order of integration of these series through unit root tests.

3.3 Data Analysis

This was done at three levels. The first level involved a descriptive summary of the variables using descriptive statistics, frequency tables and graphs. The second level involved a bivariate

such as testing for correlations among the study variables. The third level involved a multivariate analysis by running a regression model.

3.4 Model to be used

Where $Y = GDP$, $A = $ Technology, $K = $ capital and $L = $ labour $CP1 = $ Consumer price index Empirical literature on the relationship between exports and economic growth has revealed that a positive and significant relationship exists between a county's level of Coffee exports and its GDP. To test whether a causal link exists between Uganda's coffee exports and GDP, coffee exports are incorporated into the aggregate production function as a separate variable.

Model specification

In order to rule-out the differences in the units of measurements for the study variables, variables were transformed using natural logs, this leads to; The above equation was used to estimate the long run effects of the different explanatory variable affecting gross domestic product

$$Y_i = a_0 + p_1X_1 + p_2X_2 + p_3X_3 + p_4X_4 + U_t$$

Where

Y_i is the GDP

α is the autonomous GDP

β is Vector of unknown parameters

$X_1 = $ Coffee Exports

X_2 - Non-traditional exports (NXNT)

X_3 - CPI (Consumer price index)

$X_4 = $ PSC (Public sector consumption)

CHAPTER FOUR

DATA PRESENTATION, INTEPRETATION AND ANALYSIS OF THE FINDINGS

4.1 Introduction

This chapter presents the interpretation and discussion of the findings as reviewed in the literature and specific objectives. It summarizes the key issues from literature, identifies any new inferences and insights according to the specific objectives.

4.2 Presentation of the findings

4.3 Descriptive summary

The table below shows the descriptive statistics of the variables that were run and these included coffee exports (LNEX), Non-traditional exports (LNXNT), traditional exports (LNXT), private sector credit (LNPSC) and consumer price index (LNCPI).

Ho: The variables are not normally distributed

Ha: The variables are normally distributed

Table 4.1: Descriptive summary of the variables

	LNCPI	LNEX	LNGDP	LNPSC	LNXNT
Mean	4.721952	13.52125	8.289267	14.59460	11.37489
Median	4.648032	13.52755	8.313927	11.87736	11.58742
Maximum	5.347673	16.96488	8.736236	17.02257	12.79547
Minimum	4.322551	13.08123	3.306260	14.31201	9.152424
Std. Dev.	0.327391	0.199765	0.293116	0.935798	1.093193
Skewness	0.513915	-0.012564	-0.545759	0.266305	-0.343434
Kurtosis	1.962200	2.617502	1.663995	1.606517	1.546721
Jarque-Bera	7.066978	0.68975	4.432185	5.438769	3.653429
Probability	0.049345	0.76768	0.434357	0.045387	0.093648
Observations	57	57	57	57	57

Source: Secondary Data

The result in the table shows that since the Jarque-Bera values for the variables that were included in the study are all > 10%, which implied that there is normality in the variables. Therefore the researcher rejected the null hypothesis and concluded that the variables are normally distributed.

4.4 Graphical representation of the variables

The researcher was interested in establishing the trend lines and the direction of relationship of the variables under study as revealed below.
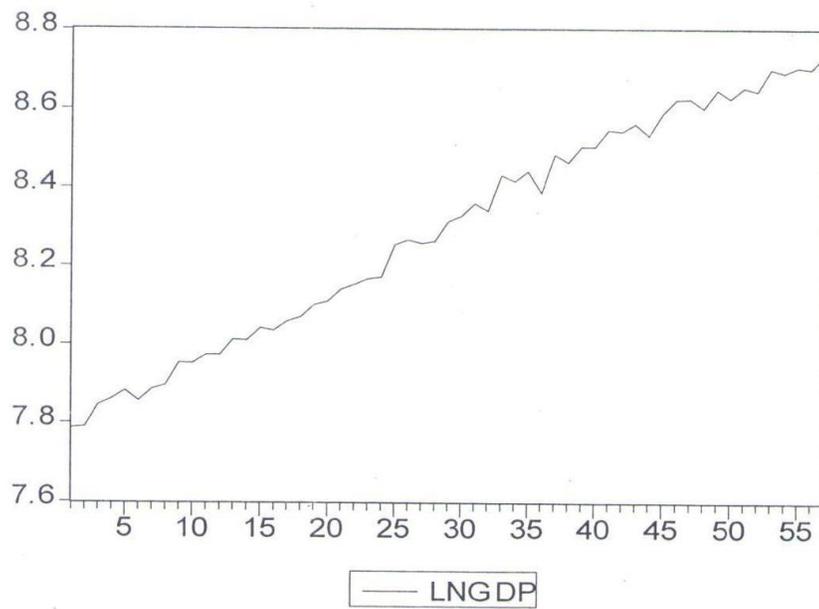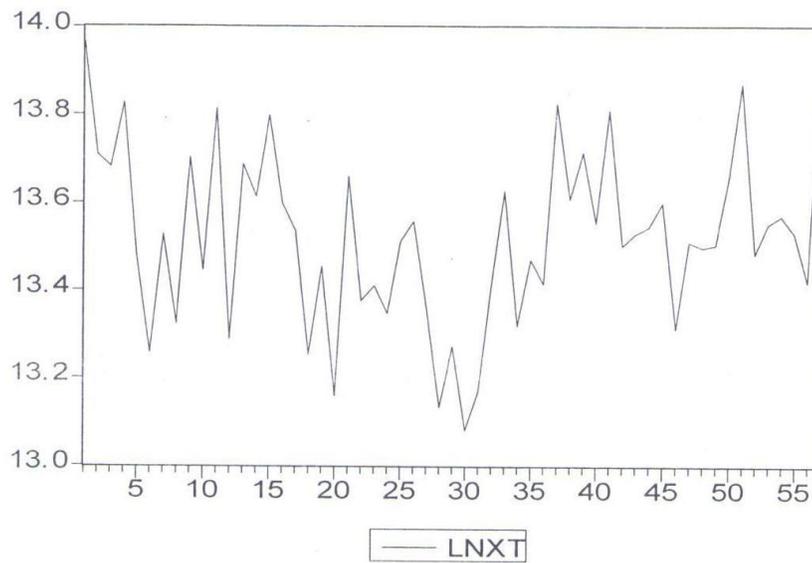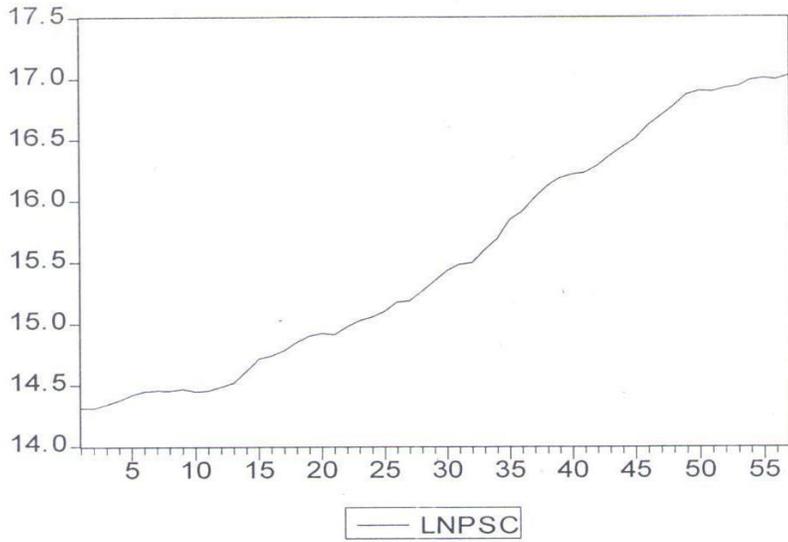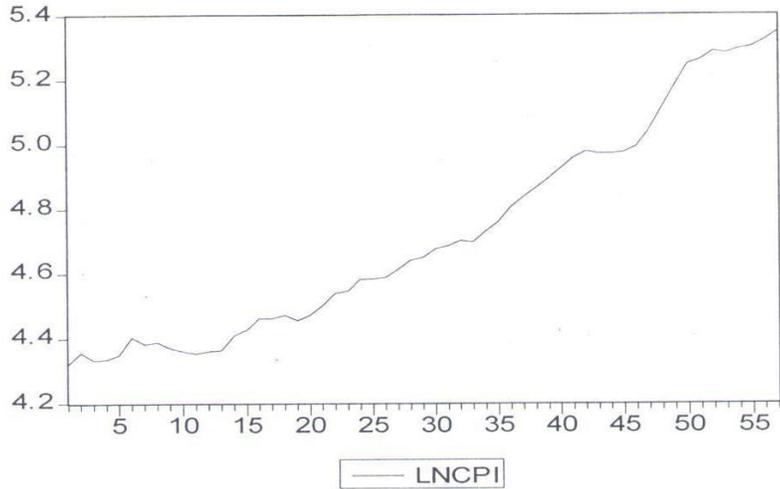
The chart above shows that the country's gross domestic product is dependent of the consumer price index and exports and most of the data is evenly distributed on the regression line implying that gross domestic product is determined by the consumer price index.

4.5 Unit root test for GDP

Ho: Gross domestic product is not stationary

Ha: Gross domestic product is stationary

ADF Test Statistic	-6.595170	1% Critical Value*		-4.1348
		5% Critical Value		-3.4935
		10% Critical Value		-3.1753
*MacKinnon critical values for rejection of hypothesis of a unit root.				
Augmented Dickey-Fuller Test Equation				
Dependent Variable: D(LNGDP,2)				
Method: Least Squares				
Date: 09/27/17 Time: 14:36				
Sample(adjusted): 4 57				
Included observations: 54 after adjusting endpoints				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNGDP(-1))	-1.655387	0.251000	-6.595170	0.0000
D(LNGDP(-1),2)	0.036417	0.140160	0.259824	0.7961
C	0.033275	0.008998	3.698181	0.0005
@TREND(1)	-0.000192	0.000220	-0.875437	0.3855
R-squared	0.803235	Mean dependent var		-0.000402
Adjusted R-squared	0.791429	S.D. dependent var		0.054213
S.E. of regression	0.024759	Akaike info criterion		-4.488090
Sum squared resid	0.030650	Schwarz criterion		-4.340758
Log likelihood	125.1784	F-statistic		68.03663
Durbin-Watson stat	2.062637	Prob(F-statistic)		0.000000

Interpretation of the output

Since the absolute T test statistic (3.4935) in absolute terms is less than the critical value (6.595170) in absolute terms, we reject the null hypothesis and conclude with the alternative that gross domestic product is stationary. Implying that the gross domestic product evolve around the mean value. Similarly since the P-value is less than 5% we reject the null hypothesis and conclude with the alternative that gross domestic product is stationary.

4.6 Unit root test for private sector credit data

Ho: Private sector credit data is not stationary

Ha: Private sector credit data is stationary

ADF Test Statistic	-2.122218	1% Critical Value*		-4.1314
		5% Critical Value		-3.4919
		10% Critical Value		-3.1744
*MacKinnon critical values for rejection of hypothesis of a unit root.				
Augmented DicKey-FullerTest Equation				
Dependent Variable: D(LNPSC)				
Method: Least Squares				
Date: 09/27/17 Time: 14:40				
Sample{adjusted): 3 57				
Included observations: 55 after adjusting endpoints				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNPSC(-t)	-0.065021	0.030638	-2.122218	0.0387
D(LNPSC(-1))	0.435562	0.119535	3.643807	0.0006
C	0.925659	0.426051	2.172648	0.0345
@TREND(1)	0.003868	0.001759	2.198887	0.0324
R-squared	0.300703	Mean dependent var		0.049283
Adjusted R-squared	0.259568	S.D. dependent var		0.037269
S.E. of regression	0.032069	Akaike info criterion		-3.971879
Sum squared resid	0.052451	Schwarz criterion		-3.825891
Log likelihood	113.2267	F-statistic		7.310145
Durbin-Watson stat	2.052220	Prob(F-statistic)		0.000361

Source: Secondary Data

The table above shows that the T statistic (3.4919) in absolute terms is less than the critical value (2.122218) in absolute terms, we reject the null hypothesis and conclude with the alternative that private sector credit is stationary which Implies that the values evolve around the mean value. Similarly since the P-value 0.0006 is less than 0.05 we reject the null hypothesis and conclude that private sector credit is stationary.

4.7 Unit root test for coffee export data

Ho: Coffee export data has no unit root

Ha: Coffee export data has a unit root

ADF Test Statistic	-2,325798	1% Critical Value*		-4.1314
		5% Critical Value		-3.4919
		10% Critical Value		-3.1744
*MacKinnon critical values for rejection of hypothesis of a unit root				
Augmented Dickey-Fuller Test Equation				
Dependent Variable: D(LNCPI)				
Method: Least Squares				
Date: 09/27/17 Time: 14:47				
Sample(adjusted): 3 57				
Included observations: 55 after adjusting endpoints				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNCPI(-1)	-0.085011	0.036551	-2.325798	0.0240
D(LNCPI(-1))	0.277031	0.126557	2.188983	0.0332
C	0.355621	0.152004	2.339550	0.0233
@TREND(1)	0.002015	0.000723	2.786851	0.0075
R-squared	0.271226	Mean dependent var		0.018026
Adjusted R-squared	0.228356	S.D. dependent var		0.021653
S.E. of regression	0.019021	Akaike info criterion		-5.016647
Sum squared resid	0.018451	Schwarz criterion		-4.870659
Log likelihood	141.9578	F-statistic		6.326832
Durbin-Watson stat	2.010572	Prob(F-statistic)		0.000989

Source: Secondary Data

The table above shows that the T statistic (3.4919) in absolute terms is less than the critical value (2.122218) in absolute terms, we reject the null hypothesis and conclude with the alternative that coffee export data is stationary which Implies that the values evolve around the mean value. Similarly since the P-value 0.0006 is less than 0.05 we reject the null hypothesis and conclude that coffee export data is stationary. These findings are in line with Najam (1993) who examined the relationship between coffee exports and GDP for a variety of countries. He examined the relationship between these two variables in a simultaneous equation framework and found that not only a strong positive association between exports performance and GDP but more than 90 per cent of the contribution of coffee exports to GDP was indirect in nature.

Similarly Raut (1997) explored the effect of primary commodity and manufactured exports on a country's GDP. The exports of primary commodity included both agricultural products and others that is metals and oil products. The study concluded that agricultural exports were the main source of growth in a country's GDP and the exports of primary products had a negligible effect. The author had used the time series data of eight Asian developing countries covering the period from 1960 to 1997. The observation here is that the growth in a country's GDP is related to the volumes of exports. These findings are in line with Kalaitzi (2013) who examined the relationship between coffee exports and GDP growth in the United Arab Emirates over the period 1980-2010. In his study, he applied the two-step Engle-Granger cointegration test and the Johansen cointegration technique in order to confirm or not the existence of a long-run relationship between the variables.

Similarly Worz (2012) argued that exports of manufacturing products are less sensitive to the cyclical changes in the international market compare to exports of raw and intermediate goods. Hence, countries that depend on the exportation of manufactured products were less affected by the cyclical changes in the world economy. Indeed, a major problem facing most developing countries was the heavy dependency on the export of raw materials. Changes in the world economy affected its demand for primary products, which then affected the economic performance of less developed countries. Sinclair (2002) in his study while investigating the causal links between trade, economic growth and inward foreign direct investment (FDI) in China at the aggregate level. The integration and cointegration properties of quarterly data analyzed. Long-run relationships between coffee exports and FDI are identified in a cointegration frame work, the study found bidirectional causality between GDP and coffee exports.

4.8 The effect of other macroeconomic variables on the country's GDP

The researcher used a log log regression model to estimate the effect of other macro-economic variables on a country's GDP and the results are shown in the table below.

Ho: GDP is independent of consumer price index

Ha: GDP is dependent of consumer price index

Ho: GDP is independent of inflation

Ha: GDP is dependent of inflation

Dependent Variable: LOG(LNGDP)

Method: Least Squares

Date: 09/27/17   Time: 11:30

Sample: 1 57

Included observations: 57

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.048142	- 0.143794 0.089525	0.334802	- 0.7391
LOG(LNCPI)	0.304611	0- 0.102162	3.402509	0.0013
LOG(LNPSC)	925953		9.063562	0.0000
R-squared Adjusted	0.970772	Mean dependent		2.114345
R-squared S.E. of	0.969690	0- var S,D. dependent		0.035460
regression Sum	006174 0.002058	var Akaike info		-7.285868
squared resid Log	210.6472	criterion Schwarz		-7.178339
likelihood Durbin-	0.317260	criterion F-statistic		896.7791
Watson stat		Prob(F-statistic)		0.000000

Source: Secondary data Explanation of out put

The coefficient of consumer price index (-0.304611) implies that a unit increase in the consumer price index will on average lead to 0.304611 decreases in the country's GDP holding other factors constant and since the P- value (0.0013) is less than 0.05 the confidence level, we reject the null hypothesis and conclude with the alternative that GDP is dependent of consumer price index.

The coefficient of inflation (0.925953) implies that a unit increase in the level of inflation will on average lead to 0.925953 increases in the country's GDP holding other factors constant and also since the P- value (0.0000) is less than 0.05 the confidence level, we reject the null hypothesis and conclude that GDP is dependent of the level of inflation. These findings are in line with (Saggi,2000) who in his study asserted that the endogenous growth of an open economy is achieved through "learning by doing" which exhibits diffusion of technology across goods exported. International trade, which transmits knowledge internationally, could increase the absorptive capacity of trading countries by promoting technological advancements employed in processing coffee before exports. Increased productivity is also achieved through practice and innovation.

CHAPTER FIVE

SUMMARY, CONCLUSSION, DISCUSSION OF FINDINGS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the critical observations from the findings, conclusions and recommendations in line with the objectives of the study.

5.2 Summary

The study was on the topic the effects of coffee exports on the country's GDP. The researcher obtained secondary data from UBOS which was coded and then entered in computer software review where different tables were generated and analyzed. The objectives of the study were to test whether GDP and coffee exports are co-integrated, to test the direction of the relationship between coffee exports (traditional and non-traditional) and GDP in Uganda and to identify the effect of other macroeconomic variables on GDP.

It was discovered that the T statistic (3.4919) in absolute terms was less than the critical value (2.122218) in absolute terms, the researcher rejected the null hypothesis and concluded with the alternative that private sector credit is stationary which Implies that the values evolve around the mean value. Similarly since the P-value 0.0006 is less than 0.05 we reject the null hypothesis and conclude that private sector credit is stationary. Similarly it was discovered that the coefficient of consumer price index (-0.304611) implied that a unit increase in the consumer price index will on average lead to 0.304611 decreases in the country's GDP holding other factors constant and also since the P- value (0.0013) is less than 0.05 the confidence level, we reject the null hypothesis and conclude that GDP is dependent of consumer price index.

The findings revealed that the coefficient of inflation (0.925953) implies that a unit increase in the level of inflation will on average lead to 0.925953 increases in the country's GDP holding other factors constant and also since the P-value (0.0000) is less than 0.05 the confidence level, we reject the null hypothesis and conclude that GDP is dependent of the level of inflation.

5.3 Conclusion

The following conclusions were drawn as a result of the research work carried out on the contribution of coffee exports on the country's GDP.

The researcher concludes that since the P-value of coffee production is 0.0013 is less than 0.05 the confidence level, the researcher concluded that GDP growth is dependent of consumer price index. And also since the P- values of the other macro-economic variables were less than 0.05 the confidence level, the researcher concludes that gross domestic product is dependent of coffee exports and other macro-economic variables.

5.4 Recommendations

The researcher recommends that the Government should give financial support to the small scale industries processing coffee for export as this will improve on the quality of the coffee exported thus improving on the country's Balance of trade.

The researcher also recommends that tax holidays should be granted to new investors in the country as this will create a conducive environment for the investors willing to invest in the coffee sector.

The researcher also recommends that the Government should encourage export of manufactured commodities than intermediate goods, since intermediate goods fetch less foreign exchange compared to manufactured goods.

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