WOLKITE UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF ECONOMICS

DETERMINANTS OF EXPORT PERFORMANCE IN ETHIOPIA

A RESEARCH SUBMITTED TO DEPARTMENT OF ECONOMICS IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF BA IN ECONOMICS

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DECLARATION

I, Abdi, declare that this thesis entitled: *"*Determinants of export performance in Ethiopia *"* is outcome of my own effort and study and that all sources of materials used for the study have been appropriately acknowledged.

To the best of my knowledge, this study has not been submitted for any degree in this University or any other University. It is offered for the partial fulfillment of the Bachelor degree in economics.

By: Abdi Geleta

Signature----------

Date----------

ADVISORS' APPROVAL SHEET

This is to certify that the thesis entitled "Determinants of export performance in Ethiopia" submitted in partial fulfillment of the requirements for the Bachelor degree in Economics, of the Department of Economics, and has been carried out by Id. **No 005/09,** under my/our supervision. To the best of my knowledge, is an original work and not submitted earlier for any degree either at this University or any other University.

Therefore I recommend that the student has fulfilled the requirements and hence here by can submit the thesis to the department.

Advisor: Biruk Birhanu (Ass.Prof.)

Signature: _____

Date: June 20, 2019

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LIST OF ACRONYMS

CSA	Central Statistical Agency
DC	Domestic credit
GDP	Gross Domestic Product
IFS	international Financial Statistics
IMF	International Monetary Fund
LDC	Least Developed Countries
MO FED	Ministry of Finance and Economic Development
NBE	National Bank of Ethiopia
OLS	Ordinary Least Squares
REER	Real Effective Exchange Rate
TOP	Trade Openness
TOT	Terms of Trade
UNCTAD	United Nations Conference for Trade and Development
UNIDO	United Nation Industrial development

ABSTRACT

This paper identified some of the main determinants of export performance in Ethiopia for the period 1985-20118.To test empirically the relationship between export performance and its major selected determinants such as terms of trade, trade openness, real gross domestic product, real effective exchange rate, domestic credit and trade openness over a period. However, except these trade openness variables other variables were found to significantly affect the export performance of the country. On the other hand, out of the all variables significantly affected export are terms of trade, trade openness, and real gross domestic product affected export positively as expected. Especially when we look at the magnitude by which trade openness affected the dependent variable both in the positively and significantly. Terms of trade and real effective exchange rate were found negatively affect export of the country. It can be regarded as one of the key finding in this study. The study concludes with recommendations to increase share of export performance of Ethiopia. Last but not least, I would like to forward my warmest appreciation and great thanks to department of Economics material help to the success of my study.

Key Words, Export Performance, Time Series

CHAPTER ONE

INRTODUCTION

1.1 Background of the study

The concept of international trade came in to being with the emergence of modern human society. International trade is an inter-locking linkage among different nations involving the exchange of goods and service, that is, exports and imports with the guiding principle of comparative advantage, which indicate that every country, no matter what their level of development is can find something that it can produce cheaper than another country.

According to the orthodox classical economist as well to the modern trade theories view trade as an agent of economic growth. Exports promotion strategy is often in accordance with the principle of comparative advantage, when a country specializes in a product, which it can produce at low cost comparing to trading partners. The goods become available to the community of the world at cheaper prices and the markets are extended. Income and employment levels expand. Consequently, the process of economic development is facilitated. This means that, emphasis on the increasing of exports would permit the optimal allocation of world resource (Mohammed and Eatzaz, 2006).

Export is a function of international trade where by goods produced in one country are shipped to another country for future sale or use as the intermediate input of other production. The sale of such goods and the use of this goods as input of other production for importing countries enhance their production and increase economic growth. Exports are one of the oldest terms of economic transfer, such as tariff or subside. The term export means shipping the good and service out of the port of country (Todaro, 2003).

Ethiopian exports are characterized by few raw materials or semi processed agricultural products which have been the main contributors to the country's foreign exchange earnings. This feature is

expected to continue without significant change, in the near future, due to the overall underdevelopment of the country's economy. The prevailing Investment friendly policies and strategies are not expected to bring about a sound export growth in the short run (Kiros, 2012). Because of this few and raw product, like other sub-Saharan countries Ethiopia is typical example of LDC's with high balance of payment (BOP) deficit, deteriorated terms of trade (TOT) and dominance of agricultural sector in terms of employment creation, value added and export earnings. Furthermore, the economy is characterized by low volume of exportable products, the limited degree of diversification on exports, unprocessed primary products, frequent economic crisis which substantially affects the demand for and price of primary products, artificial trade barriers by trading partners and political factors. By using export financing incentives schemes, export trade duty incentives scheme and duty-free importation scheme the transitional and current FDRE government has made the export sector more liberal.

The imbalance of the exports and imports of countries and its deteriorated terms of trade on economy and social implications are matters of concern to both the Public and private sectors. Thus, it is important for both parties to work together with respect to the contents and marketing strategies of export items. There is a need to take the trade deficit not only from export side but also from the import side by identifying products that can be locally produced to reduce foreign exchange out flows. At the same time, expanding the volume of trade and diversifying of export products and market destinations need to be investigated in detail to narrow the deficit (Alekaw, 2014).

Determinant of exports performance can be spilt in to external and internal components. External component are related to market access conditions and other factors affecting import demand and internal components are related to supply side conditions. The current problem of Ethiopia export performance includes both supply side (like less diversified commodities and low volume of exported commodities) and demand side (like low income elasticity of demand for primary products and limited destinations of exported commodities) constraints'.

Access to foreign markets is a critical determinant of export performance. It relates directly to the characteristics of the trading partner countries, such as the size of their market and transport facilities, and inversely to their own internal transport costs. It also depends positively on the size of the export basket and the number of differentiated items and their prices, which in turn are affected by market entry conditions, Tran's border costs, which also include tariff and non-tariff barriers, have the expected negative impact on foreign market access (Hailegiorgis, 2011).

1.2 Statement of the problems

In order to maintain a relatively strong international trade base it is important to diversify exports as much as possible. This is more relevant to exports of developing countries as diversification reduces the impact of shocks in certain production sectors. If a certain commodity dominates the export earnings of a country the shocks occurring in the sector will greatly affect the foreign exchange earnings of the country as a whole. In order to avoid such shocks from affecting the whole country it becomes important to diversify (Tewoderos, 2012).

Ethiopian export, like many other developing countries, is limited to few primary products which are mainly agricultural. Studies shows that such commodity concentration could result in instability of export earning which in turn will affect capital formation. This is due to high dependence of developing countries on earning from export sector to satisfy their import requirements. It is argued that instability of such proceeds will significantly influence output by constraining input and production planning (Fitsum, 2008).

Identifying and examining the factors that significantly affect Ethiopia's export performance helps us to know what explains variation in Ethiopian export performance that should facilitate the design of policies to improve the performance and ultimately overall economic growth.

Ethiopia has trade relationship with many of the nations in the world, especially with nations from Europe, Africa and South East Asian. The major export markets of the Ethiopia's are nations in Europe followed by Asian and African nations respectively. Taking into account the focus given to export sector, it is a rational to investigate factors determining export flows between Ethiopia and its trading partners (Alelign,2014)

Different studies have been undertaken on the factor determine export performance using different methods and during different time, their findings shows that there is a contradiction on the factors determine exports performance. In this connection, in recent years changes have occurred in the overall economy of the country to induce a need for further research in the area to identify believable factors determining export performance of the county, so that information is provided to the concerned authority thus, which leads to the formulation of perspective policies to address the problems.

This study will empirically investigate the factors that determine the country's export performance by specifying an econometric model for the period (1986/87-2016/17).Finally, it will forward policy recommendation based on the results of the study.

1.3 Objectives of the study

1.3.1General objective

The general objective of this study is to identify the key determinants of export performance in Ethiopia.

1.3.2 Specific Objectives

- To examine economic factors determining export performance.
- To analyzing factor that determine export performance in Ethiopia.
- To possible recommendation for decision makers regarding how to promote export growth rate and informs other concerned bodies.

1.4 Research Hypothesis

The hypothesis is interested in Testing the hypothesis below; the theoretical aspects and the real feature of the country, the effect of investment was described by the following hypothesis:

First, regarding the relationship of variables;

Ho: There is negative relationship between real effective exchange rate and economic growth in the country.

H1: There is positive and significant contribution of trade openness on the economic growth.

Ho: There is positive relationship and insignificant between the real gross domestic product and export in the country.

H1: there is negative and significant contribution of export performance in Ethiopia.

Second, regarding the nature of time series;

Ho: Ordinary list square model is not appropriate.

H1: Ordinary list square model is appropriate.

Third, regarding to the variety of tests for unit roots or stationary of time series;

Ho: each time series is not stationary.

H1: each time series is stationary.

1.5 Research Question

- ✓ What is examine economic factors determining export performance?
- ✓ How analyzing factor that determine export performance in Ethiopia?
- ✓ What is a possible recommendation for decision makers regarding how to promote export growth rate and informs other concerned bodies?

1.6 Significance of the study

The study is significant to identify the major factors that determine the exports performance of the country, by bringing empirical evidence using time serious data analysis. In addition, the study uses very recent data for empirical analysis. Identifying the determinants of export performance will help to provide information to the policy makers to enable them come up with the appropriate policy regarding the factor that determine exports performance and the economy as a whole and will help broaden the understanding determinants of exports?

1.7 Scope of the study

The research limited to the study the factors that determine export performance in Ethiopia, during the period 1985/86–2016/18 using annual data. The study is not concerned with the impact of trade on economic growth.

1.8 Limitations of the study

In theory many factors determine the export performance of a country. However, the short-age of time may be the limitations in conducting this research paper. Lack of organized data regarding

analyzing determinant of export performance in Ethiopia may be another constraint to get consistent information.

1.9 Organization of the study

The rest of the paper is organized as follow. The second chapter will briefly summarize both theoretical and empirical evidence of the previous studies on export and its determinants. The third chapter is concerned with source of data, model specification and analysis methodology. Chapter four is concerned with econometric analysis and discussion of results. Finally, chapter five will presents conclusion and recommendations of the study.

CHAPTER TWO

2.1Theoretical Literature Review

2.1.1 Introduction

There are different literatures concerned with the impact of international trade on economy. These different literatures provide a ground for the importance of international trade for economic growth. An organized and systematic thinking on trade starts with the mercantilist's period. One can list different reasons as to why nations trade with each other. The reason according to classical economists can be summarized as follow: "Countries engage in international trade for two basic reasons. First, countries trade because they are different from each other. Nations, like individuals can benefit from their difference by reaching an arrangement in which each does the relatively well. Second countries trade in order to achieve economies of scale in production. That is if each country produces only a limited range of goods, it can produce more efficiently than if it tried product everything (Krugman, 1991)

2.1.2 Definition of Export

Export is a function of international trade where by goods produced in one country are shipped to another country for future sale or trade. The sale of such goods adds to the producing nation gross output. If used for trade, exports are exchanged for the other products or service. Exports are one of the oldest term of economic transfer and occur in large scale between nation that have fewer restriction on trade, such as tariff or subsidy. The term export means shipping the goods and service out of the port of the country (Todaro, 2003).

2.1.3. Mercantilist view on trade

The doctrine of mercantilism is based on the premise that a nation can regulate its domestic and international affairs so as to promote its own interest. According to this doctrine, the solution lies in a strong foreign sector. If country could achieve favorable trade balance, it would enjoy payment received from the rest world in the form of precious metal. Such revenue would contribute to increased spending and a rise in domestic output and employment. To promote a favorable trade balance, mercantilist advanced government regulation of trade. It is also characterized by promotion of nationalism, emphasis on exports and restriction on imports. They believe that, there

was fixed quantities of resource in the world. Therefore, one country should promote its export and accumulate wealth at the expense of its neighbor's that trade is zero sum game (salvator, 2004)

2.1.4 Classical Theory

Classical theory of trade was first developed by Adam smith, in his famous book' the wealth of Nations; He refuses the mercantilist control over or faith of zero-sum game theory of international trade that one country can gain at the cost of the other. Classical economists have stressed the role of international trade for economic development (Salvatore, 2004).

2.1.4.1Theory of Absolute Advantage

This theory was developed by Adam Smith. According to him, when one nation is more efficient than over another nation in the production of one commodity but is less efficient than the other nation in producing another commodity, then both nation can gain by each specializing in the production of and commodity of its absolute advantage and exchanging part of its output with other nation for the commodity of its absolute disadvantage (salvator, 2004)

Unlike mercantilist, Adam Smith believed that all nations would gain from trade and strongly advocate the policy of laissez-fair: as little government interference with economic system as possible. Hence according to Adam Smith, free trade would cause resource to be utilized most efficiently and would maximize world welfare.

2.1.4.2Ricardo Theory of Comparative Advantage

Theory of comparative advantages suggests that a country should specialize in a production and export of those goods in which either it comparative advantage is greater or its comparative disadvantage is lesser, and it import those goods in the production of which its comparative advantage is lesser or comparative disadvantage is greater. According to this a country would be able to maximize its production (GNP) and its consumption. One big question that smith failed to answer was what if a country does not have absolute advantage? What would be the structure of the trade? David Ricardo addressed the answer for this question through comparative advantage. He pointed out that countries should specialize in production where they have greatest comparative advantage (Salvatore, 2004)

David's Ricardo principle of comparative advantage allows us to explain trade better than most people's intuition and better than Adam smith's original explanation of trade pattern (Pugel Linder, 2000). According to Ricardo's comparative advantage principle in the production of both goods, a basis for mutually beneficially trade may still exist (Richardson, 1992). The more efficient nation should specialize in and export that good in which it is relatively more efficient or where its absolute advantage is greatest.

The absolute advantage and comparative advantage constitutes only what is called the "supply version" of the classical theory of international trade. But the demand structure in two countries does also affect the structure in two countries as well as the gains from trade. The latter classical economists like Mill, Marshal and Edge Worth developed the theory of reciprocal demand offer curve to bring together the "demand version" of classical theory with its supply version. Their merit lies in the fact that they resolve the problem of determining the exact terms of the trade that emerged in trade equilibrium. The offer curve tries to show how the term of trade is determined by the interaction of demand and supply (Meier, 1995).

2.1.5 New Trade Theories

Trade Based on Economies of Scale: Economies of scale is referring to a production situation where output is grow more proportionally than the increase in input, that means when output is increasing by double, for example, the output may be increasing more than double. "With increasing return to scale, the mutual benefit can occur when the two nations are identical in every respect'' (Salvatore, 2004).

Hence trade based on economies of scale demonstrate that the greater division of labor and Specialization as well as introduction of specialized and productive machinery occurs to large scale operation and this result in an increase in productivity. Eventually with trade, each nation gains from specialization that arises from economies of scale (Nardhaus, 1989).

Trade Based on Product Differentiation: A large portion of the output of today economies involves differentiation rather than homogenous product. Trade based on product differentiation is a kind of trade concerned with exchange of manufactures for intra industry trade. International competition forces each firm or plant in industrial countries to produce one or at most few, varieties and styles of the same product rather than many different varieties and styles. More specialized

and faster machinery can be developed for a continuous operation and a longer production run. Then nation can gain by exporting this product and import other varieties and styles from other nation.

2.2 Factors determining export performance

A rise in export leads to an increase in a natural output. This is the example of what Rostow calls a leading sector. In a full employment economy, a favorable change in demand abroad or an innovation reducing cost at home may expand exports; improve the terms of large gain from trade. And this in turn leads to high income through higher saving. Even though the necessity of strong export sector is an in evitable pre-condition for economic growth, the export performance varies from one country to the other and is constrained by different influencing factors.

2.2.1 Supply side determinant of export performance

Supply side conditions are fundamental in defining the export potential of the economy and, for a given level of access to international markets, countries with better supply conditions are expected to export more. Supply capacity is affected by location related elements; which may for example; affect access to raw materials and other resources. It also depends on factors cost such as labor and capital. Beside resource endowment, factor costs are essentially the outcome of economic policy and the institutional environment. Access to technology, which likely affects the productivity of the external sectors also, can be an important determinant of exports performance (fugazza, 2004).

Key determinants of supply side conditions are classified into four major components: domestic transport infrastructure, real exchange rate, foreign direct investment and institutional quality. The real exchange rate can be the important element in determining export performance, diversification and international competitiveness of goods produced in a country (UNCTAD, 2005).

2.2.2 Demand side determinants of export performance

The major factors that determine export performance of a country is related to the external market access condition for its exports. In the case of foreign market access, two dimensions can be considered. The one is explained through intervention by trading partners, and the second one is related to the measures implemented by the exporting country to provide its exportable commodities with a price advantage (Mc Carthy, 2008).

Trading partners influence the export performance of a country through their trade policies (tariff and non-tariff trade measures). Meaningful market access requires lowering of all kind of barriers to trade (mold, 2005). However, since 1950 there has been a massive liberalization of world trade, first under the auspices of the General Agreement on tariffs and Trade (GATT) and now under the auspices of World Trade Organization (WTO). Due to this and other trade negations, access to international markets has improved (Thrilwall,2000).

2.3 Empirical review

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

Agash (2009), conducted study on determinant of the export growth in Uganda for the period of 1987-2006 using variables; foreign price level, foreign direct investment (FDI), terms of trade, real exchange rate and gross domestic product(GDP). His result shows that foreign price level and terms of trade were found to be statistically significant in explaining export growth for Uganda between 1987 and 2006, whereas foreign direct investment (FDI), real exchange rate and gross domestic product (GDP) do not significantly affect exports growth.

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

Naseeb (2009) using generalized method of moments(GMM) technique on determinant of exports in Pakistan, his findings reveal that exports of Pakistan are much sensitive to change in world

demand and and world prices. This establishes the importance of demand side factors like world GDP, real exchange rate and world price to determine the exports of Pakistan.

Sivri and usta (2001) conducted a study on the determinants of export growth in Turkey and found that real exchange rate does not have a significant effect for changes in exports. Oztang (2000) postulated total exports to be a function of foreign income and real exchange rate and results revealed that real exchange rate is a statistically significant determinant of export performance

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

Study related to the determinants of export performance in Ethiopia was conducted by Berhane (2000). According to his result, the world demand is found to be important determinant of export performance. In other words, the existence of demand for export from consuming countries therefore seems to be the driving force behind the growth of our export. He concluded that economic activities in the major industrial countries remain the overall determinants of export of Ethiopia. Furthermore, devaluation of birr had improved export performance while domestic consumption adversely affected its performance.

Kiros (2012), Conducted study on determinants of export growth rate in Ethiopia from 1980-2010 and his findings show that terms of trade and gross domestic product have positive impact on determining export. But, exchange rate has no significant effect on determining export growth.

Wondaferahu and Belayneh (2013), in his study of the determinant of export performance in Ethiopia found that in the long run export performance has found to be positively influenced real effective exchange rate, openness of trade, real growth domestic product (GDP) home country, infrastructural development and private credit as ratio of GDP.

Yishak (2009), analyze determinants of export performance of Ethiopia trading partners for the period of 1995-2007 and employed a gravity model for the studies. The model is estimated with Generalized Two Stage Least Square (G2SLS). The result of his study shows that good institutional quality and the growth of domestic national income affects Ethiopian exports positively appear to be the major determinants, whereas real exchange rate and FDI have no statistically significant effect on Ethiopia's export performance

Nega (2013) conducted study on the determinant of exports performance of Ethiopia, using time series data. The result of the study revealed that in the short run terms of trade become insignificant and negative in sign in which was unexpected. But, in the long run (LR) terms of trade, trade openness and real gross domestic product (GDP) affect export positively.

In summary, when we see the empirical review of different studies conducted at different times in developing countries there have been obvious contradiction on the factor determining export performance. There is also a lot change of economy in the overall of a country in the recent years, so this is the motivation for this research to identify believable determinant of export performance in order to provide information to the concerned authorities hence, leading to formulation of perspective policies to address problem.

CHAPTER THREE

3.1 Source and type, method data analysis Model Specification

3.2 Data Source

The study used secondary time series data. The data Sources are National Bank of Ethiopia (2017/2018), Ministry of Finance and Economic Cooperation (2017/2018) and Central Statistics Agency. For the purpose of analyzing the country's determinants of export performance, the export equation in this study has been estimated using time series data for the period 1985/86-2017/18. In this study exports of goods and services valued in birr which is dependent variable and the explanatory variables explained. To this regard the study uses five explanatory variables of the major factor determinants of the Ethiopian export performance. This includes real gross domestic product, trade openness, domestic credits, real effective exchange rate, and Terms of trade.

3.3 Method data analysis

This study focuses on the determinants of Ethiopia's export performance incorporating both supply and demand related variables. Hence, the study signifies Ethiopia's export performance as a function of trade openness, Terms of trade, real effective exchange rate, real gross domestic product, and domestic credit. The model that has been used in this paper is thus the adopt-ed Samuel (2012) imperfect substitution model which is expressed as follows:

X =f (TO, TOT, REER, RGDP, DC,) ---------- 3.1

3.3.1 Econometric model specification

The model that is used in this study is specified as follows

x=f (REER, RGDP, TOP, TOT, DC) …….3.2

A log-linear form for the above equation is employed to contain the determinant of export performance in Ethiopia is given by:

Ln Xt=β0+ β1 TOTt + β2 RGDPt + β3 DC + β4TOt + β5 REERt+εt…...3.3

Where;

Xt= export performance

TOTt = Terms of trade as ratio of price of export to the price of imports

TOP=Trade openness

GDP= Value of gross domestic product

REER = Real effective exchange rate

DC=Domestic Credit

β‘s are unknown parameters to be estimated

t = time in years (1985/86-2017/18)

ε = error terms

3.3.2 Definition of variables

Export Value (X): Export is the value of all goods and other market services provided to the rest of the world. This dependent variable is representing by the export from Ethiopia, measure total value of export at constant market price. Export is a function of international trade where by goods produced in one country are shipped to another country for future sale or trade. The sale of such goods adds to the producing nation gross output. Ethiopia is one of the countries whose export performance depends on overseas economic situation. As the country is a small open price taker economy in the World market forces, generally determine the prices of its exports.

Real effective exchange rate (REER): In the literature, it is recognized that depreciation of the real effective exchange rate has positive contributions for increased exports while real appreciation of the exchange rate is generally associated with a retard in exports. The appreciation of domestic currency has negative impact on exports since it decreases the competitiveness of the country‘s export in the world market. On the hand, appreciation will also make imports cheap. In theory movements are also negatively correlated with the growth in exports performance. Thus, the expected sign of the REER coefficient is ambiguous.

This is because it depends on the exchange rate regime that the country experiences. The nature of exchange management will either result on overvalued or depreciated exchange rate with the effect of determining a country’s product competitiveness in the international market. Appreciation of domestic currency will make exportable items costly, then the demand for our exports in external market is likely to fall and this in turn will reduce foreign Exchange earnings. In such a case, the expected sign of real effective exchange rate (REER) will be positive. The reverse is likely to occur if the decreases in real Exchange rate (devaluation) improve export by decreasing cost of import

for trading partner. But in this case the use of exchange rate as explanatory variables is justified on the ground of worsening export. We therefore expect the coefficient of REER to be negative.

Domestic credit (DC): it is the availability of loan, which is source of finance in case, where there is shortage of capital. An increase in domestic credit to the public sector has increased Ethiopia's export earnings. This is due to the fact that, an increase in domestic credit in Ethiopia has leads to depreciation of our currency and encourages export. Domestic credit is captured by amount of credit which is advanced to the government and private sector. So, the expected sign is positive.

Trade openness (TOP): Opening economic policies to trade with the rest of the world is needed for ex-port and economic liberalization of one country. This is because to increase the living standard of its people one country should have to open trade to the rest of the world. Trade liberalization has generally taken place in LDCs as part of the structural adjustment program. Openness of trade implies considerable reduction in tariff and non-tariff barriers, so as to establish a noticeable open market as compared with the pre- liberalization era. The empirical studies depend on the effect of trade openness on export performance have shown positive results (Belayneh and Wondaferahu, 2012)

If countries are more open its market strategies to the external world, there will be a higher foreign exchange earnings from export. Trade openness is calculated as the sum of exports and imports of goods and services to GDP ratio. However, in this study we use dummy variable to measure the trade openness, because of during Derg period there is closed economy and do not open to the external world and after liberalization the country open to the rest of the world. In short, an increase in openness will have positive impact on export performance.

Real Gross Domestic Product (RGDP): Higher RGDP values in the exporting country imply increased capacities for export. The increase in real output (RGDP) of home country affects the export positively. This is due to the fact that output capacity of an economy has implication of supply capacity by maintaining a country's competitiveness in the international market in the long run. For instance, Kumar (1998) in his study on the determinants of export growth in developing countries confirmed that GDP has a significant positive impact export volume. He also underlined that higher level of production is the main cause of export expansion. So, a higher GDP implies a

higher production and hence larger volume of exports. Therefore, we expect a positive relationship between the dependent variable and GDP.

Terms of trade (TOT): This is one of the determinants of export performance in both developing and developed countries. Terms of trade are the rate at which the commodity of country is exchanged for the commodity of other. Because of the currency of one country is not legal tender in other country, every country has to export commodities in order to import goods. These terms of trade are measured by the ratio of export price to import prices. Favorable terms of trade are associated with increased export growth rate and unfavorable terms with low export growth rate.

3.3 Expected sign of the parameters

In the above formulation, terms of trade, Real GDP, domestic credit, and trade openness have positive and significant relationship to determine export performance. Real effective exchange rate has negative and significant relationship on determinant of export performance. Hence$\beta 1$, $\beta 2$, $\beta 3$, and $\beta 4$ are expected to have positive signs but, $\beta 5$ expected to has negative sign.

3.4 Methods of Estimation and Procedure

In the econometric analysis the problem of non-stationary is highly exposed many of macro-economic time series data. Regression on non-stationary variables come to spurious regression, because of mean and variance are time variant and hence the basic assumption of OLS will be violated. Therefore, it is important to test the variable using the co-integration and ECM to solve the problems encountered with OLS regressions. If the mean and the variance of macro-economic time series data are constant over time and value of covariance between the two-time periods depends on distance or lag then the data is stationary. When the mean, variance and auto covariance of individual time series are not time in variant, these time series data are not stationary (Gujirat,1991)

3.5 Unit root test

Unit-roots are important to detect the stationary of time-series data. In estimating econometric models using time series variables requires that a stochastic process generating the data series to be stationary. There are many ways of testing for the presence of unit root. In this study the series will be tested by order of difference stationary, based on the work of Fuller (1977) and Dickey Fuller (1981, 1983). The Augmented Dickey-Fuller test is a similar but modified version of the Dickey-Fuller test which is used when the variables are not stationary at first difference. When

testing for stationary, if variables are stationary at level, then it is said to be integrated of order zero I (0). If the variable is stationary at its first difference, it is said to be integrated of order one I (1).

CHAPTER FOUR

4 PRESENTATION AND DISCUSSION OF RESULTS

This chapter presents and discusses results on the factors determining exports performance in Ethiopiaplus the direction of causality between the two. It also includes results from the unit root test and error correction model for establishing the long run relationship between economic growth rate and export performance in Ethiopia.

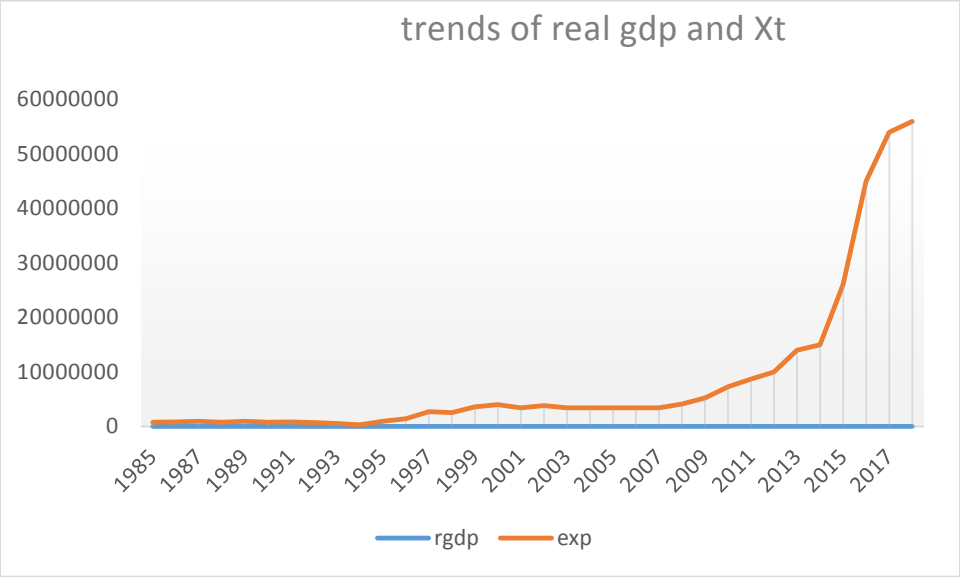
4.1 Descriptive Statistics

Descriptive statistics explains dependent variable Export and five independent variables, Real exchange rate, Terms of trade, Domestic credit, Trade openness and reals gross domestic product.

4.1.1Trends of Export and Real Gross Domestic product

The following graph shows the overall trend of Xt and real gdp in Ethiopia starting from 1985to 2018. It shows slightly increase from 1985 to 1995. Starting from 1995 to 2018 the export and real gdp of the country increase. Especially in the years from 2011 to 2018 export of the country was increases at increasing rate, this is due to the greater subsides and incentives provided by government and other foreign institution in rapid way.

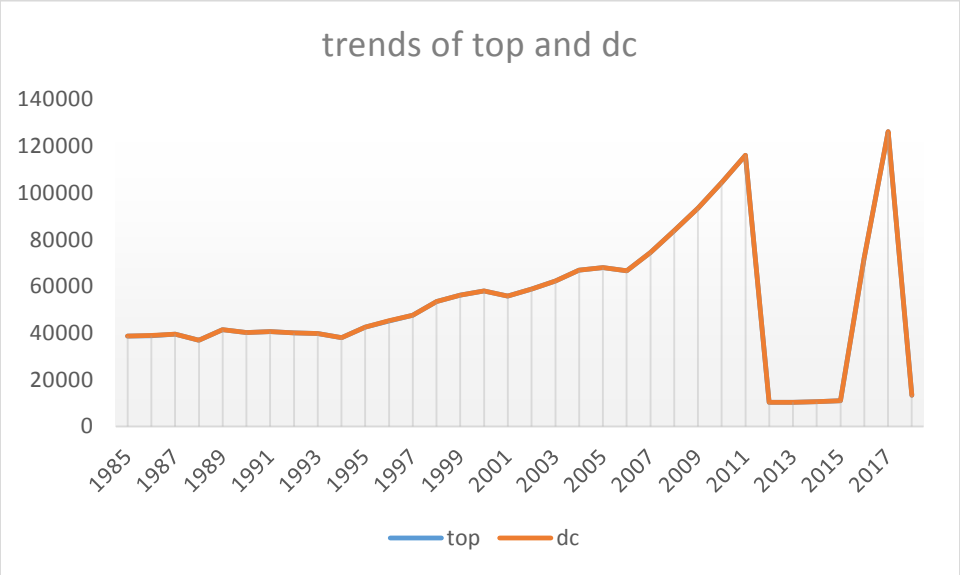
Graph 4.1.1 of export and real gdp from 1985 to 2018



4.1.2 Trends of Trade openness and Domestic credit

From the following graph the researcher conclude that domestic credit is continued with slightly increment from 1985 to 1994 however during 1995 it begun to increase with higher rate. But from 2003 to 2007 it was fluctuate by some rate this is due to the reason that the establishment of good governance which is democratic. Following this it reaches its maximum point during 2012 and from 2013 to 2015 domestic credit reaches the minimum point due to the government provided some incentives for the society. In addition to this as we observe from this graph trade openness, is declined especially, prior to 1991 due to military dictatorship and trade restriction. But currently it is somewhat better than the earlier, due to government's attention to import goods.

Graph 4.1.2 of Trade openness and Domestic Credit.



4.2 Econometrics Analysis

4.2.1 A Unit root of stationary and non-stationary test

A stochastic process is said to be stationary, if the mean and variance are constant regardless of actual time taken. Stationary test makes sure that there will not exist a spurious result which is

often found in non-stationary time series (Gujirat, 2004). A non-stationary time series on the other hand has time varying mean or a time varying variance or both and using classical ordinary list square(OLS) estimate technique on non-stationary time series data will have what is called spurious. This study uses Dickey Fuller (DF) and Augmented Dickey Fuller test to analysis or investigate a stationary of variables. If the calculated Dickey fuller is greater than critical value at given level, the time series variable is stationary at the given order.

4.2.2 Dickey fuller test for stationary

Table 4.2.1 result of Dickey Fuller test

Variables	Test static's	5%	Stationary integration
LNEXP	4.786	-1.950	I(0)
LNREER	-1.983	-1.696	I(0)
LNRGDP	3.912	-1.950	I(0)
LNTOP	-3.476	-1.696	I(0)
LNTOT	-1.810	-1.699	I(1)
LNDC	-2.113	-1.696	I(0)

Source: own computation from stata 12 result.

H1: Stationary

Ho: Non-stationary

If test statistics of a given variables are less than 0.05 or 5% critical value it is stationary. If test statistics of a given variables are greater than 0.05 or 5% critical value it is non- stationary.

If the estimated augmented Dickey-fuller statistics is larger in absolute term than it is Augmented Dickey Fuller critical value the null hypothesis is rejected suggesting that the series are stationary. The result indicated that all variables are greater than in absolute term of the critical value. As shown by table 4.5 all variables are stationary at normal level or I (0) except terms of trade (TOT).

Because their test statistics are greater than 5% level of significance.

4.2.3 Regression result

Table 4.2.3 Results of regression analysis s

GDP	Coef	Std. Err	T	P>|t|	[95% Conf. Interval]
RGDP	11662.38	458.0189	25.46	0.000	10724.17
TOP	12.64147	21.07418	0.60	0.553	-30.52704
DC	-2201110	460743.9	-4.78	0.000	-3144901
REER	-17946.17	9194.8	-1.95	0.061	-36780.87
TOT	-83.87724	10.53332	-7.96	0.000	-105.4538
Constant	-2.36e+07	3641720	-6.48	0.000	-105.4538

Number of obs = 34

F(5, 28) = 165.88

Prob > F = 0.0000

R-squared = 0.9673

Adj R-squared = 0.9615ss

Root MSE = 2.9e+06

Source: generated from stata 12 version by using data from NBE

The estimated model according to the above results is specified as follows: As can be seen from the table, the entire variables RGDP, DC and TOT are statistically significant. But also TOP and REER are statistically insignificant. Ethiopian export was found to be influenced negatively by

REER. This is because of the type of commodity Ethiopia exports to the rest of the world which is primary products and weak domestic demand of export commodities. On the other hand, in the long run RGDP has positive and significantly affect the export performance of the country. This means 1% increase in RGDP causes the increase in the production of country's export by increasing volume of exports by 36% in Ethiopia. As expected trade openness has negative coefficient with dependent variables in the long run, but its effect is insignificant. This means integrate to the rest of the world, for the Ethiopia has negative insignificant.

Terms of trade has also had negative coefficient and significant as expected. This means terms of trade or price of exported commodity in Ethiopia has negative effect on export performance. A decreases in 1% percent terms of trade decreases 27% of the country export performance in Ethiopia. In addition, domestic credit has also negative coefficient and significance in the long run. This means when the public get available loan to finance shortage of capital and result in the depreciation of the currency, then this discourages export performance in the Ethiopia.

4.2.4 Interpretation of model result

The estimation of model result can be interpreted as follows:-The null hypothesis of Statistic (the overall test of significance of the model) that the R-squared is equal to zero is rejected at 5% level of significance as the p-value was sufficiently low. F value of 0.000 indicates strong statistical significance, which enhanced the reliability and validity of the model

From table 4.2.4 the R-square and adjusted R-square of the model are 0.9673 and 0.9615 respectively. The total variation in the dependent variable that can be explained by the independent variable is 96.73%. In this model, 96.73% of the performance of explanatory variable in this model explained the variation of dependent variable and the remaining 1.11% is explained by other variables not included in the model. Thus these variables collectively have good explanatory variables with Xt in the specified area.

4.2.5 Regression result interpretation

Real effective exchange rate (REER): The coefficient of Exchange rate is found to be significant at 1% level of insignificance, and it had negative sign. This means that a 1 percent increase in Exchange rate lead to -179417 percentage decrease in Xt on average other factor remain constant.

Real Gross Domestic Product (RGDP): The coefficient Real Gross Domestic Product effects on export is found to be significant at 1% level of significance, and it had positive sign. This result indicate as real gross domestic product increase by 1 percent, export capacity of the country increase by 1166238 percentage on average other factor remain constant.

Domestic Credit (DC): The coefficient of domestic credit had negative sign, and significant at 1% level of significance. This means there is negative relationship between Xt and domestic credit. As domestic credit increase by 1%, the export capacity of the country decrease by -22011000 percentage on average other factor remain constant.

Term is of Trade (TOT): The coefficient of terms of trade effect on export is found that there is negative relationship with export, and it is significant at 1% level of significance. This means that as terms of trade increase by 1%, the export capacity of the country decrease by -8887.724 percentage on average other factor remain constant. This is real due to the country export is less than import.

4.2.6 Diagnostic Tests

4.2.6.1 Multicollinearity

Multicollinearity refers to case which two or more explanatory variables in the regression model are highly correlated and making it difficult to isolate their individual effects on the dependent variable. Using VIF test since the mean of variance inflation factor is below ten which is 1.78 there is no Multicollinearity problem in the model.

Table 4.2.6.1. Multicollineatity test (variance inflation factor test)

Variable	VIF	1/VIF
REER	2.69	0.371253
TOT	1.89	0.529937
TOP	1.46	0.687408
RGDP	1.45	0.683424

DC	1.42	0.706506
Mean Vif	1.78	

Source: Own computation using stata software

From the table we can interprete that since the mean inflation factor (1.78) is less than ten, the model has no multicollinearity problem.

4.2.6.2 Test of Hetroskedasticity

Hetroskedasticity refers to a situation when the variance of the error terms in the model is not constant and violating the normality assumption of the classical linear regression model. In the presence of hetroskedasticity, OLS estimation will give unbiased coefficients estimate which are not BLUE (beast linear unbiased estimator). The existence of hetrodaskedasticity can be tested using graphical and formal method such as God Frey, Breush-pagan and Whites general hetroskedacity test. The Breush-pagan test is the most commonly used in the empirical literatures.

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

chi2 (1) = 0.02

Prob > chi2 = 0.8980

Decission Rule

Ho: constant variance

H1: not constant variance

Depending on the test we accept the null hypothesis at 5% level of significance which means there is constant variance because prob>chi^2=0.8980, or p-value is greater than 0.05 level of significance so we accept the null hypothesis meaning there is constant variance.

4.2.7 Result of Autocorrelation Test

The result of the test is presented in table 4.2.7 Breush-Godfrey Lagrange Multiplier (LM) test is used to perform VEC Residual Serial Correlation Test. Autocorrelation may arise due to omitted explanatory variables, miss-specification of the mathematical form of the model, interpolation in the statistical observations or miss-specification of the true random term. The table shows that at lag order 2, the results are not significant so the null hypothesis of no serial correlation in the model is accepted. This implies that the random variable "u" is not correlated with its previous values; hence there is no serial correlation in the model.

Table 4.2.7 Result of Residual Serial Correlation Test

Lagrange-multiplier test

Lag	Chi2	Df	Prob > chi2
1	**39.4769**	**36**	**0.31728**
2	**35.0803**	**36**	**0.51216**

H0: no autocorrelation at lag order

4.2.8 Normality Test

The result of the normality test is presented in table 4.9 below. It reveals that the chi-squared result of Jarque-Bera is statistically significant. Thus, the null hypothesis of normal distribution of the residuals is rejected.

Table 4.2.8 Result of Residual Normality Test

VECM Residual Normality Tests

Jarque-Bera test

Equation	chi2	Df	Prob > chi2
D_exp	56.459	2	0.00000
D_rgdp	1.156	2	0.56088

D_top	29.469	2	0.00000
D_dc	0.298	2	0.86159
D_reer	12.298	2	0.00214
D_tot	0.822	2	0.66284
ALL	100.503	12	0.00000

Computed by stata 12, data source NBE. 2019

There is normality problem since prob > chi2 < 0.05. That means 0.00000 is less than 0.05.4.2.9 Autocorrelation test

Autocorrelation test is the relationship not between two or more different variables, but between successive values of the same variable and if tested by Durban Weston and Durbin's alternative test for autocorrelation. If d-statistics is greater than R^2 it gives robust result and this robust result explains free from autocorrelation problem or there is no autocorrelation.

Therefore, there is no autocorrelation. (Gujarati 2007) If the calculated' value is much smaller (close to zero) or much longer than two (close to four) we will reject our null hypothesis which indicate that there is autocorrelation. However, if the value of d is expected to be about two there is no serial autocorrelation. The R^2, the adjusted R^2, the F value and the Durbin-Watson value show that the model is strong.

Table4.2.9 result of autocorrelation **test**

Breusch-Godfrey LM test for autocorrelation

Lags (p)	Chi2	Df	Prob>chi2
1	2.985	1	0.0840

Source;stata result,2019.

Decission Rule

H0- no autocorrelation

H1-autocorrelation exist

From the above result, **Prob > chi2 is** greater than 0.05 or 5% critical value, i.e. **0.0840or8.4% is greater than** 0.05 or 5% at first difference. So the researcher reject alternative hypotheses and accept the null hypotheses which means that there is no autocorrelation,and it is statistically significant.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1 CONCLUSION

The vital question investigated in this paper is which factors significantly determine the export performance of Ethiopia. To address this question we use the time series data consisting of the period 1985-2018. The study uses secondary data collected from different sources. In this study total export is used as dependent variable and terms of trade, trade openness, real gross national product, real effective exchange rate, and domestic credit are expected to affect export performance of the country are used as independent/explanatory variables.

Accordingly, the first task was estimation using OLS technique to test the relationship between total export performance and explanatory variables.

On the other hand except these trade openness explanatory variables all other variables such as real gross domestic product, real effective exchange rate, and terms of trade over a period were found to affect the dependent variable significantly and positively as already anticipated. The coefficient of domestic credit was negative despite its significance.

The result also revealed that real effective exchange rate affects export of Ethiopia positive and significant coefficient indicates that depreciating the real exchange is enhancing export of Ethiopia.

5.2 RECOMMENDATION

Based on the findings of this study the following recommendation may be drawn:

The model depicted that there is a positive and significant relationship between the real exchange rate and export performance. So the government has to ensure a stable exchange rate policy in order to avoid the exchange rate risk attached to the assets, import prices and profit considerations of direct investor in developing countries that contributes to improve and promote export growth sector.

The positive and significant coefficients of the production capacity, denoted by real GDP is suggests that macroeconomic policy reforms aimed at improving the growth of real GDP, which enhances the total export performance of Ethiopia.

The negative and significant coefficients of the domestic credit is suggests that macroeconomic policy reforms aimed at improving the growth of domestic credit, which enhances the total export performance of Ethiopia.

The negative and significant coefficient of the terms of trade is suggest improving terms of trade enhance export performance of Ethiopia.

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Appendix

```
. reg exp rgdp top dc reer tot
```

Source	SS	df	MS		
Model	6.8438e+15	5	1.3688e+15	Number of obs	= 34
Residual	2.3104e+14	28	8.2514e+12	F(5, 28)	= 165.88
				Prob > F	= 0.0000
				R-squared	= 0.9673
				Adj R-squared	= 0.9615
Total	7.0748e+15	33	2.1439e+14	Root MSE	= 2.9e+06

exp	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
rgdp	11662.38	458.0189	25.46	0.000	10724.17	12600.59
top	12.64147	21.07418	0.60	0.553	-30.52704	55.80997
dc	-2201110	460743.9	-4.78	0.000	-3144901	-1257319
reer	-17946.17	9194.8	-1.95	0.061	-36780.87	888.5218
tot	-83.87724	10.53332	-7.96	0.000	-105.4538	-62.30072
_cons	-2.36e+07	3641720	-6.48	0.000	-3.11e+07	-1.61e+07

```
. vif
```

Variable	VIF	1/VIF
reer	2.69	0.371253
tot	1.89	0.529937
rgdp	1.46	0.683424
top	1.45	0.687408
dc	1.42	0.706506
Mean VIF	1.78	

```
. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of exp

         chi2(1)      =     0.02
         Prob > chi2  =   0.8980
```

```
. dfuller tot, drift regress lags(1)

Augmented Dickey-Fuller test for unit root         Number of obs   =        32

                                 ------------ Z(t) has t-distribution ------------
                       Test          1% Critical       5% Critical      10% Critical
                  Statistic              Value             Value             Value
------------------------------------------------------------------------------
 Z(t)               -1.810            -2.462            -1.699            -1.311
------------------------------------------------------------------------------
p-value for Z(t) = 0.0403

------------------------------------------------------------------------------
       D.tot |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         tot |
         L1. |  -.2233583   .1233968    -1.81   0.081    -.4757331    .0290165
         LD. |   .0234789   .1860146     0.13   0.900    -.3569637    .4039216
             |
       _cons |   14112.37    10873.8     1.30   0.205    -8127.053     36351.8
------------------------------------------------------------------------------

. dfuller exp, noconstant regress lags(0)

Dickey-Fuller test for unit root                   Number of obs   =        33

                                 ---------- Interpolated Dickey-Fuller ----------
                       Test          1% Critical       5% Critical      10% Critical
                  Statistic              Value             Value             Value
------------------------------------------------------------------------------
 Z(t)               4.786            -2.647            -1.950            -1.603
------------------------------------------------------------------------------

------------------------------------------------------------------------------
       D.exp |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         exp |
         L1. |    .196801   .041119     4.79   0.000     .1130444    .2805576
------------------------------------------------------------------------------
```

```
. dfuller dc, drift regress lags(0)

Dickey-Fuller test for unit root                    Number of obs   =        33

                                 ------------ Z(t) has t-distribution ------------
                       Test          1% Critical       5% Critical      10% Critical
                  Statistic              Value             Value             Value
------------------------------------------------------------------------------
 Z(t)               -2.113             -2.453            -1.696            -1.309
------------------------------------------------------------------------------
p-value for Z(t) = 0.0214

------------------------------------------------------------------------------
        D.dc |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          dc |
         L1. |  -.1466294   .0694057    -2.11   0.043    -.2881832   -.0050756
             |
       _cons |   .2577585   .1743282     1.48   0.149    -.0977862    .6133032
------------------------------------------------------------------------------

. dfuller reer, drift regress lags(0)

Dickey-Fuller test for unit root                    Number of obs   =        33

                                 ------------ Z(t) has t-distribution ------------
                       Test          1% Critical       5% Critical      10% Critical
                  Statistic              Value             Value             Value
------------------------------------------------------------------------------
 Z(t)               -1.383             -2.453            -1.696            -1.309
------------------------------------------------------------------------------
p-value for Z(t) = 0.0883

------------------------------------------------------------------------------
      D.reer |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        reer |
         L1. |  -.1154117   .0834765    -1.38   0.177    -.2856631    .0548397
             |
       _cons |   20.07622    17.7918     1.13   0.268    -16.21039    56.36283
------------------------------------------------------------------------------
```

```
. veclmar
```

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	39.4769	36	0.31728
2	35.0803	36	0.51216

H0: no autocorrelation at lag order

```
. vecnorm, jbera
```

Jarque-Bera test

Equation	chi2	df	Prob > chi2
D_exp	56.459	2	0.00000
D_rgdp	1.156	2	0.56088
D_top	29.469	2	0.00000
D_dc	0.298	2	0.86159
D_reer	12.298	2	0.00214
D_tot	0.822	2	0.66284
ALL	100.503	12	0.00000