ST. MARY'S UNIVERSTITY

SCHOOL OF GRADUATE STUDIES

An Analysis of Ethiopian's Balance of Payments (2004-2015)

BY

SERAWIT BOGALE GEBEYEHU

JUNE 2017

ADDIS ABABA, ETHIOPIA

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ADVISOR: GEMORAW ADNEW (PhD)

A THESIS SUBMITTED TO ST.MARY'S UNIVERSITY, SCHOOL OF GRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE REQUARMENTS FOR THE AWARD OF THE DEGREE MASTER OF ART IN DEVELOPMENTAL ECONOMICS

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MA IN DEVELOPMENTAL ECONOMICS PROGRM

APPROVED BY BOARD OF EXAMINERS

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DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of Gemoraw Adenew (PhD). All sources of materials used for thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree

…….. **……..**

Name **Signature**

St. Mary's University, Addis Ababa **June 2017**

ENDORSMENT

This thesis has been submitted to St.Mary's University, School of Developmental Studies for examination with my approval as a university advisor.

…….. ……..

Advisor Signature

St. Mary's University, Addis Ababa **June 2017**

DEDEICATION

This work is dedicated to my father, my great hero who left earth for his heavenly abode while I am writing this piece. And, to my kids, Amanuel and Binyam who supplies me a lot of love without asking me any price in exchange.

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ACRONYMS

BOP	Balance of payment \
CA	Current account
CFA	Capital and Financial account
DSP	Debt Service Payment
EDS	External Debt Stock
ER	External Reserve
GDCF	Gross Domestic Capital Formation
GDS	Gross Domestic Saving
IMF	International Monetary Fund
IPR	Private Investment
MoFED	Ministry of Finance and Economic Development
MOT	Ministry of Trade
NBE	National Bank of Ethiopia
NI	National Income
SDR	Special Drawing Right
TDS	Total Debt Service
SPR	Private Saving

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ABSTRACT

The Analysis of Ethiopian Balance of Payments based on Descriptive statistics, National Income Accounting Framework and Econometrics technique aimed at identifying the major determinants of Ethiopian Balance of Payments which have been a matter of interest to the Ethiopia macro economics policy maker for a long period of time. The study used time series data for the period between 2003/04 – 2014/15 collected from CSA, NBE, World Bank Group and IMF.

Estimation result of the model shows that gross saving and gross investment are the main determinant of Ethiopian balance of payments. Therefore to rise Ethiopian gross saving and to reduce the resource gap, the National Bank of Ethiopia and the Ethiopian government should develop a strategy to enhance the gross saving.

Keywords:
Ethiopia; Balance of payment, National Income Account Framework, Gross Saving Gross Investment and Tax.

CHAPTER I INTRODUCTION

1.1 Background of the Study

International Monetary Fund (IMF) defines the balance of payments (BOP) as a term that is used to refer to an accounting record for all the monetary transactions conducted by a country with other countries within a specified period of time, usually one year. It comprises all types of transactions of a country like – exports and imports of goods and services, purchase and sale of foreign assets, foreign direct investment and portfolio investment as well as borrowing from and lending to the rest of the world. It is preferably presented in the country's domestic currency (IMF, 1996). In the BOP transactions if a country has received money, this is known as a credit, and if a country has paid or given money, the transaction is counted as a debit. Theoretically, the BOP should be zero, meaning that assets (credits) and liabilities (debits) should balance, but in practice, this is not happen.

The greatest importance's of balance of payments lie in its serving as an indicator of international economic position of any country. It can also be used to appraise a nation's short-term international economic prospects, to evaluate the degree of its international solvency, and to determine the appropriateness of the exchange rate of country's currency (Mundell, 1968).

Balance of payments' can be favorable (positive), unfavorable (negative) or indifference (around zero). (Kennedy, 2013) argues that a country's favorable balance of payments cannot be taken as an indicator of economic prosperity or the unfavorable balance of payments is not a reflection of economic failure. A poor country may have a favorable balance of payments due to large inflow of foreign loans, foreign aids and equity capital. A developed country may have unfavorable balance of payments due to massive assistance given to developing countries. Thus, a deficit or surplus of balance of payments of a country per se should not be taken as a sign of economic failure or prosperity of the country. However, the longer the balance of payments deficit continues, the more it would imply some fundamental problems in that economy because of the following reasons.

- If a balance of payment deficit is financed through borrowing, it is unsustainable in the long term and countries will be burdened with high interest payments .Countries with large interest payments have little left over to spend on domestic investment

For example Ethiopian budget proposal for debt service for the year 2017/18 is more than three times compared to the education budget.

- If countries run a current account deficit, it means it needs to run a surplus on the capital account. Getting capital account surplus means foreigners have an increasing claim on the domestic assets, which they could desire to be returned at any time. There is also a risk that the countries best assets could be bought by foreigners, reducing long term income and increases the balance of payments deficit. Ethiopia is selling many of its public enterprise like the brewery industry to foreigner in the form of FDI to mitigate the current account deficit. However, in the long run the current account deficit would return back through FDI profit expatriate.
- A current account deficit may imply that countries are relying on consumer spending, and are becoming uncompetitive. This leads to lower growth of the export sector (Umer, 2010). This is particularly a problem for countries like Ethiopia which lack competitiveness in the international market that may be the reason for large current account deficits.
- A Balance of payments deficit may cause a loss of confidence by foreign investors that the investors may remove their investments causing a big fall in the value of domestic currency (devaluation). This can lead to decline in living standards and lower confidence for investment (Imoisi, 2012).

Therefore, it is prudent to know the factors or the variables that affect and understand the changes in the balance of payment to make an informed economic decision. This study investigates the determinants of balance of payments in Ethiopia for the period between 2003/04-2014/15. The study also leads to a better understanding of the factors that affect the balance of payments, their significance and policy implications.

1.2 Statement of the Problem

Despite the relatively extensive theoretical and empirical literature, there is no consensus on the determinants of balance of payment especially in developing countries. It means that the nature, performance and determinants of the balance of payment remain an empirical problem in developing countries, (Ajayi, 2014).

Ethiopian National Bank Annual Reports have confirmed that since 1953 the state of the balance of payments of Ethiopia especially the current account has not been healthy except

on the eve of the revolution (1973-74) in which the country had a positive trade balance of Birr 76 million. In every year since then, the balance has been not only negative but also widening. The same national bank annual reports also show that since 2004 Ethiopian economic growth rates became constantly high and stable but produce the same deficit in the balance of payments. This study aimed at identifying why Ethiopian balance of payment is widening while Ethiopia has a stable and high economic growth

1.3 Research Question

1. What are the main economic factors determining Ethiopian balance of payments?
2. What should be done to reduce the balance of payments deficit?

1.4 Objective of the Study

The paper specifically focused on the following research objectives:

- Analyzing the trends of the BOP and identify significant economic factors that influences the balance of payment during the period of 2004 to 2015.

1.5 Significance of the Study

The study of balance of payments has become a matter of great interest to all concerned. It has been said that Balance of Payments is just like a financial statement of a bank or a business that reveals the financial condition of the country (Umo, 1995).

The analyses of the balance of payments are significant because:

- It helps in formulation of a country's monetary, fiscal and trade policies.
- It helps in determining the influence of foreign trade & transactions on the level of national income of a country.
- It will provide information to banks, firms, financial institutions and individuals which are directly or indirectly involved in international trade and finance.

The findings of this study will shed light on the factors that has significance on the balance of payment of Ethiopia. The result and recommendation of this study will be valuable to the respective policy maker uses as input for their policy analysis. Besides, this research study will be a basis for other researchers in similar topic.

1.7 Scope and Limitation of the study

The study covers between 2004 and 2015, the years the economy growth rates became constantly high and stable but the balance of payments deficit is widening.

Limitation of this study lies on the quality of the data. The study uses secondary sources of data. The Central Statistics Agency (CSA) and the National Accounts Department of the Ministry Finance and Economic Development are the two Ethiopian official institutions that are responsible for keeping track of the statistical data. But neither organization has the institutional capability to collect reliable and accurate economic data. According to (IMF, 2014) in its assessment of data adequacy of the Ethiopian government finds out limitation on data quality on National account; Finance statistics; Monetary statistics, and in the Balance of payments.

1.7 Organization of the study

The study has five chapters. The first chapter contains the introductory part including statement of the problem, objectives, significance of the study and scope and limitation of the study. The second chapter presents both theoretical and empirical literature review. The third chapter presents data sources, data collection method and methodology of data analysis. The fourth chapter includes analysis of Ethiopian balance of payments based on descriptive and inferential statistics. Finally, chapter six gives conclusion and policy recommendations.

CHAPTER TWO REVIW OF LITERATURE

2.1 Definition of Concepts

Balance of payment (BOP) is a statistical statement that systematically summarizes, for a specific time period, the economic transactions of an economy with the rest of the world.

Transactions, for the most part between residents and nonresidents, consist of those involving goods, services, and income; those involving financial claims on, and liabilities to, the rest of the world; and those (such as gifts) classified as transfers, which involve offsetting entries to balance—in an accounting sense—one-sided transactions.

Capital Account: capital account can be regarded as one of the primary components of the balance of payments of a nation. It gives a summary of the capital expenditure and income for a country.

Current Account: Current account is the two component accounts of the balance of payments of a nation. It records the trade of goods and services of an economy with other countries of the world

Foreign Direct Investment: Refers the long-term capital investment, such as the purchase of construction machinery, building, or whole manufacturing plants. If foreigners are investing in a country, that represents an inbound flow and counts as a surplus item on capital account

Economic Integration: Economic integration is an economic arrangement between different regions, marked by the reduction or elimination of trade barriers and the coordination of monetary and fiscal policies. The aim of economic integration is to reduce costs for both consumers and producers, and to increase trade between the countries taking part in the agreement

Exchange Rate: The price of a nation's currency in terms of another currency. An exchange rate thus has two components, the domestic currency and a foreign currency, and can be quoted either directly or indirectly. In a direct quotation, the price of a unit of foreign currency is expressed in terms of the domestic currency. In an indirect quotation, the price of a unit of domestic currency is expressed in terms of the foreign currency. An exchange rate that does not have the domestic currency as one of the two currency components is known as a cross currency, or cross rate International Trade: The exchange of good or serviced along international borders. This type of trade allows for a greater competition and more competitive pricing in the market. The competition results in more affordable products for consumer. The exchange of goods also affects the economy of the world as dictated by supply and demand, making goods and service obtainable which may not otherwise be available to consumers globally.

Portfolio Investment: refers to the purchase of shares and bonds. The income derived from these assets is recorded in the current account. The capital account entry will just be for any buying or selling of the portfolio asset in the international capital market

Saving Gap: It referees to the deficit between current aggregate savings and the level of savings required to provide funds for business investment. This type of savings gap is also called a 'savings-investment' gap.

Special Draw Right (SDR): is essentially an artificial currency used by IMF and is basket of national currencies. The IMF uses SDRs for international accounting purpose. SDRs are allocated by the IMF to its member countries backed by the full faith and credit of the member countries government.

Terms of trade (TOT): refers to the relative price of exports in terms of imports and is defined as the ratio of export prices to import prices. It can be interpreted as the amount of import goods an economy can purchase per unit of export goods.

2.2 Components of balance of payment

Mundell (1968) categorized and defined balance of payments into the Current Account, the Capital Account, Financial account, Official Reserve and the Statistical Discrepancy.

I. The Current Account

The current account is one of the two primary components of the balance of payments. It t includes: trade account; income account, cash transfer account

1 The Trade Account

The trade account measures the difference between the value of exports and imports of goods and services. A trade deficit occurs when a country imports more than it exports. The trade deficit is by far the largest component of the current account deficit. In fact, fluctuations in the trade deficit are the primary cause of fluctuations in the current account deficit. The trades account is also one of the four components of the gross national product (GNP), along with consumption, investment, and government expenditures.

2. The Income Account

The income account measures the income payments made to foreigners and net of income payments received from foreigners. The income account largely reflects interest payments made by a country on its foreign debt and interest received by a country on its foreign assets. An income deficit arises when the value of income paid to foreigners exceeds the value of income received from foreigners.

3. The Cash Transfer Account

The third component is direct transfers, which includes government grants to foreigners. It also includes any money sent back to their home countries by foreigners. Direct transfers refer to money transferred without exchanging any goods or services.

II. The capital account

The capital account records the net change in ownership of foreign assets. It includes the reserve account (the foreign exchange market operations of a nation's central bank), along with loans and investments between the country and the rest of world. Capital account may also includes: Inheritances, Migrants' transfers, Debt forgiveness,

A capital account balance can be surplus or deficit. A surplus on the capital account means that there are more investment funds flowing into the country than out. This may be to fund a deficit on the current account of the balance of payments. This inward investment may be helpful to the economy and help create jobs and boost growth, but anyone investing in an economy expects a return. This means that a surplus on the capital account will lead to outflows of interest and dividends in the future.

The inflow of funds may exert an upward pressure on the exchange rate as the demand for the domestic currency will increase. This might adversely affect the current account if the increase in export prices makes exports less competitive.

A capital account deficit on the other hand will mean a net outflow of investment funds. This means the country is building up a portfolio of overseas investments, which may lead to future returns of interest, profit and dividends. This may be beneficial in the medium-term. However, short term speculative outflows of funds may have disastrous effects on an economy in terms of the depreciation of the exchange rate, loss of confidence, impact on investment, output and jobs.

III. The Financial Account

It records government-owned international reserve assets (foreign exchange reserves, gold, and special drawing rights with the International Monetary Fund), foreign direct investment, private sector assets held abroad, assets owned by foreigners, and international monetary flows associated with investment in business, real estate, bonds, and stocks.

A country's financial account is broken further down into two subaccounts: the domestic ownership of foreign assets and the foreign ownership of domestic assets. If the domestic ownership of foreign assets portion of the financial account increases, it increases the overall financial account. If the foreign ownership of domestic assets increases, it decreases the overall financial account; the overall financial account increases when the foreign ownership of domestic assets decreases. Together, a country's domestic ownership of foreign assets and foreign ownership of domestic assets measure the international ownership of assets with which the country is associated.

IV. The Official Reserve

The final component of the financial account consists of official reserve transactions (OR). The OR subsection of the financial account tracks the international currency dealings of a country's central bank. The central bank interacts not only with the domestic bond and money markets, but also with international currency markets, with foreign central banks, and with international institutions like the International Monetary Fund, and the World Bank.

The other entire non-central bank international transactions carried out by the government are recorded under government assets, in the category called other than official reserve assets. As part of its task of conducting monetary policy at the national level, the central bank may hold a diversified international portfolio that includes international currency reserves and foreign government bonds.

V. The Statistical Discrepancy

The Statistical Discrepancy (SD) is defined as the sum of all the BoP items with their signs reversed i.e. SD = - (Current Account + Capital Account + Financial Account)

In country multibillion dollar economies, it is difficult to keep track of every transaction. Not all the sources of information are reliable, for instance, multinational are often in a position to report their profits in the country which will impose the lowest rates of corporate taxes and

this may not be the country where the profit was actually generated. There are always also illegal international transactions which may throw off the neat double entry balance.

2.3 Theoretical Literature

Theories of Balance of Payments are concerned with identifying possible determinants of BoP, and specifically analysis of policies for preserving BoP equilibrium. According to Johnson (1972) prior to 1930s, no comprehensive theory of BoP was available for analysis instead there was a well worked out theory of mechanism of international adjustment under the gold standard. This approach is also known as the Classical Price-Specie-Flow mechanism. The mechanism assumes that citizens in deficit (surplus) country would experience a negative (positive) real balance effect. And, because of changed relative prices and real balances, residents of deficit country would purchase less from abroad, and citizens of surplus country would increase their imports. This process would continue until payments balance is restored. David Hume used this mechanism to refute the mercantilist belief that a country could achieve a persistent balance of trade surplus by the mercantilist policies of import protection and export promotion. However, in the real world both the mercantilist and David Hume theory of the balance of payment was not working and researchers engaged in studying the source of balance of payments disequilibrium and the mechanism to correct the disequilibria.

2.3 .1 Type of disequilibrium balance of payments

Mundell(1968) classified the type of disequilibrium balance of payments as follows: - Temporary disequilibrium; Fundamental disequilibrium; Cyclical disequilibrium; and Structural disequilibrium

1. Temporary disequilibrium

Temporary disequilibrium in the form of deficits or surpluses tends to last for a short period of time. They are the result of temporary changes in the economy like - crop failure, seasonal fluctuations, effect of weather on agricultural production, etc. Such disequilibrium may occur once a while and gets automatically corrected. It does not pose a serious problem for a country.

2. Fundamental disequilibrium

There is no precise definition of the term fundamental disequilibrium. Economists generally define fundamental disequilibrium as - “a deep rooted persistent deficit or surplus in the BOP of a country.”

3. Cyclical disequilibrium

Cyclical fluctuations in the business activity also lead to BOP disequilibrium. Cyclical disequilibrium occurs because –

- Trade cycles follow different paths and patterns in different countries.
- Different countries follow different stabilization programmes.

4. Structural disequilibrium

Structural disequilibrium occurs due to structural changes in the economy. Some of the structural changes would include – changes in technology, changes in tastes and preferences, changes in long – term capital movements, etc

2.3.2 Source of balance of payments disequilibrium

The factors leading to disequilibrium (surplus or deficit) in balance of payments could be broadly categorized into three: Economic factors, Social factors and Political factors (Mundell, 1968). He further illustrates the economic factor as follow:

- Structural changes in the economy,
- Changes in exchange rates (overvaluation /devaluation),
- Changes in the level of foreign exchange reserves,
- Cyclical fluctuations,
- Inflation / deflation
- Developmental expenditure undertaken by developing countries- developing countries in the early stage of their development imports massive capital from developed countries.

2.3.3 Theory of an adjustment of disequilibrium in balance of payments

An adjustment of disequilibrium in BOP can broadly divide into two types: Automatic and Policy Induced or Deliberate (Johnson, 1977).

According to Johnson (1977) under automatic adjustment, the BOP adjustment comes automatically; it is not brought deliberately by government policy or intervention. The burden of adjustment is on the economy and market forces and not on the government. If market forces of demand and supply are allowed to have a free play, in course of time, BOP equilibrium will be automatically restored. Assuming fixed or flexible exchange rates, the automatic adjustment in BOP takes place through changes in prices, interest rates, income and capital flows. Thus, under automatic adjustment there is no government intervention.

However, it is to be noted that automatic adjustment does not confirm to reality and has unwanted side effects.

Johnson (1977) show Policy Induced approaches broadly divided into: Absorption, Monetary and Elacities Approach.

2.3.3.1 The Absorption Approach:

According to Umo(1995), Alexander (1952) is the one who pioneered the development of the absorption to BOP adjustment in his article, "The effects of Devaluation on the Trade Balance" .The absorption approach looking the BOP, not as a relation between the country's debits and credits on International account, but rather as an element in the relation between aggregate receipts and expenditures of the economy.

It concentrates on the relationships of real expenditure to real income and on the relationships of both of these to the price levels. The foreign balance (B) is the difference between total output of goods and services (Y), and the total absorption (A) of these goods and services by the home economy. Absorption here is the name given to the aggregate of domestic demand ($C + I_d + G$), that is the amount of goods and services taken off the market domestically**.**

Thus, $B = Y - A$.

Where B, is the balance of payments (net) and

"Y" and "A" are stand for total domestic output and expenditure respectively.

If total output is larger than total expenditure, the country will have a surplus in its BOP and if the total expenditure is larger than the total output the country will have a deficit, and if output equals expenditure, the BOP will be in equilibrium. If a country has a deficit it can, in principle, close the deficit in one of two ways; by reducing expenditure or by increasing output.

It is often difficult to increase output in the short-run especially if the country already has full employment. Therefore, the chief means for reducing a deficit is usually an expenditure reducing policy. It is sometimes said that there are two main ways in which a deficit can be corrected: by expenditure reducing or expenditure switching policies.

2.3.3.2 Monetary Approach

The Monetary approach to the balance of payments, which came to popularity in the 1970s, emphasizes the monetary aspects of the balance of payments. It looked beyond merchandise trade and incorporated the important role of financial assets (Melvin, 1992). Under this

approach, money market disequilibrium is seen as a crucial factor provoking balance of payments disequilibrium. The stock imbalance between the demand for and supply of money causes external disequilibrium or balance of payments.

All else equal, an increase in money demand will bring about a balance of payments surplus and an accompanying increase in the money supply that maintains money market equilibrium. An increase in domestic credit raises money supply relative to money demand, all else equal: So the balance of payments must go into deficit to reduce the money supply and restore money market equilibrium (Melvin 1992).

According to IMF,(1996) an important contribution of the monetary approach was to stress that in many situations, balance of payments problems result directly from imbalances in the money market, and that a policy solution that relies on monetary policy is therefore most appropriate. A large balance of payments deficit may be the result of excessive domestic credit creation, for example. Even though this balance of payments deficit will generally involve both a current account deficit and a positive private financial account balance, it would be misleading to view it as fundamentally due to an exogenous fall in relative world demand for domestic goods or assets. There are many realistic cases, however, in which a balance of payments analysis based on the monetary approach is roundabout and possibly misleading as a guide to policy. Suppose, for example, that a temporary fall in foreign demand for domestic products does occur. This change will cause a fall in the current account and in the balance of payments, but these effects can be counteracted (when rigid capital account restrictions are not in place) by a temporary expansionary fiscal policy. Because output and thus money demand fall, the monetary approach also predicts that a balance of payments deficit will result from a fall in export demand. It would be wrong, however, for policy makers to conclude that because the balance of payments deficit is associated with a fall in money demand, a contraction of domestic credit is the best response. If the central bank were to restrict domestic credit to improve the balance of payments, unemployment would remain high and might even rise. While the monetary approach is an extremely useful analytical tool, it must be applied with caution in seeking solutions to macroeconomic problems. It is most useful for formulating solutions to policy problems that are a direct result of shifts in domestic money demand or supply

2.3 .3.3 The Elasticity Approach

Johnson (1977) stated the elasticity approach tries to predict the outcome policy changes on the balance of payments. This approach illustrates how exchange rates will affect the balance of payment. In theory, according to him, the exchange rate will have an impact on the current account. If there is depreciation in the exchange rate, then that particular country will experience a fall in the foreign price of its exports. It will appear more competitive and therefore there will be a rise in the quantity of exports. Assuming demand for exports is relatively elastic then depreciation will lead to an increase in the value of exports and therefore improve the current account deficit. Similarly a depreciation of the exchange rate, will also lead to an increase in the cost of buying imports. This will lead to a fall in demand for imports and also help to reduce the current account deficit. Theoretically, it is said that devaluation would:

(a) Encourage exports and discourage imports of goods and services and thereby improve trade balance and current account balance.

(b) It would encourage capital inflows and improve capital account balance. The two tendencies together would improve the overall BOP situation of the country.

The effect of devaluation on terms of trade depends on demand and supply elasticity's for exports and imports.

According to Johnson (1975) the success of devaluation depends on some essential conditions such as:

1 The demand for exports & imports should be fairly elastic. In other words, it should satisfy Marshall – Lerner condition, the condition that an exchange rate devaluation or depreciation will only cause a balance of trade improvement if the absolute sum of the long-term export and import demand elasticity's is greater than unity:

$e_x + e_m > 1$ BOP is improved

$e_x + e_m < 1$ devaluation will worsen (increase the deficit) the BOP

$e_x + e_m = 1$ devaluation has no effect on the BOP situation

Where e_x is the demand elasticity of exports

E_m is the demand elasticity for imports

2 The supply of exports should be adequate to meet the increased demand for exports after devaluation.

3 There should be domestic price stability after devaluation.

4 There should be international cooperation. In other words, the other countries should not adopt measures to counter the effects of devaluation. Such measures would include – increase in tariff duties, export subsidies, etc.

5 Devaluation cannot be successful in isolation, so it should be supported by monetary, fiscal and other trade policy measures.

2.4 Empirical Literature review

A country's balance of payments is said to be always 'balanced' in accounting sense so there would be no 'imbalance' in a country's BOP. However, in practices there is so many economic and non economic factors that disturbs the equilibrium of the balance of payments (Melvin 1992).

Obafemi (1995) investigated the long-run determinants of balance of payment dynamics in Nigeria between 1961 and 1992, using econometric method of co integration and error correction mechanism. They found that all the variables except balance of payment, exhibited non- stationary. The results also indicate that balance of payment co integrated with all the identified explanatory variables, suggesting that balance of payment fluctuations in Nigeria could be caused by the level of

1. Trade openness,
2. External debt burden,
3. Exchange rate movement and
4. Domestic inflation.

They concluded that a reduction in fiscal deficits, an increased domestic production through private investment, inflation targeting and regulated capital market integration are the cure to the negative fluctuation in the Nigerian balance of payment.

Obafemi (1996) investigated the impact of exchange rate adjustments (devaluation) in Nigeria's balance of payments from 1960-1993. Their empirical results, based on two stage-least squares estimating procedures and effective estimation showed that

1 The devaluation coefficient was statistically insignificant and was also of the wrong sign, the magnitude of the coefficient being far from unity, as a priori expected; implying that devaluation may not correct the disequilibrium in Nigeria's balance of payments, all else being equal.

2 The expansion in domestic credit was an important source leading to the worsening of the Nigeria's balance of payments position.

3 The coefficient on change in domestic credit was not only close to unity but different from unity as predicted by the monetary approach. That is, the domestic credit coefficient was found to be -0.8746 instead of -1.00 as a priori expected. The coefficient was statistically significant at about 5 per cent level.

4 The sterilization or neutralization coefficient was statistically significant at better than one per cent level. This result implies that the Central Bank of Nigeria carried out complete neutralization of the domestic money supply within the sampled period (i.e. 1960-1993).

5 Their model failed to track the actual effect of the 65 per cent devaluation in 1986 (where the Naira was devalued by 65 per cent, trading vis-a-vis the US dollar at $1 = N4.60 as against the administered rate of $1 = N1.60, during September 26, 1986 SFEM auction)

Based on their empirical results and analysis, they concluded that devaluation as a policy response to redress the disequilibrium in Nigeria's external sector was an inappropriate policy They went further to identify various factors responsible for the inapplicability of the monetary approach to devaluation in the Nigerian context to include the structure of Nigeria's production, imports and exports coupled with instability in the macro-economy, political instability and unpropitious institutional environment. However, their study indicated the crucial role of domestic credit in macro-economic adjustment.

Debelle (1996) guided by the theories of saving and investment, used cross-section and panel data to examine determinants of current account focusing on the extent to which the variables have been relevant in explaining current account balance across countries and over time for both industrial and developing countries between 1971 and 1993. His Ordinary Least Squares and fixed effects estimation results found significant impact on the stages of development and demographic factors in the cross-section. This implies that the more advanced the economy, the more likely it will experience smaller deficits and vice versa. On the other hand, a country that has an above average dependency ratio tends to have large current account deficits due to decreasing savings.

Dhliwayo(1996) argued that under a system of fixed exchange rates excess money supply induces increase expenditure, hence increased domestic demand for foreign goods and

services. The high domestic demand needs to be financed by running down foreign exchange reserves, thereby worsening the balance of payments. He further explained that the outflow of foreign exchange reserves reduces money supply until it is equal to money demand, thereby restoring monetary equilibrium and halting an outflow of foreign exchange reserves. Therefore an excess demand for money leads to an opposite adjustment, which in turn induces foreign exchange reserves inflow, and hence causes a BOP surplus. This triggers domestic monetary expansion and eventually a restored balance of payments equilibrium position.

Umer(2010) studied the determinants of the balance of payments position typically focusing on explanatory variables that potentially influence investment and saving decisions. The variables usually included were:

(a) Competitiveness indicators, such as the real exchange rate (REER);

(b) catching up indicators, reflecting the state and speed of converge between countries with different income levels e.g. relative per capita income levels of the domestic economy and a reference foreign developed economy;

(c) Demographic factors, such as population growth and the old-age dependency ratio;

(d) Business-cycle indicators, such as the output gap;

(e) Degree of financial market deregulation e.g. ratios such as private sector credit-to-GDP or M3-to-GDP may provide useful proxies for assessing the impact of banking intermediation on domestic private savings and the current account position;

(f) The degree of integration with international goods, services and financial markets;

(g) Fiscal variables, such as the general government balance; and

(h) Other important variables, such as aggregate proxies of investor and consumer uncertainty (e.g. inflation volatility) and special factors having a temporary impact on the current account (e.g. deviation of oil prices and freight rates from their respective long-term averages).

(Kayikci, 2011) applied the Variance auto regression to get the determinants of the current account balance in Turkey. Current account balance, GDP growth rate, investment, savings, terms of trade and oil imports, inflation and real exchange rate were used as the variables in

the model. The results showed that the current account balance was mostly affected by the inflation and the values of current account themselves. In one of the quarters it was established that 40% of the forecast error variance of the current account balance is caused by innovations in its own past and 26% was caused by inflation. Current account balance is also influenced from the innovations in the growth, investment to GDP ratio, saving to GDP ratio, openness, oil prices, and real exchange rate. Other factors were innovations in growths, oil prices, openness savings, investments and real exchange rate.

Mayo (2012) found a major challenge to the Ghanaian economy is the persistence disequilibrium in the balance of payments. Using an annual data set from 1980-2010. The study analyzes the balance of payments for Ghana using a monetary approach with the aid of econometric models. The study shows that the balance of payment disequilibrium in Ghana is not influence only by monetary variables. Out of the four monetary independent variables three were found to be significant. The results also show that domestic credit, GDP growth, and interest rate are found to be significant. Domestic credit and interest rate are negatively related to net foreign assets while GDP growth is positively related. Inflation however is insignificantly related to net foreign assets. However, government expenditure and public debt may influence the balance of payment in Ghana. The implication for policy is that to correct the disequilibrium in balance of payment, government should give equal attention to other policy levels instead of relying solely on monetary tools to attain stability in the country's balance of payments account.

Kennedy (2013) investigated the long-run determinants of balance of payment dynamics in Kenya between 1963 and 2012, using co integration and error correction mechanism. The study uses annual time series data for Kenya.
The paper examined how the determinants of balance of payments lead to adjustments in removing disequilibrium in the balance of payments position. In his study, he starts by specifying the long-run relationship between the following variables:

- Exchange rates,
- FDI and
- Balance of trade and he obtained the following result.

The result obtained from the regression shows that there is negative but significant impact of Foreign Direct Investment (FDI) on Balance of payments. This negativity in the coefficient of

Foreign Direct Investment is in conformity to the prior sign that a negative impact of Foreign Direct Investment on Balance of payments worsens the country's balance of payments deficit. The coefficient of exchange rate is negative contrary to the theoretical expectations. It indicates that a depreciation of the exchange rate causes worsening of the balance of payments. However it is found to be highly statistically significant. This supports the empirical analysis that the impact of the nominal exchange rate and the price differentials between domestic and foreign prices does not seem to play a strong role in terms of the movements in the balance of payments although the coefficient implies that exchange rate movements do have a negligible impact on balance of payments. This result is understandable since the direct impact of the exchange rate is felt on both the current and capital accounts and that is why the competitiveness of a country is determined through the real effective exchange rate. Thus an appreciation of the real effective exchange rate is associated with loss in competitiveness. Therefore the exchange rates seem not to be playing a direct role in the determination of balance of payments in Kenya. He attributes this to other institutional and economic factors .That is, a fall in the real effective Exchange rate has the effect of reducing the trade deficit, though by a small amount. On the other hand the impact of trade balance on the balance of payments is negative and statistically insignificant.

Mwangi (2014) studied the determinants of current account balance in Kenya.
Results of the VECM approach indicate that variables with notable effects are GDP growth rate, exchange rate, balance of trade and inflation. Kenya has been experiencing persistent current account deficits which may be considered as a structural problem that may persist in future. The response of shocks from variables to current account and the magnitude of the variables are key in determining the action to take to salvage the current account situation of Kenya. The growth rate, current account, exchange rate, balance of trade, budget deficit affects the level of saving and investments. Inflation is factor that has most influence on the current account it has considerable impacts on saving and investment. It affects saving positively and investment negatively by representing macroeconomic uncertainty which causes current account balance to Improve. Exchange rate, balance of trade and growth rate together with inflation have long lasting influence on the current account.

2.5 Conceptual framework

Mueller (2011) has laid down the balance of payment accounting framework as follow

BP = CA + CF - _R = 0.....(I)

Bringing the change of reserves (_R) to the right side, one gets

BP = CA + CF = _R.....(II)

In this form the equation demonstrates that when a country's current account (CA) and its capital and financial account (CF) should not balance, the discrepancy will show up as a change in the country's foreign exchange reserve position (_R). If a country's reserve's are depleted (R = 0) or if a certain level of foreign exchange reserves must be maintained (_R = 0) a current account deficit must fully be compensated by a net inflow of foreign capital. If the country can no longer obtain foreign financing, the burden of adaptation falls on foreign trade. On the other hand, a country will accumulate foreign exchange reserves when the sum of the current account (CA) and the capital and financial account (CF) are positive.

The current account balance (CA) contains three major items:

- The net result of the foreign trade in goods (NXG),
- Net exports of services (NXS),
- Net foreign investment income (NFI), and
- Net unilateral transfers (NTR). Any of these sub-accounts can have a surplus or a deficit just like the current account as a whole.

CA = NXG + NXS + NFI + NTR.....(III)

The capital and financial account (CF)

The increase of liabilities to foreigners constitutes capital imports (CIM) and the increases of net assets against foreigners are capital exports (CEX).

The balance equation for the capital and financial account (CF) then is:

CF = CIM – CEX.....(IV)

When the current account is in balance (CA = 0), the capital account automatically is in balance, too. Outflows equal inflows. However, when the current account is in deficit (CA < 0), a positive capital and financial account is required (CF > 0). In order to pay for the excess of domestic absorption as registered by a negative current account, there must a net sale of assets or, in other words, foreign ownership of domestic assets must increase, i.e. non-residents must show up who lend money or buy financial or real assets. Therefore, a positive capital and financial account as the counterpart to a negative current account implies that this country is accumulating debt or that it is losing out on its stock of assets.

The current account can be reduced to an account called net exports (NX).

NX = EX – IM.....(V)

The balance of payments equation then becomes

$BP = (EX - IM) + (CIM - CEX)$.....(VI)

and the overall balance of payments equation can be reduced to

$BP = NX + CF$.....(VII)

Under the constraint that a certain level of foreign exchange reserves must be maintained ($\_R = 0$) ii the balance becomes

$NX + CF = 0$.....(VIII)

Thus, negative net exports ($NX < 0$) require a positive capital flow ($CF > 0$) and vice versa.

$- NX = CF$.....(IX)

$NX = - CF$.....(X)

When one country has a deficit in the current account, some other country or group of countries must have a surplus. If the countries that have a current account surplus finance the deficit country by exporting capital, there will be no balance of payment problem in the short run. It may seem as if a country could go on forever importing more goods and services than it exports. There seems to be no reason for concern, and usually this is where a conventional analysis would stop probably only adding that flexible exchange rates will do the balancing act. But while in fact the game can go on for a long time, limits will show up sooner or later. These limits will appear in the net investment position.

CHAPTER THREE DATA AND METHODOLOGY

3.1 Data type and Source

This study used secondary data. The data were collected from National Bank of Ethiopia, Ministry of Finance and Economic development and the Central Statistics Agency (CSA), The World Bank Group and IMF. All the Ethiopian's Balance of payment account data were

collected from the National Bank of Ethiopia. According to National Bank of Ethiopia Report (2000) the legal basis for the compilation and the dissemination of the BOP relies on Proclamation No. 83/1994 which gives the Bank power to prepare periodic economic studies, together with forecasts of the BOP, money supply, prices and other relevant statistical indicators of the Ethiopian economy. Therefore, the collection of data is based on administrative records and on banking reports. The Balance of Payments and International Economic Conditions Follow-up Division (BOP Division) of the National Bank of Ethiopia (NBE) obtains statistics from a number of agencies and institutions, such as:

- Ethiopian Customs Authority
- The banking system
- The Ministry of Finance and Economic Development,
- Ethiopian Air Lines,
- Ethiopian Shipping Lines,
- Ethiopian Telecommunication Corporation and other government agencies.

According to the National Bank of Ethiopia annual report (2000) the following description shows how the data was collected by respective agency.

- Export and import of goods:

Data on exports and imports are collected by the Customs Authority through custom declaration forms prepared by the special Clearing Agency and are subjected to verification checks by a post import control unit of the customs throughout Ethiopia. Data are compiled and disseminated through the Automated System for Customs Data and Management (ASYCUDA). Customs Authority frequently makes valuation changes by substituting a minimum price for undervalued declarations. The BOP Division also gets fuel imports from Ethiopian Petroleum Enterprise, fertilizer imports and coffee export from Ministry of Agriculture and Rural Development and gold exports from the National Mining Corporation. These data are used for comparison purposes with the customs' data. Customs data are viewed as final data; the others are used when customs data are not yet available.

- Services:

With the exception of freight and communication services, the BOP Division relies on transactions undertaken through the banking system to record the entries for the services component of the balance of payments. Information related to transportation services and

freight is partially obtained from the Ethiopian Air Line and Ethiopian Shipping Lines. Ethiopian Telecommunications Corporation is the source for communications services data. No separate or independent surveys are conducted.

- Income:

Data on compensation of employees are obtained from Banking and Foreign Exchange Directorate of the National Bank of Ethiopia. Data on investment income are also obtained from the same source, Banking and Foreign Exchange Directorate of the National Bank of Ethiopia. Many of the other income receipts are derived from deposits abroad by the NBE and commercial banks. The debit entries for income on loans comprise payments of interest on loans; this information is obtained from the NBE and the Ministry of Finance and Economic Development (MOFED).

- Current and capital transfers:

The BOP Division receives fairly comprehensive data on "franco-valuta" imports (imports that are not financed through the banking system, such as transfers in kind), cash grants to individuals and government and non-government agencies. No data are available on the value of technical assistance provided to Ethiopia. Information on official debt forgiveness is obtained from the Credit Department of the MOFED. No estimates are made so far for the acquisition/disposal of non-produced, non-financial assets.

- Foreign direct investment:

Currently, foreign direct investment is estimated by taking 30 percent of the discrepancy between the import data of the Ethiopian Customs Authority and the banking system net of franco-valuta and other in-kind imports financed from other sources. This difference captures imports of machinery and equipment by direct investors which are not recorded by the banking system.

- Official reserve assets:

Data on reserve assets comprising monetary gold, Special Drawing Rights, the reserve position in the Fund and foreign exchange are obtained from the monetary survey and include foreign positions of the NBE and commercial banks.

- Exceptional financing:

Data on exceptional financing including arrears, debt relief and grants/borrowing for BOP purposes, are obtained from MOFED

3.2 Methods of Data Analysis and Econometrics Model Specification

For the purpose of analyzing Ethiopian balance of payment, this study has been using time series data for the period 2004-2015. The analyses were carried out based on Descriptive statistics, National Accounting Framework and Econometric technique.

Model specification

$$y = a + b1x1 + b2x2 + b3x3 + ei$$

Where:

y = Balance of payments

X1 = Savings

X2 = Expenditure

X3 = Exchange rate

a= Intercept

b1,b2,b3 = Slopes

ei = error term

3.3 Description of independent variables

- Resource Gap (Gross Saving -Gross Investment)

National savings rate or gross saving rate in macroeconomic theory is defined as the combination of public and private saving rates of a nation.

Gross saving = Public saving + Private saving

Public Saving

Tax minus Government expenditure

It is important to look the impact of the government budget on the balance of payments. When the government collects tax more than its expenditure there would be a surplus budget that increases the gross saving and when the government collects less tax compared to its expenditures, it brings budget deficit that reduces the gross saving

Private saving is a part of gross saving the saved by general public from part of the disposable income. The more the private citizen saved, the more the gross saving

Investment

It plays very important role in the balance of payment in low saving countries like Ethiopia which finance their investment through domestic borrowings, FDI, foreign loan, and grants. Therefore, it is important to study this variable on the balance of payment

Exchange Rate:

It defines the price of a nation's currency in terms of another currency. Theoretically, devaluation improves the country balance of payment through balance of trade. It is important to see the effect of devaluation in Ethiopian context

CHAPTER FOUR RESULT AND DISCUSSION

4.1 Descriptive Analysis

The following topic scrutinize the trends of the major Ethiopian balance of payments component such as; Current account, Capital account and the Official reserve account, for the period between 2003/04 to 2014/15.

4.1.1 Current Account

According to several NBE annual reports, Ethiopia has never showed a surplus current account balance almost for the last half century. The deficit of the current account balance has largely come from its merchandise trade balance. However, the same NBE annual report shows external resource flows, such as Foreign Direct Investment (FDI), grant, external loan and remittances of migrants could play a vital role on offsetting the worsening of current account deficit

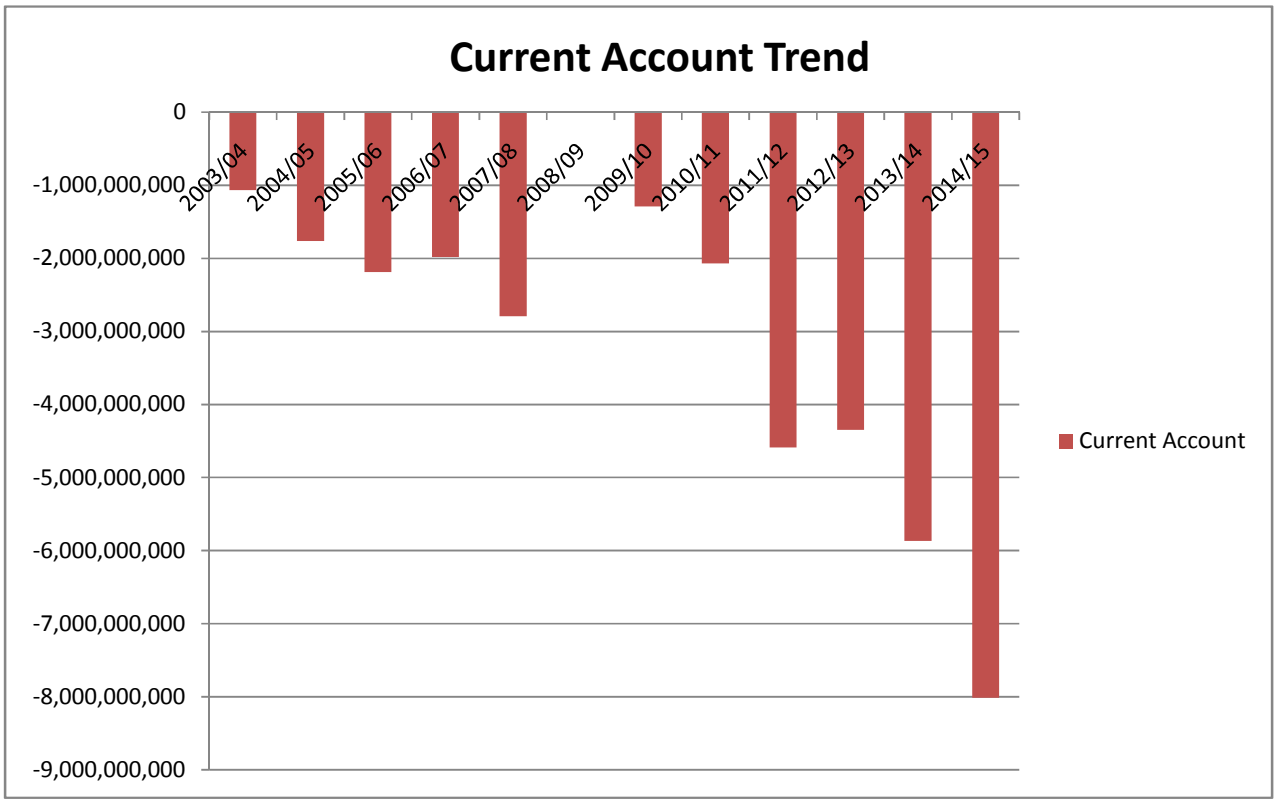


Figure 1: Current account trend

Source: National Bank of Ethiopia Annual Report between 2003/04 to 2014/15

As we have seen from the figure every year the current account balance is in deficit. The deficit between the years between 2003/04 to 2014/15 went up from $ 1,068,190,000 to $ 8,012,600,000 or 650%. The number could be much worse if we take off the unilateral current transfer. To look the current account balance in detail, it is better to see the component of the current account, particularly the following elements:

- Merchandise Trade
- Transfer payment mainly the remittances and
- Service income

4.1.1.2 Merchandise Trade

Merchandise trade is a nation's exports of goods and services and its imports of goods and services, if all financial transfers, investments and other components are ignored .A nation is said to have a trade surplus if it export more than its import. Positive net sales overseas generally add to a current account surplus; negative net sales abroad generally contribute to a current account deficit. Because exports generate positive net sales, and because the trade balance is typically the biggest component of the current account, a current account surplus is usually associated with positive net exports.

4.1.1.2.1 Export

According to (NBE, 2014/15) Ethiopia's export has been limited to few primary products, which are mainly agricultural commodities like coffee, live animals, chat (a mildly narcotic amphetamine-like leaf), fruit and vegetables. In 2014/2015, Ethiopia's major exports included: coffee (27%), oil seeds (17%), Editable vegetables (17%), flower and tree (7%), live animal (5%), row leather (3%), meat production (3%) and other (8%)

The same National Bank Annual Report reveals that major destinations for Ethiopia's exports in 2014/2015 were: Asia 38% (China accounted for 12%), Europe 33% (Switzerland accounted for 10%) and Africa 20% (Somalia, Djibouti and Sudan jointly accounted for 87%).

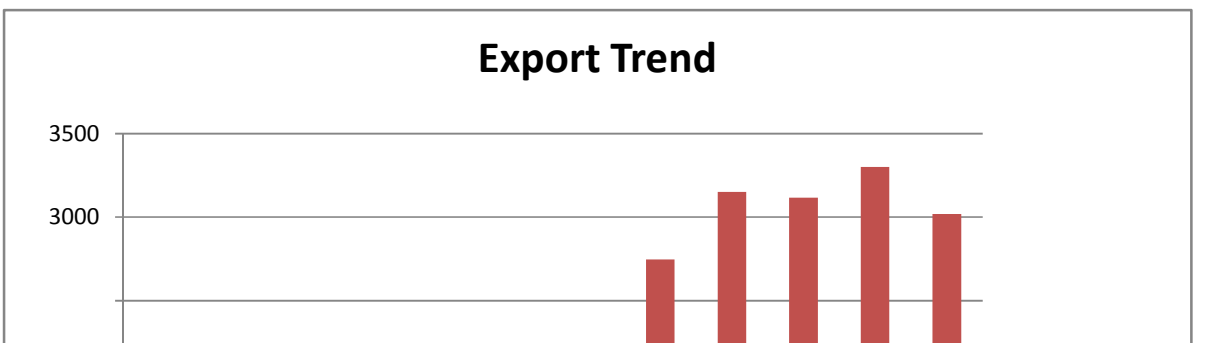


Figure 2: Export trend

Source: National Bank of Ethiopia Annual Report between 2003/04 to 2014/15

Although Ethiopia's total exports have been growing at an average rate of 15.23 per cent or from $600.5 million to $3,019.3 billion between 2003/04 to 2014/15. The export is still small; evidenced by the lower export/GDP ratio. Exports of goods in Ethiopia are only about 7 per cent of GDP. According to (Hailu, 2012), the sizes of Ethiopian export market are small which entails high transaction cost in trading and the absence of benefits from economies of scale. This is aggravated by severe competition from other relatively developed countries and emerging economies such as China and India. He further elaborated that Ethiopian exports suffer from serious structural issues which need to be addressed primarily by the industry itself. These include:

- Low value added and poor quality products fetching low international prices;
- little or no efforts on the part of industry to improve their workers' skills;
- Industry spending less money on research and development and;
- Lacking capacity to meet bulk orders as well as meeting requirements of consumer's request.

(Hailu, 2012) also figure out the external constraints of Ethiopian export. According to him the export constraint are usually occurred from the nature of the products and the level of

technology that employed in the process of production of the country's exports. He summarized the problem as follow:

- Almost all of the export items are agricultural with low quality standard which have low income elasticity of world demand and their demand also decreased as the income of the people increases / they are subject to large price fluctuations.
- Production of synthetic products by industrialized countries reduces the demand for natural products.
- The low level of population growth rate of the developed countries affects the demand for agricultural products.
- Different trade barriers and policies adopted by developed countries including protecting and subsidizing their domestic agricultural sector, discourage the demand of agriculture etc.

4.1.1.2.2 Import

Ethiopia imports cigarettes, alcohol, textiles, electronics and other consumer and capital goods. According to (NBE, 2014/15), 42% of total imports ($6.9 billion) were spent on capital goods and 27% ($4.5 billion) on consumer goods. The vast majority of Ethiopia's imports come from Asia (70%) and Europe (20%). Imports from China accounted for 38%, followed by India (7%). Italy, Turkey and Germany are the three major sources of Ethiopia's imports from Europe, jointly accounting for 8% of Ethiopia's total imports.

Ethiopia, as an agrarian economy it is little to expect to import more agricultural products than it exports. However, the ever increasing total trade deficit in Ethiopia comes from both agricultural and manufacturing goods. The country reported a huge individual trade deficit in some agricultural product where it has potential to narrow the ever increasing aggregate trade deficit. According to Hailu (2012), the country had recorded a huge trade volume deficit in some major agricultural products like soya bean, Malt Not Roasted, Spelt, common Wheat and Meslin, Durum Wheat, Grain Sorghum, Dried Peas, Shelled and Wheat/Meslin Flour.

Table 1: Cereal Import in million Dollars

Year	Cereal import
2009/10	513.1
2010/11	196.0

2011/12	652.5
2012/13	560.8
2013/14	442.8
2014/15	601.6

Source National Bank of Ethiopia Annual Report

Figure 4: General Import trend in $

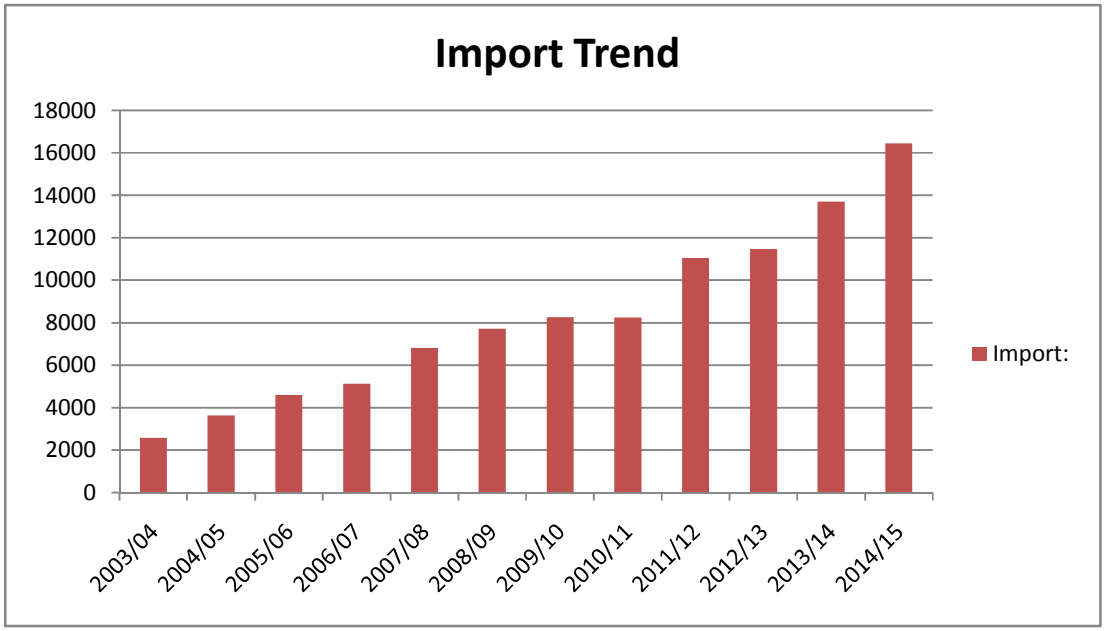


Figure 3: Import trend

Source: National Bank of Ethiopia Annual Report between 2003/04 to 2014/15

Ethiopia imports progressively increasing on average by 13.5% per annum between 2003/04 and 2014/15. The rise in imports has aggravated the trade deficit, which ballooned from $ $2,586.3 billion in 2003/04 to $16,458.6 billion in 2014/2015.

4.1.1.3 Logistic

Logistics is defined by council of logistics management as the process of planning, implementing and controlling the efficient, effective flow and storage of goods, services and related information from point of origin to point of consumption for the purpose of conforming to customer requirements. The ability to transport goods quickly, safely, economically and reliably is seen as vital to success of trade.

According to (World Bank Report, 2014) the Logistics performance index in Ethiopia was 2.41 in 2013 (1=low to 5=high). Logistics Performance Index overall score reflects perceptions of a country's logistics based on efficiency of customs clearance process, quality of trade and transport-related infrastructure, ease of arranging competitively priced

shipments, quality of logistics services, ability to track and trace consignments, and frequency with which shipments reach the consignee within the scheduled time. The index ranges from 1 to 5, with a higher score representing better performance. Ethiopia ranks at the lower end of the surveyed countries in all the six key dimensions of logistics covered by the index.

In Ethiopia the Maritime Affairs Authority (MAA) is a government body under Ministry of Transport which is established to coordinate and regulate all maritime activities including sea ports, dry ports, shipping, coordination of sea port-land transport and dry port including multimodal transport operation and to handle corridor transport facilitation in bilateral, regional and international maritime relationships. The constraints associated with logistics system in Ethiopia could be characterized with underdevelopment of logistics management system, inadequate fleets of vehicles (means of transport) for goods transport. These constraints were the main bottleneck to the countries international trade and the balance of the trade.

Ethiopia can improve its balance of trade through efficient logistic management. According to (Edwarda, 2001) a 1% increases in the stock of transportation and telecommunication infrastructure in the exporting African country boosts its export towards other African countries by about 3%

Table 2 General consumer goods import process

Activities	Days
Request for import/foreign exchange permit	1.0

National Bank Clearance*	5.0
Shipping quotation (Ethiopian Shipping lines)	0.5
Marine Insurance debit Note	1
Bank permit for import	3
Collection of Import Advice Note (IAN)	2
Time taken to obtain shipping documents	30
Collection of original import documents from L/C opening bank	2
Submission of import declaration form to Customs	1
Collection of notice of payment from Customs	1
Preparation of CPO	1
Issuance of Customs receipt	1
Document transmission to Djibouti by Customs	1
Port handling and clearance at Djibouti	13
Truck transport to Mojo Dry Port	2
Total customs delay at checkpoint along corridor particularly at Mille	1
Cargo handling at Dry port	2
Customs release at Dry Port	7
Arranging local transport	1
Dispatch to importer	1.5
Total time	76

Source: Central Statistics Agency 2103 Report

The above table can tell us why Logistics performance index in Ethiopia was only 2.41. It also tells us the country has a room for trade balance improvement by improving its logistic performances.

Balance of Trade

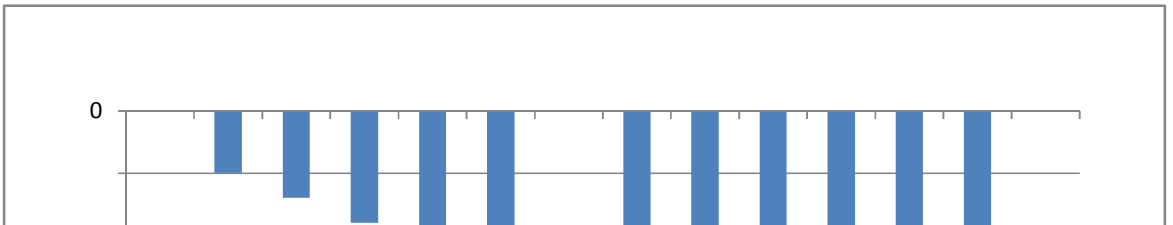


Figure 4: Balance of Trade Trends

Source: National Bank of Ethiopia Annual Report between 2003/04 to 2014/15

Ethiopian balance of trade deficit has grown from $1985.9 billion to $ 13,439.3 between 2003/04 to 2014/15. This huge deficit was highly contribute to balance of payments deficit

4.1.1.2 Service Income

4.1.1.2.1 Tourism

The revenue generation performance of Ethiopian tourism was much lower than the countries of Eastern Africa. According to (World Bank Report, 2014) Ethiopia's revenue from tourism in 2013 was USD 850 million as compared with Tanzania's USD 1.7 billion.

(Solomon, 2007) figure out the Challenge of Ethiopian tourism as follow

- Performing arts, entertainment services and other local creative products, which could have helped to lengthen the stay of visitors, are not offered in sufficient variety.
- There is a shortage of trained manpower that is crucial to the development of the sector.
- Weak mutual support and coordination among tourism stakeholders.
- Ethiopia's image on the international scene is widely associated with draught, famine and war.

In 2013, the government established the Ethiopian Tourism Organization (ETO) - mandated to boost tourism destination development and marketing, and enhance the benefits of tourism in a sustainable and competitive manner. This signaled a decision to take tourism seriously as a means of generating revenue that helps in reducing the balance of payment deficit**.**

3.1.12 Transportation

Transportation is another part of service income that is recorder in current account. Ethiopian Air Line contribution to the Ethiopian current account is moderate. In the year to June 2013/14, the company recorded a net profit of 3.15bn birr ($148m) (NBE, 2014/15). However, Ethiopian airline reinvest some of its profits that has a negative impact on the current account balance through import.

4.1.3 Current Transfer

4.1.3.1Remittance

Remittance inflows have a significant contribution to savings and investments in recipient countries. However, various authors note that despite its large migrant population, Ethiopia has not fully tapped its potential. The current flow of remittance to Ethiopia is only one-sixth of its potential. It covers just 8 % of budget deficit (World Bank Report, 2014).

Ethiopia maintains a number of foreign exchange restrictions on payments and transfers that are not consistent with international standards, as determined by the International Monetary Fund (IMF). These contribute to the decrease in remittances. The Ethiopian Birr is not freely convertible because the exchange rates are set by the government. Additionally, Ethiopia limits foreign currency inflows and outflows and the amounts that local and foreign individuals and corporations can hold (IMF 2014).

Figure 5: Trend of Individual Transfer

Source: National Bank of Ethiopia Annual Report between 2003/04 to 2014/15

4.1.3.2 Grant and International Aid

Grand and International Aid is an important source of finance in Ethiopia in order to fill the financial gap due low savings, limited export earnings. In average, 15.91 % of Ethiopian government budget between the years 2003/04 to 2014/15 was covered by grant

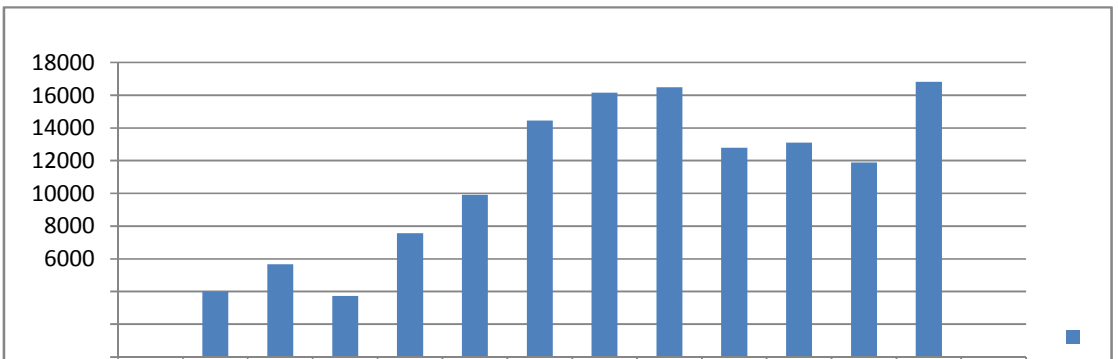


Figure 6: Trend of Grant

Source: National Bank of Ethiopia Annual Report between 2003/04 to 2014/15

4.2 Capital Account

The capital account records the net change in ownership of foreign assets. It includes debt forgiveness

Since Ethiopian current account is in deficit, the capital account is in surplus. The surplus has come in the form of long and short-term loans, foreign direct investment (FDI), debt forgiveness and other flows.

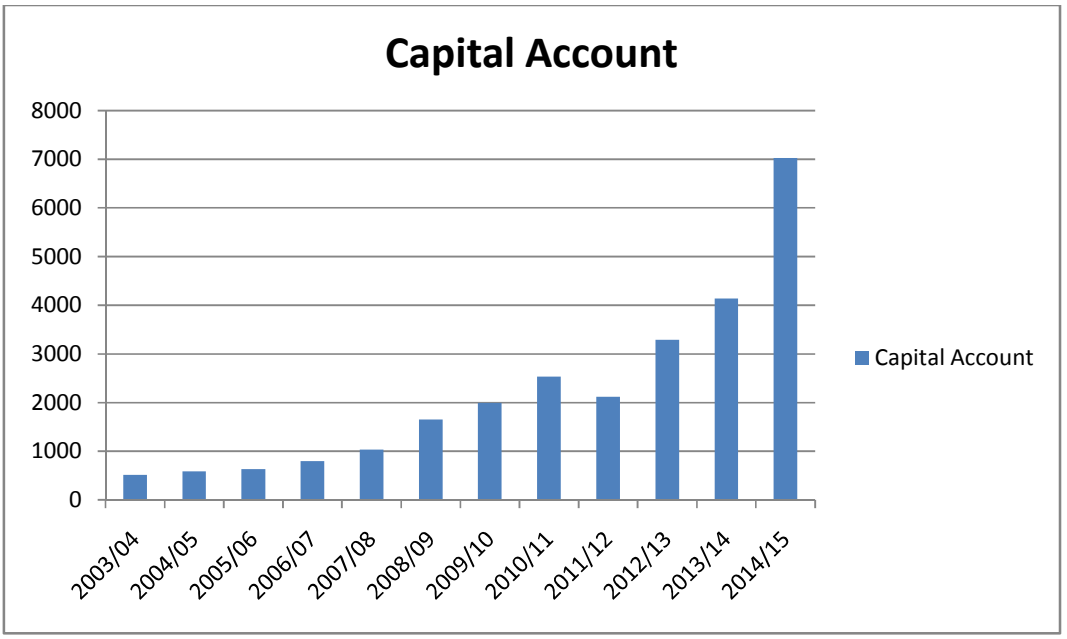


Figure 7: Capital Account Balance Trend

Source: National Bank of Ethiopia Annual Report between 2003/04 to 2014/15

As we have seen from the figure the Ethiopian capital account balance has been showing surplus time to time. In 2003/04 the country records a surplus of around half a billion USD and by 2014/15 the balance showed more than four billion dollar. This surplus was partially offsetting the deficit that was recorded in the current account. To get a full picture of Ethiopian capital account balance activity, it is better to analyze the major components of the account; FDI, Portfolio Investment and External debt

4.2.1 Foreign Direct Investment (FDI)

Currently, Ethiopia registered a significant increase in FDI. According to (NBE, 2014/15) foreign direct investments inward stock reached close 6.1 billion dollars in 2014, up from 941 million dollars in 2003/04.

To attract more FDI, the government of Ethiopia is currently pursuing accession to the World Trade Organization, while maintaining their goal of attaining least-developed country status. It is actively pursuing improving the current investment climate through adopting more efficient bureaucratic processes in the areas of registration, logistics, and tax processes.

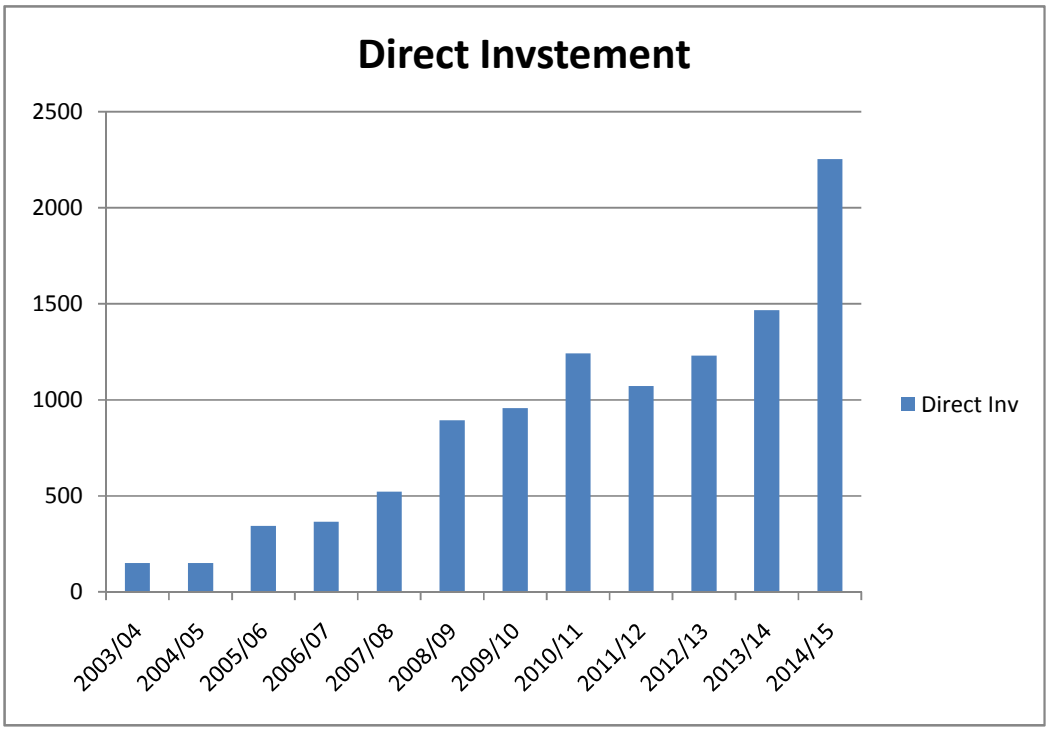


Figure 8: Trend of FDI

Source: National Bank of Ethiopia Annual Report between 2003/04 to 2014/15

4.2.2 Portfolio Investment

Ethiopia does not have a securities market. Stock market is non-existent in Ethiopia. But, the government offers a limited number of 28 days, 3-month, and 6-month Treasury bills. The yields on these T-bills are below 2%. This market remains unattractive to the private sector and over 95% of the T-bills are held by the state-owned Commercial Bank of Ethiopia and public enterprises (IMF, 2014). Foreigner is not allowed to buy this bill thus it is not directly affecting the balance of payment.

In December 2014, Ethiopia issued its first Euro-bond offering, raising USD 1 billion at a rate of 6.625%. The 10-year bond was oversubscribed indicating a continued market interest in high – growth sub-Saharan African markets, but did trigger the country to exceed its non-concessional borrowing threshold set by the World Bank, which could limit Ethiopia's access to additional concessional lending (IMF,2014).

Compared to the market interest rate, Ethiopia is paying huge premium to its euro bond. This interest payment will significantly affect the Ethiopian current account in short run and the overall balance of payment in the long run.

4.2.3 External Debt

The accumulation of external debt is a common phenomenon of developing countries at the stage of economic development where the supply of domestic savings is low, current account payments deficits are high, and imports of capital are needed to supplement domestic resources. Although foreign borrowing can be highly beneficial, providing the resources necessary to promote economic growth and development, when poorly managed, it can be very costly. In recent years, these costs have greatly outweighed the benefits for many developing nations. The main cost associated with the accumulation of a large external debt is debt service (Todoro, 2012). Debt service is the payment of amortization (liquidation of the principal) and accumulated interest; it is a contractually fixed charge on domestic real income and savings. As the size of the debt grows or as interest rates rise, debt service charges increase. Debt service payments must be made with foreign exchange. In other words, debt service obligations can be met only through export earnings, shortened imports, or further external borrowing. Under normal circumstances, most of a country's debt service obligations are met by its export earnings. However, when export earnings diminish like Ethiopia, debt-servicing difficulties are likely to arise.

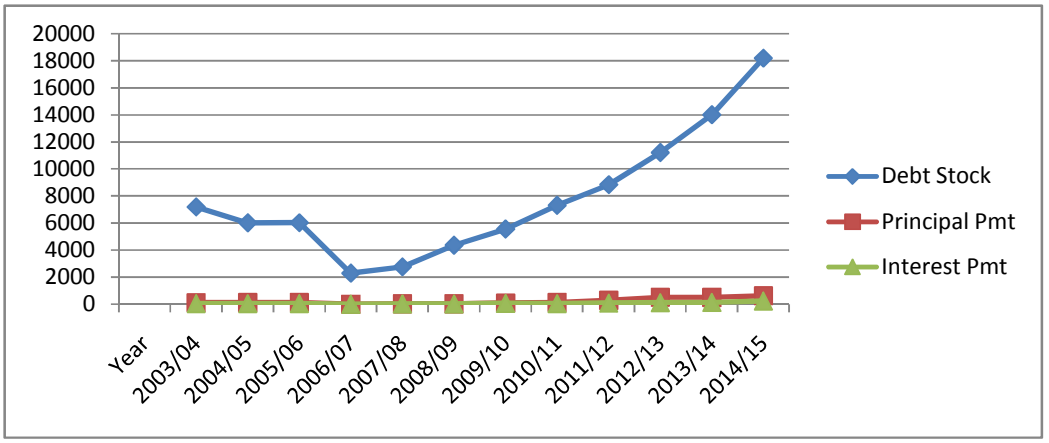


Figure 9: Trend of External Debt

Source: National Bank of Ethiopia Annual Report between 2003/04 to 2014/15

The External debt level of Ethiopia has been on a rising trend particularly following the starting of stable economic growth since 2003/04. Between 2003/04and 2014/15, the debt level has increased from USD 7.2billion to over USD 18 billion (average annual increase of 5.7%). It constantly increased thereafter and reached USD 8.87 billion (20% of GDP) at the

end of 2012 and further to USD 10.2 billion (23.2% of GDP) in 2012/13. Currently the external loan has reached to $23 billion dollar

4.3 Official Reserve Account

Ethiopian reserve account consist the dollar value for the stock of all financial assets for use in meeting the country's balance of payment needs. The category includes not only foreign currency and gold but also Special Drawing Right.

Ethiopian reserve account is very low in terms of its importing activity. According to IMF (2015) Ethiopian reserve balance was only 3.382 billion dollar in 2014 and 3.272 billion dollar in 2013.

There are many factors for low reserve account. According to Global Financial Integrity (GFI) (2010) Ethiopia lost US$ 11.7 billion to illicit finical outflow between the periods of 2000-2009. Furthermore, the high level panel delegated by the African Union (AU) and chaired by Thabo Mbeki, the former president of South Africa, found Ethiopia to be among the top African nations in terms of being a source of illicit financial flows (IFFs), most of which makes ways to the developed world. According to this panel, since 2010, Ethiopia more likely lost USD 10 billion. If this financial illicit is avoided through prober policy, Ethiopian balance of payment may stand in a better position.

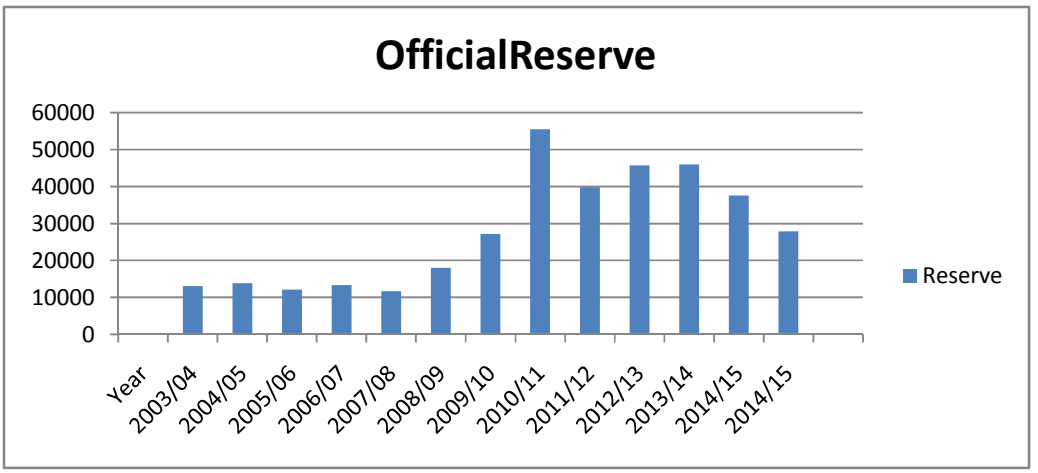


Figure 10: Trend of Official Reserve Account

Source: National Bank of Ethiopia Annual Report between 2003/04 to 2014/15

4.2 National Income Accounting Framework Analysis

Absorption approach theory states that if a country has a deficit in its balance of payments, it means that nation is 'absorbing' more than it produces. Domestic expenditure on consumption and investment is greater than national income. The theory further says, to reduce the deficit, it is often difficult to increase output in the short-run especially if the country already has full employment. Therefore, the chief means for reducing a deficit is usually an increase saving and/or expenditure reducing policy. It is sometimes said that there are two main ways in which a deficit can be corrected as far as expenditure policy concerned: (I) expenditure reducing or (II) expenditure switching policies.

From this theory we can understand that balance of payments reflects the internal balance between national income such as consumption, investment, government expenditure and balance of trade. In order to deal with Ethiopian balance of payment deficit, based on the theory, Ethiopia should either increase its national income or apply expenditure reducing or expenditure switching policies. However, any government policies designed to correct disequilibrium in BOP cannot neglect the internal balance like unemployment, inflation, economic growth etc. reducing national income should not be an option as far as any developing countries like Ethiopia.

Therefore, the first part of the absorption analysis deals the external balance (balance of payment) within the framework of macroeconomic accounting. The second part of the absorption analysis deals in expenditure switching policy.

Macroeconomic accounting states that aggregate spending is composed of Private consumption (C), Private Investment (PI), Government expenditure (G), and Net exports (EX – IM). In terms of Income, the components are; Private consumption (C), Private savings (PS) and Tax payments (TA).

In mathematical relation form:

$Y = C + PI + G + EX - IM$ and ….....1 $Y = C + PS + TA$…….....2

Y = National Income

These two equations deliver

$C + PI + G + EX - IM = C + PS + TA$…….....3

Then:

$(EX - IM) = (PS - PI) + (TA - G)$…….....4

Public savings is given by (TA – G), so that the government surplus or deficit together with the private savings balance (PS) constitute national savings or gross saving (GS)

(TA- G) + PS = GS…….....5

Based on equation III with EX – IM = NX and GS = S

One gets: NX + I = S…….....6 and

NX = S – I……..... 7

In this framework, the current account balance (ignoring unilateral transfers) reflects the internal balance between investment and savings. If the saving is greater than the investment the country shows a surplus in its balance of payments. If the investment is greater than the saving there would be a resource gap that reflects deficit in the balance.

Table 3: Resource Gap: Consumptions, Saving, Investment: Resource Gap and Trade Balance per GDP in Ethiopia

Year	Private Consumption	Public Cons.	Total Consumption	Gross Saving	Gross Inv	Resource Gap	Ex-Em
2003/04	70.9	14.0	84.9	15.1	31.9	-16.8	-20.4
2004/05	77.3	13.3	90.5	9.5	30.1	-20.6	-24.9
2005/06	78.7	13.1	91.7	8.3	31.2	-22.9	-23.7
2006/07	76.4	11.2	87.6	12.4	31.9	-19.5	-20.3
2007/08	80.3	10.5	90.8	9.2	28.8	-19.6	-20.1
2008/09	80.7	9.5	90.2	9.8	28.2	-18.4	-19.5
2009/10	81.5	9.2	90.7	9.3	28.9	-19.6	-21.1
2010/11	72.4	10.3	82.8	17.2	32.1	-14.9	-19.0
2011/12	72.5	8.3	80.8	19.2	37.1	-17.9	-18.3
2012/13	73.5	9.0	82.4	17.6	34.1	-16.5	-17.6
2013/14	70.2	9.2	79.5	20.5	38	-17.5	-19.0
2014/15	69.2	9.0	78.2	21.8	39.3	-17.5	-21.5
Average	75.3	10.55	85.84	14.16	32.63	-18.48	-20.5

Source NBA annual report and self computation

As we have seen in the table, the average consumption and saving rate for the period between 2003/4 to 2014/15 was 85.84% and 14.16% respectively. However, in the same period the investment rate was 32, 63 % that causes (18.48%) resource gap.

Average Saving = 14.16%: Average Investment (I) = 32.63%: NX = (20.45%):

Average Resource Gap = (18.48%)

Theoretically, NX (20.45%) should be equal to the resource gap (18.48%). However, the theoretical calculation of this study ignores the unilateral transfer that the country received in the form of private transfer.

4.3 Econometric Analysis

Dependent Variable (Y) Balance of payments

Independent variable: (X1) gross saving

(X2) gross investment

(X3) Exchange Rate

Table 4: Regression Result

```
. reg y x1 x2 x3
```

Source	SS	df	MS		
Model	25.2459921	3	8.41533069	Number of obs =	12
Residual	4.4831746	8	.560396825	F(3, 8) =	15.02
				Prob > F =	0.0012
Total	29.7291667	11	2.70265152	R-squared =	0.8492
				Adj R-squared =	0.7926
				Root MSE =	.7486

y	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
x1	.6943021	.1377348	5.04	0.001	.3766852	1.011919
x2	-.9416818	.1549345	-6.08	0.000	-1.298961	-.5844022
x3	.1009626	.0986411	1.02	0.336	-.1265043	.3284295
_cons	10.11238	3.599252	2.81	0.023	1.812489	18.41227

The regression result tells us 84.92% of the Ethiopia balance of payment deficit can be explained by the gross saving and gross investment. Both variables are 99 %statistically significant. The result also shows gross saving has a positive coefficient and gross investment has a negative coefficient. However, the exchange rate depreciation is statistically insignificant.

Discussion

From the regression result we can understand that gross saving and gross investment are the main determinants of Ethiopian balance of payments. Therefore, to improve Ethiopian balance of payments these variables should be considered.

4.3.1. Savings

According to absorption theory, if gross domestic saving is equivalent to the gross domestic investment that country could not have a balance of payment problem. In Ethiopian case, the gross investment is much greater than the gross saving in the entire year of the study covered. This resource gap clearly reflected in Ethiopian balance of payment deficit which should be reduced.

There are many opportunity that Ethiopia can boost its saving in both private and public arena. The following discussion explore the mechanism to improve saving in both private and public sector.

A. Private saving:

There are many reasons for Ethiopia's low savings rates. One of the reasons are the absent of secondary financial market.

Table 5

Financial return between 2010-2015 in East African countries

COUNTRY	Period	Stock Market Return	Bank Deposit Return	Saving per GDP
ETHIOPIA	2004-2015	N/A	4.36%	14.16%
KENYA	2010-2015	12.1%	8.29%	16.80%
UGANDA	2010-2015	18%	10%	16.28%
TANZANIA	2017-214	15.24%	9.8%	18.2%

Source: World Bank and Global Financial Development Database and self computation

Financial markets have the important function of transferring the economy's resources from those households that wish to save some of their income for the future to those households and firms that wish to borrow to buy investment goods to be used in future production. Financial market is at the heart of resource mobilization boosting investment and accelerating economic growth. The financial market can affect saving and investment decisions by reducing information and transaction costs, creating mechanisms of risk sharing, facilitating trade and payments among economic agents and providing various supporting services. Financial market can heighten domestic investment and increasing domestic savings.

Ethiopia can boost capital investment that helps in reducing the balance of payments deficit through both private and public saving with the help of vibrant financial market such as stock and bond market.

Stock market is a market in which shares are issued and traded, either through exchanges or over-the-counter markets. It is one of the most vital areas of a market economy because it gives companies' access to capital and investors a slice of ownership in a company with the potential to realize gains above the bank interest rate based on the company performance.

B. Public saving

Public savings is synonymous with government savings and is defined as government revenue (T) less government spending (G), or, taxes minus government spending and is often written as (T-G)

- Tax

Taxes are generally an involuntary fee levied on individuals or corporations that is enforced by a government entity.

Ethiopian government major tax collection areas are Income Tax, Value Added Tax (VAT) and Tariff. The ministry of economic development and finance released data shows that, the government is not collecting enough tax to finance its spending.

World Bank (2016) study shows that governments that collect enough tax to finance its spending enjoy a favorable balance of payments where as government that finance its spending through public borrowing run in balance of payment deficit.

Table 6 Government Revenue

Year	Tax Rev	Grant	Balance ex grant	Expenditure	Tax per GDP in %
2003/04	10,906	4,002	-6,587.00	20,504.00	14.5
2004/05	13,365	5,666	-10,629.0	28,712.00	14.7
2005/06	14159	3732	-9795.00	29325.00	13.2
2006/07	17354	7583	-13810.00	35,607.00	15.6
2007/08	23801	9911	-17121.00	46,915.00	14.5
2008/09	28,998	14,454	-17,601.00	57,775.00	16
2009/10	39,499	16,147	-22,780.00	75,508.00	15
2010/11	58,980.8	16,491.40	-24,711.54	93,831.40	16.8
2011/12	85,739.86	12,794.85	-21,553.10	124,416.70	15.8

2012/13	107,010.31	13,115.05	-29,851.20	153,928.68	16
2013/14	133,118.3	11,903.70	-27,395.30	185,471.78	15
2014/15	158,239.7	16,827.40	-35,935.00	229,742.62	15.5

Source: National Bank of Ethiopia

Table 7 Tax to GDP ratio on selected developed and developing nation for the year 2016

Country Name Developing Nation	Tax to GDP ratio	Country Name Developed Nation	Tax to GDP ratio
Botswana	42.8%	Norway	53.1%
Namibia	37.5%	France	51.8%
Djibouti	36.2%	Sweden	48%
South Africa	27.3%	Nederland	41.9%
Zimbabwe	24.0%	United Kingdom	37.6%
Rwanda	22.4%	USA	18.11%
Ghana	21.2%		
Kenya	18.6%		
Uganda	14.7%		
Ethiopia	14,6%		
Nigeria	2.7%		
Somalia	2.5%		

Source: WB

The above figure tells us Ethiopian tax collection per GDP is very low even in Sub Saharan Africa standard. There are many reasons why Ethiopian government was collecting less tax revenue. However, many study observed that the country narrow tax base and higher tax rate are the main reason behind to less tax collection by the authority.

World Bank (2001) argued that Irrespective of the form of activity on which tax is imposed, a broad-based tax imposed at a lower rate is likely to achieve a higher score on an index of tax effectiveness than a selective tax imposed at a higher rate. It is now widely accepted that moderate rates of income taxes encourage saving, foster growth, and motivate voluntary compliance. In the case of higher tax rates, incentive for evasion is very high. Tax rates should be lower with stricter penal provisions for evasion. On account of lower tax rates, most taxpayers will not be attracted towards evasion and the few who will still be attracted towards evasion will be prevented from doing so on account of stringent penal provisions. The system should try to cover every aspect of the economy with lower tax rates. A broader tax base will be able to result in good revenue to governments even with lower tax rates.

If Ethiopia wider its tax base and introduces different new tax code in its tax system, the

country can improve its tax revenue. There are many taxes base Ethiopia can introduce. Ad valorem tax in real estate and Estate tax are some of them. Ad valorem tax is based on the assessed value of an item such as real estate or personal property. The most common ad valorem taxes are property taxes levied on real estate; however, ad valorem taxes may extend to a number of tax applications, such as import duty taxes on goods from abroad. Ad valorem property taxes are typically a major source of income for different nation.

An estate tax is levied on an heir's inherited portion of an estate if the value of the estate exceeds an exclusion limit set by law. The estate tax is mostly imposed on assets left to heirs, but it does not apply to the transfer of assets to a surviving spouse. The right of spouses to leave any amount to one another is known as the unlimited marital deduction, but when the surviving spouse who inherited an estate dies, the beneficiaries may then owe estate taxes if the estate exceeds the exclusion limit.

. The introduction of estate and property tax can achieve:

- Boost its tax revenue thus increase public saving or reduce government deficits and balance of payment
- It reduces the income difference between the rich and the poor that exhibit in the contemporary Ethiopia
- The nation wealth will not concentrate in few individuals' birthright through generation skip tax.

In sum up, Ethiopia has many potential tax bases that can boost government revenue. If the government wide its tax base, the public saving definitely improves.

4.3.2 Expenditure

The World Bank data reveals that marginal products of public and private capital in Ethiopia were roughly equal in the 1987–2003 periods, implying that an adequate balance was struck between public and private investment. However, starting 2004, as the Ethiopian economy took off, the marginal product of private capital increased substantially, while the marginal product of public capital continued to decline. In 2011, the marginal product of private investment was 22.5 percent compared to the marginal product of public investment of 7.5 percent (WB Report, 2015).

In welfare economic textbook versions of a 'market economy', government intervention is justified in the context of market failure, including

- information asymmetry,
- externalities,
- Monopoly, and, to meet social policy objectives.

Government interventions in the Ethiopian 'mixed economy' model are includes welfare economic justifications, but goes beyond this. The Ethiopian government has been engaged in massive public infrastructure investment. This investment is financing through largely by financial repression policy and external loan.

The term financial repression policy was defined as government financial policies strictly regulating interest rates, setting high reserve requirements on bank deposits, and mandatorily allocating resources. According to WB Report (2014), financial repression policy involves a transfer of resources from savers to borrowers with cheep cost of capital through:

1. First, kept interest rates low and directed the bulk of credit towards public infrastructure.
2. Overvalued exchange rate that cheapened public capital imports.
3. Monetary expansion, including direct Central Bank budget financing, which earned the government seignorage revenues

In a market-based system, the real interest rate is determined by supply and demand of money. In the case of Ethiopia, the minimum deposit rate is effectively set by the Government (NBE) and this will have a strong bearing on the level of the real interest rate. Since it is set below the market rate, the market clears via quantity rationing. Some agents get access to credit at the below market rate. Other agents are completely excluded from credit access giving rise to 'unsatisfied demand' as a result Credit growth has been increasingly concentrated in public projects rather than private ones**.** World Bank report (2015) shows the share of private credit in total outstanding credit has declined from 37 percent in 2007/08 to 28 percent in 2014/15. Conversely, the share of loans to State Owned Enterprises increase from 21 to 62 percent over this period.

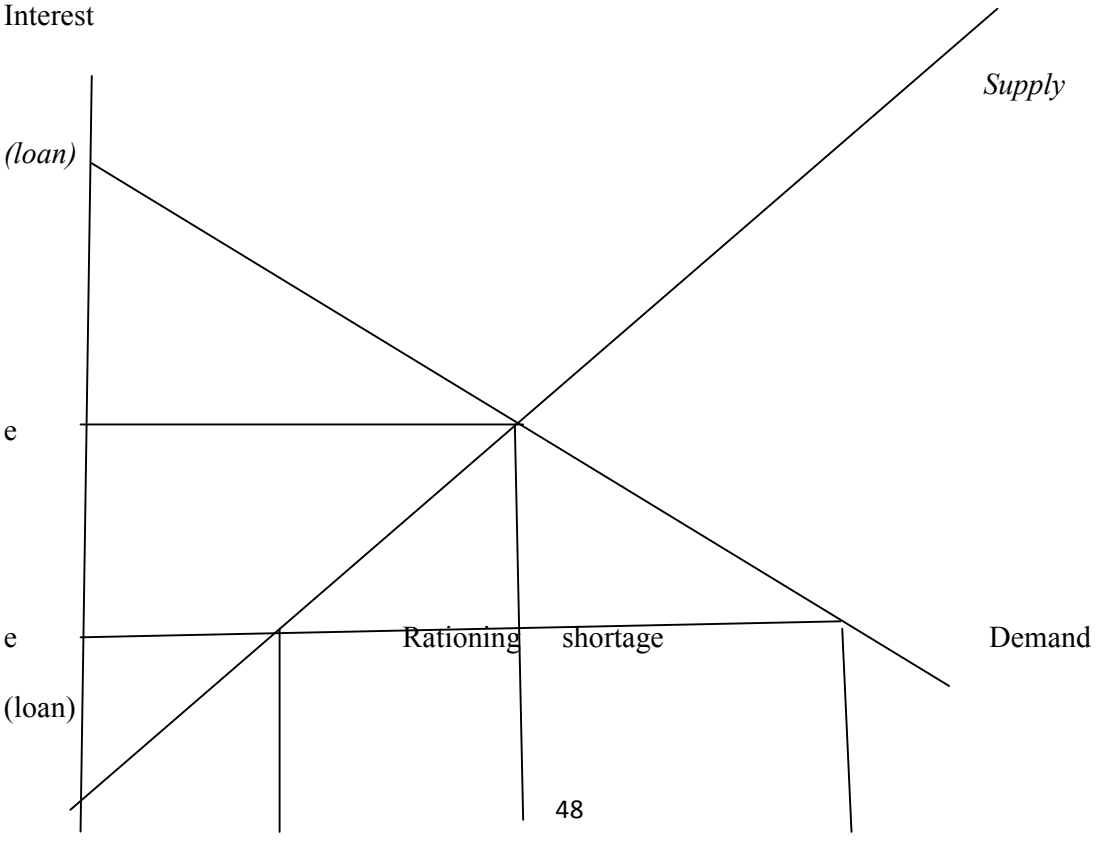
Real interest rate in Ethiopia is negative because of high inflation rate. Ethiopia has experienced high and variable inflation since 2005. Agents usually prefer to use bank facilities from a security perspective not as an option for investment as the real interest rate on deposits is often negative. As a result the supply of loan is much less than the demand for credit.

Table 8 Interest rate and Inflation rate

Year	Saving Deposit	Time Deposit	Lending Rate	T-bill Nominal	Inflation
2003/2004	3.08	3.62	10.50	1.05	8.5
2004/2005	3.08	3.97	10.50	0.04	12
2005/2006	3.08	3.97	10.50	0.04	21
2006/2007	3.08	4.08	10.50	0.50	26.4
2007/2008	4.08	5.16	11.50	0.67	36.4
2008/2009	4.50	4.44	12.25	0.80	7.9
2009/2010	4.50	4.79	12.25	0.89	8.8
2010/2011	5.40	5.49	11.88	1.31	9.1
2011/2012	5.38	5.66	11.88	1.25	8.7
2012/2013	5.38	5.66	11.88	1.86	8.5
2013/2014	5.38	5.66	11.88	1.59	9.8
2014/2015	5.38	5.77	11.88	1.43	10.2

Source: National Bank of Ethiopia Annual Report

Interest rate



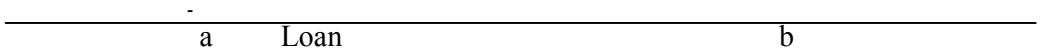


Figure 13: Ceiling interest rate

e = Market interest rate

c = ceiling (fixed interest rate below market interest rate)

ab = shortage of credit as a result of fixed interest rate policy

Because of loan shortage, government took significant part of the available loan and invests it with low marginal productivity of capital compared to the private sector. This activity hurts the balance of payments through low marginal productivity of capital by public sector.

Table 9: Effect of financial repression policy on Balance of payment

Prediction effect	Financial repression policy more toward private sector	Interest rate liberalization
Private investment	Increase	Increase
Public investment	Decrease	Decrease
Total investment	Indifference	Increase
Tax Revenue	Increase	Increase
Interest income to saver	Indifference	Increase
Balance of payments	Improve through marginal productivity of capital	Improve through increasing in savings

If interest rate is liberalized, cost of borrowing for the government is become expensive. Since the marginal productivity of capital of the public sector is less than compared to the private sector, government may not able to pay back the debt service to the lender. Thus, the public investment could be reduced while the private sector could be increased. However, the government revenue can be increased through tax collection that imposed on the private

sector. Eventually, the balance of payment can be improved through an increase marginal productivity of capital and increase in tax revenue.

4.3.3 Exchange rate

In theory, the exchange rate will have an impact on the current account. If there is depreciation in the exchange rate, then that particular country will experience a fall in the foreign price of its exports. It will appear more competitive and therefore there will be a rise in the quantity of exports. Assuming demand for exports is relatively elastic then depreciation will lead to an increase in the value of exports and therefore improve the current account deficit if the sum of export and import elasticity greater than one. Similarly a depreciation of the exchange rate, will also lead to an increase in the cost of buying imports. This will lead to a fall in demand for imports and also help to reduce the current account deficit (Johnson, 1972).

Table 10 Exchange rate, Export and Import

Year	Exchange rate	Depreciation percentage	Export	Export growth	Import	Import growth
2003/04	8.63	1.16%	600.5	7.80%	2586.3	22.42%
2004/05	8.66	0.35%	847.2	29.12%	3633	28.81%
2005/06	8.68	0.23%	1,000.30	15.31%	4,592.80	20.90%
2006/07	8.79	1.25%	1,185.10	15.59%	5,126.00	10.40%
2007/08	9.24	4.87%	1,465.70	19.14%	6,810.50	24.73%
2008/09	10.42	11.32%	1,447.40	-1.26%	7,726.60	11.86%
2009/10	12.89	19.16%	2,003.10	27.74%	8,268.90	6.56%
2010/11	16.11	19.99%	2,747.10	27.08%	8,253.30	-0.19%
2011/12	17.23	6.50%	3,152.70	12.87%	11,061.20	25.39%
2012/13	18.19	5.28%	3,115.80	-1.18%	11,460.60	3.48%
2013/14	19.07	4.61%	3,300.10	5.58%	13,712.30	16.42%
2014/15	20.09	5.08%	600.5	-9.30%	16,458.60	16.69%
Average		11.16%		12.37%		15.62%

Source: National Bank of Ethiopia Annual Report

As we have seen in the figure the average depreciation between the years 2003/04 to 2014/15 was 11.16% but the export and import growth in average was only 12.37% and 15.62% respectively, this tells us depreciation in Ethiopia doesn't bring significant impact on

Ethiopian international trade. Econometric analysis confirms the validity of the above descriptive analysis.

The result of the correlation shows that Ethiopian balance of trade which is the part of the balance of payment has not significantly depended on depreciation of the exchange rate. Because:

- 90% of Ethiopian export is agricultural products. These products are highly exposed for supply and demand shock. The supply shock may come from natural case like drought and disease. And, the demand shock may come from world agricultural product price.
- As the supply reduces from supply shock the country cannot feel the devaluation effect on its export activity.
- When the price of agricultural products on the international market rise the demand of this commodity reduce more than the percentages of price increases which lead a total revenue reduction. Thus, the country didn't feel the devaluation effect on its balance of trade
- When producer encourage in producing more from the devaluation policy, there would be more supply than the demand which reduces the price and bring the revenue in the level at before the devaluation.
- 70 % of Ethiopian imports are capital goods and complementary goods like fuel and spare parts. The country should import these goods regardless of the effect of the exchange rate.
- Ethiopian import income elasticity is high that can pass through currency devaluation. Since, Ethiopian GDP increases time to time its import was not discourage through the devaluation.

Table 11: The import income elasticity of Ethiopia

Period	Elasticity
1974-1991	1.26
1991-2013	3.50

Source: National bank of Ethiopia Working Paper

CAPTER FIVE

SUMMERY, CONCLUSION AND POLICY IMPLICATION

5.1 Summery

The broad objective of this research was to establish the determinants of the balance of payment in Ethiopia and the specific objective were: to determine the macro-economic variables that affect the balance of payment in Ethiopia, to determine the magnitude of each variable and to come up with the policy options of addressing the balance of payment deficit in Ethiopia.

Since the aim was to determine the variables which contribute to the balance of payment, conceptual analysis based on National Income Account framework and linear regression Models was applied. Both model proved that resource gap such as gross saving and gross investment are the primary candidate for the balance of payment deficit in the last 12th year.

5.2 Conclusion

Domestic savings (Investment) are a key to sustainable favorable balance of payments; however, the Gross domestic savings (% of GDP) in Ethiopia was 14% in average for the last 12 years. Here are some reasons for Ethiopia's low savings rates,

- Absent of secondary financial market
- Negative real interest rate (Average nominal interest rate was 4.8% and Average annual inflation rate was 14%).

Public saving in Ethiopia is not in a better position, either. The Government operates in fiscal deficits. Ethiopian tax -to-GDP ratio is only 14.9 percent in 2014/15 which is much less than even compared to even Sub Saharan African countries.

The government tries to offset the budget deficit through Public borrowing; External loan; Grant; selling the nation public assets in the form of FDI etc. However, this budget financing mechanism does not have sustainability or it cannot help the balance of payments in the long run. Therefore, Ethiopia should mobilize its domestic resources.

5.3 Policy Implications

Disequilibrium in balance of payment in any country is adjusted through both monetary and fiscal measure. The policy implication for the Ethiopian economy is that, increases in resource gap deficit leads to an increase balance of payment deficit. Thus, monetary authorities should pay special attention to domestic saving expansion. Domestic saving expansion can be achieved through vibrant financial market such as stock market. Stock market is non-existent in Ethiopia; the development of secondary stock market is long overdue. Ethiopia should launch a secondary equity market as soon as possible. The establishment of Independent Security and Exchange Commission is a crucial prerequisite for launching the equity market. The monetary authority also should address the minimum

nominal deposit rate. Inflation should be reduced or minimum nominal deposit should be raised.

Ethiopian Government operates in fiscal deficits. The expansion in fiscal deficit leads to increase in domestic credit which has been shown to impact negatively on balance of budget, thus leading to balance of payment deficits. Fiscal measures that would limit earmarked government expenditures should be put in place to be in harmony with revenue generation. This requires prudent government consumption and viable taxation policies that will ensure wide taxation base and increased revenue collection.

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APPENDICIES

Appendix 1 Balance of payment data

Year	Current Account	Capital Account	Change in Reserve Account
2003/04	-501.70	512.8	-308.2

2004/05	-983.10	*584.5*	17.6
2005/06	*-1,462.6*	632.5	207.5
2006/07	*-782.9*	798.5	-84.7
2007/08	*-1,501.7*	1,031.6	263.5
2008/09	*-1,636.2*	1,647.9	-494.8
2009/10	-1,193.2	1,996.2	-304.6
2010/11	-210.6	2,535.5	-1,201.
2011/12	-2,799.8	2,119.8	980.8
2012/13	-2,780.3	3,291.2	15.5
2013/14	-4,352.3	4,134.6	100.3
2014/15	-8,012.6	7,030.6	521.4

year	FDI	External loan	Debt Stock	Principal	interest
2003/04	150	510.6	7200.3	122.3	61.5
2004/05	150	570.3	6021.0	130.2	51.3
2005/06	342.7	344.4	6029	147.4	61.7
2006/07	365.1	325.7	2300	17.8	12.0
2007/08	521.2	394.8	2767.1	46.8	30.0
2008/09	893.7	650.4	4364.8	42.1	25.5
2009/10	956.4	1,601.2	5,569.8	106.7	74.5
2010/11	1242.5	1,148.5	7,318.8	151.6	52.9
2011/12	1072.1	1,471.8	8,846.3	302.2	89.1
2012/13	1231.6	2,679.2	11,222.7	527.9	120.7
2013/14	1467.0	3,150.0	14,008.1	509.2	143.5
2014/15	2253.7	5,423.1	18,194.1	629.0	249.2

Appendix 2 Trade Data

Year	Export fob	Import:	balance
2003/04	600.5	2586.3	-1985.9
2004/05	847.2	3633.0	-2785.8
2005/06	1,000.3	4,592.8	-3,592.5

2006/07	1,185.1	5,126.0	-3,940.9
2007/08	1,465.7	6,810.5	-5,344.8
2008/09	1,447.4	7,726.6	--6,279.2
2009/10	2,003.1	8,268.9	-6,265.8
2010/11	2,747.1	8,253.3	-5,506.2
2011/12	3,152.7	11,061.2	-7,908.5
2012/13	3,115.8	11,460.6	-8,344.8
2013/14	3,300.1	13,712.3	-10,412.2
2014/15	3,019.3	16,458.6	-13,439.3

Year	Export/GDP	Import/GDP
2003/04	6.2	26.6
2004/05	7.6	32.5
2005/06	6.6	30.3
2006/07	6.1	26.4
2007/08	5.5	25.6
2008/09	4.5	24.0
2009/10	6.7	27.8
2010/11	9.5	28.5
2011/12	7.3	25.5
2012/13	6.6	24.2
2013/14	6.0	25.0
2014/15	4.8	26.3

Appendix 3

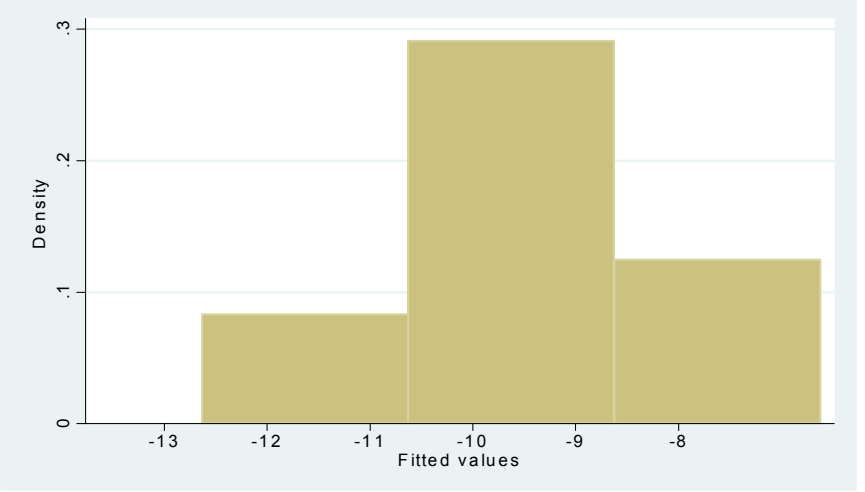
Diagnostics tests

- Test for Multicollinearity

```
. vif

    Variable |      VIF      1/VIF
-------------+----------------------
          x1 |      6.55    0.152575
          x2 |      6.55    0.152575
-------------+----------------------
    Mean VIF |      6.55
```

- Test for Normality



Test for Homocedasticity

```
.hettest

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

         chi2(1)      =  0.48
         Prob > chi2  =  0.4906
```

- Test for Serial correlation

Breusch-Godfrey LM test for autocorrelation

lags(p)	chi2	df	Prob > chi2
1	1.403	1	0.2363

H0: no serial correlation

- Test for Stationary

Dickey-Fuller test for unit root Number of obs = 11

	Test Statistic	Interpolated Dickey-Fuller 1% Critical Value	5% Critical Value	10% Critical Value
Z(t)	-2.879	-3.750	-3.000	-2.630

MacKinnon approximate p-value for Z(t) = 0.0478