18

THE IMPACT OF TRADE LIBERALIZATION ON THE TRADE BALANCE AND ECONOMIC GROWTH: THE CASE OF ETHIOPIA

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ACRONYMS

AAU	Addis Ababa University
ACP	African, Caribbean and the Pacific
AGOA	African Growth and Opportunity Act
CCCN	Customs Co-operation Council Nomenclature
COMESA	Common Markets for East and Southern Africa
CSA	Central Statistical Authority
EBA	Everything But Arms
ECM	Error Correction Mechanism
EEA	Ethiopian Economists Association
EEPA	Ethiopian Export Promotion Agency
EEPRI	Ethiopian Economic Policy Research Institute
EFY	Ethiopian Fiscal Yea
EPA	Economic Partnership Agreement
EU	European Union
FDRE	Federal Democratic Republic of Ethiopia
FTA	Free Trade Area
GDP	Gross Domestic Product
HIPC	Heavily Indebted Poor Countries
HS	Harmonized System
IFIs	International Financial Institutions
IGAD	Inter-Government Authority on Development
LDCs	Less Developed Countries
MFN	Most Favored Nations
MOFED	Ministry of Finance and Economic Development
MOTI	Ministry of Trade and Industry
NBE	National Bank of Ethiopia
NTB	Non Tariff Barriers
OLS	Ordinary Least Squares
PTA	Preferential Trade Agreement
SAPs	Structural Adjustment Programs
SPS	Sanitary and Physio-Sanitary
SSA	Sub-Saharan Africa
TRID	Trade and Regional Integration
TRIPS	Trade Related Intellectual Property Rights
UNECA	United Nations Economic Commission for Africa
USD	United States Dollar
VAT	Value Added Tax
WTO	World Trade Organization

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Table of Contents

LIST OF TABLES

LIST OF FIGURES

Page

LIST OF APPENDICES Page

ABSTRACT

The objective of the study is to asses the impact of trade liberalization on the trade balance and economic growth. The study employs an Error Correction Mechanism (ECM) to investigate relationship between trade balances and trade liberalization variables using annual data over the period 1970–2002. Moreover, a balance of payment constrained growth model is used to assess the effect of trade liberalization on economic growth of Ethiopia.

The empirical result of the descriptive and time series analysis suggests that trade liberalization has not reduced the trade balance as theoretically expected. However, the process has aggravated the trade deficit at least in the short run. The major explanation for this dismal trade balance is attributed to the imbalance between the country's exports of primary commodities and its imports that are mainly composed of capital and consumer goods. Trade liberalization efforts have aggravated the existing imbalance by inducing more imports than exports. Moreover, the terms of trade variable is found to have profound effect on trade balance.

The analysis conducted with respect to the impact of trade liberalization on economic growth using Balance of Payment Constrained Growth model demonstrates that the income elasticity for import demand increased to 2.05 after liberalization as compared to 0.75 during the pre-liberalization period. Moreover, the study finds out that the actual growth rate has been constrained by the Balance of Payment position after trade liberalization.

As a whole, Trade liberalization per se did not improve the trade balance and economic growth, which can be partly attributed to the structure of exports and imports. Hence, the main policy implication of the study is that the country should improve the structure of production and income elasticites of demand for exports, which involves the diversification of the existing primary commodity exports into manufactured goods.

Key Words: Trade balance, Trade liberalization, time series analysis, Ethiopia

CHAPTER ONE: INTRODUCTION

1.1 Background

The debate on whether trade liberalization or openness should lead to high rates of economic growth is an age-old question which has sustained arguments between pro-traders and protectionists over the years-from Adam smith, John Stuart Mill and John Maynard Keynes to Raul Prebisch and Hans Singer and to Jadish Bhagwati and Paul Krugman. Theorists from both camps have influenced policy in many countries and at various stages of development. Early proponents of free trade lauded the gains from trade that could accrue to countries when they specialize in the production of goods in which they have a comparative advantage, and engage in trade to meet their other needs. New development theorists contend that openness stimulates technological change by increasing domestic rivalry and competition, leading to increased innovation; and, that trade liberalization by allowing new goods to flow freely across national borders increases the stock of knowledge for technological innovations, which spur growth.

In the midst of all this controversies, many African countries adopted highly interventionist and protectionist trade regimes between the early 1960s and the early 1980s. These regimes were broadly characterized, on the import side, by restrictive licensing systems, high tariffs, escalated tariff structures made up of several layers, varying degrees of import prohibitions, and tight foreign exchange controls. On the export side, the trade regimes feature substantial implicit and explicit taxes as well as frequent use of non tariff barriers, such as the prohibition of certain export items. Although these trade policies were motivated by several different concerns, Balance of Payments concerns and budgetary needs probably had much stronger impact on evolution and structure of pre liberalization trade regimes than did the desire to protect local manufacturing activities (Oyejide,1996).

Ethiopia like most African countries has been following interventionist and heavy protectionist policy during the reign of the socialist Derg regime (1974-1991). The major motive for such policies was to maximize government revenue through tax, so as to maintain the Balance of Payments at sustainable level and also to control and extinct the private sector (Befekadu and Berhanu 1999/2000). Moreover, the Derg regime strengthened protectionist policy through exchange rate pegging to the US dollar for a long period of time, curtail import

through imposing quotas, high tariff rates (230percent) and lengthy import licensing procedures. Exporters were also forced to surrender 100percent of their foreign exchange earning. Both external sector activities were performed through government marketing channels. According to Alem (1995), the Derg's regime trade and exchange rate policies were effective in depressing incentives to export production than repressing import demand, which consequently led to a persistent BOP deficit. An equivalent tariff of 71percent in 1977, for instance, had led to a 43.5percent fall in relative prices of coffee, while giving average "true" protection of only 27.3 percent for import competing sector.

As a result of such highly protective trade regimes and other problems, Ethiopia suffered poor economic performance. For instance, the GDP growth between 1974/75-1990/91 was about 2.01percent, while the average population growth was 2.9percent. The ratio of gross domestic savings to GDP in the 1960s and 1970s was about 14.2 percent and 9.7percent, respectively. This decline continued in the 1980s where it reached 7.5percent of GDP on average and the structure of the countries export and of the overall economy has remained the same for a long period of time. Moreover, Gross Fixed Domestic Investment declined to 12.7percent and 11.3percent to GDP in the 1970s and 1990/91-1992/93, respectively (EEA, 2004).

The country pursued the Structural Adjustment Program initiated by the World Bank and International Monetary Fund in 1991/92 after the overthrow of the *Dergue* regime by the EPRDF. As the major component of the structural adjustment programs, trade reforms was adopted as a central lever of the free market strategy in order to obtain financial support to pull out the country from its entrenched poverty. The new development strategy involved diverse actions: deregulation of domestic prices, liberalization of foreign trade, privatization of public enterprises, the gradual abolition of export subsidies and taxes, devaluation of the exchange rate and significant reduction in tariffs and non tariff barriers. For instance, quotas were replaced with tariff and later the highest tariff rate was reduced from 230percent, in the last periods of Derg, to 35percent as of 2003/2004 with a tariff dispersion of 30percent; and the number of official tariff rate decreased from 24 to 6 over the same period. Duties on all exports were removed and foreign exchange retention scheme was established.

The growth of GDP and per capita GDP has shown an increase to an average of 4.5percent and 1.6percent, respectively between 1991/92 and 2002/2003. Despite, a fall in an international price for coffee in the last five years, the quantity of exports has shown an

increasing trend. Gross Capital Formation has also increased to 22.2percent of GDP in 2002/2003 as compared to 11.3percent in 1992/93. However, saving has been falling over the years and has gone down to -2.1percent of GDP in 2002/2003 from 4.02percent in 1992/93. The resource gap, which reached 24.3percent by the end of 2002/2003, was an obvious indication that the country was consuming more than it was producing and whatever investment took place during this year was a result of foreign grants and loans. This in turn has resulted in a deteriorating current account balance, and, thus, contributed to the continuous accumulation of external debt with all its dire consequences reaching close to 107percent of GDP in 2002/2003(EEA, 2004). The structure of the economy has, however, remained the same as before three decades, with agriculture still playing a dominant role in the real GDP and the export sector, 39.4percent and 73.34percent in 2001/2002, respectively as compared to 55.9percent and 73.17percent respectively in 1991/92. Such an apparent decline in the share of agriculture is however due to the sector's bad performance rather than increase in the share of other productive sectors (EEA, 2004).

1.2 Statement of the problem

The majority of developing countries that implemented Import Substitution strategy starting in the 1970s did not achieve the intended success, mainly due to inefficient method of production and very high price for domestic consumers. To reverse this situation most developing nations embarked on Structural Adjustment Programs supported by international financial institutions like the IMF and World Bank. The main components of the SAPs included deregulation of domestic prices, liberalization of foreign trade, privatization of public enterprises, the gradual abolition of export subsidies and taxes. These policies were aimed at improving the trade balance and Balance of Payment, stabilizing fiscal deficits, promoting foreign direct investment, and ultimately fasten economic growth.

There are many benefits claimed to spring from trade liberalization. It provides expanded market opportunities; when coupled with reduced discrimination against exports, these allow exploitation of comparative advantage, permit greater capacity utilization and enhance exploitation of economies of scale. By reducing anti-export bias trade liberalization stimulate export performance, particularly non-traditional exports. Increased competition from abroad and enhanced access to better technology made possible by trade liberalization induce

technological innovation and higher productivity. In principle, these impacts of trade liberalization are channeled through various resource allocation and supply responses. In general, trade liberalization is assumed to improve a country's performance by promoting domestic economic efficiency and encouraging trade flows between nations, thus boosting export growth, thereby improving the external trade that ultimately stimulates economic growth. (Oyejide, 1996)

Despite the gains promised from the trade liberalization, serious objections and skeptics about the effectiveness have nevertheless remained. The major work in this regard is that done by (Rodrik and Rodriguez, 1999, Rodrik, 2001). They have finely tuned certain concerns among decision makers on the impact of trade liberalization on Africa. Their major concern relates to the fact that trade liberalization has not produced the promised increase in growth rates or improved international integration for Africa. On the contrary, the authors argue that the continent has become increasingly marginalized in international trade, with a significant fall in its share of world exports, from 4.1 percent to 1.6 percent of global exports between 1980 and 2000. Africa's imports have also decreased steeply during the same period, from 3.2 percent to 1.3 percent of the world's overall imports. Even in raw materials, its share in world trade dropped from 8percent in 1980 to 4.4percent in 2000 (Submaramanian and Tamirisa, 2003). Thus, economic reforms and the liberalization of world trade have not led to and improvement in Africa's international position, and have failed to compensate for the growing marginalization of the continent's economies.

The problems raised above lead to a question as to what will bring successful developments in developing countries. It is argued that there is no need to introduce far reaching import liberalization and laissez-faire but combination of protection and liberal trade policies may be the preferred option. ECA (2004) argues on why trade liberalization succeeded in East Asia but failed in Africa. It reasoned out that Asia's success did not lay in state neutrality instead the State played an important role in fostering export competitiveness by maintaining export-friendly effective exchange rates and granting large subsidies to exporters. This helped to protect the vulnerable or undeveloped economic sectors from external competition while opening the sectors with high competitive capacity. Moreover, the trade policies were part and parcel of broader national development strategies. On the contrary, others including International Financial Institutions like the, IMF and World Bank advice full liberalization of

trade system and further argue that if at all there is a failure it is not the liberalization, which brings it, but the way it is carried out.

Ethiopia started trade liberalization in 1991/92 after three decades of inward oriented trade regime. Like in most developing countries, trade liberalization was adopted in Ethiopia as part and parcel of the IMF-World Bank supported Structural Adjustment Policies. The trade liberalization scheme among others includes reduction of import tariffs and quantitative restrictions (quotas) were converted to equivalent tariffs. Similarly, the overvalued exchange rate was devalued in 1992 and its price is currently determined by daily inter-bank foreign exchange auctions. Currently, the gap between the official and parallel foreign exchange is very minimal, which imply the corrections of earlier distortion.

In the case of Ethiopia, following the reform period, although there has been a significant increase in exports, the deterioration of Ethiopia's visible balance of trade has accelerated at a faster pace. In 2002/2003, the total merchandise exports, with a value of around $400 million, were about four times smaller than merchandise imports, totaling $1.6 billion. The ability of exports in financing imports has been continuously contracting to reach just about 26 percent in 2002/2003 with the resource gap being mostly financed by development assistance, rather than market-related capital flows (EEA, 2004)

The major reason for such prolonged trade deficit is attributed to the structure of Ethiopia's trade, which is characterized by export of low income and price inelastic primary commodities and oligo price fixed import goods (Alemayehu, 2002). Although the relative share of the various components of exports and imports had changed, the structure of trade has not seen a major change in the past three decades. Agricultural products mainly coffee constitute 58.7percent & 39.4percent of total exports in 1970 and 2001, respectively. On the other hand, Ethiopia import consists of capital and intermediate goods upon which industry depended. Imports also satisfied most of the country's demand for nonfood consumer goods, such as automobiles, radios, televisions, pharmaceuticals, and textiles.

Despite some recent improvements in private transfers from Ethiopia abroad, the deficit in merchandise trade has significantly contributed to the deterioration in current account deficit. For instance, the current account deficit, measured as a percentage of GDP stood at 20.5percent in 2002/03, rising from 13.9percent in 1999/2000 (EEA, 2004). Despite the

deficit in the current account, the overall balance registered a significant surplus during 2001/02 amounting to 5.1 percent of GDP. The surplus increased by 15 percent owing to external loans, grants, debt rescheduling, and a small amount of debt cancellation.

Although there are some studies conducted to asses the impact of trade liberalization on trade balance and economic growth at cross country level (see Rodriguez and Dan Rodrik (1999), Parkih and Stirbu (2004), there are limited works done for Ethiopia. Thus, this paper extends this existing evidence by examining the effect of trade liberalization on the trade balance for Ethiopia over the period 1970/71 to 2002/2003. Moreover, this paper samples the resulting literature with a view to assess whether trade liberalization enhances growth by employing the balance of payment constrained growth model.

1.3 Significance of the Study

Though there have been some studies conducted on the effects of liberalization on export performance and economic growth at cross country level, as far as my knowledge there has been very little published research on this topic particularly for Ethiopia. Thus, the study is important to analyze the credibility of trade liberalization in Ethiopia, which implies whether the policy reform is sustainable or not. This would enable agents to have an appropriate view on the measures taken.

The study also sheds lights on the link between trade liberalization and economic growth by using demand oriented Balance of Payment Growth Model. This is believed to help policy makers to review and formulate trade policies along with other development objectives.

In general, this study is significant to give an insight of the scale of trade liberalization in Ethiopia and its impact on the trade performance and economic growth, which may help in identifying problems in the liberalization process so far and how trade liberalization should be handled for future development.

1.4 Objectives of the Study

The general objective of the study is to assess trade liberalization in Ethiopia and appraise its performance based on its impact on trade balance and economic growth from 1970 to 2002.

The specific objectives include:

- To analyze the relationship and impact of trade liberalization on trade balance of the country.
- To empirically examine relationship between trade liberalization and economic growth in the Ethiopian economy.
- To draw policy implications that are in line with the results of the study.

1.5 Limitation of the study

Although the author has tried to look at the research agenda in different angles using available data, the paper is not without limitations. The major limitation comes from the smallness of sample size due to insufficient data. This might imply a limited robustness of the conclusions; however, the present analysis provides, at least, an insight into the investigated subject.

1.6 Organization of the study

The paper is organized as follows. Chapter one deals with the introductory part where the problem of statement is clearly presented along with the objective and significance of the study. Both theoretical and empirical reviews of trade and growth are discussed in the literature review of the study. The third chapter explores in detail the evolution of Ethiopian Trade policy as well as its performance using descriptive analysis. The next chapter of the paper gives full account of data and methodology followed by analysis using econometric method as well as presentation of results in chapter five. The last chapter of the study concludes and provides some recommendations.

CHAPTER TWO: LITERATURE REVIEW

2.1 Definition, measurement and Credibility of trade liberalization

2.1.1 Definition of trade liberalization

Although different researchers define trade liberalization in different ways, Greenway, Collier and Gunning (1997), commonly define it as import liberalization and/or a move towards neutrality in the structure of relative prices and/or substitution of less distorting for more distorting forms of intervention. The implication is that trade reform policies are typically involving removal or reduction in quantitative or administrative import restriction, temporarily replacing these by tariff surcharges, unification and subsequent reduction of tariff, the introduction of direct incentive to the exporters and etc.

With regards to whether devaluation is part of trade liberalization Ritva Reinikka, (1994) argued that in Africa foreign exchange for balance of payments purpose is closely linked to import control, which provides protection for domestic industries. When devaluation is combined with a change in the mechanism of allocating scarce foreign exchange, and import of final good will be no longer be discriminated against non issuance of license, it qualifies as a move towards free trade. Thus, the implication is that even if devaluation is an exchange rate policy, countries characterized by high restriction on foreign trade should be considered as part of the trade reform policy.

Based on the above points it is always argued that a liberalization episode is supposed to begin at the time when the major policy changes towards liberalization (devaluation, reduction in tariff and etc) have taken and it comes to an end with a reversal or when no further policy change in either direction take place.

2.1.2 Measuring Trade Liberalization

There are several measurements of trade liberalization or openness in the economics literature. Table 2.1 shows a selection of measures of openness that have been used by researchers.

Table 2.1: Measures of Openness

Measure	Definition
Trade Dependency Ratio	The ratio of exports and imports to GDP
Growth Rate of Exports	The growth rate of exports over the specified period
Tariff Averages	A simple or trade-weighted average of tariff levels
Collected Tariff Ratios	The ratio of Tariff revenues to imports
Coverage of Quantitative Restrictions	The percentage of goods covered by quantitative restrictions
Black Market Premium	The black market premium for foreign exchange, a proxy for the overall degree of external sector distortions
Trade Bias Index	The extent to which policy increases the ratio of importable goods' prices relative to exportable goods prices compared to the same ratio in world markets.
Sachs and Warner Index	A composite index that uses several trade-related indicators; quota coverage, black market premia, social organization existence of export marketing boards

Source: Rodriguez and Rodrik, 2000: 37

The most popular of these openness measures is Sachs and Warner Index. They define an economy as 'open' if all five of the following conditions are met: (i) an average tariff rate of less than 40 percent; (ii) average non-tariff barriers equivalent to a tariff rate of less than 40 percent, (iii) a black market exchange rate premium of less than 20 percent, (iv) no communist government, and (v) no state monopoly of major exports. These criteria can be used for pinpointing the precise year (s) of trade openness for a country (Sachs and Warner 1995).

Pritchett (1996) gives preference to the indicator 'average tariff' which is also positively linked to the ratio of imports covered by NTBs. However, even though this indicator might be the best for cross-country studies, it is not too practical for time series country studies. The variation of 'average tariff' might not be big enough to draw any conclusions on the impact of trade policy. Simple measures of trade barriers tend not to fit significantly well into a well-specified growth regressions, regardless of time periods, sub samples, or the conditioning

variables employed. Simple tariff averages underweight high tariff rates because the corresponding import levels tend to be low. Such averages are also poor proxies for overall trade restrictions when tariff and non-tariff barriers are substitutes.

As for the non-tariff coverage ratios, they do not do a good job of discriminating between barriers that are highly restrictive and barriers with little effect. Conceptual flaws aside, both indicators are clearly measured with some errors (due to smuggling, weaknesses in the underlying data, coding problems, etc.). Even more troubling, is that the different measures of openness that have been used in a host of studies, tend not to be correlated with one another. [1]

For example, most of the developing countries that have reduced trade barriers in recent decades have also implemented a variety of other policy reforms in fiscal and monetary policy, capital flows, financial regulation and labor markets. There is a web of complex interrelationships between trade policy and other government policies and various macroeconomic variables, and the interactions cannot be easily separated[2]. Furthermore, most of the economies with high trade barriers are often also characterized by government intervention in internal competition and the financial sector, subsidy and tax programs favoring specific sectors in the economy, inefficient bureaucracy, inconsistent macroeconomic policies, and high inflation

Dollar and Kraay (2001) also argue that adequate measures of trade policy are difficult in practice. For instance, in many developing countries non-tariff barriers have been particularly destructive –licensing schemes that amount to firm specific planned allocations of imports. Hence, NTB coverage ratios do not effectively capture how severe non-tariff barriers are. Also, where average tariff rates provide some information about trade policy, yet changes in reported tariff rates are often not accompanied by any change in trade volume. They exposed the use of level of the trade/GDP ratio as a measure of openness arguing that it is likely to be more a product of a country's initial conditions than of policy, and tells little about the effects of trade policy on growth, and many simply reflect the effects of geography on growth through other channels. Since initial conditions occur once, Dollar and Kraay reason that they

[1] One reason for lack of convergence is that openness variables may be proxies for other country characteristics that have very little to do with trade.

[2] Variables that attempt to measure trade distortions may be capturing other distortions instead.

can "control" for them by differencing countries' trade/GDP levels between time periods. This reasoning of focusing on changes rather than level is valid to the extent that the intervening variables that make the initial conditions to change are controlled for. The effects of the initial conditions are not the same in every period (the effect vary with time), and the intervening variables that cause the changes are sometimes beyond the control of policy makers. As a result, any observed increases in the trade/GDP ratio can then be taken to be the result of policies, which foster openness.

2.1.3 Trade policy credibility

This is a situation in which private agents might reasonably expect that there is a risk of policy reversal, and act accordingly to keep their interest. If the necessary conditions for trade liberalization are not met, then policy reversal is predicted thus making trade liberalization incredible. Trade reform will only induce behavior that makes them self-sustainable if they are credible. There are three necessary conditions for trade liberalization to be credible. These are macroeconomic compatibility, the absence of systematic forecast ability and the time consistency of the reform program.

Macroeconomic compatibility also consists of two components namely balance of payment and fiscal policy compatibility. Balance of Payments compatibility is best seen through the monetary approach to the Balance of Payment. Trade liberalization that lowers implicit tariff without changing other policies lowers domestic price of importable and this lead to decline in the transaction demand for money which in turn lead to an excess supply and to unsustainable loss of reserve. Thus it is essential to take policy measures that reduce the excess supply of money or induce the demand for money. Such policies include exchange rate depreciation, imposing taxes on both tradable and non tradable goods and etc.

Fiscal policy compatibility refers to fiscal budget deficit due to reduction in tariff rate because of trade liberalization. This is done by looking at government revenue from tariff as percentage of GDP. It is not severe as Balance of Payments incompatibility since trade liberalization may either lead to increase or decrease in the government budget and short run deficit could be sustained at the price of accelerating inflation. However, according to a study conducted by Oyejide, (1996) on credibility of trade liberalization, most policy reversals revealed in the case studies were triggered by balance of payments and fiscal incompatibility.

The reluctance of governments to refrain from using traditional trade policy instruments for addressing incompatibility issues made policy reversals virtually unavoidable.

Systematic forecast ability refers to a situation where the private economic agents can easily predict the policy rule of the government. Trade policy changes might reflect either response according to an existing rule or an initiative to a change in the rule. Liberalizations that are responses to the change in to the state of the world under the existing policy rule can in certain circumstances be predictable to the extent that they will be reversed. The implication is therefore that liberalization should be classified according to whether they are responses or initiatives.

Time inconsistency of the trade liberalization refers to the situation where the policy measures taken by the government do not attain initial objectives in the later periods. African trade is viewed as time inconsistent due to the fact that it is carried out by the aid from donors i.e. trade liberalization is adopted in order to get the aid but revert to trade restriction if the aid stopped or bad economic situation occurs. The other reason is due to some form of regional integration and international agreements do not lock trade in Africa, as the existing regional agreements are weak. Even if the time inconsistency plays a great role in the credibility of the trade liberalization policy, it is very difficult to establish it empirically.

2.1.4 Evaluating the performance of trade liberalization

It is agreed that the cost of protectionist measure was the misallocation of resource due to price distortion, thereby leading to an illegal activities like smuggling and rent seeking behaviors. Moreover, in a situation where there is a severe external shock, trade protection coupled with the control on the foreign exchange rate also lead to failure of adjustment in production to change in relative prices which further affects the functioning of the economy.

Advantage of trade reform includes removing the above problems and promoting the growth in GDP, export capacity, level of investment and employment in the economy. As the reform policy corrects price distortions, factors of productions flow from the formerly protected sector (import substituting sector) to the export sector. Thus, through efficient allocation of resources both employment and investment in the export sector will increase and hence there

comes a diversification in the type of the commodities exported. The removal of the price distortions also increases productivity and efficiency in the manufacturing sector.

However, there needs to be evaluation whether trade liberalization has brought the expected results or not. Evaluation of the impact of trade liberalization however has problems. Since the implementation of the liberalization policy is carried over a long period of time it is rational to expect that the full outcome of the policy emerge over a long period of time. This implies that evaluation of the performance of trade liberalization also needs the judgment as to how long should the liberalization program have been in place before we evaluate success. Furthermore, it involves deciding on the type of indicators to use to evaluate the success or failure of the liberalization.

Collier, greenway and Gunning (1997) proposed some criteria used in the evaluation of the performance of trade liberalization. The criteria include a set of performance indicators that can be measured across countries (aggregate employment, composition of employment and trade, current account balance, gross domestic capital formation, growth of trade, growth of real output, fiscal profile and distribution of income.); and use of sufficient data point to make evaluation by comparing the periods before and after liberalization.

Thus, this paper attempts to evaluate trade liberalization experience in Ethiopia based on its impact on trade balance and economic growth. The theoretical and empirical relationship between these variables is explored in the next sections.

2.2 Theoretical review

2.2.1 Inward versus Outward Oriented trade regimes

The appropriate role of trade policy in economic development has been controversial for a very long time. In this regard, historically there are two major paradigms, namely inward oriented and outward oriented trade regimes. The former is propagated by the structuralisms while neo classical argue in favor of the latter.

The major argument raised by Structuralisms is that unfettered markets in developing countries can't be relied upon to allow full exploitation of the gains from trade (Greenway,D. and Wyn Morgan, 1998). The vital signaling function performed by the market mechanism

not only operates imperfectly, but may even emit misleading signals. Sources of market are manifold capital market imperfections, production externalities, and a complete absence of some markets. Thus rather than giving the market a helping hand, policy should be directed at market replacement. The most influential imperfections alleged in the traded goods sector are term of trade decline, export instability and infant industries.

The terms of trade deterioration hypothesis is pioneered by Singer (1950) and Prebisch (1950) who independently identified the potential for an inherent tendency to decline in the terms of trade of primary producers. The combination of demand functions on the one hand for primary products which are relatively income inelastic, and are sold on market that are very competitive and manufacturers where demand is income elastic and markets less competitive on the other. This results in a secular tendency to relative prices decline. This significant decline through time in the relative price of primaries does translate to terms of trade decline for the least developed countries heavily dependent on exports of primary goods.

Price inelasticities in both demand and supply of primary product markets combined with a tendency to exogenous shocks triggered by weather condition, pestilence and the like, results in large fluctuations in prices which in turn translate to large fluctuation in export earning. However, does this imply that inward orientation the optimal response? In the longer term, the optimal response must again be diversification, which brings us back to the most appropriate policy for promoting industrialization.

The other case to pursue inward orientation is the infant industry argument. This argument has been the most pervasive and influential of all arguments for inward orientation. It states that established mature producers benefit fully from scale economies. As a result they produce at the minimum efficient scale. So long as the scale curve is declining over the relevant range, developing countries are unable to compete. Thus temporary protection serves to raise the selling price of the mature competition. This allows the new entrant to expand capacity, gain market share and move down the scale curve. In time the infant matures and protection can be removed (Greenway,D. and Wyn Morgan, 1998).

However, as Johanssons (1971), Baldwin (1969) and others have argued scale economies in themselves don't constitute as defensible argument for infant industry protection. After all, they are pervasive feature of manufacturing activity in industrialized countries and the capital

market has a mechanism for declining with them. All 'infant' producers have to do is demonstrate that once scale economies are fully exploited, profits will be sufficient to offset initial losses and guarantee a rate of return at least equivalent to what could be earned elsewhere. However, in a developing country the capital market may not exist. Even if it exists it may operate imperfectly. In such circumstances it is argued that infant industry protection is required. Since, manufacturing activity is a key element in the industrial sector, and since the entire manufacturing sector may potentially be in its infancy, it follows that widespread protection of manufacturing may be necessary.

The structuralisms argument for inward orientation has been severely criticized by the Neo-classical analysis for outward orientation. Neo classical economists draw upon several model structures in making a case for outward orientation, rather than framing the case in terms of a single paradigm. The basic case rests upon allowing markets to send out reliable and consistent signals, such that agents can react to these in appropriate ways to facilitate the exploitation of gains from trade.

Thus, according to neo classical analysis static gains from inter industry exchange are the standard deadweight gains associated with specialization and exchange. It is argued that these gains can only be maximized when markets are permitted to function. Dynamics gains from inter industry exchange are the other gains associated with trade. Empirical analysis suggests that static gains are of a modest order of magnitude i.e. the required gains from infant industry protection need not be that great to make inward orientation worthwhile. The dynamic gains from exchange are, however, likely to be much greater than static gains. These arise from X-inefficiency and a more rapid diffusion of technology. The former derive from the pro competitive effects of trade while the latter comes from better information flows either directly or indirectly through embodied technology.

The other case for outward orientation is a "negative" argument against inward competition, which states that it induces directly unproductive activity. Studies conducted on public choice analysis in assessing interest group behavior in developing countries (see Bhagwati, Brescher & Srinivasan, 1984) argued that economies, which rely heavily on direct controls, create an incentive structure, which generates rents. In turn the existence of rents gives rise to rent seeking. It is further argued that agents compete for the attention and favors of bureaucrats and politicians in an endeavor to secure the rents. As a result, much if not all of the rents are

dissipated in the process of lobbying. This activity is unproductive in that it does not add anything to national output. Thus this kind of activity is growth inhibiting rather than growth enhancing. It is argued that if a policy of free trade is followed, this kind of incentive structure which engenders directly unproductive activity can not arise.

In summary, the issue is controversial in the sense that arguments for both inward and outward orientation can be marshaled; second, these theoretical arguments are not wholly conclusive in one way or the other.

2.2.2 Old and New models of trade and growth

The impact of trade in general and trade liberalization in particular on economic growth works mainly through improving efficiency and stimulating exports, which have powerful effects on both supply and demand within an economy. However, the real transmission mechanism in which trade promotes growth has been an age-old question which has sustained arguments between pro-traders and protectionists over the years-from Adam smith, John Stuart Mill and John Maynard Keynes to Raul Prebisch and Hans Singer and to Jadish Bhagwati and Paul Krugman. Theorists from both camps have influenced policy in many countries and at various stages of development. Early proponents of free trade lauded the gains from trade that could accrue to countries when they specialize in the production of goods in which they have a comparative advantage, and engage in trade to meet their other needs. New development theorists contend that openness stimulates technological change by increasing domestic rivalry and competition, leading to increased innovation; and , that trade liberalization by allowing new goods to flow freely across national borders increases the stock of knowledge for technological innovations which spur growth.

2.2.2.1 Traditional theories of trade and growth

The doctrine that trade enhances welfare and growth has a long and distinguished ancestory dating back at least to Adam Smith. Smith, in his famous book, An Inquiry into the Nature and Causes of the Wealth of Nations (1776), stressed the importance of trade as a vent for surplus production and as a means of widening the market thereby improving the division of labor and the level of productivity.

Hence, a surplus productive capacity suitable for the export market appears as a costless means of acquiring imports and expanding domestic economic activity. According to the staple theory of growth, the discovery of a primary commodity in which a country has a comparative advantage or an increase in demand for its comparative advantage commodity leads to an expansion of resource-based export commodity which in turn induces a higher growth of aggregate and per capita income.

Following Smith, David Ricardo (1772-1823) developed the theory of comparative advantage and showed rigorously in his Principles of Political Economy and Taxation (1817) that on the assumptions of perfect competition and the full employment of resources (although not made explicit), countries can reap welfare gains by specializing in the production of those goods with the lowest opportunity cost and trading the surplus of production over domestic demand, provided that the international rate of exchange between commodities lies between the domestic opportunity cost ratios . These are essentially static gains that arise from the reallocation of resources from one sector to another as increased specialization, based on comparative advantage, takes place. These are the trade-creation gains that arise within Customs Unions or Free

According to classical economists, capital accumulation and technological progress could lead to expansion in international trade, and that international trade could improve the conditions for economic growth. The feedback effects of trade on economic growth were recognized to operate through a number of channels, including the importation of inputs to domestic manufactures; international diffusion of new production techniques and new consumption possibilities; and wider extension of the division of labor, promoting increased economies of scale.(UNCTAD,2004).

Western attempts at constructing new mathematical theories of economic growth, most notably those of Roy Harrod (1939) and Evsey Domar (1946)[3], relied on assumptions of technologically fixed proportions between labor and capital and fixed rates of saving independent of any human decisions about the appropriate rate of savings. The logical implications of such restrictive assumptions were that stable, long-run economic growth was

[3] Both harrod and Domar as cited in UNCTAD(2004)

unlikely in market economies, and that chronic growth of either unemployment or idle machinery was very likely.

2.2.2.2 Models of Export-Led Growth

The main idea behind export led growth model is that export demand is the most important component of autonomous demand in an open economy, so that the growth of exports will govern the long run growth of output to which other components of demand adopt. Three main models of export-led growth are discussed in this section[4]: the neoclassical supply-side model; the balance of payments constrained (Hicks super-multiplier) model and the virtuous circle model. The first is the conventional orthodox model which fits neatly into mainstream neoclassical growth theory. The latter two models are rarely articulated in the trade and growth literature, and yet may be of greater importance for understanding growth rate differences in open developing economies; especially if most developing countries are constrained in their economic performance by a shortage of foreign exchange. Moreover, orthodox growth and trade theory predicts the convergence of per capita incomes across countries which are at variance with what we observe in the real world. What appears to happen in practice is that once a country gains an advantage through the capture of export markets, it tends to sustain that advantage through the operation of various cumulative forces which generate 'virtuous circles' of success for favored countries (and regions), and 'vicious circles' of slow growth and under-employment for those countries that get left behind. When studies are conducted of the relation between exports and growth, either across countries or over time, it is not always clear whether the relation found is picking up supply side factors; demand-side influences; cumulative forces interacting with each other, or a combination of all three.

[4] The section mainly drawn from A.P.Thirwall (2000) Trade, Trade Liberalization and Growth: Theory and Evidence for Africa. African Development Bank Working Paper No. 85.

The Neoclassical Supply-Side Model

The neoclassical supply-side model of the relation between exports and growth assumes that the export sector, because of its exposure to foreign competition, confers externalities on the non-export sector, and secondly that the export sector has a higher level of productivity than the non-export sector. Thus, the share of exports in GDP, and the growth of exports, matters for overall growth performance. Feder (1983) was the first to provide a formal model of this type to explain the relation between export growth and output growth. The output of the export sector is assumed to be a function of labour and capital in the sector; the output of the non-export sector is assumed to be a function of labor, capital and the output of the export sector (to capture externalities), and the ratio of respective marginal factor productivities in the two sectors is assumed to deviate from unity by a factor d. These assumptions produce an augmented neoclassical growth equation of the form:

$$G = a\,(I/Y) + b\,(dL/L) + [d/(1+d) + Fx]\,(X/Y)\,(dX/X) \qquad (2.1)$$

where I/Y is the investment ratio; dL/L is the growth of the labour force; dX/X is the growth of exports; X/Y is the share of exports in GDP; d/(1+d) is the differential productivity effect, and Fx is the externality effect. Feder tests the model taking a cross section of 19 semi-industrialised countries and a larger sample of 31 countries over the period 1964-73. First he tests the model without export growth, and then with the growth of exports included. The inclusion of dX/X considerably improves the explanatory power of the equation, and the effect of export growth is always statistically significant. The coefficient on export growth, however, is a mixture of an externality effect and a productivity differential effect. To decompose the two, equation (2.1) can be fitted excluding the export share term (X/Y), which then isolates the externality effect. The difference between the total effect of export growth and the externality effect is the productivity differential effect. When this is done, Feder finds substantial differences in productivity between the export and non-export sector and also evidence of externalities.

The results should not surprise. The export sector is likely to be more 'modern' and capital intensive than the non-export sector which to a large extent consists of low productivity agriculture and petty service activities. The externalities conferred are part of the dynamic

gains from trade associated with the transmission and diffusion of new ideas from abroad relating to both production techniques and efficient management practices.

Whatever procedure is adopted, however, the problem remains of identifying the causal mechanism by which exports influence growth. The Feder model is a pure supply-side argument which has plausibility, but there are other (non-neoclassical) supply-side arguments, and also demand-side considerations which would also be consistent with finding export growth and GDP growth positively correlated over the long term. From the supply side, export growth may raise output growth through externalities, but also faster export growth permits faster import growth. If countries are short of foreign exchange, and domestic and foreign resources are not fully substitutable, more imports permit a fuller use of domestic resources. In particular, more foreign exchange allows the greater import of capital goods which may not be produced domestically. (Esfahani (1991) as quoted by Thirwall,2000) recognizes this point and re-estimates Feder's equation for 31 countries, including the growth of imports as well as the growth of exports. The export growth variable now loses its significance, while the import growth variable is significant. The regression is also run without export growth, and it is found that once the import supply effect of exports is taken into account there is apparently no significant externality effect of exports left to explain.

Even the Esfahani argument, however, doesn't go far enough because it neglects the importance of demand for the growth of output. Most factors of production in the growth and development process are endogenous to demand and not exogenously determined as neoclassical growth theory assumes. Capital is a produced means of production and is as much a consequence of the growth of output as its cause. The demand for labor is a derived demand from output. Labor input responds to demand in all sorts of ways through reductions in unemployment; increases in labor force participation; increases in hours worked; shifts of labor from low productivity to high productivity sectors, and in the last resort, through international migration. In labor surplus economies, such as most developing countries, it stretches credulity to assume an exogenously given supply of labor that determines output in a causal sense. Productivity growth is also largely endogenous to output growth working through induced capital accumulation, embodied technical progress and static and dynamic returns to scale. To understand growth rate differences between countries, it is necessary to

understand why demand growth differs between countries, and the constraints on demand that exist within countries.

In most developing countries, the major constraint on the growth of demand is the current balance of payments and the shortage of foreign exchange (Thirwall, 2000). Export growth relaxes a balance of payments constraint on demand and allows all other components of demand (consumption, investment and government expenditure) to grow faster without running into balance of payments difficulties. This is the simplest of all explanations of the relationship between export growth and output growth, and leads us on to the modeling of balance of payments constrained growth models in which export growth is the driving force.

Balance of Payments Constrained Growth Models

In the long run, no country can grow faster than that rate consistent with balance of payments equilibrium on current account unless it can finance ever-growing deficits which, in general, it cannot. Ratios of deficit to GDP of more than 2-3 percent start to make the international financial markets nervous (witness Mexico, Brazil and the countries of East Asia in recent years), and all borrowing eventually has to be repaid. We can model a country's balance of payments equilibrium growth rate by stating the balance of payments equilibrium condition, specifying multiplicative (constant elasticity) import and export demand functions in which imports and exports are a function of domestic and foreign income, respectively, and of relative prices, and substituting these functions in the equilibrium condition. Since imports are a function of domestic income, the model can be easily solved for the growth of income consistent with balance of payments equilibrium (see McCombie and Thirlwall, 1994). The constrained growth rate (y_B) is:

$$y_B = [(1 + \psi + \eta)(pd - pf - e) + \varepsilon(z)] / \pi \qquad (2.2)$$

where pd is the growth of domestic prices; pf is the growth of foreign prices; e is the rate of change of the exchange rate measured as the domestic price of foreign currency; z is the growth of world income; ψ (<0) and η(<0) are the price elasticities of demand for imports and exports, respectively, and ε (>0) and π (> 0) are the income elasticities of demand for exports and imports respectively. If relative prices, or the real exchange rate, does not change very much in the long run, and/or the Marshall-Lerner condition is just satisfied ($\psi + \eta = 1$), equation (2) reduces to:

$$y_b = \varepsilon(z)/\pi \quad (2.3)$$

or

$$y_b = x/\pi \quad (2.4)$$

Equation (2.4) is the dynamic version of the so-called Harrod trade multiplier result derived by Harrod in 1933 where, on various assumptions (including constancy of the real terms of trade), the level of income Y is shown to be a linear multiple (1/m) of the level of exports (X), where m is the propensity to import.

It can be seen that equation (2.4) predicts a correlation between a country's long run sustainable growth rate and the growth of exports, with the strength of the correlation depending on differences in the income elasticity of demand for imports (π). Extensive empirical research (see, McCombie and Thirlwall, 1994 and 1997), shows that x/p is a very good predictor of a country's long run growth performance, so that allowing for differences in p, income growth and export growth are highly correlated. The conclusive evidence that most developing countries are balance of payment constrained is to find countries growing at their balance of payments constrained growth rate (or above, financed by capital inflows) while resources lie idle domestically. In these circumstances, export growth will raise output growth by relaxing a balance of payments constraint on demand, irrespective of any supply-side effects.

Exports are unique as a growth-inducing force from the demand side because it is the only component of demand that provides foreign exchange to pay for the import requirements for growth. In this sense, it allows all other components of demand to grow faster in a way that consumption-led growth or investment-led growth does not. Indeed, it can be shown (see McCombie, 1985) that the dynamic Harrod multiplier result of equation (2.4) is formally equivalent to the Hicks super-multiplier in which the growth of output is determined by the major component of autonomous demand to which other components of demand will adapt. In an open economy context, the major component of autonomous demand is export growth, and faster export growth allows all other components of demand to grow faster. It is possible, as McCombie does, to then disaggregate the contribution to growth of exports and other components of demand within this demand-oriented framework.

According to the Balance of Payments constrained growth model proponents, the classical ideas of Smith and Ricardo, and also much of conventional modern trade theory, ignore the monetary or balance of payments consequences of trade (Thirwall 2000). If a particular pattern of trade leads to balance of payments difficulties, and the balance of payments is not self correcting through relative price (i.e. real exchange rate) movements, the gains from trade can easily be offset by the reductions in output and the increase in unemployment necessary to compress imports. This is an important consideration in thinking about the potential role of strategic protection and the speed of trade liberalization. The balance of payments consequence of trade is also one of the important reasons, neglected by orthodox theory, for supposing a strong link between exports and growth. Export growth is the only component of demand that provides the foreign exchange to allow other components of demand in an economy to grow faster, such as investment, consumption and government expenditure, all of which have an import content which needs to be paid for in foreign exchange. Export growth relaxes a balance of payments constraint on demand, as well as impacting on growth from the supply-side.

Virtuous Circle Models of Export-Led Growth

The third model recognizes that exports and growth may be interrelated in a cumulative process. This raises the question of causality, but more important such models provide an explanation of why growth and development through trade tends to be concentrated in particular areas of the world, while other regions and countries have been left behind. These models provide a challenge to both orthodox growth theory and trade theory, which predict the long run convergence of living standards across the world. In neoclassical growth theory, capital is assumed to be subject to diminishing returns so that rich countries should grow slower than poor countries for the same amount of investment undertaken. Neoclassical trade theory predicts convergence through the assumption of factor price equalization. The empirical evidence is at odds with the theory; there is no evidence that living standards across the world are converging (see Thirlwall, 1999).

A simple cumulative model, driven by exports as the major component of autonomous demand, is to assume that (i) output growth is a function of export growth; (ii) export growth is a function of price competitiveness and foreign income growth; (iii) price competitiveness is a function of wage growth and productivity growth, and (iv) productivity growth is a

function of output growth – the so-called Verdoorn Law working through static and dynamic returns to scale, including learning by doing. It is this induced productivity growth that makes the model 'circular and cumulative' (Dixon and Thirlwall, 1975 as cited by Thirwall 2000) since if fast output growth (caused by export growth) induces faster productivity growth, this makes goods more competitive and therefore induces faster export growth. Specifying a four-equation model such as the above, and substituting, gives the equilibrium growth rate of:

$$y = \gamma[\ \eta(w - ra + \tau - p_f) + \varepsilon\ (z)]/(1 + \gamma\ \eta\lambda) \qquad (2.5)$$

where w is the rate of growth of wages; ra is the rate of growth of autonomous productivity; τ is the rate of change of the markup on unit labour costs; p_f is the rate of change of foreign prices; z is the growth of world income; γ is the elasticity of output growth with respect to export growth; η (<0) is the price elasticity of demand for exports; ε is the income elasticity of demand for exports, and λ is the Verdoorn coefficient. The Verdoorn relation not only makes the model 'circular and cumulative'; but also gives rise to the possibility that once an economy obtains a growth advantage it will tend to keep it. Suppose, for example, that an economy obtains an advantage in the production of goods with a high income elasticity of demand in world markets, such as high technology goods, which raises its growth rate above other countries. Through the Verdoorn effect, productivity growth will be higher and the economy will retain its competitive advantage in these goods, making it difficult, without protection or exceptional industrial enterprise, to establish the same commodities. In such a cumulative model, it is the difference between the income elasticity characteristics of exports (and imports, if balance of payments equilibrium is a requirement, as argued earlier), which is the essence of divergence between industrial and agricultural economies, or between 'centre' and 'periphery'. It can also be seen in equation (2.6) that if no Verdoorn effect is assumed (λ= 0), and there is no change in competitiveness, the equation reduces to $y = \gamma\ \varepsilon\ (z)$. If balance of payments equilibrium is a requirement γ= 1/p, where p is the income elasticity of demand for imports. We are back to equation (2. 4) which, rearranging, yields:

$$y/\ z = \gamma\ \varepsilon \qquad (2.6)$$

This says that one country's growth rate (y) relative to all others, z (the world growth rate), is equi-proportional to the ratio of the income elasticities of demand for exports and imports. This is the essence of the classic center-periphery models of Raul Prebisch, Dudley Seers, Nicholas Kaldor and others (see Thirlwall, 1983); also sometimes called the 45° degree rule

for obvious reasons. Poor developing countries typically export goods with a low-income elasticity of demand and import goods with a higher income elasticity of demand, compared to developed countries. This simple model can go a long way in explaining differences in the level of development between countries and the forces which perpetuate divergences in the world economy. The forces are structural relating to the production and demand characteristics of the goods produced and traded.

2.2.2.3 The New Endogenous Growth Models

Policy makers have always asserted that trade liberalization is good for growth, yet economists have only recently developed tools to evaluate this claim. Solow(1957) model seeks to explain the growth rate of aggregate output from various components, mainly the growth of factor supplies labor and capital and the factor for technological progress representing growth in the factor productivity (TFP). To measure the relative roles played by input growth and technological change in explaining output growth, one would need to measure rate of change of output, technology, capital and labor. However, it is not easy to measure technological change, as result, Solow and others computed available information of labor and capital and output, and imputed the contribution of technical change as a residual. This computation can be derived as

$$\Delta A/A=\Delta Y/Y-[(1-\alpha_t)\Delta K/K+ \alpha_t\Delta L/L] \qquad (2.7)$$

Where $\Delta A/A$ is change in technology

$\Delta Y/Y$ is change of Output

$\Delta K/K$ is change of Capital

$\Delta L/L$ is change of Labor

As postulated by the growth accounting models, technological change constitutes the major part of economic growth. Given the significance of technological factors in growth accounting, we need to go further into the specification of factors that determine technological change. New growth theorists have argued that technological change was not exogenous, as assumed in the above Solow's model, and that is driven by the interaction of economic factors within the economy. This is the major thesis of endogenous growth theorists such as Lucas(1988) and Romer(1990), who explored various assumptions concerning the

dependence of growth on the development of technology and productivity, and especially growth in human capital.

Although, there are various approaches to endogenous growth models, the common approach is that they all endogenize technological progress in the growth process, argue that it is determined by economic forces, and not necessarily a residual. In the neoclassical growth models developed by Solow and others, technological change as embodied in A was seen as exogenous –a residual unaffected by economic forces. With endogenous growth theory, output growth will not result from accumulating the physical or traditional factors alone, but would come from advances in human capital, and taking deliberate measures to invest in areas that contribute to improving total factor productivity (A).

Trade is seen as affecting long run growth through its impact on technological change i.e. it influences the rate of change in technological progress. Endogenous growth models, therefore, hold that trade provides access to imported products, which embody that technology; additionally trade alters (mainly increases) the effective size of the market facing producers which raises returns to innovation; and affects a country's specialization in research-intensive technologies and production systems.

2.3 Empirical review

Developing nations view traditional trade theory as involving adjustment to existing conditions, while development necessarily requires changing the existing conditions (Salvatore, 1998:331). Because of these Import substitution strategies were followed by developing countries in order to improve their Terms of Trade. Thus become protective i.e. restricted imports, issued import license, foreign exchange control so as to encourage domestic industries. The major reason for pursuing such trade strategy is Prebisch-Singer hypothesis discussed above. Moreover, because of low income elasticity of demand for the exports of the developing nations, the terms of trade will continue to deteriorate, making developing countries to lose from any trade they perform with the developed ones.

With regards to practical significance, the majority of developing countries that implemented Import Substitution strategy did not achieve the intended success, mainly due to inefficient

method of production and very high price for domestic consumers. Moreover, the increased capital intensity absorbs the meager investment fund and increased unemployment and underemployment. The fact that most industries in the developing countries depend on the intermediate and capital goods imported from developed nations, which are imposed with high tariffs, led the industries to excess capacity. Moreover, developing nation's neglect of agricultural sector led to fall in export, an increase in the import of food items, which with some of the above impacts further led to deterioration of Balance of Payments.

With the advent of debt crisis in 1980s and success of outward oriented countries (Asian miracles), many developing countries started to take trade liberalizing and outward looking measures since 1980s. These measures include reduction of import tariffs, elimination or reduction of quotas, import license and export duties. The policy measures were mainly advocated by the International Financial institutions like IMF and the World Bank as a major component of the Structural Adjustment Program. The next section of the paper explores existing literatures regarding the impact of trade liberalization on balance of payment and economic growth.

2.3.1 Trade Liberalization and Trade balance

There are several works done to examine the relationship between trade liberalization/reform, trade balance and current account of balance of payments. Michael Michaely (1991) summarized the World Bank's comparative study of trade liberalization policies in nineteen countries in the post war period. He argued that for countries that have been running a restrictive trade policy for a long period, the initial strength of the liberalization is very important for sustainability of the reform. Moreover, liberalization under an extreme pressure is more likely to be successful than that started under a normal condition. Also, after taking an appropriate policy measures an engagement in the multilateral agreement is important for the survival of the policy.

The study further goes on to argue that there is a positive relation between trade liberalization and performance of the export and the balance of payment; and also there is a strong association between failures of liberalization and decline in the foreign exchange reserve at the end of liberalization. Moreover, nominal devaluation followed by a restrictive fiscal policy is important for the sustainability of the reform. The experiences further indicate that

the successful liberalizers are those who keep their budget deficit at the lowest level. The impact of liberalization, as already mentioned above is the growth of GDP and exports, with the growth rate of the latter being higher than that of the former.

There are many country studies that need to be mentioned in this regard. One of them is the evaluation of trade liberalization on Mauritius based on the methodological framework proposed by Greenway, Collier and Gunning (1997). Evaluation of the reforms carried out during two liberalization episodes between the periods 1979-1985 and 1991-1994 on the basis of both descriptive and econometric analyses show that although there were factors that played a role, following the liberalization there was an increase in the GDP growth and the quantity of exports.

Another liberalization success story mostly mentioned in literature is the Chilean experience since 1974. The major liberalization effort taken by the country were removal of all quotas and official approvals on imports, reduction of the tariff rate in three phases from 750percent to 10percent and an introduction of consumption tax to compensate for the reduction of tariff. Restrictive fiscal and monetary policies were introduced and the budget deficit was contained to the lowest level. A massive institutional arrangement was also made accompanying the above policies. The impacts of liberalization were growth in export and GDP, while increase in the quantity of imports was not significant.

Although there was threat to the liberalization policy it managed to be sustainable. The factors contributed towards the sustainability were the determination of the government to carry on the reform even under unfavorable condition, stable macro environment, the behavior of the trade balance, high real exchange rate and the disagreement between the interest group as to which policy to support. Therefore, the Chilean experience shows us that the appropriate policy measures in trade liberalization are to remove quantitative restrictions and other distortions before reducing the tariff rate to the required minimum. Removal of the anti export bias through the appropriate real exchange rate is an important policy.

There are also cross- country studies that support the claim that trade liberalization is often associated with positive impact on trade balance and balance of payments. For instance, Ashok Parikh (2002) examined the impact of liberalization on trade deficits and current accounts for developing economies. The study used data of 64 developing economies over the

period 1970–1999 and conducts a panel data study on the relationship between trade balances to GDP percentages with the growth rates controlling for other factors. Similar analysis is conducted using the current account to GDP percentages in the panel data framework. The study also considered the endogeneity of growth variable and lagged effects through a dynamic structure. The major conclusion of the paper was that the impact of improvement in terms of trade and the higher growth in developed countries seems to play a greater role in improving trade balances than the corresponding deterioration induced by higher growth in developing economies.

A recent work by Amelia U. Santos-Paulino(2003) on the impacts of trade liberalization on the trade performance of the Dominican republic also supported the above works. The Dominican Republic has undertaken important trade policy reforms that have mainly been part of structural adjustment programs financed by the IMF and World Bank in the last three decades. The study shows that the Dominican Republic has made a significant progress towards a more open trade regime, particularly through the elimination of non-tariff barriers and through the simplification of the tariff structure and the reduction in the rates of duties. In effect, the impact of a more liberalized trade regime in the country has raised export growth by over 0.9 percentage points while trade liberalization increased import growth by 0.8 percentage points. Thus, trade account shows a positive reaction to trade liberalization, that is, an improvement in the ratio of the trade balance to GDP of one percentage point.

On the other hand, there are some studies that show a negative relationship between trade policy reform and trade balance. Among such studies Oli Havrylyshn(1991), shows that the Yugoslavia liberalization undertaken from 1965 to1975 failed. The major reasons mentioned was the inappropriate macro exchange rate policies, persistence of distorted prices and incentives, which were not eliminated in the short lived liberalization. The macro policies taken following the liberalization were too restrictive; devaluation was inadequate; liberalization was too limited and the excessive decentralization make fiscal policy less effective instrument by putting the burden on monetary policy. The major lesson learnt from Yugoslavian liberalization attempt is that the appropriate macroeconomic policy that complements trade liberalization is not country-specific, but also situation-specific.

Lopez (2003) studied the impact of trade liberalization in balance of trade for Mexico. The author estimated trade balance taking independent variables including world income, domestic income, terms of trade, real exchange rate and trade liberalization coefficients, namely import and export tariffs as well as dummy variables to proxy year of liberalization using error correction model. The author found out that effects of liberalization on the non-oil current account of the balance of payments are not picked up by the OLS estimations. The shift dummy variable, which considers liberalization in trade of goods and services, was not statistically significant. Hence, the trade reforms launched during the mid-1980s worsened the position of the trade balance by between 14 and 18 percentage points in 1985. Although the effect is fairly small, it is negative, showing that trade liberalization, among other factors, contributed to deterioration in the position of Mexico's trade sector.

2.3.2 Trade Liberalization and Economic Growth

The available literature regarding the link between trade reform and economic growth can be seen in two broad categories. The first category comprises of economists arguing that trade reforms are significantly and positively related to economic growth while the other group criticize the robustness of these results particularly in developing countries.

Using time series models Dollar (1992) attempted to measure the relationship between growth and openness. Thus, he carried out an econometric regression between per capita income growth and distortions in the real exchange rate and its variability, as well as investment rates in 95 countries between 1967 and 1985. This test shows that the high level of distortion and greater exchange rate variability are strongly correlated with a low per capita income growth level, a result which enables Dollar to assert that openness has a highly positive impact on growth and development.

Sachs and Warner (1995) introduced five major criteria: average tariffs, non –tariff barriers, the nature of the economic system, the existence of a State monopoly over main exports, and the presence of a black market in the country as a new index for assessing openness. The study showed that their openness index is positively correlated with per capita income growth rate. Moreover, they suggest that the way forward in researching the link between trade strategy and growth is to explore the timing of policy shifts and how these have impinged on growth performance. The authors shows that open economies perform better than closed

economies and that convergence can be achieved by poor countries as long as they are linked by trade to richer ones. Their conclusion was that 'poor' polices affect growth directly, even when controlling for other factors, and in particular they affect the accumulation of physical capital.

Using a cross-country sample of 68 countries, Dollar and Kraay (2001) relate growth in countries per capita output to change in the trade/GDP ratio. The Trade/GDP ratio has been called a measure of 'trade openness'; hence 24 out of their country-sample whose trade/GDP ratios increased dramatically over the 1980s and 1990s were classified as 'globalizers' and the remaining 44 countries as 'non-globalizers'. Increases in integration with the world economy have been substantial among the globalizers, had large changes in trade volumes between the 1970s and the 1990s: a doubling of trade to GDP on average (16percent to 33percent of GDP). The trade to GDP ratio also grew dramatically among the rich countries (29percent to 50percent of GDP), but among the non-globalizers, trade actually fell as a share of GDP (60percent to 49percent of GDP).[5] Thus, it is interesting that practically no country that has been close to autarkic has managed to sustain a high growth performance over a sustained period.

Recent research, however, has questioned the robustness of the relationship between openness indicators that turned out to have a positive 'association' and economic growth. For instance, Ben-David(1993), Lee(1993), Harrison(1996) and Wacziarg (1998), all arrived at the same conclusion and vigilant that it was difficult to demonstrate from the above studies that there is a strong correlation between openness, economic growth and development. The major difficulty in the demonstrations arises from the methodological inconsistency of the different indicators used in the economic literature to assess the degree of openness of various economies. The authors reject these indicators and prefer the use of others that can be prepared more easily, including an average rate of tariffs on foreign trade, calculated by the ratio of revenue from import tariffs to the total volume of imports and the second indicator measuring non-tariff barriers applied by different countries.

5 The globalizers have also had large reductions in tariffs, a total of 22percent (from 57percent to 35percent), while tariff cuts among the non-globalizing developing countries were a much more modest 11percent (from 31percent to 20percent)" (Dollar and Kraay, 2001:9).

Rodriguez and Rodrik (1999) confirm the above authors critique and argued that much of the work to correlate trade openness and economic growth has been plagued with subjective and collinear measures of openness that, though positively related with economic growth, arrive at their conclusions through problematic econometric methodologies. Rodriguez and Rodrik conducted cross-national study in Sub-Saharan Africa, which includes Ethiopia found that the cross national variation in trade performance within the region is well explained by the standard determinants of trade, namely trade policies, income levels, country size, and geography. In particular, trade policies, as measured by taxation of imports and exports, are significantly and robustly correlated with volumes of trade as well as the growth of trade. However, the role of trade and trade policy in achieving sustained long-term growth in the region was insignificant. Moreover, he argued that the variation in long-term growth performance within the region is explained largely by a small set of fundamentals: human resources, fiscal policy, demography, and a catch-up factor. Trade policies have played a much smaller role in growth performance, although there is evidence that excessive taxation of exports was partly responsible for some dismal failures.

Various studies have been conducted to test the impact of trade liberalization on growth of developing countries. A study by Thirwall (2000) in developing countries pointed out that though trade promotes growth through a more efficient allocation of resources within countries and by transmitting growth from one part of the world to another, the benefits from trade are however, not necessarily shared equally among countries. He argues that the benefit from trade will depend on the production and demand characteristics of the goods that a country produces and trade; the domestic economic policies pursued, and the trading regime it adopts. Since developing countries still largely produce and export primary commodities and low value-added manufactured goods with a relatively low-income elasticity of demand in world markets trade with the most industrialized countries, it resulted in widening gap of growth. Thus, the author argues taking the developing countries as a whole; the volume of exports has grown slower than for developed countries since 1950, 5 percent per annum compared to 8 percent. The discrepancy in rates of growth of exports has been even wider in value terms because the terms of trade of developing countries has deteriorated vis à vis developed countries causing the developing countries' share of the total value of world trade to have fallen from 30 percent in 1965 to 20 percent in 2000.

Similarly, studies conducted on the impact of trade liberalization on balance of payments and economic growth in developing countries includes that of Lopez (2003). The case study which was carried out in Mexico employed the Balance of Growth Model first derived by Thirwall (1979). Thus, the paper examined whether the Mexico's growth rate was predicted by the Balance of Payments constrained Growth model, which is equal to the ratio of the growth rate of export to the income elasticity of import demand. The study finds out that the long run income elasticity of demand for imports has increased over time; the change is most likely linked to trade reforms. Moreover, he concluded that the increase in the income elasticity of demand for imports, which has not been compensated by a higher rate of growth of exports, has contributed to the slowdown of Mexico's long run equilibrium growth rate.

Studies specific to African countries including Fosu (1990), Ojo and Oshikoya (1995), Ghura and Greens (1993) and Sachs and Warner (1997) all confirm the negative effects of trade restrictions. Sachs and Warner found the lack of openness by far the largest contributor to the dismal economic growth performance of Sub-Saharan Africa.

The issue of contention here is the causal connection between trade liberalization– explicit policy changes–and economic growth, rather than the less contentious connection between increases in trade flows (which can be caused by factors other than trade policy) and economic growth. While numerous studies have shown that trade liberalization can be said to *cause* economic growth, each has issues of reliability of indicators and accuracy of their measurement that can cast doubt on the conclusions.

The latest evidence on the weak relationship between trade and economic growth comes from UNCTAD's report on LDC's[6]. According to the report, export expansion does not often lead to economic growth in Less Developed Countries. The major reason attributed is the trade-growth relationship. Though there is a positive association between export growth and output growth in the LDCs, it is slightly weaker than in the other developing countries in terms of the closeness of the association between the two variables. Moreover, the report observed that real export growth rate below the threshold, 5 percent per annum has a greater possibility to be associated with declining GDP per capita than with increasing GDP per capita.

[6] UNCTAD , *the Least Developed Countries Report, 2004*

Notwithstanding, the fact that trade-growth relationship in LDC's is weaker than in developing countries requires further study, there was actually a very strong relationship between import growth and investment growth in the LDCs during the 1990s. This suggests the possibility of a strong investment-export nexus through increased exports enabling increased imports, increased imports enabling increased investment in the domestic economy, and increased investment leading to higher economic growth. However, the evidence suggests two major missing links in the relationship between exports, imports, investment and economic growth. First, the growth in import capacity in the 1990s was much slower than exports growth, which likely reflects decreased aid inflows and changes in contractual debt service obligations. Second, increased investment is not as strongly associated with increased economic growth in the LDCs as in other developing countries.

In general, empirical studies suffer from a number of shortcomings, and as a result they have not resolved the questions surrounding the correlation between openness and growth. Baldwin (2000) offers explanations for the differences among researchers of the openness-growth nexus. According to him, while econometric analyses based on quantitative data are limited by the scope and comparability of available quantitative data, differences in what investigators regard as appropriate econometric models and tests for sensitivity of the results to alternative specifications that may be based in part on the personal policy predilections of authors can also result in significant differences in the conclusions reached under such quantitative approaches. If these studies used measures that were even slightly correlated, then the empirical literature together could be taken as proof of a positive relation between openness and growth. In other words, the general conclusions have much in common and may be summed up as: trade liberalization can lead, and in some cases has led, to economic growth, but this relationship is not automatic[7].

In the case of Ethiopia, there are limited studies on the impact of trade or the general process of trade liberalization on trade balance and economic growth. However, there are several studies conducted on the one hand with respect to import including that of Solomon (2000) and export performance such as Berhane(2000)[8] and Tura (2001). On the other hand, previous studies of Ethiopia's economic growth have focused on the source and determinants

[7] Even trade critics concede that on both theoretical and empirical grounds "international trade has the Potential to act as a powerful catalyst for poverty reduction." [Watkins 2002, p. 24]

[8] Cited by Tura(2001), unpublished graduate thesis paper, pp32-35.

of economic growth (for instance Alemayehu 2002), while that of Debele(2004) examined export and economic growth relationship but do not exclusively discuss the effect of the post 1991/92 trade reforms.

Berhane(2000) undertook a study on the determinants of export performance of Ethiopia using an equation that includes both demand and supply factors together, termed as export determination model. The dependent variable is export supplied by Ethiopia and the independent variables include world demand, exchange rate, domestic demand, and relative price of export and tax rate. He has found that world demand is the serious constraint to export and that the domestic demand affects export negatively. However, it is important to conduct an explicit study on the demand for Ethiopian exports rather than implicitly including it as one of the independent variables in the export determination model.

Tura (2001) also conducted a study on the determinants of international trade flows for Ethiopia through the estimation of demand elasticities for aggregate imports and exports and their respective components during 1974/75-1999/2000. The study employed the Johansen multivariate co-integration procedure to find that the country faces inelastic short run price elasticities for aggregate import and its components (fuel and machinery). In addition, real income elasticities were lower for aggregate imports. On the other hand, foreign exchange receipts are found to affect imports more significantly. The author concluded that policies that affect the foreign exchange availability in the form of capital inflow and export earnings are likely to have a larger impact on import volumes than those that depend exclusively on exchange rate and aggregate demand management.

Debele (2004) examined the relationship between exports and economic growth using different econometric techniques. The author used a single production function framework in which exports enter as an additional 'input' in the production process. Also he used simultaneous equation models of growth of real GDP as a function of growth of real investment, labor and export variables; growth of real investment as a function of per capita income, growth of per capita income, exports share to GDP and capital inflow variables; and growth of real export as a function of growth of real GDP, price competitiveness, trade partner's growth, trade partner concentration and trade structure composite variables. Moreover, Granger causality test was employed to check whether there is a one directional or feedback relationship between exports and economic growth.

The author finds out that the regression result using growth of exports as well as exports as a share of GDP confirms the hypothesis that exports positively and significantly affects the growth of the Ethiopian economy. The simultaneous equation model estimations result show that, although most of the variables under consideration are not statistically significant, coefficients of the export growth variable, exports share to GDP and GDP growth are statistically significant. In the first equation, the export growth variable was positive and statistically significant coefficient, which supports the hypothesis that exports growth, leads to economic growth. In the second equation the positive and significant coefficient of the exports share to GDP variable indicates that a large export sector may raise investment either by augmenting public savings through the tax generated from export proceeds or by attracting foreign capital from the revenue generated from exports. Thus, in addition to its direct effect, indirectly exports can induce economic growth via enhancing savings. In the last equation the coefficient of the GDP growth variable is found positive and highly significant. This result suggests that while growth in export can contribute to greater economic growth, conversely, a growing economy may result in greater exports growth. The other finding of the study was that the Granger causality test conducted weakly suggests the causation runs from exports growth to GDP growth. This, therefore, implies a different channel through which exports growth could cause output growth. However, the major issue of argument of this paper is not on the less controversial connection between increases in trade flows (export can be caused by factors other than trade policy) and economic growth, but on the causal connection between trade liberalization – explicit policy changes – and economic growth.

With respect to economic growth in Ethiopia, Alemayehu etal, (2002)[9] discuss on the growth history, sources and determinants of economic growth in the country. The study analyzes by setting out the growth history in Ethiopia and attempting to understand what has been the main sources of growth. According to the study, in the last four decades, the Ethiopian economy has changed from a liberalized economy until 1974 to a controlled one in 1974-1989/90 and again back to a liberalized one after 1991. Growth during the *Derg* period (1974/75-1989/90) averaged 2.3percent (the per capita growth being -0.4percent). During the post-*Derg* period (1990/91-1999/00), which witnessed a major policy shift from its immediate predecessor, real total and per capita GDP on average, grew by 3.7percent and 0.7percent per

[9] as cited in MOFED(2002), Ethiopia: Sustainable Development and Poverty Reduction Program

annum respectively. The study attributes post- *Derg* impressive achievement than the previous two regimes partly to liberalization and deepened series of reforms.

In the presence of limited analysis made on the interaction between trade liberalization, trade balance and economic growth, it is thus important to conduct this study. Thus, in the following chapters we attempt to make our own estimates of the impact of trade liberalization on the balance of trade and economic growth.

CHAPTER THREE: TRADE POLICY REFORM AND PERFORMANCE IN ETHIOPIA

3.1 Trade policy Reform in Ethiopia

3.1.1 The *Dergue* Regime (1974-1991)

The foreign trade policy of the *Dergue* in general had four major objectives. The primary objective was mobilizing government revenue by imposing taxes on imports and exports. The second objective was protecting the domestic economy participants from foreign competition. The third objective was to maintain favorable balance of payments at a sustainable level. The last objective was the gradual extinction of the private sector from foreign trade participation. In line with the last objective, the government discouraged private importers; and exporters from exporting traditional export items, such as coffee, pulses and oilseeds and the like. In turn, public enterprises had been established to run such activities.

During the regime, however, there were many difficulties on the export sector that hamper the attainment of the above objectives. Accordingly, exporters were not allowed to export commodities at a price which is less than the reference prices provided by the government. Exporters were also forced to surrender 100 percent of the foreign exchange earned from the transaction to the government, thus making it difficult to acquire foreign exchange for private use. Moreover, the exchange rate was fixed to Birr 2.07 per United States Dollar for a long time, which was far below the parallel exchange market.

From the import side, the Marxist regime made efforts to regulate the sector that made severe restriction through a combination of high tariffs and excessive quantitative restrictions. The tariffs were as high as 230percent on certain luxury consumer goods and much of intermediate and investment goods imports to public sector enterprises were allowed at zero or low duties. The quantitative import restrictions on imports by the private sector included direct import prohibition (a long 'negative list'), quotas, strict licensing and foreign exchange rationing.

The *Dergue* Regime followed the convention on nomenclature for the classification of goods in Customs Tariff. Accordingly, commodities were categorized into 21 sections each with different chapters (99 chapters as a whole). Amendments during the *Dergue* regime generally increased the duty rate levied on commodities. Moreover, they reduced the number of commodities categorized under duty free items (MOF, 1995).

During the *Dergue* regime regarding preferential trade relations, the Legal Notice No.96 of 1986 provided the legal bases for different customs tariff applicable to the Preferential Trade Area for Eastern and Southern African States (PTA), later on renamed as COMESA. In other words, the schedule indicating the rates of customs duties applicable to goods imported to Ethiopia from member states of the Preferential Trade Area was different from the Schedule applicable to Non-Preferential Trade Area (NPTA). That was clearly indicated in the Customs Tariff Regulations No.42 of 1976 (MOF, 1995).

3.1.2 The 1991/92 Trade Policy Reform

3.1.2.1 Overview

Since the beginning of the 1990's, Ethiopia has been making significant progress toward opening up its economy and has notably improved its trade policy regime (Subramanian, 2002). More specifically, the trade reforms implemented resulted in a significant cut in import tariff rates, a reduction of the tariff dispersion and a decrease in the level of applied rates. At present, the country's trade protection system includes no quotas, no seasonal tariffs and no tariff contingent, and quantitative restrictions have been almost entirely eliminated. Currently, they are applied only to used clothes and for security and safety reasons.

The major improvements on trade policy include the significant reductions in the number of items included in the negative list used to determine import eligibility for foreign exchange access, as the conversion of the most specific tariffs into *ad valorem* rates. Currently, specific rates are used only for less than 3percent of total tariff lines. Consequently the current Ethiopia tariff structure is roughly fully consolidated. In other words, a very large majority of import duties and taxes has been set in the external tariff.

Likewise, as a result of the tariff reform, the range narrowed from 0percent-240percent at the beginning of the 1990s to 0percent to 80percent in 1995. The current tariff structure, introduced in 2003, consists of six rates, 0percent, 5percent, 10percent, 20percent and the

highest 35percent. During the same period, the tariff bands (the number of official tariff rates) was reduced from 23 to 6. It is important to note that the current rates are very close to those that will be used for the common external tariff of COMESA's customs Union (CU), when the maximum rate will be 30percent. Therefore, joining the regional CU should not be a very difficult process for Ethiopia, at least as regards the common external tariff (CET) implementation aspect. A study by the COMESA Secretariat underlines that " the proposed customs Union CET structure would raise Ethiopia average trade weighted tariff from 12.8percent to 13.1percent, thus accordingly Ethiopia's domestic industry higher effective protection" (COMESA, 2003 as quoted in MOTI,2004) .

As is often the case, the range of the rates in relation to the types of products to which they are applied follows an ascending tariff system (tariff escalation) which is liked to the amount of processing undergone by the products in the country. The lowest tariff levels are mainly applied to capital goods, while the highest are reserved to consumer good. COMESA study illustrates in this point, showing that the average tariff rate for capital goods is 12percent, while raw materials, intermediate goods and customers carry an average rate of 15percent, 15.5percent and 28percent respectively (COMESA, 2003 as quoted in MOTI,2004). Therefore, the effective protection for some goods is above the nominal protection. The DTIS compared nominal and effective protection in Ethiopia, stating that a "weighted average rate of (nominal) protection of 22.2 percent in 1995 was associated with an effective protection level of 36.2 percent. The comparable figures for 2001 were 14.7 percent and 26.0 percent respectively" (DTIS, 2004).

Box 3.1: The trade policy cycle

1. **Analysis.** Capacity to analyze trade issues is needed so as to identify the strategic priorities of a trade policy and to respond to changes in the environment including the policies and actions of trade partners. This includes building analytical capacity among policy makers: first the government, but also actual and potential constitutes such as private sector organizations, trade unions, consumers, universities, think-thanks, etc.
2. **Formulation of trade policy.** Trade policy is part and parcel of a country's overall development strategy and poverty reduction plans. The identification of trade interests and the subsequent formulation of trade policy objectives, and strategies for attaining these objectives, has to be fed by the analysis.
3. **Negotiation.** This involves the country's capacity to promote its interests in bilateral, regional and multilateral negotiations, which have become increasingly complex, long- drawn- out and not always consistent between them. Such interests may be either 'defensive' (e.g. building alliances to curb the introduction of non tariff barriers by trade partners), or 'offensive' (e.g. obtaining better access to important markets).
4. **Implementation.** If the adoption of a given policy is the first necessary step, ensuring that it is actually implemented in practice is a completely different matter. Implementation is often the responsibility of several ministries, agencies and bodies, with the trade ministry sometimes playing a second role. For instance, do the custom services, the standards agencies, and the trade facilitation bodies have the capacity and the equipment that are needed to effectively perform their tasks? This also implies the country's capacity to implement the multilateral, regional or bilateral agreements it has concluded. This includes(i) meeting contractual obligations(e.g. complying with notification requirements in the WTO) and (ii) exercising rights within the multilateral system (e.g. instituting anti-dumping proceedings).
5. **Monitoring and evaluation** of trade policy and agreements would again require the active participation of all stakeholders, including those representing the civil society and the private sector, as well as co-ordination within the whole spectrum of ministries and agencies involved.

Source: Solignac Lecomte(2001)

Nowadays, tariffs per se do not constitute a meaningful trade barrier to access the Ethiopian market and all Ethiopia's trade partner's benefits at least from Most Favored Nation (MFN) regime. However, there are apparently some implementation difficulties. For example, within the 2003 tariff, there remain some products with an import duty of 40percent. For some other products, the applied duty rate could be dissimilar between trading partners.

More importantly, despite its important improvements towards liberalizing its external trade and easing its participation in the global economy, Ethiopia's trade policy contains some constraints that hamper its international trade. As in most LDCs, in Ethiopia, the public and

private sector lacks the capacities, at both the institutional and the human levels, to cope with the complexities of trade policy in all of its multiple phases, facets, links and consequences (as described in Box 3.1) as well as the details of the multilateral trading system and of the obligations stemming from the bilateral and regional agreements. The forthcoming WTO membership will considerably add to these burdensome obligations. In general, the post-*Derg* trade policy can be mainly explained through tariff and non tariff reform, exchange rate reforms and export promotion policy, which are explored in the next section.

3.1.2.2 The Tariff Reform in Ethiopia

Tariff is a duty or tax, which is charged on imports from other countries. That is what we usually call 'customs duty'. The duty may be imposed on '*ad valorem'* rate or specific rate. The tariff could be used either to protect home industries from the competition of foreign producers or it may be adopted to reduce the total imports bill a country has to pay (Nagpal, 1995).

At the outset, the objectives of tariffs in Ethiopia have been to protect domestic industries, to control imbalances in the balance of payments through the control of the balance of trade and to collect revenue from imports and exports tariff. It was targeted to provide signals to producers and importers and to encourage import substitution, later on, however, liberalization of foreign trade was most important. Though there have been different tariff laws before 1943, the first officially known tariff regulation was issued in 1943. This regulation has been revised at different times. The tariff regulation, which was in place just before August 1993, was based on Customs Co-operation Council Nomenclature (CCCN) and had 99 chapters and about 1800 categories of goods. The tariffs levied were both *ad valorem* and specific rates. Out of these, 1800 categories of goods, about 73percent, had *ad valorem* tariffs ranging between 5-230percent; 9percent with specific rates and 18percent were imported duty free (MOF 1995).

The Ethiopian government has made six successive customs tariff amendments after the 1991/92 trade and fiscal reform. All Customs tariffs revisions and amendments since Regulation No. 122/1993 have been done based on the Internationally Accepted Commodities Descriptions and Coding System of the Harmonized System including the latest amendment of import tariffs Regulation No. 209/2003, dated January 9, 2003. These amendments were aimed at enabling the execution of the basic objectives of Customs Tariff. The regulations

were fundamentally based on the country's industry effective rate of protection studies as well as on problems associated with the rate and application of tariffs. On all the amendments, the highest tariff rates, weighted average tariff rates, tariff bands and tariff dispersion were corrected step by step. Table 3.1 summarizes the various amendments that took place before and after August 1993.

Table 3.1: Characteristics of the Tariff code in Ethiopia

No	Descriptions	Before Aug 1993	August1 993	Jan.96 to Dec'96	Dec'96 to Dec '97	Dec' 97 to Dec ' 98	1999/20 00	Jan 2003 to date
1	Number of tariff Items with imports	1800	5332	5332	5332	5297	5426	5608
2	Lowest official tariff rate (percent)	5	5	5	5	5	5	5
3	Highest official tariff rate (percent)	230	80	60	5	40	40	35
4	Number of Official tariff rates /including zero/	24	9	8	7	7	7	6
5	Simple Official mean tariff rate (percent)	-	35	28.8	24.3	20	20	20
6	Weighted Average Tariff Rate (percent)	-	29.6	24.6	23.6	19.5	19.5	17.5
7	Tariff Dispersion (percent) (3-2)	225	75	55	45	35	35	30
8	Number of Duty free Items	327	138	169	170	167	167	179
9	Number of items with specific tariffs	162	3	3	3	3	3	

Source: Ethiopian Customs Authority

As it can be observed from the above table, categories of items distinguished in the country's tariff nomenclature were between 1800 and 5608. This shows that the country's tariff codes after 1996 are moderately detailed compared to the previous years, hence facilitate classification of goods for tariff levying purpose, if customs has professional staff trained in classification. In addition the table indicates 5percent as the lowest tariff rate while the highest tariff rate has been reduced from 230 down to 35 in 2003. Consequently, the successive tariff amendment this has reduced the number of official tariff rates (tariff band) from 23 to 6; the simple official mean tariff rate also declined from 35percent in August, 1993 to 20 percent in

2003; the weighted average tariff rate scaled down from 29.6percent during the period of 1993-1996 to 17.5percent in 2003. The tariff dispersion has tremendously declined to 30percent in 2003 from a high of 225percent before August 1993. The tariff regime has also resulted in increase in the number of duty-free items charged with specific tariffs. The rates in the above table are for import duty. In fact, it should be noted that there are additional taxes (for example excise, sales, and sur taxes), and various fees (the pre shipment inspection fee, warehouse fee, customs processing fee), which are levied and collected at the customs clearance office.

As per Regulation No.209/2003, the latest customs tariff classification system of goods and rates was done in January 2003. At present, there are five import tariff bands excluding zero rates. They are 5, 10, 20, 30 and 35 percent of import tariff. The number of tariff lines is currently 5608; out of which 5424 are subject to *ad valorem* duties while the rest are prohibited and duty free items. Currently the lowest and highest tariffs are 5 percent and 35 percent respectively, which makes the tariff dispersion 30 percent. (See table3.2)

Table3.2 Distribution of Tariff bands

Tariff bands (percent ad valorem)	Number of Tariff lines	Share of Tariff (percent)
0	179	3
5	1391	25
10	1370	24
15	-	-
20	1004	18
30	725	13
35	934	17
Specific	-	-
Prohibited	5	-
Total	**5608**	**100**

Source: Ethiopian Customs Authority.

The latest revision eliminated the fractional rates (that are rates in between the above six rates). These fractional rates had unnecessarily complicated tariff administration and provided ample room for administrative discretion, without any economic justification. On the export

side, duties on all exports other than coffee (the main export product) were removed. The coffee export duties were unified at 6.5percent. But, this duty rate was exempted when export prices were below US $0.55 for unwashed coffee and US 105 cents for washed coffee (DTIS, 2004).

Zero Tariffs or duty free items mostly comprises of fertilizers, wood and articles of wood, railway or tramway locomotives, rolling-stock and parts thereof, aircraft, spacecraft and parts thereof, etc. In general, most of the items within the 5 and 10 bands are raw materials and machineries, which are used by manufacturing industries. These tariff bands as we can observe from the above table consist around 50percent share of total tariffs. Items within the 20 percent band include organic chemicals, cartons, boxes, envelopes, sacks and bags, thread, synthetic filaments, artificial filaments yarn, synthetic monofilament staple fibers. Items within the 30 and 35 percent bands include animal, or vegetable fats, perfumes and toilet water, soaps, tiles, transmission belts, ornaments, silk, cotton, jewelry, footwear, motor vehicles, textiles products and toys.

There are five prohibited items such as opium, ethyl alcohol and other spirits, denatured of any strength, worn clothing and worn textile articles and rags as classified in the Harmonized system. These items are prohibited since they are harmful and interfere with legal trade. Hence such imports were governed by specific rates in the recent tariff amendment. This measure was taken to discourage illegal traders or contrabandists and to protect domestic textile and garment factories from dumped worn clothing and textile articles and rags.

Despite significant trade liberalization over the past thirteen years there is still considerable administrative discretion impacting on import trade. A report by DTIS argues that in the presence such non-tariff barriers, the rate of protection enjoyed by some industries could be much higher than what is suggested by the nominal rate of protection. Moreover, most light manufacturing industries (textiles and garment in particular) are believed to face considerable competition from illegal cross-border imports. Illegal trade normally results in 'water in tariff' (that is, in the presence of illegal imports the actual price-raising impact of existing tariff structure could be much lower than what is interpreted from the official tariff rates and Effective Rate of protection estimated based on these rates). Also given Ethiopia's geography, 'natural' protection to domestic industry (and negative protection to export-oriented production) arising from transport cost could be substantial (DTIS 2004).

3.1.2.3 Non Tariff Reform

During the post liberalization period, the government has implemented two major reform measures to encourage exporters. The major one is the dismantling of the government monopoly in coffee trade and abolishing the mandatory approval requirement for export contracts by the National Bank of Ethiopia (NBE). Another measure to support exports has been the introduction of a foreign exchange retention scheme allowing exporters to retain part of their foreign exchange proceeds. At present, exporters are allowed to retain 10 percent of the export proceeds without a time limit. However, export procedures in the country can be improved; in particular, the licensing system could be eased. As a whole the country has removed most restrictions, licensing, prohibition and charges on foreign trade (DTIS, 2004).

In line with its coherent international integration policy, the Ethiopian trade regime does not include minimum export prices or voluntary export restrictions. In the same logic and as for imports, the country does not apply quantitative export restrictions or quotas. In fact, the only exception is the prohibition of exports of rawhide and skins. Also, according to the national regulations, the country does not subsidize exports.

3.1.2.4 Exchange Rate Reforms

The Ethiopian liberalization reform package has been formulated with due emphasis on the complementarity between trade liberalization and macroeconomic management in shaping reform outcome. Thus, trade liberalization was accompanied by a significant exchange rate reform backed by a firm commitment to fiscal and monetary frugality (DTIS 2004).

The exchange rate determines export and import prices in local currency. Hence, government policies affecting this variable exercise an enormous influence on the country's trade performance and on its competitiveness in both external and domestic markets that is in terms of exports and imports. An important indicator of a country's macroeconomic price competitiveness is its real effective exchange rate (REER), which is the index of Birr's weighted average exchange rate against the currencies of Ethiopia's main trading partners, adjusted by the differential in inflation rates between Ethiopia and its partners. According to the recent Diagnostic Trade Integration Study, the five RER series estimated by the study generally point to an improvement in the particular aspect of competitiveness over the post

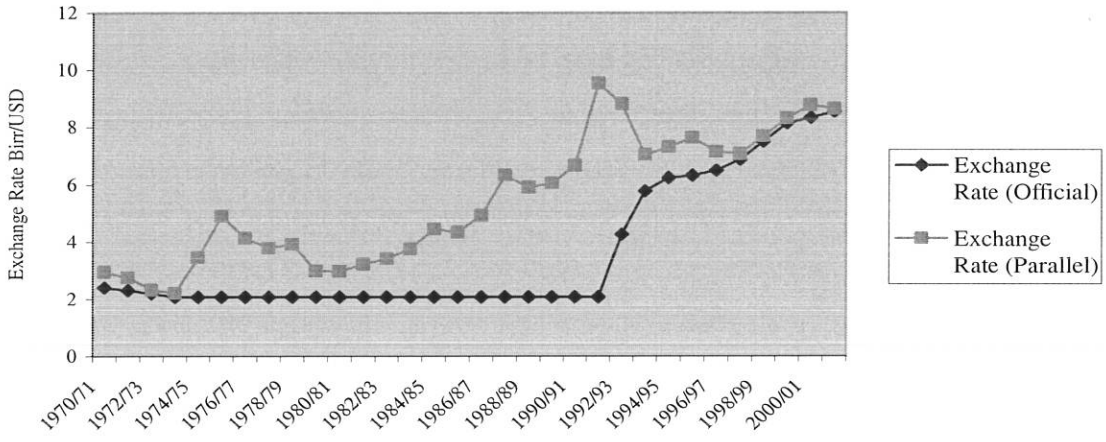
reform years, in particular from about 1994/95 (DTIS,2004). This represents an improvement, although slight, in Ethiopia's external competitiveness.

However, the adequacy of this development should be judged against a broader background including the trends in the country's terms of trade and balance of payments. For instance, Ethiopia's REER depreciated by a cumulative of 7percent during the period 2000/2001-2002/2003, which was a slight improvement in the external competitiveness, however, the country's terms of trade deteriorated as much as 17percent, mainly as a result of rapidly falling coffee prices. The external current account deficit sharply widened to 15percent of GDP by 2002/2003, a level that can be financed through the huge volume of official development assistance (close to 14percent of GDP, excluding external debt relief under the HIPIC initiative), which remains however very volatile (MOTI, 2004).

The Ethiopian currency Birr has remained rigidly pegged to the US dollar from the late 1940s to 1990. During 1945-71 Birr/$ rate remained unchanged at 2.5. This was revalued to 2.3 in December 1971 and then to 2.07 in February 1973 and remained at that level until October 1992. The result of this passive exchange rate policy was the development of an illicit parallel market for foreign exchange, where at times the spread between the two rates reached as high as 230 percent (DTIS 2004). The overvalued official exchange rate coupled with stringent foreign exchange rationing provided fertile ground for illicit cross border trade, particularly in coffee and live animal.

It should, however, be noted that the gap between the official and the parallel market exchange rate has virtually disappeared over the whole study period (see figure 1). The major explanation can was the exchange rate was adjusted from Birr/$ 2.07 to 5.00 on 1 October 1992 142% devaluation), as part of the overall reform program of the new government. This was later followed by fortnight auctions and daily inter-bank auctions. This development means that the official exchange rate increasingly reflects market forces, although the market is biased by the predominant role of the National Bank of Ethiopia.

Figure 1.Comparison between Official and Parallel Exchange Rate, 1970-2001



Source: National Bank of Ethiopia

Exchange rate is a key factor not only for external trade but also for monetary and fiscal policies, foreign capital flows, the level of official international reserves and thus for the overall balance of payments. Because of its multiple effects, the exchange rate policy cannot be geared only to maximizing export volumes and import substitution activities. But as the same time, the exchange rate policy should always take into proper account its impact on exports and imports as well as its consistency with trade policy. For instance, a 15percent reduction in import duties could be offset by an exchange rate depreciation of the same magnitude (MOTI 2004).

3.1.2.5 Preferential Trade Relations

The Ethiopian government has entered into a number of trade agreements in an effort to promote national development, regional integration and international cooperation. Thus, Ethiopia has signed bilateral trade and cooperation agreements with 31 countries[10] most of which are not very active. Ethiopia has multilateral trade agreements with COMESA and EU, commonly known as Everything But Arms (EBA); the country was also designated as one of

[10] the countries are Algeria, Libya, Bulgaria, Malaysia, China, North Korea, Cuba, Poland, Djibouti, Rumania, Egypt, Russia, Eritrea, Saudi Arabia, France, South Korea, Germany, Sudan, Greece, Sweden, Hungary, Tunisia, India, Turkey, Iran, Yemen, Italy, Yugoslavia, Jordan, Zimbabwe and Kenya

the 35 sub-Saharan African countries eligible to benefit from the African Growth Opportunity Act (AGOA) since October 2000; and Ethiopia has an observer position in the WTO.

According to a recent study (Afro, 2002) conducted on the impact of COMESA, COMESA is the leading regional economic integration grouping of which Ethiopia is the founding member. The country has achieved more than the targets set by COMESA in Macroeconomic indicators such as inflation, budget deficit, broad money supply, and GDP growth and foreign exchange liberalizations. It has also eliminated most non tariff barriers such as restrictions, licensing, prohibition and charges on foreign trade and actively participated in all major institutions and acceded to and installed most operating system including PTA Bank, clearing House, Insurance, Leather and Leather products institutes, COMESA Air Transport Service Liberalization Program, Common Valuation System, Association of COMESA commercial Banks and etc. .

As a member of this regional and economic grouping, Ethiopia is likely to implement fully its Free Trade Agreement by 2008. Since January 2003, Ethiopia applies a 10percent reduction to the MFN rates on imports originating from COMESA countries. The country intends to continue the tariff dismantling process. Among the different assumptions envisaged, a proposal contains the following steps: an additional 50percent reduction in 2004/5, 10percentin 2005/6, 10percent in 2006/7, and a final 20percent in 2007/8. Similarly, the regional integration envisaged the establishment of a Custom Union by 2004, followed by a common market ten years later and subsequently even by an economic union. The setting up of the CU has been postponed, to a date to be determined (Afro, 2002).

Moreover, Ethiopia has signed another regional agreement on economic integration: the Inter-Government Authority on Development (IGAD)[11]. Through increased co-operation, IGAD aims at assisting and complementing the efforts of the member states to achieve Economic co-operation and integration as one of the objective. Even though some progress in policy harmonization in the region has been achieved, the economic integration between IGAD members is far from being completed.

[11] Created in 1986, IGAD includes 7 member states: Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan and Uganda.

3.2 Ethiopia's Trade Performance

3.2.1 Openness

Openness measures the relative importance of external trade in a country's economy. The openness rate is calculated by the amount of exports and imports of good and services as a percentage of GDP. In Ethiopia's case, during 1999 -2001 this rate was 45.4percent (see Table 3.3). This level is some what lower than the average openness rate of LDCs and lower-income countries, but slightly higher than that of high income OECD countries, which stood at 43percent over those years. In line with the international specialization logics, one may conclude that Ethiopia is relatively well integrated in the world economy.

However, it is notable from Table 3.3, which Ethiopia's exports of goods and services represent a much lower proportion of GDP (15percent) than corresponding imports (30percent), with the resource gap being mostly financed by development assistance, rather than market–related capital flows. Ethiopia's exports to GDP ratio is well below the average of 20 percent for LDCs and 29 percent for developing countries. On a per capita basis, Ethiopia's export performance is the second weakest among LDCs (UNCTAD 2004). These are all indications of the country's weak export capacities, especially in the goods sector, account for more than half of total export receipts. (MOTI 2004)

Table 3.3 Selected LDCs ranked by "openness",1999-2001(annual average, percentage)

	Trade as share in GDP	Exports as share in GDP	Imports as share in GDP	Trade balance as share in GDP	Exports as share in imports	Exports per capita (USD)	Imports per capita (USD)
Above average "openness"							
Equatorial Guinea	299.2	187.3	111.8	75.5	162.5	5545.1	3310.4
Maldives	169.9	77.5	76.8	0.7	121.2	1982.1	1635.2
Angola	153.1	84.0	71.0	13.0	118.6	521.4	439.7
Lesotho	114.6	30.3	87.2	-57.0	31.3	116.7	372.4
Gambia	113.8	63.1	64.6	-1.4	76.3	156.9	205.6
Djibouti	105.5	40.7	60.8	-20.1	73.6	393.0	533.7
Cambodia	104.3	43.2	57.0	-13.7	83.1	128.4	154.6
Mauritiana	89.1	37.8	50.7	-12.9	75.7	141.3	186.7
Senegal	68.5	30.1	38.3	-8.2	78.7	145.5	185.0

	Trade as share in GDP	Exports as share in GDP	Imports as share in GDP	Trade balance as share in GDP	Exports as share in imports	Exports per capita (USD)	Imports per capita (USD)
Malawi	66.3	29.0	39.7	-10.7	67.1	45.4	67.6
Zambia	60.2	28.0	36.6	-8.6	64.7	78.3	121.1
Below average "openness"							
Nepal	54.3	25.3	31.4	-6.2	72.6	53.1	73.1
Chad	54.1	18.8	38.7	-19.9	39.8	30.4	76.6
Guinea	52.8	24.4	28.4	-4.0	86.1	104.5	121.3
Comoros	45.4	14.6	30.8	-16.0	47.4	56.6	190.3
Ethiopia	45.4	15.0	30.4	-15.4	49.4	14.8	30.0
Haiti	44.6	12.7	32.1	-19.4	38.9	61.9	159.1
Benin	43.6	24.0	28.2	-4.2	54.6	57.3	105.1
Niger	40.9	16.7	24.1	-7.5	69.4	29.8	42.9
Uganda	36.4	11.7	24.7	-13.0	47.6	30.9	64.9
Bangladesh	34.3	14.2	20.1	-5.9	70.8	50.6	71.4
Rwanda	32.1	6.7	24.3	-17.6	31.9	18.2	57.2
Sudan	28.8	12.9	15.9	-2.9	81.1	47.0	38.0
Burundi	28.2	8.1	20.1	-12.0	14.3	8.3	20.5
LDCs	50.7	20.3	30.0	-9.7	76.7	61.2	79.7
Low –income	54.3	27.0	27.2	-0.3	94.6	101.6	107.3
Low-and middle –income	56.0	28.7	27.2	1.3	103.5	343.9	332.2
High-income OECD	43.0	21.6	21.7	0.5	97.7	5672.5	5804.5

Source: UNCTAD (2004)

3.2.2 Exports structure and performance

Ethiopia basically depends on export of few commodities in the international market like most developing countries. Hence, Ethiopia's exports structure by product is unbalanced, with the share of agricultural and food products accounting for an average of 80 percent and 83 percent of total exports over the whole period (1970-2002) and post trade liberalization period, respectively. The major export items are coffee, oilseeds, pulses, hides and skins, vegetables, and fruits, beeswax and live animals. In 1991, coffee represented as much as 70 percent of total exports, followed by hides and skins (24 percent). However, By 2002/2003, export concentration within the agricultural sector had declined with the reduction of the share of coffee to 46 percent, accompanied by the rise in the shares of *Chat* and oilseeds to 16 percent and 13 percent, respectively mostly owing to the sharp fall in coffee price in the international market. The export of *Chat* has risen very much since farmers can not cope with the deterioration of coffee prices in the world market. Besides agricultural products, other exports

particularly manufacturing products are modest, account less than 10 percent of total export. These results have also been confirmed by the computation of commodity concentration index, which has not shown a significant change between 1970/71 and 1997/98, indicating the highly skewed concentration of exports in a single commodity, coffee (EEA, 2004).

In order develop a more detailed analysis of the export structure; we have calculated the share of each broad category of export to their total export value, for the whole period and after trade liberalization, (see appendix 2). Trade liberalization measures on the export side include removal of quantitative restrictions (quotas), the gradual abolition of taxes on exports in particular coffee and authorization of 10 percent foreign currency retaining scheme for exporters. The most important conclusion of the analysis is that primary commodities are essential components of Ethiopia's exports, where there share have increased from the average 80.44 percent during the whole period to 83.06 percent after trade liberalization. When we look at export item level, the decline in the average share of coffee during the whole period has been compensated by another agricultural product, Chat, leaving the composition of exports unchanged. The other conclusion that can be reached from the analysis is that the shares of other non agricultural products have remained nearly the same, which imply the low level of export diversification of the country. In general the structure of Ethiopia's does not significantly change as a result of trade liberalization but rather remained dependent on agriculture since the comparative advantage of the country still remains in this sector. Moreover, the absence of diversification and the high dependency on specific commodities makes the export sector vulnerable to external shocks.

Similar to its structure of exports, the Ethiopian exports are characterized by high geographical concentration over the decades. This can be easily observed from table 3.4, which shows the destination of export in 1990/91 and 2002/2003. In 1990/91, 85 percent of total exports were sold to only seven countries, which are Germany, Japan, UK, Djibouti, Saudi Arabia, Italy and United States, in descending order. Half of these exports value during the year were earned from the single European market. However, the geographical concentration of exports was diversified a little during 2002. Accordingly, from the total exports of 4.1 billion; 50 percent were sold to nine partners showing a general stability in the direction of Ethiopia's exports. They are, in descending order: Germany, United States, Djibouti, France, Japan, Italy, Saudi Arabia, the Netherlands and Kenya. These countries were already in 1990/91 as the first five partners except France; however their share shrank over

direction of Ethiopia's exports. They are, in descending order: Germany, United States, Djibouti, France, Japan, Italy, Saudi Arabia, the Netherlands and Kenya. These countries were already in 1990/91 as the first five partners except France; however their share shrank over the period. This decrease occurred mainly in favor of countries under the rest of the world, mainly India and Israel and, to lesser extent, Pakistan.

Table 3.4: Ethiopia's main export partners (1990 and 2002), value (Thousand Birr) and percentage

Partners	1990/91		2002/03		Cum
	Value	percent	Value	percent	
Djibouti	53,400	10.7	289,825	7.0	
Kenya	1,809	0.4	134,318	3.2	10.2
Sudan	5	0.0	77,138	1.9	12.1
U.A.R		0.0	64,582	1.6	13.7
France	25,726	5.2	273,552	6.6	20.3
Germany	114,830	23.0	352,919	8.5	28.8
Italy	30,704	6.2	183,166	4.4	33.2
Netherlands	17,629	3.5	141,980	3.4	36.6
U.K.	58,603	11.8	76,732	1.9	38.5
Russia	2,164	0.4	431	0.0	38.5
Yugoslavia	834	0.2	0	0.0	38.5
U.S.A.	27,995	5.6	340,060	8.2	46.7
China, P.Rep.	1,067	0.2	22,525	0.5	47.2
Japan	97,739	19.6	188,440	4.5	51.8
Saudi Arabia	38,815	7.8	182,350	4.4	56.2
Rest of the World	26,962	5.4	1,814,340	43.8	100.0
Total Export	***498,282***	***100***	***4,142,357***	***100***	

Source: National Bank of Ethiopia

When we look at the direction of Ethiopia's export across continent, though it share declined the dominance of the EU in Ethiopian external trade is still very evident. Germany is the biggest importer of Ethiopia's exports with in the union, though has declined to 8.5 percent in 2002 from 23 percent of total export values in 1990. United States is the second importer of Ethiopia's product having 8.2 percent of total export values. In Africa, Djibouti's share has declined over the years, while Kenya and Sudan import's share have increased to 3.2 percent and 1.9 percent in 2002, respectively. With regards to Asia, Japan and Saudi Arabia are major destinations of the country's export.

Apparently the markets for the country's exports are confined to few industrial countries that are price makers in the international markets. In particular, Ethiopia has limited trade with African countries, due to the fact that it produces similar primary commodities that are produced in other African countries. Thus, the existing structure of exports of the country would not enable Ethiopia to benefit from the increasing volume of intra-African trade. Hence, in order to enhance the foreign exchange earning capacity of exports, there is a need to diversify the destination of exports and ensure the stability of exports.

When we come to the Ethiopian export performance, it had been sluggish after the start of trade liberalization in 1991 as compared to 1971-1990 and 1971-2002. This can mainly be observed if we consider the ratio of exports to GDP, exports to imports as well as the growth rate of export earnings (table 3.5). Hence, export as a share of GDP that recorded 6.9 percent during 1971-1990 slightly decreased to 6.8 percent after trade liberalization. Similarly the ratio of export to import, which indicates the capacity of exports to finance imports, has declined to 32.7 during the period of trade liberalization from 60.8 percent through 1971-1990 and 49.9 percent during the whole period. On contrary to the above results, the average growth rate of export earnings show a significant improvement after trade liberalization (29.9percent) as compared to average growth rates of 7.6 percent and 14.9 during the period between 1971-1990 and 1971-2002, respectively.

Table 3.5: The ratio of export to GDP (exp/GDP), Import (exp/imp) and average annual growth of exports (AVGexp)

Period	*exp/GDP*	*exp/imp*	*AVG exp*
1971-1990	*6.9*	*60.8*	*7.6*
1991-2002	*6.8*	*32.7*	*29.0*
1970-2002	*6.8*	*49.9*	*14.9*

Source: *Own computation from National Bank of Ethiopia*

Conversely, as it is common in the developing economies, the contribution of the Ethiopia's exports to world total exports has declined to 0.007 percent in 2000 as compared to 0.02 percent before two decades (UNCTAD, 2004). This is mainly due to the fact that Ethiopia is dependent on a few commodities, which have large volatile price; and

also face very high transport costs and have weak institution to facilitate trade. The country has also experienced armed conflicts and recurrent droughts through out the past three decades, which have major impacts on its economy. All these factors therefore stagger trade performance of the Ethiopia.

During the past two decades developing countries, in general, have increased their share of global trade from just under one-quarter to about one third due to their movement beyond their traditional specialization in agricultural and resource exports in to manufactures trade, while Ethiopia export shares like Sub-Saharan countries has becoming sluggish and very weak (Global economic prospects, 2004). This also indicates Ethiopia's reliance on exports of a narrow range of primary commodities. From this, we can conclude that the competitiveness of the Ethiopia in the international market is still weak.

3.2.3 The structure and performance of the Import sector

In any developing country, the role of imported goods are very crucial in expansion of production and availing consumer goods for ensuring long term economic development. Thus, Ethiopia has to import those goods that are not domestically produced. The structure of imports however, has remained inflexible as the absorptive capacity of the economy failed to show any significant structural changes (NBE, 2000). Thus, the import structure of the country can be classified under the broad categories of raw materials, semi-finished goods, consumer goods, capital goods and fuel, which are the basic inputs for the industrial sector.

In order to examine the major components of the import sector throughout sub periods, we computed percentage share of each component before and after trade liberalization (Appendix 3). As discussed in the above sub sections, a massive tariff reduction on imported items was conducted starting 1992/93. Accordingly, the tariff dispersion, which measures the difference between the highest and lowest tariff has declined from 225 percent during the *Dergue* regime to 30 percent in 2003. Moreover, the 'negative lists' of prohibited import goods have been considerably reduced.

The major import components raw materials, semi-finished goods, fuel, capital goods and consumer goods, had an average share of 3.6, 16.1, 15.4, 33.8, and 30.3 before trade liberalization (Appendix 2). Hence, capital goods and consumer goods constitute more than

64 percent value of total imports. Semi finished goods comprises of chemicals, textiles and fertilizers while transport, agricultural and industrial components. Consumer goods mainly consist of consumer durables, radio television, tyres, cars and other vehicles and others.

As it was mentioned earlier the import structure of the country does not show significant change after 1991/92. Thus, the average share of raw materials, semi-finished goods, fuel, capital goods and consumer goods, were 3.0, 15.9, 15.8, 33.2 and 30.2 during 1991/92-2002/2003 (appendix 2). Therefore, the data shows that the structure of Ethiopia's import was on whole stable for the past three decades. If we compare the share of import products between 1990/1991 and 2002/2003, agricultural and food products declined from 12.4percent to 10.6percent of the total import value, respectively. Metal products and petroleum were responsible for roughly 7percent and 15percent, respectively in 2002/2003. In fact, the most noticeable change was the growing importance of the machinery and equipment, whose shares in total imports grew from 18.8percentto 22 percent in 2002. To some extent, the same comments can be applied to textiles and garments as their share in total imports rose from 3percent to 6.8percent (EEA, 2004).

Regarding the transformation degree, it can be stressed that Ethiopian imports are mainly high transformation stages goods. In particular, intermediate and capital goods groups account for approximately 46percent of the total imports. Conversely, the shares of agricultural and food products and of basic manufactured good are relatively low and declining, particularly in the case of agricultural and food products as compared between 1990/91 and 2002/2003.

As noted with exports, Ethiopia's imports are also concentrated with regard to their origin, but, at the same time, import concentration is relatively lower than for exports. In 2002, a little more than 56percent of Ethiopia's total imports amounting to Birr 15.9 Billion originated from six countries: EU, China, Saudi Arabia, Japan and United Arab Emirates, in ascending order (Table3.6). From 1991 to 2002, the first five countries as a group kept a relatively constant share in Ethiopia's imports, but the composition of the group has changed over the period. In fact, the main changes are related to the growing importance of China which in 2002 accounted for 9.3percent of Ethiopia's imports, compared to 0.5percent in 1990 and the United Arab Emirates , whose share rose to 6.8percent by 2002 from a negligible level at the start of the period.

Even though its share has declined from 35percent in 1990 to 30percent in 2002, the EU remained by far the first import source for Ethiopia throughout the period. The EU has been exporting to Ethiopia three times as much as the second supplier since 1995. Table 3.6 also indicates that Imports from COMESA countries were also quite stable during the period, accounting for around 6.5 percent of total imports. Kenya, Djibouti and Egypt were the three most important regional partners in the order.

Table 3.6: Ethiopia's main import partners (1990 and 2002), value (Thousand Birr) and percentage

Partner	1990/91		2002/03	
	Value	percent	Value	percent
Djibouti	36,046	1.69	570,584	3.58
Kenya	43,567	2.05	161,019	1.01
Sudan	29	0.00	3,119	0.02
U.A.R	3,503	0.16	1,094,366	6.87
France	61,940	2.91	224,132	1.41
Germany	223,560	10.49	690,602	4.34
Italy	265,407	12.46	1,091,273	6.85
Netherlands	62,566	2.94	423,628	2.66
U.K.	133,355	6.26	717,420	4.50
Russia	179,307	8.42	215,931	1.36
Yugoslavia	17,365	0.82	1,305	0.01
U.S.A.	316,538	14.86	959,433	6.02
China, P. Rep.	10,894	0.51	1,480,535	9.29
Japan	152,326	7.15	1,043,226	6.55
Saudi Arabia	74,841	3.51	1,307,811	8.21
Rest of the World	549,091	25.77	5,945,091	37.32
Total Import	2,130,335	100	15,929,478	100

Source: National Bank of Ethiopia

The Ethiopian import performance can be analyzed by comparing the average import values, import to GDP ratio and average import growth rates at different periods. As we can observe from table 3.8, Ethiopian imports have generally increased throughout the periods in terms of average import values and average import growth rate. Accordingly, despite devaluation measures in 1991/92 to discourage imports, it has risen to Birr 1.48 billion in 1991-2002 as compared to Birr 1.42 billion during 1971-1990. Moreover, the average import growth rate has increased from 8.75 percent to 20.83 percent during the period 1971-1990 and 1991-2002, respectively. The continuous growth of imports has been mainly attributed to the composition

of imports as discussed previously. Accordingly, Ethiopian imports have been concentrated in capital goods and consumer goods. Capital goods are essential for the expansion of exports as well as sustainable economic growth. However, the share of consumer goods that includes consumer durables and household items has excelled the share of capital goods starting 2000/2001(appendix 2). This implies that the country's dependence in such goods and the utilization of its scarce foreign exchange for importing consumer goods, which should have been produced locally.

Table 3.7: Average import values, ratio of import to GDP and AVG import

Period	*Average import values (millions of Birr)*	*Imp/GDP*	*Average import Growth rate*
1971-1990	1421.1	12.5	8.75
1991-2002	1488.3	11.9	20.83
1970-2002	1647.4	12.2	13.52

Source: Own computations from National Bank of Ethiopia

In general, trade liberalization measures such as devaluation, ease of foreign exchange control, the gradual reduction of import tariffs and elimination of non tariff barriers have resulted in increase of imports. This implies that trade liberalization should be implemented cautiously since it might increase imports more than exports as it has been the case for most developing countries (Santos 2004, Parkih & Stirbu 2004).

3.2.4 Trade Balance and Economic Growth

Ethiopia's trade balance is generally negative over 1970-2003 as can be seen from table 3.8. The possible explanation for this dismal trade performance is the structure of its import and exports. In 2002, total merchandise exports, with the value around Birr 3.5 billion, were about four times smaller than merchandise import, totaling Birr 13.9 billion. Moreover, the trade deficit recorded in 2002 was higher than in 1970 and 1991, by 72.6 percent& 6.01 percent, respectively.

The trade balance deterioration can also be analyzed as a share of GDP by comparing the Trade balance as a whole and its trend after the trade liberalization of 1991/92. Table 3.8 shows that trade balance to GDP has persistently declined from 2.6percent in 1970 to

20.7percent in 2002. Although, the government undertook several trade liberalization measures such as reduction of tariffs and reduction/elimination of non tariff barriers and devaluation of currency, the decline of trade balance reached 20.7 percent of GDP in 2002 as compared to 7.2percent of GDP in 1991/92. This phenomenon is mainly attributed to the structure of export and import of the country, which seems to work against the external trade performance of LDCs. On the one hand, the country depends on the export of primary commodities, which are highly subjected to external shocks (such as climatic factors) and characterized by low price and income elasticity. On the other hand the imports of the country are mostly comprised of capital goods and consumer goods, which have high price and income elasticity. This in turn led to the deterioration of the trade balance, which implies the country's incapacity to finance its imports. Moreover, it also implies that the trade liberalization measures in Ethiopia have been not yet effective in reducing the dismal trade balance gap as with the case for developing countries (Santos-Paulino, 2004).

Another important point that can be drawn from table 3.8 is that the poor performance of the trade balance has also significantly contributed to the deficit in the current account of the balance of payment. Hence, the current account deficit as percentage of GDP has almost tripled after trade liberalization (from 3.9 percent in 1991 to 11.4percent in 2002) and doubled when we consider the period before and after liberalization. Despite the deficit in the current account the overall balance of payment as percentage of registered a significant surplus during 2001/2002 amounting to 4.6 percent of GDP. This surplus increased due to external loans, grants, debt rescheduling, and debt cancellation (EEA, 2004).

Table 3.8: Trade Balance, Current Account and BOP as a percentage of GDP (Selected years)

Year	Trade Balance	Current Account Balance	BOP Balance
1970	-2.5	-2.3	-0.8
1975	-2.04	-0.1	1.2
1980	-5.29	-4.1	-1.2
1984	-9.34	-4.8	0.7
1991	-7.2	-3.9	-2.0
2002	-20.7	-11.4	4.6
Average 1970-1991	-5.5	-3.7	-0.09
Average 1991-2002	-13.9	-7.4	0.05

Source: Own computations from National Bank of Ethiopia data

Analyzing Ethiopia's trade balance by product is not complex, since the country is an exporter of almost exclusively two categories, namely agricultural goods and leather, textiles and garments, while importing broadly every category of products. Accordingly, we made comparison in the years 1995 and 2002. In 1995 Ethiopia recorded surplus in agricultural and food products as well as leather, textiles and garments, but showed deficits in all the other main product groups. In 2002, the situation is broadly the same except one major change: the country shows a deficit in textiles and garments (table 3.9). The surge of China's textiles and garments products among import sources explains, to a large extent, this transformation. The other fact from the table is that the most significant import categories are also the major sources of trade deficits. This means that, in descending order, machinery and equipment, chemicals products, transport equipment, raw materials, minerals and fuel are all in deficit, with respect to Ethiopia's trade with all partners.

Table 3.9: Ethiopia's most important trade balances by main product categories (1000 US$) (selected years)

Product Categories	World	
	1995	2002
Agricultural and food products	178332.0	148603.9
Construction materials	-13777.4	-15665.0
Chemicals	-207907.4	-253299.7
Machinery, equipment and accessories	-214852.0	-351157.0
Metals and metal products	-113233.1	-154590.8
Raw materials, minerals and fuel	-116117.5	-203778.4
Textiles and garments	10092.9	-58014.0
Toys and various manufactured goods	-4544.7	-6130.8
Transport equipment	-205886.6	-201160.8
Wood, paper and paper products	-29984.5	-76785.8
Total	**-719074.5**	**-1178388.4**

Source: MOTI (2004)

When we come to see the trade balance at the bilateral level, Ethiopia also recorded trade deficits with practically all of its partners. As it was the case with the total trade balance

deficit, the bilateral trade deficit increased after the implementation of the trade liberalization reforms in 1991/92. In 2002 among its roughly 140 trading partners, Ethiopia registered a trade surplus with only 20 of them. Ethiopia's structural trade deficit is broadly explained by its relations with limited number of countries i.e. small geographical concentration index as we have seen before. In 2002, five countries (the EU, the United States, Saudi Arabia, China and the United Arab Emirates) accounted for 63percent of the trade deficit. Among these five, China and UAE replaced Japan and Kenya as new major sources of bilateral deficits after 1991/92 (See appendix 4).

When we examine the relationship between the trade balance and economic growth, Ethiopia has achieved high rates of GDP growth, but in combination with trade disequilibria and phases of sharp decline (see figure 2). Thus, the trade balance relative to GDP shows opposite movements in relation to the output growth rate, and this inverse relationship has hardly changed for the last three decades. The phenomena imply that GDP growth in Ethiopia increases the tendency to import than exports resulting in augmented trade deficit.

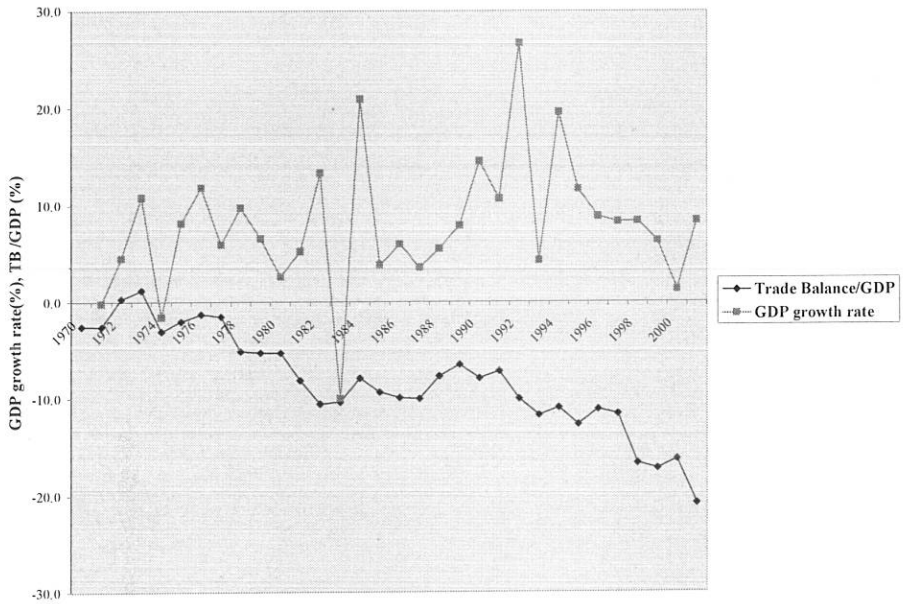
In general as we can see from figure 2, the Ethiopian economy has positive growth except in the years of 1971/72, 1974/75 and 1983/84 where the GDP percentage growth were -0.2, -1.6 and -10.0, respectively. The slowdown of the economy in all the periods was mainly attributed to the dismal performance the agriculture sector, which recorded negative GDP growth rate of -4.1, -6.2 and -20.1 respectively. During these years the country faced famine due to recurrent drought (EEA, 2005).

Like the trade structures of the country, the GDP growth in Ethiopia has not shown appreciable structural transformation over the past three decades. Accordingly, agriculture accounted 64.2 percent and 37.9 percent of real GDP in 1970/71 and 2002/2003, respectively. Moreover industry, distribution services[13] and other services[14] constituted of 10.4, 13.4, 12.0 and 11.4, 15.6 and 30.9 percent of real GDP before and after liberalization, respectively (Appendix 5). Although, agriculture depicts a declining trend, it is not due to the transformation of the economy rather it is attributed to the bad performance owing to vagaries of nature. During years of good weather in terms of quantity and time, the country enjoys

[13] Includes hotels and restaurants, trade, transport and communications
[14] Other services is composed of a host of services largely provided by the government of which government consumption accounts for the lion's share(Befekadu & Berhanu,2000/2001)

bumper harvest, which in turn triggers a vibrant economic activity pushing it to the higher growth path. On the other hand, when the weather turns inauspicious, agriculture and with it the whole economy is depressed. Thus, the real GDP growth of the economy generally shows small and uneven performance as a result of such performance of the agriculture sector (EEA,2004).

Figure2. GDP Growth and Trade Balance/GDP, 1970-2002



Source: Own computations from National Bank of Ethiopia data

Nevertheless, the Real GDP has increased to 4.5 percent in 1991/92-2002/2003 from that of 2 percent in 1970/71-1990/91. When we disaggregate the growth rate, agriculture allied activities, industry, and distributive services share to real GDP growth before 1991/92 was 1.5, 1.9, 1.8 and 5.3 percent, respectively. After trade liberalization the share of agriculture allied activities, industry, and distributive services were 1.1, 6.1, 6.5 and 6.9 respectively (appendix 5).

CHAPTER FOUR: THE DATA AND METHODOLOGY

4.1 The Data: Definition and sources

The study employs secondary data obtained from various sources. The major data needed for the trade balance estimation are export and import values as well as world income (WY), domestic income (Y), real exchange rate (P), terms of trade (tot), import duties (md) and export duties(xd) over the period of 1970/71 to 2002/2003. Where, import and export duties are defined as the percentage share of import and export revenue to total import value of imports and exports, respectively. Moreover, Real import (RIM) and Real GDP (RGDP) at constant factor prices are used in income elasticity estimation of import demand.

The major sources of data are National Bank of Ethiopia various annual reports and EEA/EEPRI database CD-ROM. Moreover, Ethiopian Customs Authority, International financial statistics, World Bank and IMF publications and CD-ROMs are used to gather both quantitative and qualitative data over the period. Specifically data on tariffs and quotas are collected from Ethiopian Customs Authority. Annual data on major macro variables like GDP, exchange rate, growth rate and Trade data are obtained from EEA/EEPRI database and National Bank publications.

4.2 Econometric Method

4.2.1 Model specification

Here, we specify the trade balance and Balance of Payment Constrained Growth model to empirically analyze the effect of trade liberalization on the trade balance and economic growth.

4.2.1.1 Trade Balance Model specification

Prior to estimating a model of the trade balance over the period 1970-2000, we specify a standard export and import growth functions following Thirwall (2002). First we use a conventional constant elasticity export demand function, which makes export (X) demand a

function of relative prices measured in a common currency (competitiveness) and income outside the country:

$$X_t = A(P_{dt}/P_{ft})^{\eta} Z_t^{\varepsilon} \quad (4.1)$$

So that taking the logarithmic form:

$$x_t = \eta\,(p_{dt} - p_{ft}) + \varepsilon(z_t) \quad (4.2)$$

Where variables Z is income outside the country; $\eta(<0)$ and $\varepsilon(>0)$ are the price and income elasticity of demand for exports, respectively. The growth of income outside the economy and foreign prices may be taken as exogenous variables.

The import demand function may be specified in the same way as the export demand function: as constant elasticity function in which imports are related to competitiveness and to domestic income as a proxy for expenditure. Thus,

$$M_t = B(P_{ft}E/P_{dt})^{\Psi} Y_t^{\Pi} \quad (4.3)$$

Where $\Psi(<0)$and $\Pi(>0)$are the price and income elasticity of demand for imports. Taking the logarithmic form:

$$m_t = \psi(p_{ft} + e - p_{dt}) + \pi y_t \quad (4.4)$$

Next we specify the trade balance as the ratio of the value of exports to imports. Thus:

$$TB = X/M \quad (4.5)$$

Where X and M, are the values of merchandise exports and imports, respectively. Taking logs of the variables, the trade balance is defined as:

$$TB = (PX + X) - (PM + M) \quad (4.6)$$

The difference between export prices and import prices (px – pm) measures change in the terms of trade, tot. Based on the logarithmic form of equations (4.2) and (4.4), which define

exports and imports, respectively, we substitute and rearrange terms to obtain the following equation:

$$TB = \psi + \theta_1 WY + \theta_2 Y + \theta_3 P + \theta_4 TOT + \mu \qquad (4.7)$$

The theoretical expectation of the estimated coefficients for the trade balance specification of coefficients is as follows. θ_1 is positive because world income increases the demand for export thus improving trade balance. Domestic income increases the demand for importable goods decreasing the trade balance value, thus θ_2 is negative. Along with neo classical theory real exchange rate is assumed to improve the trade balance of a country through price effects on import and exports. Accordingly, devaluation of a currency encourages export by making them cheap and discourages imports by making them expensive. Therefore, θ_3 is assumed to have a positive sign. Likewise, θ_4 is assumed to have positive sign since the improvement in price of exports than imports would improve the value of balance of trade. Ψ is a constant and μ is the error term.

Following Santos-paulino and A.P. Thirlwall (2004), Equation (4.7) is then extended with the inclusion of export and import duties, and a shift dummy variable to test the impact of trade liberalization[15] on the trade balance. The complete equation estimated is as follows:

$$TB_t = \psi + \theta_1 WY_t + \theta_2 Y_t + \theta_3 P_t + \theta_4 TOT_t + \theta_5 XDt + \theta_6 MDt + \theta_7 LIB92t + \mu_t \quad (4.8)^{16}$$

Where XD and MD are export and import duties, respectively, and lib92 is the shift dummy variables for trade liberalization. θ_5 is expected to have a negative sign since a decrease in export duties expands volume of export thus improves trade balance. On the contrary θ_6 is expected to be positive since increase in import duties reduces import volume expanding the trade balance. The sign of θ_7 is undetermined.

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15 (with A.P. Thirlwall) The Impact of Trade Liberalisation on Export Growth, Import Growth, the Balance of Trade and the Balance of Payments of Developing Countries, The Economic Journal, Vol. 114, No.143 (February), pp.F50-F72.

16 The explanatory variables of the trade balance equation encompass both the absorption and elasticity approaches to the balance of payments.

4.2.1.2 Balance of Payment Constrained Growth Model

As regards to evaluating the impact of trade liberalization on economic growth, a Balance of Payment constrained growth model used by A.P. Thirwall (1979), which was discussed in chapter 2 of this paper is employed. The model[17] starts with the balance of payments equilibrium condition. Next, it uses the specified export and import demand functions. Since import growth is a function of income growth, we can then solve the growth of income consistent with balance of payments equilibrium.

Current account equilibrium is given by:

$$P_d X = P_f ME \qquad (4.10)$$

Taking the rates of growth gives:

$$p_d + x = p_f + m + e \qquad (4.11)$$

Where X is the quantity of exports; $P_{d\ is}$ the price of exports in domestic currency; M is the quantity of imports; P_f is the price of imports in foreign currency, and E is the exchange rate measured as the domestic price of foreign currency.

Substituting equations (4.2) and (4.4) into (4.12) gives the rate of growth of income consistent with balance of payments equilibrium (y_b):

$$y_b = [(1 + \eta + \psi)(p_d - p_f - e) + \varepsilon z]/\pi \qquad (4.12)$$

In equation (4.12) if the first term $(1+ \eta+ \psi)$ is <0, one country's prices rising faster than another measured in common currency, then it will lower a country's balance of payments equilibrium growth rate. Also, an improvement in the real terms of trade, $(Pd - pf - e) > 0$, will improve the country's growth rate consistent with balance of payments equilibrium.

The other important variable is nominal exchange rate; e. currency depreciation ($e>0$) will raise the balance of payments equilibrium growth rate if the sum of the price elasticities is

[17] This section is summarized from Thirwall (2002): pp53-78.

greater than unity. This the dynamic version of the static Marshall-Lerner condition for an improvement in the balance of payments following currency depreciation. However, a once-for-all depreciation or devaluation of the currency cannot put a country on a permanently higher growth path consistent with balance of payments equilibrium since in the period after devaluation e=0 and the growth rate would revert to the former level. It can be also observed that the balance of payments equilibrium growth rate is inversely related to its eagerness for imports, measured by π.

If it is now assumed that relative prices measured in a common currency remain unchanged, equation (4.12) reduces to:

$$y_b = \varepsilon(z)/\pi^{18} = x/\pi \qquad (4.13)$$

This is a dynamic version of the static Harrod trade multiplier result Y=X/m (where Y is the level of income, X is the level of exports and m is the marginal propensity to import), which Harrod derived in his book International Economics in 1933 on the same assumption as above, namely balance of payments equilibrium and no change in the real terms of trade (cited by Thirwall, 1994). In the open economy it is probably more difficult to close an import-export gap than it is to bridge a saving-investment gap and therefore the foreign trade multiplier (1/m) has more relevance for understanding the macroeconomic performance of countries. If relative prices do not adjust in international trade, or trade flows are relatively insensitive to price changes, it is output and growth that adjust to bring imports and exports into line.

The original model of Thirwall's specified in equation (4.13) has been found to work for developed and developing countries (Thirwall 2000). However, for developing countries where foreign exchange is a more acute bottleneck than in the developed, the model can be applied using capital inflows. The major reason is that developing countries are often able to build up-ever growing current account deficits financed by capital inflows, and by itself the simple growth rule pronounced might not be a good predictor of long run-growth performance. What countries gain from capital inflows, however, they may lose by the adverse effects of relative price movements: indeed, the former may be partly in response to the latter. It is an appealing empirical question what the net consequence may be.

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[18] It can also be shown that this result holds if the Marshal Lerner condition is just satisfied (i.e. $\eta+\Psi=1$)

Thus, with capital flows Thirwall and Hussain (1982), modified equation (4.1) as:

$$P_d X+C=P_f ME \qquad (4.14)$$

Where C>0is capital inflows measured in domestic currency. This is an identity because the balance of payments must balance in total. Taking rates of change of (4.14), and substituting (4.2) and (4.4), gives the rate of growth of income consistent with the total balance of payments:

$$y_{bt}=[(pd -pf-e)+ (\theta\eta + \psi) (pd -pf-e) + \theta\varepsilon z+(1- \theta) (c- pd)/\pi \qquad (4.15)$$

Where c is the growth of nominal capital inflows; θ is the share of exports in total receipts to pay for imports, and (1- θ) is the share of capital inflows in total receipts. The first term in equation (4.15) gives the pure terms of trade effect on real income growth. The second term gives the volume effect of relative price changes. The third term gives the effect of the growth of real capital flows, which 'finance' growth in excess of the rate of growth consistent with equilibrium on current account.

4.2.2 Econometric Methodology

Trade Balance model

According to Leybourne and Newbold (1999), it is a regular practice to test the hypothesis that the process generating a series has a unit autoregressive root versus that this process is stationary. Moreover, most macroeconomic variables are found to be non stationary and show trending over time. It is however, possible to difference the variables in order to make them stationary. A series is stationary, if its mean, variance, and autocorrelation (at various lags) remain the same no matter at what point we measure them: that is, they are time invariant (Gujarati, 2003). If variables become stationary through differencing, they are in the class of difference stationary process. This study employs the Adjusted Dickey-Fuller (ADF) test[18] to

[18] The ADF test here consists of estimating the following regression:
$\Delta Y_t = \beta_1 + \beta_2 t + \sigma Y_{t-1} + \alpha i$ Ë $\Delta Y_{t-i} + \varepsilon_t$
Where εt is a pure white noise error term and $\Delta Y_{t-1} = (Y_{t-1} - Y_{t-2})$, $\Delta Y_{t-2} = (Y_{t-2} - Y_{t-1})$, etc. In the ADF we will test whether $\sigma=0$ and the ADF test follows the same asymptotic distribution.

detect the presence of unit root tests in the data. The ADF test is based on the null hypothesis that a unit root exists in the variable against the alternative that the variables are stationary.

Following the unit root test, the next step is test for co-integration. The concept of co-integration implies even if many economic variables are non stationary, there linear combination may be stationary (Cuthberston, et.al 1992)[20]. Moreover, as Granger notes, "a test for co integration can be thought of as a pre test to avoid 'spurious regression' situations"[21].

The two most commonly used co-integration techniques are the Engle &Granger (1987) two–step residual based procedure for testing the null of no co-integration and Johansen's (1991) system-based reduced rank regression approach. A common approach in these methods is their emphasis on cases in which the underlying variables are integrated of order one I(1).

In this study we employ Engle-Granger two stage procedures for the existence of Co-integration in time series. Because of the dominance of the common stochastic trends, the estimate of long run coefficient from the static regression are super consistent approaching the true parameters as a rate proportional to sample size rather than the square root of the sample size. Moreover, in the second step of the Engle-Granger Error Correction, lagged residual from static regression are used in place of the equilibrium error correction equation. Again OLS provides consistent estimates, this time through the adjustment speed and short run parameters of the error correction specification (Basses etal.1997).

Moreover, the Johansen co integration trace and eignevalue maximum tests can have conflicting results in practice because they use different information i.e. alternative hypothesis differ. Hence, Monte Carlo study conclude that both tests display some size of distortions i.e. a tendency to over reject H0, most likely due to over fitting the VAR (Gregory 1994).

In testing for Co-integration in Engle-Granger two step approaches, the first step is to estimate the long run model and obtain the resulting residuals. If the residual is stationary the series is Co-integrated (Endres, 1995: 374). The last step in the time series technique is estimation of

[20] Cited by Gujarati (2003)
[21] Cited by Gujarati (2003) C.W.J.Granger, "Developments in the study of Cointegrated Economic Variables," oxford Bulletin of economics and Statistics, Vol, 48,1986,p.226

the parameters. In this regard, error correction model was employed to see the impact of trade liberalization on trade balance using an ordinary least square (OLS) estimation technique. Hence, the log linear functional form of the trade balance takes

$$Ltb_t = \beta_0 + \beta_1 LWy_t + \beta_2 Ly_t + \beta_3 Lp_t + \beta_4 Ltot_t + \beta_5 Lxd_t + \beta_6 Lmd_t + \beta_7 lib92_t$$

Where the parameter β_3, β_5, β_6, & β_7 are coefficients that signify trade liberalization measures, whereas β_1, β_2 & β_4 are control variables used in the long run dynamics. β_0 is the constant term.

After the estimation of the long run equation, the second stage is to estimate the short run coefficients and the speed of adjustment factor by using the one period lag residual of the above regression as a regressor. This regression equation, therefore, take the following form:

$$D(Ltb_t) = \beta_1 D(LWy_t) + \beta_2 D(Ly_t) + \beta_3 D(Lp_t) + \beta_4 D(Ltot_t) + \beta_5 D(Lxd_t) + \beta_6 D(Lmd_t) + \beta_7 D(lib92_t) + (1-\alpha)ERC_{t-1}$$

Where the parameter β_1 ***to*** β_7 denotes the coefficients of explanatory variables in the short run, $(1-\alpha)$ indicates the speed of adjustment coefficient, which theoretically expected as negative if any short term shock, converges towards long run equilibrium. In addition to the estimation of the parameters, appropriate diagnostic tests are conducted to ensure the soundness of the model.

Balance of Payment Constrained Growth Model

As regards to the Balance of Payment constrained Growth Model, a formal test was conducted as proposed by McCombie (1989) to check whether the actual growth of a country can be predicted from its balance of payments equilibrium growth rate. The test consists of estimating the hypothetical income elasticity of demand that equates the actual and the balance of payments equilibrium growth rates (i.e. $\pi' = x/y$), and to compare π' with the estimated π from the time series of import demand function in equation (4.3). The import demand function is estimated for two sub periods: 1974-1991 and 1992-2002 representing pre and post trade liberalization, respectively, by applying the Engel and Granger Error Correction Mechanism

The long run import demand and error correction mechanism are specified as follows in log form.

$$LRIM=\beta_o+\beta_1 LRGDP+\beta_2 LP \quad (4.14)$$

$$D(LRIM) = \beta_1 D(LRGDP) +\beta_2 D(LP)+ (1-\alpha)ERC_{t-1} \quad (4.15)$$

Where RIM and RGDP are real imports and real GDP at 1980/81constant price and P is the real exchange rate. In this equation β_1 refers to π and expected to be positive and β_2 expected to be negative, since devaluation is expected to reduce the volume of imports.

According to Gujarati (2003), a test of significance is a procedure by which sample results are used to verify the truth or falsify of a null hypothesis (Ho). The decision to accept or reject Ho is made on the basis of the value of the test statistic (estimator) obtained from the data at hand.

Thus, under normality assumption the long run variable (β_1)

$$t= \beta_1 - \beta_1*/s.e(\beta_1)$$

follows the t-distribution with n-2 degree of freedom and since β_1 is computed from the import demand in equation (4.14) which can serve as a test statistic. In the test of significance approach we hypothesize value for β_1, π' in our study, and try to see whether the computed, π lies within 95 percent confidence limits. If the estimated π departs from the hypothesized π' the *t* will be increasingly large. Therefore, a "large" *t* value will be evidence against the null hypothesis, i.e. reject $\pi = \pi'$ which implies that the actual GDP growth will differ significantly from the balance of payment equilibrium growth rate. The estimation is conducted for two sub periods taking 1991 and 1992 as years of trade liberalization.

CHAPTER FIVE: ANALYSIS OF EMPIRICAL RESULTS

5.1 Time series analysis

5.1.1 Tests for Stationarity

As it is a common practice in a multivariate regression analysis, unit root tests are prerequisite for co-integration analysis and estimation of parameters. Hence, the degree of integration of each variable in the Trade Balance model is determined using Augmented Dickey Fuller (ADF) test with annual data over the period 1970-2001. The results of the ADF test applied to the log-level series and the series in first differences with and with out trend and intercept are reported in Table 5.1. The results of the ADF test can not reject the null hypothesis of a unit root test in the log levels of almost all the variables, which seem to be I(1) series[21].

Table 5.1 Augmented Dickey-Fuller unit root tests

Variable	Level		First difference	
	Intercept	Trend and intercept	Intercept	Trend and intercept
Lx	-0.867	-1.804	-3.361*	-3.321*
Lm	0.013	-1.752	-3.291*	-3.206*
Lmd	-1.595	-1.360	-4.550*	-4.745*
Lxd	-1.388	-2.419	-4.489*	-4.613*
Lp	-1.337	-1.249	-4.02396*	-4.290*
Ly	0.257	0.128	-2.477**	-2.142**
Lwy	-1.322	-3.798*	-4.455*	-4.625*
Ltot	-2.01	-2.07	-3.488*	-4.270*
Ratio				
Ltb	-1.381	-2.751	-5.271*	-5.195*

* denotes significance of a test (i.e. rejection of non stationarity) at the 1percent level.

** denotes significance of a test (i.e. rejection of non stationarity) at the 5percent level.

[21] The graphical analysis and the correlogram tests have also confirmed that all variables are non stationay at levels.

5.1.2 Co-integration test

After conducting the unit root test, the following step would be to establish whether there are long run equilibrium relationships among the arguments of trade balance using co-integration test. To this effect, we primarily run the dependent variable, Trade Balance, over the independent variables, domestic income, world income, real exchange rate, trade liberalization dummies (equation 4.8). The result of the long run estimation in log of the variable is presented as follows.

$$Ltb_t = -80.589 + 2.84Lwy_t - 0.25y_t + 0.39p_t - 1.755\, tot_t + 0.221xd_t + 0.26md_t - 0.157\, lib92_t$$

t-statistic = (-1.53) (2.84) (-0.474) (2.048) (-2.586) (2.81) (1.011) (-0.656)

Adjusted R-Squared = 0.85 *Durbin-Watson stat = 1.701*

F-statistic = 19.788[0.000]

The diagnostics test in the regression, the F-test (joint test) reveals that the null hypothesis of all the slope coefficients are simultaneously zero; that is, all explanatory values jointly have no impact on the regressand, is statistically rejected. The long run estimation of the above regression revealed that export duty coefficient is statistically significant among trade liberalization indicators but with incorrect sign. The real exchange rate coefficient is statistically significant with correct sign. The world income and terms of trade are statistically significant variables among the control variables of the study. Nevertheless, the sign of terms of trade was on contrary to our prior expectation.

The next procedure is to test whether the residual of the long run relationship is stationary or not. Accordingly, the ADF test conducted at levels reveal that the residuals from the regression are *I(0);* that is ,they are stationary. Hence, the trade balance equation is a co integrating regression and this regression is not spurious, even though the explanatory variables are not non stationary.

Thus, we use this residual to tie the short run behavior of explanatory variables to their long run value using the Error Correction Mechanism (ECM). The ECM, popularized and used by

Engle Granger, corrects for disequilibrium in the short run (Gujarati, 2003). Therefore, the outcomes of the model are described in the following equation:

$$\Delta Ltb_t = 4.925\Delta Lwy_t - 0.189\Delta Ly_t + 0.271\Delta Lp_t - 2.60\ \Delta Ltot_t + 0.25\Delta xd_t + 0.17\Delta md_t - 0.431lib92t - 0.90*RESID\ (-1)$$

t-statistic = *(2.615)* *(0.348)* *(1.255)* *(-2.998)* *(3.18)* *(0.954)* *(-2.24)* *(-4.533)*

R-Squared *= 0.649* ***Durbin-Watson stat*** *= 1.80*

F-statistic *= 6.900[0.000]*

In the short run dynamics, world income, terms of trade, export duty and the shift dummy variables are statistically significant as indicated by the t-statistics in the parenthesis. However, terms of trade and export duty are significant with unexpected signs. On the other hand, domestic income and real exchange rate have the correct sign but not statistically significant. The error correction mechanism variable is statistically significant with expected sign. Moreover, the F-test (joint test) reveals that the null of all variables becomes zero is statistically rejected.

Balance of Payments Constrained Growth Model

In this section we examine the impact of trade reforms on Ethiopia's economic growth using Thirwall model. The effect of trade reforms on Ethiopia's GDP is measured by changes in income elasticity of demand for imports and the rate of growth of exports. If the former has increased over time this means a negative effect of trade liberalization on economic growth, unless offset by a faster rate of growth of exports.

Different income elasticities of import demand were derived from import demand functions, estimated by applying Engle Granger Error Correction Model. Thus, we followed the same procedure we undertake for trade balance. First we tested for unit root tests using ADF test (Appendix6). The result show that all variables seem to be I(1) series.

Here, our main interest is in the results of the income elasticity of the import demand. Accordingly the income elasticity of the import demand for the two sub periods were statistically significant with expected sign. The estimated elasticities are summarized in the last column of Table 5.2.

The following step is to see whether the variables are co integrated. Thus, the cointegration test by applying the Error Correction Mechanism (ECM) indicates that there is a co integration vector that binds the short run behavior of explanatory variables to their long run value. Accordingly, the speed of adjustment coefficient, which indicates the adjustment towards the long-run equilibrium, is found to be statistically significant with a negative sign. The result of both short run and long run coefficients along with the appropriate diagnostic tests are reported in Appendix7.

When we return to our discussion of the Balance of Payment Growth model, Table 5.2 compares the Harrod trade multiplier ($Yb=x/\pi$), the actual growth rate and long run income elasticities in each period. From the table we can see that the estimated dynamic Harrod foreign trade multiplier result is somewhat higher than the actual growth rate of real GDP (y) in sub period 1992-2002. Moreover, despite having increasing rates of growth of exports, π has dramatically increased after the trade liberalization in 1991/92, which includes tariff and non tariff measures. Accordingly, income elasticity for import demand has increased to 2.05 during 1992-2002 as compared to 0.75 in 1974-1991. We can also observe from the table that the values of the Harrod trade multiplier and actual growth rate are close.

Table 5.2 Impact of Trade Reforms on Ethiopia's GDP Growth (Selected sub-periods)

Period	**Harrod trade multiplier ($Yb=x/\pi$)**	***Actual Growth Rate (y)**	***Export Growth rate(x)**	**Income elasticity of demand (π)**
1974-1991	1.43	1.56	1.07	0.75
1992-2002	6.99	4.51	13.64	2.05

**the figures are in real terms at 1980/81.*

Source: Own estimations based on data from National Bank of Ethiopia.

Even though the income elasticity for import demand has increased significantly after trade liberalization, it has not lead to a reduction in the actual rate growth of GDP. One probable reason is that the country use capital inflow in the form of loans and grants that enables the economy to grow even with large trade deficits. On the contrary, it is important to note the increase in the balance of payments equilibrium growth rate post 1991/92 is greater than actual Growth Rate. As a result, while the balance of payments equilibrium growth rate increased by 5.57 percentage point (from sub period 1974-1991 to 1992-2000), the actual growth rate increased by 2.95 percentage point during the same period.

The result of the formal test of the hypothesis whether $\pi = \pi'$ i.e. the income elasticity for import demand is not statistically different from the hypothetical income elasticity of import demand that equates the actual and the balance of payments equilibrium growth rates, are reported in Table 5.3. Accordingly, the balance of payments equilibrium growth rate is not refuted for both sub period 1974-1991 and the post trade liberalization period, 1992-2002. This implies that the balance of payment constrained growth rate predicts the actual growth rate of the country.

Table 5.3 Testing for whether π and π' are significantly different (Selected sub-periods)

Period	π	π'	**Absolute value of the *t* statistic**
1974-1991	0.75	0.68	0.159
1992-2002	2.05	3.02	1.709

As a whole, even without considering the influence of capital flows on the balance of payments (equation 4.16), which certainly would yield better approximations between the actual and estimated growth rates, it is shown that Ethiopia's actual economic growth rate(y) is predicted by the balance of payment constrained growth rate (yb), which is the ratio of export growth to income elasticity of import demand. Consequently, the Harrod foreign trade multiplier model fits to the growth experience of Ethiopia, where a foreign exchange is an acute bottleneck like most developing nations. The result of this study is inline with cross country studies in developing countries (McCombie and Thiwall 1994, Nureldin-Hussain 1999).

5.2 Interpretation of results

One of the major objectives of the study is to analyze the impact of trade liberalization, implemented in 1991/92, on the trade balance of the Ethiopian economy using a time series model over the period 1970 to 2001. In this study, we used import and export duties to proxy the effect of tariff reforms on the trade balance. In addition real exchange rate is used to see the effect of devaluation which is closely linked with the trade liberalization process in Ethiopia. Other trade liberalization reforms that can not be quantified are represented by the shift of trade liberalization dummy variable.

The result of the trade balance presented in the above sub section of the paper indicates that export duties, world income and terms of trade are the only variables that are statistically significant in both short and long run. As regards to expected signs of estimated coefficients, the terms of trade and export duty coefficients exhibited unexpected signs in both short and long run. On the other hand, although the Real exchange rate coefficient shows expected sign in both short and long run, it was statistically significant only in the long run. Also the import duty was not statistically significant having the expected sign. The trade liberalization dummy variable is found to be significant only in the long run.

The results from both short run and long run suggest that trade liberalization measures as expressed by export and import duties have no considerable impact on the trade balance of the country in both short and long run. Theoretically, the reduction of import duties can have encouraging effect on imports thus reducing the trade balance. Nevertheless, the result of the coefficient shows the correct sign with out statistical significance. This situation can probably be explained by the fact that despite reduction of import tariffs, the import of goods is still affected by some administrative procedures making the impact less significant as explained in third chapter of the paper. On the other hand, in theory it is expected that as export duties decrease export volume increases which in turn increases the trade balance. However, the result shows that the coefficient of the export duty has the wrong sign. This may imply that export demand in the country has not been affected by trade liberalization but to other factors.

Despite the above results from tariff reforms, the trade liberalization dummy shows a negative sign in the short run. The major point is that trade liberalization measures which are aimed at improving the trade balance and ultimately recovering the external sector of the country has a

negative effect in the short run. This imply that trade liberalization has favored the import of goods than the export of goods which in turn deteriorates the trade balance. Empirically, Ethiopian imports are mainly composed of intermediate and capital goods as discussed in the preceding chapters. Moreover, trade liberalization has a negative sign in the long run, but not statistically significant. This result is in conformity with other studies conducted on developing countries (Santos 2004, Parikh and Stribu 2004).

The result of the real exchange rate variable indicates that it is only statistically significant in the long run with expected sign. The neoclassical theory states that appreciation of currency or devaluation improves the trade balance through its price effect by expanding exports(lowering export prices) and discouraging imports(making import goods expensive). However, our result shows that the real exchange rate has expected sign in the short run but not statistically significant. The possible reason can be attributed to the terms of trade effects in the trade balance equation. The prior assumption of terms of trade coefficient is positive, thus improving the trade balance position of the country. However, our result indicates that terms of trade has a negative effect on trade balance in both short and long run. The possible explanation for this is the structure of exports and imports of the country as mentioned in the early chapters of the study. The result is in accordance with the famous Prebisch- Singer hypothesis[23]of the secular deterioration of the terms of trade in developing countries. In practice, as discussed previously the export structure of the country reveals the country's dependence on export of primary commodities which are characterized by high fluctuation of prices and low income elasticity. On the other hand, the country import is composed of relatively fixed and high income elastic capital and consumer goods. This has in effect resulted in the decline in export values relative to import values of the country, thus deterioration of the trade balance. According to our estimates, a one percent increase in terms of trade on average results in a decrease of the trade balance by 2.60 and 2.56 percent in the short and long run, respectively holding other things constant.

The speed of adjustment coefficient, which indicates the adjustment towards the long-run equilibrium, is found to be statistically significant with a negative sign as expected. Its magnitude reveals that economic agents adjust by about 90percent to their long-run steady state whenever there is a shock in the system.

[23] As quoted in Thirwall and Mcrombie(1994)

In general, estimation of results the trades balance of Ethiopia indicates that the trade liberalization does not achieve its objective. On the contrary, it proved to aggravate the balance of trade deficit. Moreover, the estimation results reveal that the control variable, foreign income, significantly affects the performance of the trade balance of the country. In effect, a one percentage increase in foreign income leads to 4.9 and 4.3 percent average increase of trade balance level in the short run and long run respectively, holding other variables constant.

With respect to the Balance of Payment Constrained growth model, the hypothesis that the Balance of Payments constrained growth rate predicts the actual growth rate of Ethiopia has been established. Thus, the evidence indicates that economic growth rate in Ethiopia has been partly constrained by the performance of the balance of payment. The poor performance of the balance of payment can be attributed to trade liberalization. Accordingly, while trade liberalization undertaken increased the rate of export growth from 1.07 to 13.64, it also lead to an increase in the income elasticity for import demand from 0.75 to 2.05 in 1974-1992 and 1992-2002, respectively. Moreover, devaluation which is mostly associated with trade liberalization has increased the import demand at least in the short run rather than reducing it as it is shown in appendix 7.2B. However, it should be noted that trade liberalization was implemented simultaneously with fiscal and stabilization policies.

Moreover, the equilibrium long run rate of economic growth (y) of the country was less than the balance of payment constrained growth rate after trade liberalization. This results conform Thiwalls fundamental proposition that "no country can grow faster than that rate consistent with the balance of payments equilibrium on current account unless it can finance ever growing deficits, which in general it can not" (Thirwall 2002:66). As we have seen in chapter three Ethiopia suffers from current account deficit. The deficit has been mostly financed by capital inflows in the form of aid, grants and loans, so that the total balance of payments is balanced. This implies that we even can get better result by estimating the extended model specified in equation (4.16).

CHAPTER SIX: CONCLUSIONS AND POLICY IMPLICATIONS

The impact of trade liberalization on developing countries has been a major area of study in the past two decades, as it has witnessed mixed effects on their balance of trade and economic growth. The current study extends the existing debate to test the case to Ethiopia. To this effect, it has undertaken both descriptive and econometric analysis over the period 1970/71-2002/2003, taking 1991/92 as a reference year.

As has been widely discussed in the study, though the country undertaken several trade liberalization measures including gradual tariff dismantling, removing most non tariff barriers and adjusting its overvalued currency through daily inter-bank auctions, to remedy its historical trade balance and Balance of payment deficits, the impact has been perverse in the sense that export performance has failed to match import growth. As a consequence, the trade deficit worsened to reach 20.5 percent of GDP in 2002 as compared to 7.2 percent before trade liberalization. The major reason for such decline as repeatedly said in the study is due to the structure of the export and import sector of the country.

The above argument has been also confirmed by the trade balance regression analysis. Accordingly, the impact of exports and import duties that imply tariff barriers on the trade balance of the country has been minimal to prior assumption of the study. However, the shift dummy liberalization variable that was used to take into account effects of non tariff barriers and policies of trade liberalization has negatively affected the trade balance in the short run. The effect of real exchange rate, which was closely associated with trade liberalization demonstrate the devaluation was not significant at early stages of implementation but can improve trade balance in the long run. Therefore, the existing evidence of this study demonstrates that the trade liberalization effort in Ethiopia has not succeeded in reducing the balance of trade deficit, but resulted in aggravating the problem in the short run.

The other important issue with regards to the persistent trade deficit performance is its implication in current account financing. During the study period, despite pro trade reforms, the capacity of merchandise export to finance has drastically declined from 69 percent in 1970 to just 26 percent in 2002/2003. This implies that the country is continuously becoming incapable of financing its import from the export of its primary products, which has not seen

significant change in composition over the past three decades. This problem is also persistent in developing countries particularly in Less Developing Countries (UNCTAD 2004)[24] despite undertaking the whole trade liberalization process very rapidly and having a more open trade regime than other developing countries and high-income OECD countries. Hence, the contention is not the extent and depth of trade liberalization, but on how to effectively formulates a trade policy that combines protection and trade liberalization.

Moreover, this study has shown that terms of trade, which has been used, as control variable have significantly affected the trade balance than trade liberalization. Hence, we can conclude that trade balance can be improved in a sustainable manner by addressing the factors that affect terms of trade deterioration.

The paper also applied a Balance of payment constrained growth model to evaluate Ethiopia's long-term growth especially after 1991/92 trade reforms. This has not been previously researched for Ethiopia; however, it is essential because trade liberalization in goods and services may hamper Ethiopia's long run economic growth if imports grow faster than exports. In effect, the result of the paper shows that though exports grow in the post liberalization period, the growth in income elasticity for import demand has prevented the country to reach its Balance of Payment Constrained growth rate (yb). Part of the explanation for the increase in the income elasticity of demand for imports is the increased dependence of the under-developed industrial sector on foreign inputs. Trade liberalization has exacerbated and reinforced this dependence, promoting and facilitating access to a wide variety of imported goods. Hence, the main policy implication of the study is that the country should improve the structure of production and income elasticites of demand for exports, which involves the diversification of the existing primary commodity exports into manufactured goods. Moreover, import controls can be imposed on consumer goods such as textiles and garments with caution to reduce the income elasticity of demand for imports (π).

Finally, further research can be done by including the capital inflows in the Balance of Payment constrained Growth model to augment this study.

[24] UNCTAD (2004), *Less Developed Countries Report*

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Appendices

Appendix 1. Ethiopia's Major Export items share in Total Export Value (1970-2002)

Commodity	Coffee	Oilseeds	Hides & Skins	Pulses	Chat	Total	Industrial products*
	1	2	3	4	5	6=(1-5)	7
1970/71	58.7	1.3	7.9	6.5	0.8	75.2	0.1
1971/72	51.8	11.9	9.4	8	1.2	82.3	3.1
1972/73	44.3	12.8	14.8	9.5	0.8	82.2	2.7
1973/74	28.1	15.3	9.9	19.7	0.8	73.8	3.1
1974/75	24.7	18.7	7.8	15.5	1.2	67.9	4.6
1975/76	55.3	6.6	7.9	9.8	0.7	80.3	2.6
1976/77	63.9	4.2	8.2	7.6	1.2	85.1	2.6
1977/78	78.9	1.8	8.9	4.7	0.5	94.8	4.1
1978/79	77.4	1.3	14.5	2.5	1.1	96.8	0.6
1979/80	66.5	1.4	14.9	2.6	2	87.4	1
1980/81	61.6	3.3	10.9	2.8	2.6	81.2	11.3
1982/83	61.2	1.9	9.5	3.6	4.6	80.8	11.2
1983/84	63.5	3	10.1	2.2	3.1	81.9	10
1984/85	62.6	2.1	12.8	2.3	2.1	81.9	12.4
1985/86	72.0	0.8	12.9	1.4	0.9	88	5.9
1986/87	64.75	1.21	13.37	1.05	3.55	88.11	1.77
1987/88	55.74	2.79	16.88	2.04	2.23	85.84	1.79
1988/89	68.25	1.20	13.45	1.78	0.91	89.35	1.19
1989/90	53.57	1.11	17.61	4.70	2.78	81.86	4.24
1990/91	46.92	0.63	16.12	2.75	3.57	73.17	2.87
1991/92	52.87	0.12	18.42	0.12	1.59	75.28	0.55
1992/93	56.57	0.12	14.17	0.43	6.92	78.69	0.54
1993/94	50.59	3.11	14.35	1.95	7.60	78.90	1.81
1994/95	63.46	1.77	13.18	3.64	6.08	89.26	0.08
1995/96	66.13	1.61	11.88	2.96	6.69	90.57	0.00
1996/97	59.29	1.90	9.57	1.98	5.60	80.43	0.12
1997/98	69.77	7.60	8.40	2.49	6.58	96.55	0.00
1998/99	58.08	7.46	6.68	2.79	12.23	89.40	0.03
1999/00	53.91	6.45	7.24	2.02	15.63	87.56	0.61
2000/01	39.49	6.97	16.76	1.86	13.86	80.58	1.86
2001/02	36.07	7.21	12.28	7.28	10.83	76.18	2.20
2002/03	34.24	9.55	10.82	4.13	12.02	73.34	3.71
Total Average	56.26	4.60	11.92	4.46	4.45	80.44	3.08
Average after 1991/92	53.37	4.49	11.98	2.64	8.80	83.06	0.96

*** includes sugar, oilcakes and petroleum products**

Appendix 2 Shares of Imports by End Use in Total import Value (1970-2002)

Year	Raw Materials	Semi-Finished	Fuels	Capital Goods	Consumer Goods	Miscellaneous
1970/71	4.2	18.9	9.4	34.1	32.5	0.9
1971/72	4.4	16.6	8.3	38.5	31.6	0.7
1972/73	4.7	21.5	9.4	30.2	33.5	0.8
1973/74	4.7	22.4	17.2	16.8	38.2	0.7
1974/75	5.0	21.7	21.9	13.9	36.9	0.6
1975/76	3.3	18.1	15.2	29.9	32.2	1.2
1976/77	4.3	14.2	16.3	27.3	33.0	5.0
1977/78	3.8	16.3	12.2	33.9	32.3	1.5
1978/79	4.0	17.6	19.4	34.0	24.5	0.5
1979/80	3.8	20.0	22.5	30.8	22.2	0.7
1980/81	3.8	13.6	25.0	32.7	24.9	0.2
1981/82	3.4	13.6	22.0	33.5	27.3	0.1
1982/83	3.5	14.8	23.3	33.9	24.2	0.2
1983/84	3.6	12.0	18.9	46.1	19.0	0.5
1984/85	2.8	13.6	17.9	29.1	36.4	0.1
1985/86	3.8	11.7	11.4	33.6	39.3	0.2
1986/87	2.2	12.0	10.1	42.8	32.6	0.3
1987/88	2.4	14.4	9.5	47.1	26.3	0.3
1988/89	2.6	16.9	10.1	39.0	30.7	0.7
1989/90	3.2	17.6	12.3	38.6	28.1	0.2
1990/91	2.7	11.1	9.9	45.3	30.2	0.9
Average	3.6	16.1	15.4	33.8	30.3	0.8
1991/92	1.9	12.9	13.8	36.5	34.6	0.3
1992/93	2.0	9.0	22.7	35.0	31.3	0.1
1993/94	1.8	16.3	15.3	29.2	35.1	2.2
1994/95	2.0	17.0	15.2	31.9	32.5	1.5
1995/96	2.4	16.7	12.4	34.3	32.4	1.9
1996/97	2.0	19.0	19.1	38.5	20.5	0.9
1997/98	2.0	16.4	24.4	29.8	19.7	7.7
1998/99	1.7	16.8	11.4	33.7	28.1	8.3
1999/00	1.2	12.7	15.5	29.2	26.8	14.5
2000/01	1.5	18.3	18.8	28.6	30.1	2.8
2001/02	1.8	17.0	15.8	28.3	34.6	2.5
2002/03	1.2	14.8	15.5	29.6	35.2	3.7
Average	3.0	15.9	15.8	33.2	30.2	1.9

Source: Ethiopia Customs Authority

Appendix 3: Ethiopia's most important trade balances, by partner (1000 Birr)

Trading Country	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/01
Djibouti	-68480	-72722	-91427	-30031	96077.19	91875.03	323899.6	105325.9	237,744	259,803	-114,509
Kenya	-31183	-102255	-141759	-158595	-209083	-117208	-124529	-133190	-161,804	-104,920	-137,601
Sudan	-170	-1360	18217	4604	-3833.39	-4412.26	-4453.8	-11070.3	2,803	5,581	-11,986
U.A.R	-2846	-6192	-29527	-3003	-264470	-69684.9	-276175	-493480	-503,955	-128,093	-108,313
France	-1158	-10803	-83706	-3201	-28580.2	-10040	271.295	-142041	-300,902	-290,757	-256,291
Germany	-34616	-204296	-177112	248046	294735.3	207046.2	214433.1	-31141.8	75,535	-236,050	-327,660
Italy	-59735	-169770	-437708	-514791	-715804	-486774	-355865	-659389	-656,308	-677,227	-895,077
Netherlands	-24224	-124638	-201167	-164966	-136675	-476768	-64622.8	-152973	-197,096	-215,996	-271,760
U.K.	-58080	-123071	-181261	-219318	-286684	-325389	-330553	-451284	-430,113	-372,371	-443,875
Russia	-974	-6504	-2465	-14169	-16613	-7033.57	-48178.9	-29942.3	-60,726	-127,781	-50,289
Yugoslavia	-381	-2023	-353	6295	815.9	-3559.94	-656.884	-1190.88	-2,949	-30,470	-3,322
U.S.A.	-110751	-141169	-386423	-678960	-542995	-50089.7	139611.2	-402446	-566,705	-533,387	-1,225,650
China,	-5999	-26304	-82275	-123895	-185536	-288310	-286208	-446807	-608,176	-903,090	-1,124,753
Japan	-14726	55461	-78422	-29879	-268824	-335249	-238950	-27133.1	-359,256	-270,275	-218,018
Saudi Arabia	-67403	-633083	-521179	-970777	-648739	-243591	-1863540	-742126	127,298	-223,711	-1,740,545
Rest of the World	-1051148	-729391	-904425	-1161881	-2253287	-2647182	-2281360	-4445770	-5,753,468	-5,252,350	-3,691,320
Overall Trade Balance	-1531874	-2298120	-3300991	-3814521	-5169495	-4766371	-5196877	-8064658	-9,158,080	-9,101,094	-10,620,969

Source: EEA/EEPRI 2005 CD ROM

Appendix 4. Trade Balance, Current Account and Balance of Payments (Millions of Birr)

	Trade Balance	Current Account Balance	BOP Balance
1970/71	-140.4	-126.6	-46.8
1971/72	-144.3	-114.9	17.4
1972/73	16.9	66.5	193.4
1973/74	76	176.2	263.1
1974/75	-195.3	-151	13.8
1975/76	-140.3	-6.8	80.2
1976/77	-101.4	-23.4	49.1
1977/78	-127.1	-55.4	-260.5
1978/79	-475.2	-384.8	-95.1
1979/80	-517.6	-421.2	-83.6
1980/81	-532.7	-411.2	-123.6
1981/82	-863.5	-709.7	125.3
1982/83	-1243.4	-981.7	-148
1983/84	-1137.4	-803.4	-87.6
1984/85	-1025.8	-622.7	95.8
1985/86	-1268.3	-709.3	347
1986/87	-1427.1	-1014.4	-43.6
1987/88	-1501	-1178.2	-383.3
1988/89	-1207.6	-722.0	-23
1989/90	-1095.5	-651.7	-549.2
1990/91	-1514	-1162.1	-131.2
1991/92	-1492.5	-811.4	-425.8
1992/93	-2669.8	-1647.9	-499.2
1993/94	-3320.8	-1713.3	1602.9
1994/95	-3711.1	-1433.2	1038.3
1995/96	-4809.6	-2414.6	-275.2
1996/97	-4609.6	-2282.1	-2553.3
1997/98	-5196.4	-2299.0	205.4
1998/99	-8064.8	-5440.7	-349.8
1999/00	-7480.6	-3547.8	-2546.2
2000/01	-8447.3	-4564.3	-793.4
2001/02	-10621	-6749.4	2441.1
2002/03	-11787	-7231.0	2629.9

Source: EEA/EEPRI 2005 CD ROM

Appendix 5. Percentage share to real GDP and Annual Growth rate in real GDP (selected periods)

Year	AGRICULTURE & ALLIED ACTIVITIES		INDUSTRY		DISTRIBUTIVE SERVICES		OTHER SERVICES		
	percent Share to real GDP	Annual Growth Rate in Real GDP	percent Share to real GDP	Annual Growth Rate in Real GDP	percent Share to real GDP	Annual Growth Rate in Real GDP	percent Share to real GDP	Annual Growth Rate in Real GDP	Total Annual Growth Rate in Real GDP
1970/71	64.22	2.05	10.43	9.05	13.36	6.29	11.99	5.81	3.7
1975/76	61.42	0.81	9.36	-6.23	14.02	0.25	15.2	5.32	0.68
1980/81	57.75	-1.18	10.85	3.38	13.86	3.27	17.54	6.93	1.26
1985/86	49.63	16.02	14.36	6.57	15.24	3.45	20.78	3.81	9.9
1990/91	55.9	5.17	9.36	-19.06	11.93	-23.5	22.8	-2.72	-3.62
AVG (1970-1990)	**56.98**	**1.55**	**11.25**	**1.94**	**14.18**	**1.83**	**17.6**	**5.25**	**2.08**
1991/92	56.46	-2.74	9.03	-7.11	12.07	-2.52	22.44	-5.24	-3.69
1992/93	53.47	6.06	10.36	28.45	13.18	22.23	23	14.81	12
1993/94	50.65	-3.65	10.89	6.97	13.76	6.18	24.7	9.2	1.7
1994/95	49.7	3.39	11.17	8.07	13.9	6.44	25.23	7.67	5.38
1995/96	51.73	14.68	10.3	1.58	13.74	8.96	24.23	5.79	10.18
1996/97	50.91	3.44	10.45	6.67	14.09	7.7	24.55	6.47	5.09
1997/98	45.88	-11.18	10.86	2.35	15.09	5.62	28.17	13.09	-1.44
1998/99	44.94	3.82	11.12	8.57	14.74	3.49	29.2	9.89	5.99
1999/2000	43.6	2.2	10.75	1.79	15.04	7.51	30.62	10.47	5.35
2000/01	45.12	11.48	10.48	5.01	14.69	5.24	29.7	4.5	7.71
2001/02	43.39	-2.3	10.91	5.79	15.1	4.44	30.59	4.64	1.6
2002/03	37.92	-12.6	11.88	4.62	16.23	3.21	32.43	1.83	-3.92
AVG(1991-2002	**47.81**	**1.05**	**10.68**	**6.06**	**14.3**	**6.54**	**27.07**	**6.93**	**3.83**

Source: EEA/EEPRI 2005 CD ROM

Appendix 6. Augmented Dickey Fuller test for unit roots

Variable	Level		First difference	
	Intercept	Trend and intercept	Intercept	Trend and intercept
Lrim	0.097584	-1.379693	-3.672165**	-3.606535**
Ly	0.689226	-1.960968	-5.716852*	-6.351959*
Lp	-1.473322	-1.332854	-3.904074*	-4.153514

* denotes significance of a test (i.e. rejection of non stationarity) at the 1percent level.

** denotes significance of a test (i.e. rejection of non stationarity) at the 5percent level

Appendix 7: Estimates of the Import Demand Equation

Table 7.1A: Long-run Specification of Imports
Dependent Variable: LRIM
Sample: 1974-1991

Variable	Coefficient	t-Statistic	Diagnostic Tests	
C	3.619598	0.842896	R^2	0.816474
LY	0.752219	-2.675030	DW stat.	1.200274
LRER	-0.375684	1.803284	F-stat.	18.95264
			Prob(F-stat)	0.000078

Table 7.1B: Short-run Specification of Imports
Dependent Variable: LRIM
Sample: 1974-1991

Variable	Coefficient	t-Statistic	Diagnostic Tests	
DLY	0.046873	0.102224	R^2	0.683855
DLRER	-0.424393	-2.026491	DW stat.	1.412198
ECM_{t-1}	-0.724463	-3.150718	F-stat.	4.360970
			Prob(F-stat)	0.033712

Table 7.2A: Long-run Specification of Imports
Dependent Variable: LRIM
Sample: 1992-2002

Variable	Coefficient	t-Statistic	Diagnostic Tests	
C	-11.27447	3.100790	R^2	0.896897
LY	2.058582	3.550371	DW stat.	1.290535
LRER	0.392034	0.732140	F-stat.	34.79631
			Prob(F-stat)	0.000113

Table 7.2B: Short-run Specification of Imports
Dependent Variable: LRIM
Sample: 1992-2002

Variable	Coefficient	t-Statistic	Diagnostic Tests	
DLY	0.474791	0.858898	R^2	0.724884
DLRER	0.918444	2.842355	DW stat.	0.995392
ECM_{t-1}	-0.820732	-2.988044	F-stat.	22.16340
			Prob(F-stat)	0.090224

Declaration

I, the undersigned, declare that this thesis is my own original work and it has not been presented for a degree in any other University. All sources of materials for this thesis have been duly acknowledged.

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