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**ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES**



**THE EFFECT OF FOREIGN DIRECT INVESTMENT
ON EXPORT: THE CASE OF ETHIOPIA**

**BY
MENEYECHEL ENEYEW**



**Thesis Submitted to the School of Graduate Studies of Addis Ababa
University in Partial Fulfillment of the Requirements for the Degree
of Master of Science in Economics (International Economics)**

**July 2008
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Declaration

I, the undersigned, declare that this thesis is my original work and it has never been presented in any other university. All sources of materials used for this thesis are duly acknowledged.

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**ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES**

**“The Effects of FDI on Export: The case of
Ethiopia.”**

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Meneyechel Eneyew

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LIST OF ABBREVIATIONS

ADF	Augmented Dickey Fuller test
ADLI	Agriculture Development Led Industrialization,
AIC	Akaike Information Criteria
AR	Auto Regressive
ARCH	Autoregressive Conditional Heteroskedasticity
CPI	Consumer Price Index
DTIS	Diagnostic Trade Integration Study
DW	Durbin-Watson
ECA	Economic Commission on Africa
ECT	Error Correction Term
EIA	Ethiopian Investment Authority
EIC	Ethiopian Investment Corporation
EPA	Ethiopian Privatization Agency
FDI	Foreign Direct Investment
FIAS	Foreign Investment Advisory Service
GDP	Gross Domestic Product
IGE	Imperial Government of Ethiopia
IMF	International Monetary Fund
IPLC	International Product Life Cycle
LDCs	Less Developed Countries
MEDaC	Ministry of Economic Development and Cooperation

MNE	Multinational Enterprise
NBE	National Bank of Ethiopia
OECD	Organization of Economic Cooperation and Development
OIJV	Office of Investments and Joint Ventures
OLS	Ordinary List Square
SAP	Structural Adjustment Program
SSA	Sub-Saharan Africa
R&D	Research & Development
TGE	Transitional Government of Ethiopia
TNC	Transnational Corporation
UNCTAD	United Nation Conference for Trade and Development
WB	World Bank
WCPI	Wholesale Consumer Price Index
WIR	World Investment Report
VAR	Vector Autoregressive
VECM	Vector Error Correction Model

ABSTRACT

Although there is considerable evidence on the link between FDI and export in developing countries, the causal relationship of these variables still remain an important question. Significantly, there is an overall agreement that inward FDI has a positive effect on the host country's export performance. However, the results on this issue were inconclusive and require more evidence. The Ethiopian case is more relevant to this topic because Ethiopia consistently encouraged FDI inflows. The objective of this paper is to investigate the remaining barriers of FDI and to examine the effects of inward FDI on Ethiopian export performance from 1974 to 2006. The major hypothesis is that inward FDI has had a positive impact on Ethiopian export performance.

The paper attempts to examine the possible effect of FDI and export in Ethiopian economy with a focus on the relationship between FDI and host country exports. It has reviewed the evolution of various FDI regimes and linked them with long term FDI performance and exports. The empirical part of the paper examines the association between FDI and host country exports. A cointegration analysis in a multivariate VAR model is applied for causality test. The Johansen cointegration test procedure and error correction mechanism are employed to capture the linkage between the variables interest. The results of the regression analysis provide much support for the link between export and FDI in Ethiopia. It shows not only a long run relationship between the variables but also the existence of causality in the short run. Thus, it is an evidence for bi-directional causality between FDI and export. It also indicates that FDI inflows have a significant and positive effect on the host country exports. Hence, providing more incentives to export oriented foreign firms into a more strategic core is a plausible means to stretch the positive linkage of FDI and export performance.



CHAPTER ONE

INTRODUCTION

1.1 Background

Sub-Saharan Africa (SSA) countries are increasingly aware of the positive role that Foreign Direct Investment (FDI) can play in promoting growth and development of their economies.¹ FDI can help narrowing the capital and foreign exchange gaps, transferring technology and business know-how, creating employment, broadening the tax base, and sharing risks (ECA, 2006). The benefits of FDI can be particularly significant for the export sectors, as transnational corporations help integrate developing countries into global economy through launching new products, facilitating access to foreign markets, and building integrated international production systems. At the same time, potential shortcomings of FDI are also widely recognized. Frequently mentioned ones are imports of outdated technology, exploitation of local labor, wage pressures, the lack of linkages with local communities, the use of transfer pricing to avoid taxes, encouragement of corruption, damage to the environment, and the creation of a culture of dependency (Ikiara, 2003; OECD, 2002; UNCTAD, 1999). A key question is hence how the SSA countries can maximize the benefits of FDI, while minimizing the risks.

For a number of years, research attempting to determine whether FDI inflows promote growth in developing countries has led to inconclusive and sometimes controversial results. More recent work has shed some light on this issue by linking FDI with competitiveness of the economies into which FDI is being introduced, and in particular with trade and investment openness. This line of research posits that a sufficient degree of competition in the host country is needed to allow foreign investors to increase efficiency of existing activities and introduce

¹ FDI is defined as investment that is made to acquire a lasting management interest (usually at least 10 percent of the voting stock) in enterprise operating in a country other than that of the investor (defined according to the residency). It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short term capital as shown in the balance of payments.

new production techniques, thus enhancing productivity and positive spillovers. A related key finding is that when FDI inflows are accompanied by increased trade, host countries tend to accelerate their growth rates (Moran et al, 2005).²

While the motivating factors of FDI are complex and vary across sectors and firms, the driving forces typically include political stability, prudent macroeconomic policies, high economic growth, trade openness, liberal investment policies, and high quality of institutions. Among institutions that matter, research points to a low level of bureaucracy and corruption, a sound banking sector, and robust legal institutions as particularly important (Benassy-Quere et al, 2007; Campos and Kinoshita, 2003). SSA is no exception; conflicts and the accompanying economic instability (including high inflation) have had damaging consequences for the investment climate in the region. Distortions, inconsistent policies, and corruption have also affected investment adversely (Rogoff and Reinhart, 2003). It is also well documented that different factors determine “horizontal” and “vertical” FDI. Specifically, while “horizontal” FDI is driven mainly by market access to developed or emerging economies, “vertical” FDI reflects break-up of the production chain into segments, with the labor-intensive component being located in developing countries with low labor costs. Because of the break-up of the production process and the limited size of markets in developing countries, under the right conditions “vertical” FDI increases trade and especially exports. This joint increase in FDI and trade, in turn, results in higher growth in the host countries (Melitz, 2005).

So far the hopes that FDI inflows to SSA would significantly increase and contribute to sustainable growth and poverty alleviation have not materialized. Developed economies continue to account for the majority of the world FDI flows – they are the main source of outward FDI and receive about 70 per cent of total FDI inflows. This trend continues, as the steady annual increases in global FDI inflows (27 percent in 2005 and 38 percent in 2006)

² The recent research linking FDI and trade builds on an earlier pioneering work by Bhagwati (1973), Brecher and Diaz-Alejandro (1977), and others, who found that the nature of the trade regime in the host country – export promoting vs. import substituting – is crucial in determining the growth-enhancing effects of FDI. The available empirical studies as well as the Ethiopia’s experience indicate that a country needs to be an active participant in the international markets in order to benefit from FDI inflows.

were driven mainly by growth of inflows to developed countries (UNCATD, 2007 and Table 1.1).

Nevertheless, the long-term geographical pattern of the FDI flows has been gradually changing, with more inflows going to developing countries, especially in Asia (Figure 1). The total inflows to developing countries reached their highest level ever in 2006 (\$310 billion). The aggregate numbers mask important differences though – at US\$70 billion, the 2006 FDI inflows to China were twice as large as those to the entire African continent (\$36 billion) and almost six times as large as those to SSA (\$12 billion). The SSA share in total FDI inflows has been constant over the long term at about only 1 percent. Still, the FDI flows to SSA countries have increased notably during 1980 – 2006. This trend has been driven to some extent by favorable commodity prices, but the improved investor perception together with policy and regulatory reforms undertaken in many SSA countries also helped attract FDI to the region (Table 1.1). As in other regions, increases of FDI to SSA also reflect a mix of globalization, progress with capital account liberalization, and improved macroeconomic policies (Dorsey et al, 2008).

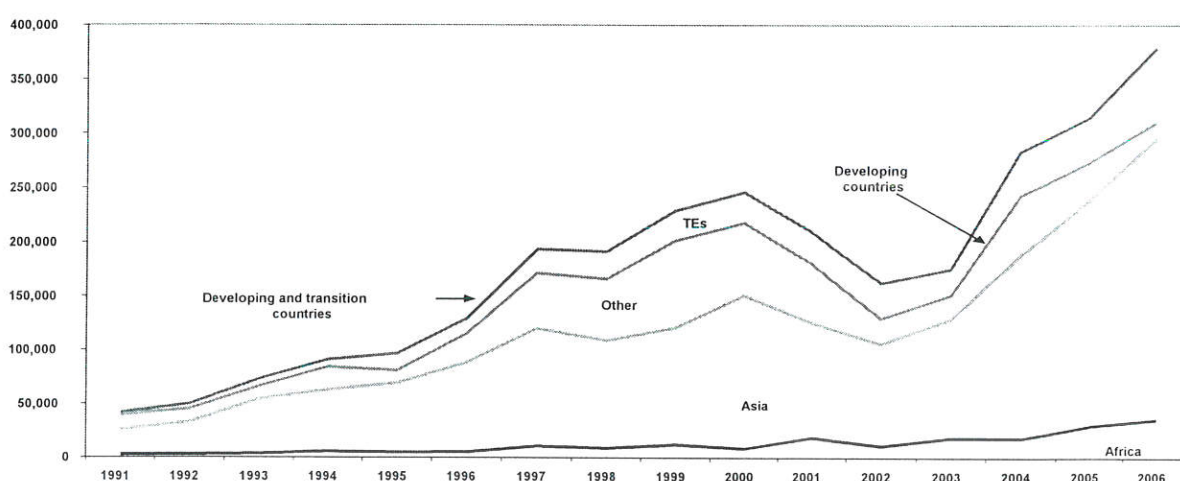
Table 1.1: FDI Inflows by Host Regions, 1980 - 2006

	1980 - 1989	1990 - 1999	2000 - 2006	2004	2005	2006
<i>Average annual FDI inflows</i>	(billions of US dollars)					
World	169	403	917	742	946	1306
<i>Of which Developing countries</i> ¹	35	111	215	243	273	310
<i>Of which Africa</i>	4	6	20	18	30	36
SSA	...	4	11	11	16	12
Asia ²	16	72	155	170	209	259
China	3	31	59	61	72	69
<i>Share in total world FDI inflows</i>	(percent of world FDI)					
Developing countries ¹	21	28	23	33	29	24
Africa	2	2	2	2	3	3
SSA	...	1	1	2	2	1
Asia ²	10	18	17	23	22	20
China	2	8	6	8	8	5
<i>Contribution to total FDI growth</i>	(percent of previous period world FDI stock)					
Total FDI growth		139	128	...	27	38
Developing countries ¹	...	46	26	...	4	4

Source: UNCTAD's World Investment Reports, 1991 - 2007⁽¹ Excludes transition economies of Central, Eastern and Southeastern Europe, and CIS, ² East, South, South-East and West Asia.)

Africa as a whole and sub-Saharan Africa in particular, has been on the sideline of the FDI boom. Starting from similar levels in the mid-1980s, annual FDI flows into sub-Saharan Africa stagnated for a long time while the amounts received Asia, and in particular into East Asia, expanded impressively from the 1990s onwards. Consequently, Africa's share in FDI flows & sub-Saharan Africa suggests that the region still follows other developing regions in FDI performance and after 1990s has brought some optimism and a number of countries have been put favorable conditions in attracting FDI (UNCTAD, 1999).

Figure 1: FDI Inflows to Developing and Transition Countries, 1991 – 2006 (Millions of US \$)



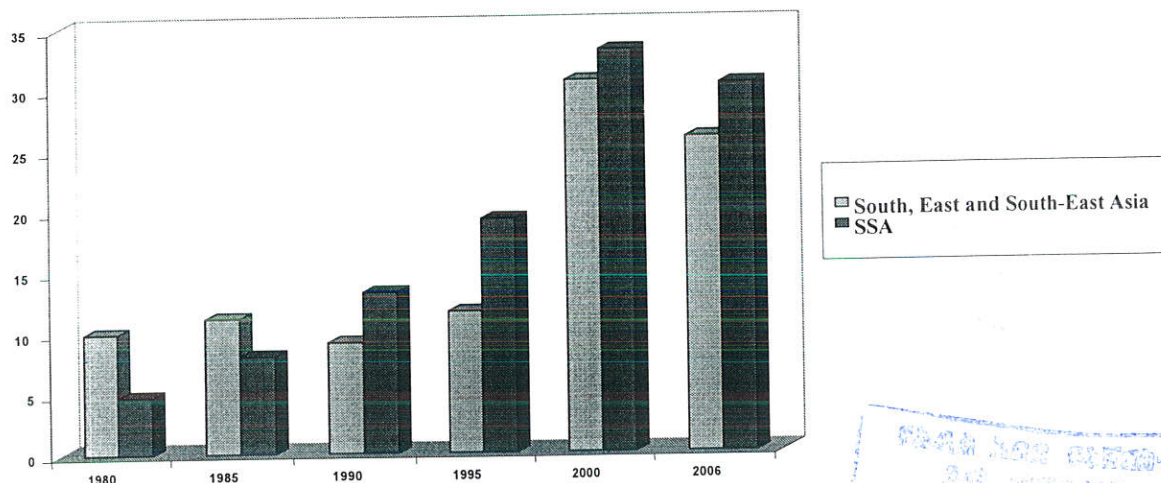
Source: UNCTAD's World Investment Reports, 2007

The level of FDI flows to SSA almost tripled since 2001 in comparison with the average annual flows during 1991 – 2000. Moreover, when compared with the size of their economies (GDP), many SSA countries attract comparable amounts of FDI as the group of South, East and South-East Asian countries (Thomsen, 2005 and Figure 2).³ The longer-term trend has been also positive – the FDI inflows increased from less than one percent of GDP in the first half of the 1980s to almost 5 percent of GDP over 2000-06. Nevertheless, as in other regions,

³ Within the group of Asian countries, the rapid development of South East Asia (South Korea, Malaysia, Indonesia, and Thailand) is one of the best examples of positive impact of export-oriented FDI on exports and economic growth. South East Asian countries possessed transportation and communications infrastructures, sound legal and administrative capacities, relatively sophisticated human resources, and access to broader markets in Asia (Dampier, 2006).

the FDI inflows to SSA have been heavily concentrated, with the top three SSA countries (Nigeria, Chad and Equatorial Guinea – all oil exporters) having received more than 60 percent of these flows in 2006. At the country level, Nigeria alone accounted for 45 percent of FDI inflows to SSA that year (WIR, 2007). Still, FDI flows to some of the least developed countries (LDCs), including Ethiopia, have increased in recent years as well, with investors seeking new potential sources of natural resources and opportunities for profit in the service sector.

Figure 2 Inward FDI stocks in Asia and SSA, 1980 - 2005 (as percent of GDP)



Source: UNCTAD's World Investment Reports, 2006



1.2 Statement of the Problem

The SSA countries face many challenges in accelerating their economic growth and development. One crucial challenge lies in a lack of investment, including FDI. In the case of Ethiopia, the government's Agriculture Development Led Industrialization (ADLI) policy identified the agricultural sector as one of the priority areas for attracting FDI, given Ethiopia's natural resource base and the dependence of the entire economy on agriculture.⁴ This goal is also consistent with the objectives of creating employment, alleviating poverty and diversifying export as specified by the Foreign Investment Advisory Service (FIAS, 2001).

⁴ Over 85% of the population relies on this sector and it provides the bulk of export commodities. Country's exports consist mostly of primary commodities, with coffee alone accounting for a large share of total foreign exchange earnings. This has made the country vulnerable to dynamic fluctuation of world price for primary commodities. Trade deficit has thus remained a key feature of Ethiopian's external trade sector, due to the overall weak export performance.

However, the dependence on agriculture makes Ethiopia vulnerable to exogenous shocks, such as terms of trade shocks and unexpected changes in weather conditions. Hence in addition agriculture, the government strategy aims at attracting FDI into other sectors and thus diversifying the country's production and export base. Efforts to improve environment for FDI are reflected in Ethiopia's higher ranking at the UNCTAD's FDI performance index. The Ethiopia's position has improved from 99 in 1990 to being consistently ranked among top 50 from 2002 onward.

1.3 Objectives of the Study

There is a wide consensus among economists that good institutions will not only help attract FDI inflow but also positively influence country's development through promotion of investment in general, through reducing uncertainty, and increasing the expected rates of return. Accordingly, the investment and export procedures, rules, regulations, and laws are simplified, with trade liberalization being one of the important FDI determinants, especially in low income countries.

This study aims at identifying the Ethiopia's vital remaining barriers to FDI inflows and the role of FDI in promoting the host country's exports. The related issue is what measures the Ethiopian policy makers can adopt to mitigate them. In summary, the key problems that this paper aims to address are:

- (i) Identifying areas where enhancing a regulatory and institutional framework would lead to higher FDI inflows to Ethiopia as well as increasing country's exports
- (ii) Identifying linkages between export and FDI in Ethiopia
- (iii) Drawing implications for policy measures and further research.

1.4 Significance of the Study

The study posits that FDI is a powerful tool of export promotion because MNCs through which most FDI is under taken have well established contacts and up to date information about

foreign markets. Thus, it is important to examine empirically the main effects and determinants of FDI flows to Ethiopia. The Ethiopian case may serve as an example of how FDI promotes export in developing countries in general, and African and Sub-Saharan countries in particular.

1.5 The Hypothesis

This paper carries out a causality test for the inward FDI to Ethiopia and the country's exports during 1974-2006. Based on the previous sections and results from earlier empirical studies, the hypothesis that FDI inflows have had a positive impact on Ethiopia's export performance is formed. The FDI effects arise because foreign capital flows may incorporate different competitive advantages, such as superior knowledge and technology and thus, higher productivity, or better information about export markets.

1.6 Scopes and Limitation of the Study

This study mainly devotes itself to the assessment of the effects of inward FDI on exports using the Johansen causality analysis in the context of Ethiopia since 1974s. The analysis is performed on the annual data, due to difficulties in finding more detailed FDI data. To my knowledge, no comprehensive study on this important topic has been undertaken so far.

1.7 Methods and Data Source

In addition to the empirical analysis of the impact of FDI on exports using Johansen causality tests using annual time series data, this study also employs descriptive analysis and case studies. For the econometric analysis, PC Give econometric software package is being used on secondary data. The secondary data used in this study were collected from the National Bank of Ethiopia (NBE), Ethiopian Investment Authority (EIA), various annual publications of the International Monetary Fund (IMF CD-Room), and the World Bank; UNCTAD Investment Report (CD-Room). The case studies draw on direct questioning of investors to obtain insights regarding their decisions for investing in Ethiopia as well as their experience with Ethiopian'

investment environment. In this regard, the study makes an important contribution to understand the motives and behavior of foreign investors in Ethiopia.

1.8 Outline of the Study

The rest of the study is organized as follows: Extending the Introduction, Chapter 2 describes in further detail institutional environment, FDI and export performance in Ethiopia. Similarly, Chapter 3 reviews in further detail literature on FDI and export relations. Chapter 4 is devoted to model specification, while Chapter 5 carries out the empirical estimation of FDI impact on export. The final chapter draws conclusion and provides policy recommendations. [The appendices contain a detailed description of the survey questions.]

CHAPTER TWO

OVERVIEW OF ETHIOPIA'S FDI AND EXPORTS PERFORMANCE UNDER TWO REGIMES

2.1 Overview of Ethiopia's FDI

FDI inflows to Ethiopia can be evaluated under two regimes: (i) the Derg regime during 1974 - 1991, and (ii) the post-Derg regime covering the period from 1991 until today. During 1950s, 1960s, and early 1970s, the Imperial government pursued market-based policies and strived to modernize the country through expansion of schools and health facilities, adoption of the first constitution, infrastructural development, and introducing medium term planning. Even though the regime enacted FDI legislation and implemented policies to encourage foreign investment, attempts to develop private sector and attract significant FDI amounts ended with the change of government in 1974.⁵

2.1.1 The Derg Regime during 1974 - 1991

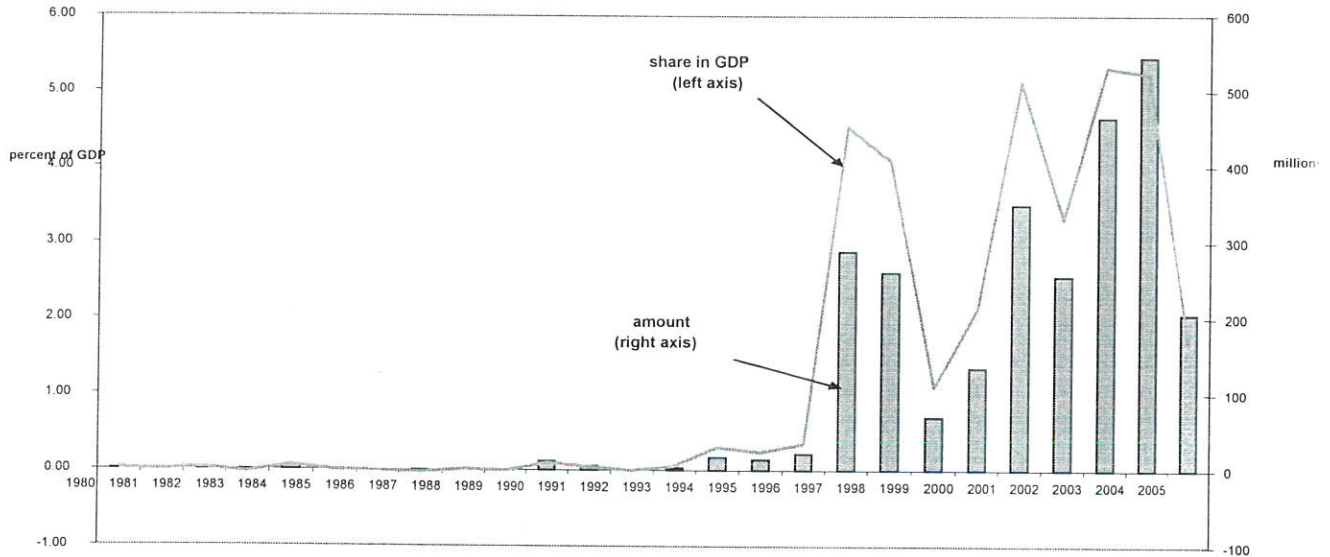
When the Derg regime came to power, the economic policy was guided by the plan rather than the market (Geda and Degefe, 2002). Accordingly, the private property was suppressed with nationalization of land, houses, manufacturing firms, and financial organizations.

The Joint Venture Proclamation No 235/1983 signaled Ethiopia's renewed interest in attracting foreign capital. It offered incentives such as five-year income tax exemptions on new projects, import and export duty relief, tariff protection, and right of repatriation of profits and capital. However, foreign holdings were limited to 49 percent and the duration of the investment could not exceed twenty-five years. The government also reserved its right to purchase all shares in

⁵ Proclamation No 242 of 1966 allowed foreigners to establish and operate private companies in Ethiopia in the same way as Ethiopian nationals. However, foreigners were prohibited from owning land and investing into state enterprise owned and operated by the Imperial Government (i.e. in strategic industries such as air transport, electricity, communication).

proclamation failed to attract foreign investment. Moreover, foreigners were not willing to invest in a country with history of nationalizing foreign companies without adequately compensating them (Figure 3).

Figure 3: Ethiopia: FDI inflows during 1980 - 2006



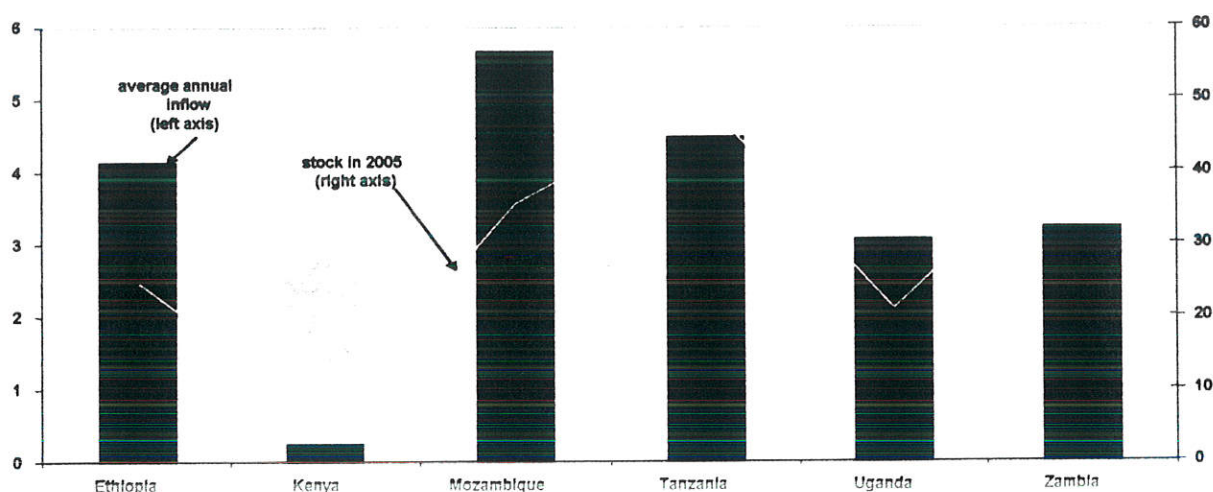
Source: UNCTAD's World Investment Reports, 2007

2.1.2 The post-Derg Regime since 1991 until today

As Figure 3 illustrates, the Ethiopian economy experienced a significant increase in FDI inflows during the last decade (from average of \$2 million annually during 1991-95 to average of almost \$300 million during 2001 -06), and its performance compares favorably with those of similar SSA countries. This recent increase has allowed narrowing the country's gap vs. other SSA countries in FDI stock (Figure 4).⁶ Regarding sources of recent FDI inflows, they have been about equally split between developed and developing countries, with Asia playing major role.

⁶ Still, the recent FDI inflows to Ethiopia look less impressive if measures in terms of population, underscoring the low living standards and importance of maintaining high GDP growth.

Figure 4: FDI inflows and stocks in selected SSA countries, 2001 – 2005 (as percent of GDP)



Source: UNCTAD's World Investment Reports, 2006

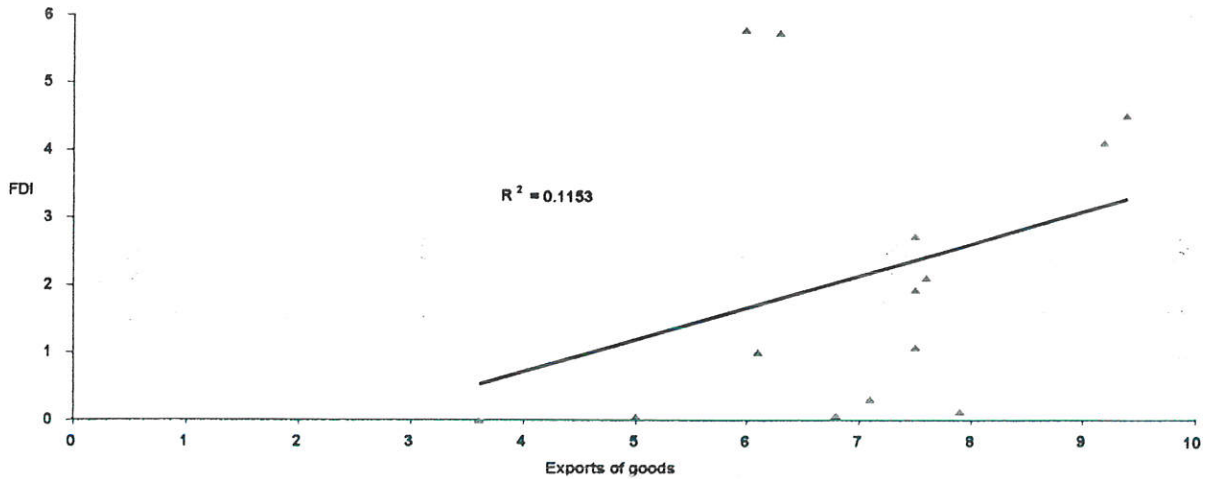
Unlike FDI, Ethiopian exports remain low, and Ethiopia's recent impressive GDP growth can hardly be described as "export-driven". The slow moving growth of the Ethiopian economy was partly due to stagnation in the export sector that heavily depends on the agriculture sector. The population relies on this sector and it provides the bulk of export commodities. Moreover, exports continue to be driven by primary commodities which gravitated the country's terms of trade downward continuously.

Table 2.1 Ethiopia: FDI and Exports, 1991 - 2006

	1991 -95	1996 -00	2001 - 06		2004	2005	2006
FDI (average annual inflows, mln of \$)	2	152	282		545	221	364
FDI (average annual flows, % of GDP)	0	2	4		5	2	3
FDI stock (% of GDP)	2	15	24		...	24	24
<i>Memorandum items</i>							
Exports (annual average, mln of \$)	220	490	637		601	847	1,000
of which flowers (mln \$)	0	0	5		0	7.8	21.8

Source: UNCTAD Reports, 1997 - 2007 and IMF country reports, 1998 - 2007.

Figure 5: FDI and Exports of Goods in Ethiopia, 1993 – 2006 (as percent of GDP)



Source: UNCTAD Reports, and IMF country reports, 2007.

In spite of the increase in the last decade (from average of \$2 million annually during 1991-95 to average of almost \$300 million during 2001-06), the annual FDI inflows to Ethiopia remain low both relative to the size of the economy (especially if measured in terms of population) and some other comparable East African countries, most notably Uganda and Tanzania. Similarly, Ethiopian exports are low, and Ethiopia's recent impressive GDP growth can hardly be described as "export-driven" (Table 2.1 and Figure 3). The correlation between exports and FDI also appears to be weak. Moreover, exports continue to be driven by primary commodities (coffee). Without diversification of production and exports, Ethiopia will therefore remain vulnerable to terms of trade shocks in the years ahead. Still, "pockets of success" in several sectors have recently appeared, with the booming flower industry providing one example of FDI that has led to diversification, higher value added generated in Ethiopia, and increased exports.⁷

⁷ The manufacturing, trade and flower sub-sector will therefore be examined through a case study.

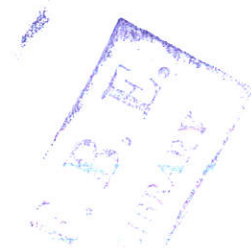
2.2 Ethiopia's Institutional Framework and Environment for FDI

The current Ethiopian Government, which came power in 1991 following military overthrow of the Derg regime, has introduced a number of initiatives to encourage FDI inflows. The key objective was creating conducive investment climate, with transparent legal framework that would support private sector development.

2.2.1 Institutional Framework

Shortly after coming to power, the Transitional Government of Ethiopia (TGE) strived to remove redundant bureaucratic procedures of investment and encouraged a wider participation of foreign private capital in the economy.⁸ Towards these goals, the government established the Ethiopian Investment Authority (EIA) immediately in 1992, and the creation of the Ethiopian Privatization Agency (EPA) followed in 1994. Both agencies are accountable to the Ministry of Trade and Industry, administered by the Board of Directors, and ran by General Managers. The main purpose of establishing these agencies, which still exist today, was promoting private sector development in Ethiopia.

More specifically, the main purpose of establishing the EIA in 1992 was to create "one shop" agency and provide prompt services to potential and actual foreign investors in Ethiopia, but at the same time also ensure that the FDI inflows meet the country's regulatory requirements (all foreign investment applications needs to be approved by the EIA). Specifically the EIA has been responsible for processing all investment applications i.e. approving or rejecting them. It has been also issuing investment permits to approved investors, granting investment incentives in accordance with the law, and the following on implementation. Other functions of EIA related to the existing foreign enterprises include providing registration services to newly incorporated businesses, approving expatriate jobs and issuing work permits to foreign employees, regulating and registering technology transfer agreements between local companies



and foreign suppliers, registering export-oriented non-equity based foreign enterprises, and facilitating acquisition of land by foreign investors. Finally, the EIA is responsible for "outreach" activities such as disseminating information about investment opportunities in Ethiopia advice on the availability of joint-venture partners as requested, and carry out promotional activities(exhibitions, conferences, etc.)

Another significance step in the promotion of FDI occurred in 1994 with establishment of the Ethiopian Privatization Agency (EPA), under the proclamation No 87/1994, which has been in charge of privatization and restitution. The relevant ministries, in particular the Ministry of Trade and Industry, sector ministries, the ministry of Foreign Affairs and institutions dealing with taxation are also involved in stimulating FDI as part of the privatization process. Moreover, the regional investment promotion agencies strive to encourage FDI into their region. Since the outset, in addition to the private sector promotion and reducing the role of the government in the economy, an important strategic objective of EPA has been generating revenues for the fiscal budget.

2.2.2 Legal Environment

The first legal measure of the TGE pertaining directly to FDI was adoption of the investment proclamation 15/1992, which was merged two existing investment laws (Decree No. 17/1990 and Joint Venture Proclamation No. 11/1989). Investment incentives provided under the 1992 proclamation were restricted to agriculture, manufacturing and natural resources. Activities still closed to foreign participation include a number of services, small-scale manufacturing and sectors considering to be of national interest (those being reserved for state ownership). Changes introduced in the Proclamation No. 37/1996 (i) included opening additional sectors such as health education, tourism and consulting services for FDI; (ii) modifying the requirements for minimum capital; (iii) removing foreign deposit requirements; and (iv) exempting all small-scale investment from customs duties. The Proclamation No.116/1998 relaxed prohibition on investing in strategic industries and allowed private investors in government joint investment like telecommunications and defense. It also opened up hydropower generation to foreign investors (Tadesse, 2001).

The Ethiopian government continues to provide numerous incentives to attract FDI into the country. Currently, these incentives focus on tax regime and include duty free imports of all capital goods, duty free imports of raw materials for production of exports destined products, export custom duty exemptions, tax holidays ranging from 1-5 years, loss-carry forward provision, and incentives to conduct research and development. In addition, Ethiopia has concluded twenty bilateral investment treaties, of which eight with OECD member countries. Policies to enhance transparency have also been put in place, as the Government has been publishing its investment regulations as well as the list of restricted sectors (OECD, 2005).

The generous incentive system notwithstanding, the Ethiopian regulatory regime has been at the same time imposing various restrictions on FDI. Among these, prohibition of land ownership for purposes of FDI is among the most severe deterrents to foreign investors. Sectoral restrictions are also still very limiting. The financial services provide a notable example of a sector which is typically not deemed of strategic importance, but so far the access had been completely reserved for the Ethiopian government and nationals (OCED, 2005). Moreover, Ethiopia has not so yet accepted the obligations of the Article VIII of the IMF's Article of Agreement, which requires countries to remove restrictions on payments and transfers for the current transactions and to adopt multilateral payment system.

2.3 Overall institutional barriers of business entry and exit in Ethiopia

Since 1992 Ethiopia has gradually shifted from having a closed and state controlled economy towards an open and market-oriented one. Successive amendments to the National Investment Code have reduced the number of industries that are closed to foreign investors. FDI is now, in principle, welcome in most sectors. Activities still closed to foreign participation include a number of services, small-scale manufacturing and sectors considered to be of national interest. To facilitate private investment, both domestic and foreign, and to provide a one-stop-shop for investors, the government established Ethiopian Investment Commission (EIC) in 2003.



Today, foreign companies interested to invest in Ethiopia are required to obtain prior approval from the EIC. According to the Investment Code a minimum amount of investment is required, in cash or in kind, from foreign investors who do not commit to reinvest their profit or dividend, or export at least 75% of their production. A wholly foreign-owned company is requested to allocate an initial capital of to USD 100,000 except in consultancy services and publishing, where USD 50,000 is required. For joint venture with domestic entrepreneurs the minimum entry capital is USD 60, 000 and USD 25,000 respectively. A further requirement stipulates that Ethiopian partners must hold more than 27% of the equity in a joint venture. Sectoral limitations to FDI the sectors exclusively reserved for the Government and Commercial banking and insurance companies remain exclusively reserved for Ethiopian nationals.

In order to understand Ethiopia in a comparative perspective, this section compares Ethiopia's business environment with the selected neighboring countries, SSA countries, and industrialized economies (OECD). The World Bank's doing business indicators offer quantitative assessment of the quality of business regulation for 178 countries around the world. While facing their own limitations, these indicators are most often used to measure government regulations, enforcement and their effect on businesses. In Doing Business 2007, business regulations are assessed by eleven sets of business environment indicators as World Bank Doing Business Data. These are starting a business, dealing with licenses, employing workers, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts and closing a business.

The table below shows the evaluation of doing business in Ethiopia with the comparison of selected neighboring countries with respect to the World Bank doing businesses indicators. Some indicators like starting a business, hiring and firing workers, protecting investors, and closing the business are ranked as lower. It also indicated in the areas such as doing business, dealing with licenses, registering property, paying taxes, enforcing contracts and getting credit are also found lesser rank which constitute still the existence of constraints of doing businesses in Ethiopia. The overall easiness of doing businesses in Ethiopia placed 99th out of 178 countries in 2007. However, when we compare Ethiopia's performance with other Sub-Sahara

Africa countries such as, Uganda, Nigeria and Tanzania looks better for some indicators. Kenya was found superior for most indicators (Table 2.2) in easiness doing business than Ethiopia as per World Bank doing business indicators.

Table 2.2 World Bank doing business ranking—Selected ‘SSA’ countries (Out of 178 countries)

Indicators	Kenya	Uganda	Tanzania	Nigeria	Ethiopia
	2007 RANK	2007 RANK	2007 RANK	2007 RANK	2007 RANK
Doing Business	82	116	129	108	99
Starting a Business	115	109	101	80	103
Dealing with Licenses	15	79	168	161	60
Employing Workers	66	10	150	30	89
Registering Property	112	161	156	173	145
Getting Credit	32	156	111	84	94
Protecting Investors	81	120	81	51	105
Paying Taxes	156	49	98	107	33
Trading Across Borders	147	162	90	138	149
Enforcing Contracts	105	148	34	93	77
Closing a Business	74	48	107	89	70

Source: Doing Business data (<http://www.doingbusiness.org>).

Starting business (paid mini. Capital); Registering property (procedure); Getting credit access (Credit information index); Trading Across Borders (Time for export); duration of enforcing contracts; closing a business (recovery rate); paying profit tax; cost of import are some of the World Bank Doing Business indicators measure found at low level compared with the regional (SSA) and the OECD average (Table 2.3) .

Table 2:3 Summaries of barriers of doing business in Ethiopia comparison with SSA and OECD

Indicator	Ethiopia	SSA	OECD
Starting business (paid mini. Capital)	960	188.8	32.5
Registering property (procedure)	213	7	4.9
Getting credit access (Credit information index)	2	1.3	4.8
Profit tax (%)	26.8	21.4	20.0
Time for export (days)	46	35.6	9.8
Cost of import (US \$/ container)	2793	1985.9	986.1
Enforcing contract Duration (days)	690	643.0	443.3
Closing Recovery rate (Cents on the dollar)	33.1	17.1	74.1

Source: Doing Business data (<http://www.doingbusiness.org>).

The above summaries of World Bank doing business indicators (See Appendix 2) are an additional evidence for our investigation as Ethiopia's vital remaining barriers to FDI inflows into the country (i.e; prohibition of land access, sectoral restriction, etc,) and consistence with that of Aidis et al, (2007) the general findings of the doing business series indicate that businesses face greatest regulatory obstacles in low income countries.

2.4 Export Performance

The trend of the World value of goods exported has been growing from \$1,946.84 to \$10,407.7 billion through the period 1980-2005 and it reaches 12,030.9 billion in 2006. During the period under consideration, developed economies have a lion share from the total world value of goods export. Whereas, the developing economies and Africa still have a lower export share value of goods from the total world export. African export has been growing from \$91.74 to \$255.74 billion through the period 1980-2005 and it lifts up \$291.12 billion in 2006. The share of African export was not more than 3% since 1990 and annual average growth rate of export reaches 13.8% in 2006. (IMF, 2007) Average annual flows export of Ethiopian has been growing in terms of value of goods and its contribution to GDP. The five years average trend of

export was \$200 million dollar in 1986-1990, \$220 million dollar in 1991-1995, \$490 million dollar in 1996-2000, \$637 million dollar in 2001-2006.

Table 2.4 Ethiopian export to GDP ratio dynamics

	1986-90	1991 - 95	1996 - 00	2001 - 06		2004	2005	2006
Exports (annual average, mln of \$)	200	220	490	637		601	847	1,000
Average annual flows Export, % of GDP	0.01	0.01	0.03	0.07		0.06	0.07	0.08

Source: Authors computation

As one can observe from the above table 2.4 annual average value of export has been growing from 200 million US\$ in 1986-90 to 637 million US\$ in 2001 - 2006 and its share of GDP raise from one percent in 1986-90 to seven percent in 2001- 2006. The annual average value of export and its contribution to GDP was improved since 1991.

2.4.1 Export Promotion Efforts in Ethiopia

The foreign trade sector was governed by a relatively free market oriented policies with the private sector (mainly foreign capital) occupying the lion's share in both export and import activities before 1975. Although import substitution was the dominant trade strategy of the country, the concern over export diversification, at least explicitly, efforts were exerted to promote exports and diversify the entire export commodities during Imperial Government of Ethiopia (IGE). Incentives like profit income tax holidays, export trade licensing simplification, restructuring and strengthening of chamber of commerce, and others were offered for investors who engage themselves in the production of non traditional export items. Also during the period of 1975-1991 the export objective the Derg Regime was to orient the country's export structure towards manufactured products from the primary exports of agriculture products and expand substantially the country's foreign exchange earning. By emphasizing the role of state owned export companies, geographic diversification of exports towards the markets of socialist countries and neighboring African countries as well as diversifications towards manufactured products were the agendas of the perspective plan.

However, the Ethiopian export products remain undiversified and were concentrated on very few primary products in both regimes (Derrese, 2001 and Berhanu, 2004).

In 1991 the Transitional Government of Ethiopia (TGE) undertook Structural Adjustment Program (SAP) and liberalization under the auspicious of the IMF and the World Bank to address the internal and external imbalances of the economy. In particular, trade policy reform was undertaken, which aimed at promoting exports through diversifying the country's commodity exports. These measures included devaluation of Ethiopian birr, tariff reduction, and simplification of import and export licensing system, preferential interest rate and others (Berhanu, 2004 and Geda, 2005). As a result of these trade policy reforms, a decrease in the anti-export-bias incentive structure and an increase in export volume and earning were realized.

2.4.2 Composition and Direction of Ethiopian Exports

Like most developing countries, a large proportion of the country's total exports consist of traditional agricultural exports which constitutes more than 95% of the total foreign exchange earnings. Of the total export earnings (table 2.5), coffee alone accounted for more than 61% in 1980, and 36% in 2006. This clearly indicates that the dependency on a single product for foreign exchange earnings making the country much more vulnerable to the effects of a monoculture export profile. Despite attempts made to diversify the export mix towards the end of the Derge regime, a single new major export product has not been developed since 1991 (Derrese, 2001).

A country's export structure is a mirror image of its production structure. The country continues to export the same primary commodities which are dominated by coffee as it has been doing decades ago. This confirms the lack of structural transformation of the economy.

Table 2.5 Percentage Composition of Ethiopian Exports (Percent of Total), 1980-2006

Commodity	1980	1990	2000	2001	2002	2003	2004	2005	2006
Coffee	61.58	46.92	39.31	36.07	34.24	37.2	41.13	35.42	35.78
Hides and skin	10.89	16.12	16.39	12.28	10.82	7.3	8.1	7.5	7.54
Oil seeds	3.33	0.63	6.97	7.21	9.55	13.8	12.6	21.13	15.82
Pulses	2.78	2.75	1.88	7.28	4.13	3.8	4.4	3.70	5.92
Chat	2.62	3.57	13.2	10.83	12.02	14.7	12.2	8.90	7.81
Fruits & Veg	0.43	2.10	1.18	2.07	1.98	2.1	2.0	1.32	1.36
Meat & Meat P	0.74	0.18	0.37	0.24	0.50	1.3	1.8	1.85	1.30
Others	17.63	27.73	20.7	24.02	26.76	19.8	17.77	20.18	24.47

Source: NBE, Quarterly Bulletin (various issues)

As shown in table 2.5, coffee remains the dominant export crop. The oil seeds are also has highest percentage share from the composition of Ethiopian exports .What is more concerning is that the share of hides and skins, the major manufactured export commodity, is showing a declining trend. The rise in the share of Chat, now it becomes the major export earning commodity of the country (Geda, 2005)

Another structural rigidity is shown in the destination of export commodities. For decades Europe remains Ethiopia's major trading partner, accounting for nearly half of its export. Germany, Italy, France, Belgium and United Kingdom are the major importing countries with a higher share of over of the exports to this region. Outside Europe, however, there is an indication of a shift from American to Asian markets like China and India becomes the higher trade partner. Export share to America (both North and Latin America) has been consistently declining, while the opposite has been taking place to Asia. But within Asia itself there is little diversification. Japan, China, India and Saudi Arabia alone account higher share from the total Export to the Asian market. (UNCTAD, 2002)

The lack of diversification, both in the type of commodity export and direction of external trade, for nearly half a century is evidence of the absence of structural change in production, where still traditional mode of production in agriculture remains predominant. Even today, Ethiopia heavily depends on agriculture for its foreign exchange earning. Ethiopia not

only failed to exploit its comparative advantage arising from its geographic proximity to the African market (relatively less cost of freight/ transportation, communication, etc.), but also has withdrawn from one of the richest markets in the world, the USA as Berhanu et al (2002).

Table 2.6 The Selected Direction of Ethiopian Exports (Percentage of Total)

Country	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	89-2005
DJIBOUTI	0.08	0.08	0.07	0.10	0.10	0.55	0.05	0.10	0.04	0.06	4.8%
BELGIUM	0.02	0.04	0.04	0.04	0.04	0.00	0.01	0.01	0.03	0.03	2.6 %
FRANCE	0.03	0.03	0.03	0.05	0.03	0.12	0.01	0.01	0.02	0.02	2.8%
GERMANY	0.30	0.21	0.25	0.20	0.20	0.03	0.04	0.05	0.12	0.13	9.3%
ITALY	0.07	0.08	0.08	0.07	0.07	0.07	0.04	0.03	0.06	0.05	8.5%
NETHERLANDS	0.01	0.01	0.02	0.02	0.02	0.00	0.00	0.00	0.03	0.04	2.7%
U.KINGDOM	0.03	0.03	0.02	0.03	0.02	0.05	0.02	0.01	0.04	0.03	4.4 %
USA	0.06	0.11	0.09	0.05	0.04	0.02	0.01	0.02	0.06	0.05	9.4 %
China	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.10	7.5 %
INDIA	0.00	0.00	0.00	0.00	0.02	0.04	0.01	0.01	0.01	0.01	4.8%
JAPAN	0.12	0.11	0.10	0.14	0.12	0.00	0.03	0.04	0.10	0.07	7.3%
SAUDI ARABIA	0.11	0.09	0.09	0.13	0.08	0.00	0.03	0.03	0.06	0.06	12.5%
YEMEN	0.01	0.01	0.01	0.02	0.01	0.17	0.01	0.01	0.02	0.02	2.9%
Others	0.13	0.15	0.16	0.23	0.18	0.22	0.24	0.18	0.26	0.26	20.5%

Source: NBE, Quarterly Bulletin (various issues) author Computation

Table 2.6 depicts that the main markets for Ethiopian exports were Germany, U.S.A, Japan, Saudi Arabia, Djibouti and Italy accounting for about 9.3 percent, 9.4 percent, 7.3 percent, 12.5 percent, 4.8 percent and 8.5 percent respectively on the average during the period.1989-2005. (Appendix VI) This indicates that the bulk of Ethiopia's exports are to industrialized countries (Germany, the United States, Italy, France, the U.K., Japan, and Saudi Arabia. The share of African countries, especially Djibouti, is also increasing. Table 2.6 shows the need to increase and diversify the destination of exports so as to avoid overdependence on a few countries (Geda, 2005).

To sum up, the governments that ruled the country for the last four decades have implemented different trade policies. The policy adopted in the pre-1991/92 period used a prolonged over valuation of the Birr, high tariff rates, extensive foreign exchange control, heavy taxation on exports that was characterized by strongly inward oriented development strategy. This had a

negative impact on export profitability and competitiveness. Whereas the current government that came to power in 1991/92 has undertaken trade policy reforms, which aimed at promoting exports through diversification of the country's commodity exports. Despite the policy reforms, however, there is still a bias against exports that calls for active government intervention to create conducive atmosphere for effective export performance (Debel, 2002).

Also, it is observed that the export structure of Ethiopia has been characterized by greater concentration on few traditional exports such as coffee, hides and skins and oilseeds and pulses for the last 33 years. There were few investments found in growing export crops, tanneries and leather products, cotton garments, cut flowers and marble. The major reasons for low attraction of investment to the export sector are related to the country's limited competitiveness, poor infrastructure facilities and the restricted access to external markets. This indicates that export-oriented FDI inflows have been limited so far (Berhanu, 2004).

Similar to the commodity structure, the sectoral structure of Ethiopian's export is concentrated on primary agricultural products. The higher share of the total merchandise export is accounted by agriculture sector and the manufacturing sector has still a lower share. However, foreign investors have desires to export manufacturing items including beer, soft drinks, soap, incandescent and fluorescent lamps, tumblers, beach sandal and slipper, tanned hides and skin, processed leather, human and degeneracy medicines and drugs, assembled computers, galvanized corrugated iron sheet, tube and pipes, plastic packaging, plastic products and tire. Some products were entirely targeted towards export. In the majority of cases export-oriented industries supply a considerable percentage of their product to internal market as well. Despite targeting a certain part of their products to the export market, these industries are highly import-intensive and about 87 percent of their raw materials demand was met from imports. (DTIS 2004)

2.5 THE SURVEY SCOPE AND RESULT

2.5.1 SCOPE OF THE SURVEY

The survey covered firms operating in the Ethiopian, UNCTAD (2005) identified 17 largest (Appendix IV) affiliates of TNCs in Ethiopia from which I took a random sample of 5, which consists of manufacturing sector and motor trade and flower firms. The questionnaire used was structured along the lines of the World Bank and Ugandan Investment Authority 1994 surveys expecting both countries are striving for higher FDI and have almost the same proximity for investors. Box 1 gives background of two companies.

Box 1. Ethiopia: Selected Foreign Firms in Manufacturing and Flower sub-sector

1. MATADOR - Addis Tyre is a joint venture between the Matador Group (based in Slovakia) and the former Addis Tyre Share Company (based in Ethiopia).

Matador is a leading European tyre manufacturer, established in Bratislava in 1905. It controls a vertically integrated group of companies known as “Matador Group” that are engaged in various activities. Addis Tyre Share Company (ATC) was a sole tyre manufacturer in Ethiopia for the past 34 years, and it was state owned until July 2004. It produced exclusively for the Ethiopian market, where it held a 35% market share.

In July 2004, Matador entered the JV with ATC with the contribution of technical-know-how, machinery, working capital of USD 13, 899, 000, and export commitment. The ATC provided machinery, vehicles and right of land use. The shareholding of Matador group is 61% and the shareholding of the Privatization and Public Enterprises Supervising Authority (PPESA) is 39%. The total registered capital of the Joint venture Company reached \$22,785,000. The company has 790 employees the annual production capacity is up to 500,000 pieces of truck and passenger radial tyres. The plant manufactures produces mainly for the African market. The enterprise has a close contact with the Ethiopian government, which is one of its main shareholders.

2. Ethiopian Crown Cork and Can Manufacture Industry S.C.

The company has been operating for the last 35 years. It focuses on producing crown corks and cans and supplying these products for beverage and pharmaceutical product factories. It is partly owned by Crown Cork and Seal Inc. of USA, which holds and supply 60% of the world market in crown corks and can and other packaging products has 25% share and the government of Ethiopia has the remaining 75% share.

Source: www.matador-atc.com and interviews of staff of both companies.

Moreover, the Flower sub-sector is incorporating in the survey since it is booming sector which provide FDI that lead diversification and increased export. The rate of growth of the flower industry in Ethiopia is incredible, and the country is bound to rank among the biggest exporters in the Africa for cut flowers due to their ideal agro-climatic conditions, business-friendly environment and strong government support. Ethiopia's proximity to European and West Asian markets, its climate and overall conditions led floriculturist investors to operate in Ethiopia. Specifically, investors from the Germany, India, Zimbabwe, Holland and Israel have secured licenses for floricultural developments around the central region. (Danse et al, 2007)

Ethiopia was seeking investors in this sector through attractive investment packages of a five year tax holiday, duty free machinery imports, and easy access to loans, as well as smooth access to land. Consequently, the flower industry experienced a rapid growth, and Ethiopia is among the biggest exporters in the world for cut flowers. There are about 5 in 2003 and reaches 77 in 2007 flower farms in Ethiopia, of which 55 per cent owned by foreign investors. This sub sector creates 70, 000 employment opportunities. Europe is major market for flower from Ethiopia and countries like Japan, Russia and Middle East are additional markets for the sector. Box 2 gives background of one flower firm.

Box 2: Maranque Plants PLC in Ethiopia

In 2007, Maranque flower farm Plants plc in Ethiopia has two greenhouses on 10.000 square meters. All required infrastructure like water irrigation facilities, climate control equipment, a working hall with a cold storage, & offices were established in the first year of the project.

The company further extending from 2 green houses to 11 and its total area is expanded from 30 to 70 ha in 2008. Now the main plot is 48 hectares big and it has a plot of 22 hectares where the firm started to grow trees. This area is half flooded in the rainy season. The plant started to grow trees there to generate material to improve the structure of the soil in the greenhouses. At this moment the flower farm employs 250 people, mainly women. The women are working in the greenhouses. The company is providing training and English lessons for his employees. It is extremely important that the highest environmental standards in using chemicals and fertilizers are adhered. The company is aware of that and is busy obtaining the necessary certificates In short; Maranque combines business with a social and environmental face.

source: www.maranqueplants.com/index.asp

2.5.2 SURVEY FINDINGS

The government has made a lot of efforts in attracting investors through creating conducive investment environment and investment policies, including the investment incentive as tax exemption. Though investors maintain easy access to loans from local banks, they express dissatisfaction with other aspects of the business environment. The most often quoted challenges are poor infrastructure (water, telecommunication service), lack of raw materials and other inputs, low quality of labor, and high taxes. Regarding government regulations, tax regulations and procedures guiding land ownership were viewed as most constraining. In addition, the survey included investors in the Flower sub-sector. The survey intended to provide an example of successful FDI and export combination. Lack of trained manpower, high cost and shortage of inputs (agrochemicals, lack of suitable packaging), tax regulation, and infrastructure and land ownership were identified as major bottlenecks. (See annex 4)



CHAPTER THREE

REVIEW OF LITERATURE

3.1 THEORETICAL DETERMINANTS OF FDI

There are a variety of theoretical models explaining FDI and a wide range of factors that can be experimented within empirical studies in order to find the determinants of FDI. Different theoretical approaches give different predictions about the relationship between FDI and exports; and how FDI affects the host country export performance. The following different approaches can be distinguished to explaining FDI as the location decision of multinational enterprises (MNEs). These theoretical explanations of FDI flows and its relation with the host country's export can be traced by: (1) Neoclassical theory of FDI suggests that FDI is lies in interest rate differentials between countries (2) The Market Imperfections Theory of FDI based on where investing firms have superior knowledge that enables them to produce products that will be preferred by consumers over local offerings; (3) The Product Life Cycle Theory of FDI that argue technological capacity is a factor of multinationalization; (4) New Trade theory of FDI which consists of the determinants of the Horizontal FDI model (Proximity Concentration Hypothesis) & the Vertical FDI model, (Factor Proportions Hypothesis or the theory of international fragmentation); and finally (5) The Eclectic Theory of FDI, which identifies three broad conditions that are necessary before a firm will engage in direct investment These are Ownership, Location and Internalization (OLI. Framework)

3.1.1 Neoclassical theory of FDI

The early neoclassical approach, MacDougall (1960), hypothesized that capital flows across countries are governed by differential rates of return. The MacDougall model assumes perfect competition, risk free capital movement, mobility in factors of production and no risk of default. However, the portfolio approach to FDI, presented in reaction to The MacDougall model, emphasizes not only return differential, but also risk (Iversen, 1935 and Tobin, 1958, both cited in Agarwal, 1980)

The theory of portfolio investment is one of the earliest explanations of FDI. The basis for this explanation lies in interest rate differentials between countries. Capital, according to this explanation, moves in response to changes in interest rate differentials between countries/regions and multinational companies are simply viewed as arbitrageur of capital from countries where its return is low to countries where it is high.

This explanation, however, fails to account for the cross movements of capital between/across countries. In practice, capital moves in both directions between countries (Harrison et al, 2000).

3.1.2 The Market Imperfections Theory of FDI

The real world is not perfect, and countries differ in the resources that are available for the production of goods. Imperfect Market Theory discusses the conditions where factors of production are somewhat immobile. There are costs and most often restrictions related to the transfer of labour and other resources used in production.

Hymer (1960) was a pioneer in multinational firm theory from a radical perspective because of his departure from such neoclassical views. Hymer argues that multinational firms arise due to market imperfections. He identified four factors that cause the rise of multinational firms: 1) market imperfections in the goods markets (e.g., special marketing skills); 2) market imperfections in factor markets (advantages in raising capital, superiority of management or special patents and general superiority in technology); 3) internal and external economies of scale (the latter linked to vertical integration); and 4) governments' interference with production or trade. Through his elaboration of these market imperfections, Hymer has been credited with raising the issue of control over overseas markets as an important aspect of multinationalization. His theory explains why firms might have a vested interest in shifting outside of their domestic boundary to produce in overseas markets.

This theory states that MNEs must own some particular advantage over domestic firms in the host country. Given such an ownership advantage, it must be beneficial for the MNE to

internalise it within the firm by means of FDI, provided that the foreign country possess a location advantage over the home country making FDI more profitable than exporting (Hymer, 1976).

Hymer's argument that local firms hold natural advantages over foreign investors has been criticized by contemporary theorists, who argue that it is in fact foreign investors that often have natural advantages over local firms because of their global access to capital, technology, and management skills (Dicken 1994). Foreign investors also may have better ability to take advantage of the economies of scale (Kindleberger 1969). These theories do not explain sufficiently why certain operations are offshored while others are not. This gap was filled in part by Vernon, who argues in his product cycle theory that technological capacity is a factor of multinationalization.

3.1.3 The Product Life Cycle Theory of FDI (late 1960s)

Vernon (1966) developed the product cycle model of internationalization to explain the sequence from domestic production of a new product to its export and then foreign production by investigating the multinational companies in 1950s and early 1960s. There are four stages of production including the stage of innovation, growth, maturity, and decline. Accordingly, the first stage new products are developed in the home country and sales occur in the domestic market. In the second stage, the MNE will start exporting to foreign markets where the consumers have the same preferences and incomes as at home. In the third stage, and as the foreign markets grow, firms might establish a subsidiary abroad to produce their products close to their destination markets. When the production in foreign countries rises, the MNE's exports to those markets will fall, and so will exports to the third country markets. Finally, in the fourth stage, as foreign firms master the production processes and as their costs fall with the increased scale of production, they might begin to produce and export their products to the home country. This developmental sequence indicates that foreign production may substitute for export from the home country and even create import of the same product at a later stage

Letto (2004) summarized the product life theory as in the early stage of the life of a product, production of the good usually takes place in the country where it was invested and initial

access to facing markets is by means of export. However, in the long run as the competing products emerge the firm may decide to move towards location where it finds lower costs of production along with new markets. In addition, the firms may also be attracted to new locations due to economies of scale that might result from allocating component products and assembly to different plants.

Johnson (2006) describes how a change in the location of production generates an outflow of FDI from the higher to low income countries and thereby replacing export flows. And Hansen (1998) suggested that the location of production will be determined by the relative factor cost of production in different phases of the product cycle.

Vernon (1966) introduced a location dimension to the product life cycle theory. This contribution made it possible to describe the relationship between exports and FDI on the aggregate level. To Vernon, the location of production was determined by the product life cycle, and, eventually, increased competition would result in foreign production as a substitute for exports from the home country in order to reduce production costs. The model describes how a change in the location of production generates an outflow of FDI from the home country to low income countries and thereby replacing export flows.

Thus, the product life cycle theory of FDI takes into account both ownership and location-specification factors in explaining FDI, and it takes into account changes over time. However, while the theory predicts the sequence of events, it does not analyze the rate of change or the time involved in each stage. Also, multinational activities are no longer restricted to offshore production by firms taking advantage of low production costs in developing economies. Firms have developed overseas production facilities in developed countries. As a result, product cycle theory has become increasingly inadequate in explaining multinational activities in general.

3.1.4 New Trade Theory of FDI

The new trade theory emerging during the early 1980s generated more realistic general equilibrium trade models which could handle increasing returns to scale, imperfect competition and differentiated products. These models are based on the ideas of ownership and location advantages. The new trade theory has been able to incorporate the relationship between FDI and trade. However, early models were not very helpful in handling MNEs and FDI due to the assumption of single plant national firms, excluding the existence of MNEs.

The development of New Trade Theories with their stress on agglomeration advantages and thus on the geography of production was bound to raise interest in the activities on the Transnational Corporation (TNC). This has led to a variety of contributions (Helpman, 1985; and Markusen, 1998) in which the activities of the TNC are basically seen as multiplant locations to be explained by a combination of costs structure (including transport and other spatial costs) and the existence of internal or external economies leading to agglomeration advantages.

Trade theory provides different FDI implications depending on the MNE's structure; its models distinguish the MNEs structure related to FDI motives as horizontal and vertical FDI. The horizontal MNE model shows that similarity in size and relative factor endowments between a home country and a host country are important factors determining FDI. The vertical MNE model emphasizes the importance of the two country's relative factor endowments, since MNEs choose locations based on input costs.

3.1.4.1 Horizontal FDI is concerned with market access (market seeking) and the MNE produces the same product in multiple plants located in more than one country. In the case of horizontal integration, the firm basically faces the dilemma of either producing abroad or exporting. Such foreign investments and trade are obviously substitutes. A horizontal MNE has headquarters in its home country while assembling final products in both the home and a host country. A horizontal MNE can avoid trade costs (such as tariffs and transportation costs) by

locating an affiliate in a host country. FDI to establish a horizontal MNE is a substitute for international trade (Markusen, 2002). As Hanson et al (2001) pointed, according to the horizontal FDI view the MNEs arise because trade barriers make exporting costly.

According to Markusen et al. (1996), multinationals are multiplant firms producing approximately identical products in different locations and substituting international production for trade as in the horizontal model of Markusen (1984).

3.1.4.2 Vertical FDI Vertical FDI refers to those multinationals that fragment production process geographically. Under vertical FDI, MNE separates the production chain vertically by outsourcing some stages abroad. The basic idea to involve in vertical FDI is if input prices of certain stage of production are lower in the country other than investor's country and it becomes more profitable to split production chain (Markusen, 2002).

According to Markusen (2002), vertical FDI views that multinationals arise to take advantage of international factor-price differences. Firms engage in two activities: headquarter services, e.g., R&D and advertising, and production. Headquarter services are intensive in physical or human capital, while production is intensive in manual labor. When factor prices differ across countries, firms become multinational by locating production in countries where manual-labor costs are low and headquarters in countries where skilled-labor costs are low.

Helpman (1994) used a differentiated products framework with multiplant economies of scale to examine the effect of differences in relative factor suppliers on production location decisions. The model predicts that multinational firms with corporate headquarters located in one market and a single production plant located in another market will arise to exploit potential factor cost differentials, as long as corporate and production activities have different factor intensities.

One can simply observe from the above discussion variety of theoretical models attempting to explain FDI and the location of MNEs. These different approaches treat as envelop of FDI



theories. Since it envelops the FDI theories developed from Hymer's market imperfection theory (Hymer 1976), Rugman's internalization theory (Rugman 1980) and many others. Thus, an eclectic OLI paradigm is provided by Dunning (1977). This theory has been regarded as the most authorized FDI theory until now.

3.1.5 The Eclectic Theory of FDI

The theory developed by Dunning (1977) is a synthesis of all the existing theories and has had a large impact on FDI field (Tahir and Larimo, 2002). According to this theory, the MNE's decision about exporting, licensing or investing is determined by the combination of ownership, location and internalization advantages (OLI). The linkages between FDI and trade can be discussed relative to these advantages. If the host country does not have a location advantage, the MNE will serve the foreign economy through exports, suggesting a substitution relationship between FDI and trade. More generally, the MNE theory starts with an assumption that firms must have certain advantages in order to become multinational companies. Dunning (1993) organized these advantages in three basic groups: the multinational firm has a product or a production process giving it some monopoly power in the foreign market (ownership advantage), and/or has a reason to locate production abroad (location advantage), and/or has an incentive to exploit its ownership advantage internally (internalization advantage).

3.1.5.1 Ownership-specific advantages: According to Hymer (1960) on multinational enterprises theory, firms possess certain ownership specific advantages that can be better exploited abroad by establishing subsidiaries instead of exporting their products or licensing their technology. The ownership specific advantages that motivate a firm to invest in a foreign country include superior technology, economies of scale, an exclusive control over certain natural resources, access to inexpensive labor, finance and information (Agarwal & Ramaswami, 1990) cited in Tahir and Larimo (2002).

Knowledge capital is a broad concept that consists of intangible assets such as brand name, human capital, patents, trademarks and technology. Markusen (1995) and Markusen (2002) both argue that knowledge capital is important for MNEs based on the

fact that MNEs tend to have large R&D expenditures, a large share of technical workers and produce technically advanced products. Mainly knowledge-capital is important for providing firm-specific advantages that allows MNEs to operate profitably in multiple economies.

Caves (1971 and 1974) and Kindleberger (1984) cited in Fan (2002) further extended the industrial organization theory of FDI. They emphasized the behavior of firms that deviate from perfect competition as the determinants of FDI. According to their perspective, MNCs face disadvantages imposed by both geographical and cultural distance in comparison to domestic firms. In order for a firm to undertake FDI in a foreign country, it must possess some special ownership advantage over potential domestic competitors. Technological superiority or possession of some intangible, rent-yielding assets such as management skills and brands are believed to provide such advantages.

It is note worthy that a possession of firm specific advantages, such as superior technology can not fully explain why firms engage in direct foreign investment as superior technology can also be exploited through licensing agreements and exporting of product, which embody the superior technology. It can also be argued that an exclusive control over inputs is only a necessary condition for FDI.

3.1.5.2 Location Theory of Foreign Direct Investment: Firms interested in servicing foreign markets are expected to use a selective strategy and favor entry into more attractive markets. This is because their chances of obtaining higher returns are better in such markets (Agarwal & Ramaswami, 1990), cited in Tahir and Larimo (2002). FDI theories suggest that investing firms will prefer those countries that provide greater location specific advantages. Though, it has been known that both the firm and location-specific advantages separately and jointly influence the firm for the choice of target country for its FDI venture.

This theory developed by Dunning (1973) asserts that for a country to be attractive to FDI, it should possess certain location specific advantage. These location specific factors are:

1. **Availability and costs of input:** It is suggested that a firm investing abroad may be attracted by the availability of some inputs, which are very expensive at home, or by a lower cost of inputs abroad lower labor costs in developing country.
2. **Marketing factors:** It is asserted that TNCs invest in a foreign country in which there is a large and rapidly growing market for their products. In so doing, they will be able to exploit better the local market, avoid tariff and non – tariff barriers, and reduce transportation costs.
3. **Factor Related to Government Policies:** It is suggested that a firm is often attracted to invest in a foreign country because the country offers advantages such as lower tax rates, better infrastructure, greater political stability, and greater scope for expansion and the pursuance of corporation goals.

It can be noted that they provide a good list of host country determinants of FDI. However it fails to interpret other factors, such as firm specific advantages indicated above under industrial organization theory as motivations behind undertaking FDI.

3.1.5.3 Internalization Theory of FDI

As Rugman (1979) elaborated the Internalization Theory which was proposed by Buckley and Casson (1976) that MNEs are assumed to hold control over their own internal markets and resources, including technological, managerial and marketing know-how. When MNEs expand into international markets, they can potentially earn additional profits in their own internal markets where their relatively superior resources and assets, such as knowledge, are further leveraged.

Logically, MNEs should decline to transfer their FSAs to the non affiliated firms through contractual agreements, such as licensing, for a number of reasons: i) this may result in the MNE giving away its technological and managerial know-how (FSA) to a potential competitor; ii) licensing does not often give the MNE the adequate control over manufacturing and managerial decisions in the foreign country; iii) the MNE's know-how

may not be easily transferable to a third party (requiring higher costs and/or further adaptations); iv) a transfer to a third party/agent over which the MNE has less than full control may compromise the MNE's FSAs, leading to larger long-term cumulative losses than the short-term benefits. In response to the above and other potential costs, the theory of internalization argued that MNEs internalize their capabilities. Internalization allows for replication, further development and exploitation of FSAs within the MNE's internal markets in a virtuous cycle and without the risks of longterm dissipation or losses.

Williamson (1975), cited in Forte (2004) asserts that possession of ownership specific factors will make it profitable for a firm to engage in FDI to avoid risks & uncertainties that arise from exporting &/or licensing. Buckley and Casson (1976) emphasized that a MNE will internalize its activities in a foreign country through FDI if the internalization cost (internal organization costs, such as communication costs, administrative costs, etc.) is inferior to the cost associated with export or to other forms of entry.

Thus, the internalization of markets across nation boundaries depends on location specific advantages. If a foreign country does not possess location specific advantages, a firm internalizes the home market and exploits the foreign market by exporting. On the other hand, if a foreign country possesses location specific advantages (e.g. lower factor costs); the firm prefers internalization of the foreign market (Dunning, 1988; Forte, 2004).

Also Dunning (1993) has contributed a lot to the ideas on motives of foreign direct investments. Following from the principal motivations for investing in foreign countries, economic determinants can be grouped into three and has the following explanation. FDI could perform as:

Resource-seeking FDI when the company tries to gain access to resources not available at home. Such resources could be: natural resources, raw materials, technological, innovatory or created assets (e.g. patents), including knowledge-based assets embodied in individual firms. Resource-seeking FDI is mainly undertaken through vertical integration. If FDI is resource seeking, there is an increase in host country's exports while imports are unaffected



(Vuksic, 2005). Market-seeking FDI when the company is interested to gain access and expand within domestic and regional markets, typically through horizontal integration. Main reasons for such FDI are to overcome trade barriers (tariffs) and transportation costs. If FDI is market seeking, it would have positive influence on imports into host economy, but no effect on exports (Ibid). Efficiency-seeking FDI that gain from scope and scale economies emerging from common governance. Main form of such FDI remains the desire to increase efficiency (total or partial rationalization) by transferring production to low labor cost locations.

While Dunning's eclectic theory has gained acceptance as a general framework to understand multinational firm location, it has also been criticized as systematic arrangement, rather than theory. While it may serve as the broadest framework, for most types of multinational activities it is difficult to distinguish which are the most important factors. Aoyama (1996)

Various motivations of FDI were put forward in the literature. The eclectic theory may be considered as an envelop of FDI theories. Among these FDI theories, a location specific advantage makes the chosen foreign country a more attractive site for FDI than the others. Because these approaches which explaining FDI as the location decision of multinational enterprises (MNEs) move overseas to take an advantage of cheaper location factors in the host, in order to pursue export expansion.

It is evidence in the case of transition countries, where natural resources factor plays an important role in FDI attraction. Several empirical works have considered resource seeking variables. Until recently most FDI inflow to Africa generally was undertaken in natural resources exploration (mining sector), extraction and processing associated with the host countries' factor endowments determining their spatial pattern (Geda, 2000). Also, Asaidu (2003) asserted that an important implication of FDI to Africa driven by natural resources.

3. 2 DETERMINANTS OF EXPORT

Berhanu et al (2002) describes a number of factors influence export performance in a developing countries. These factors can be broadly classified into domestic and external factors. External factors involve international/regional and individual country's trade and related policies. The rules established by international organizations such as the World Trade Organization may in the long run promote external trade. According to them, domestic factors could be classified into two categories: factors that are internal and external to the firm. Internal factors to the firm primarily affect total productivities, which is the fundamental determinant of competitiveness. Such factors include labor skill/education, personnel and engineering management, level of technology employed, planning, accounting, and other professional services, etc. Whereas, domestic factors that are external that include government policies and incentives, the overall level of development/industrialization and export support services. Government macroeconomic and sectoral policies, such as the exchange rate regime, fiscal and monetary policies, trade and investment, and industrial policies also have direct impact.

The higher level of production is the main cause of export expansion, because surplus of output can be exhausted in international markets. In a close economy surplus of production lead to fall in prices, that in turn creates pessimism among the producers. While, in an open economy such surpluses create foreign reserves by exporting production. So we expect the positive impact of GDP on exports growth. Kumar (1998) as cited in Majeed and Ahmad (2002) confirms the positive impact of GDP on exports.

Sharma (2000) reviewed that fall in domestic prices due to exchange rate depreciation makes exports cheaper in international markets resulting in increased demand for exports. But this effect varies across the countries due to domestic macroeconomic instability and issues of quality competition in exports sector. He indicated that depreciation of real exchange rate has a positive impact on export.

The effects of FDI on exports are controversial. Many studies (e.g. Pfaffermayr (1996)) find positive impact of FDI on exports. The main reason underlying is the export oriented MNCs. Since government provides facilities for export promotion. If the motives behind FDI are to capture the domestic market (tariff-jumping type investment) it may not contribute to export growth. On the other hand, if the motive is top tap exports markets by taking advantage of the country's comparative advantage, then FDI may contributes to export growth. A work by Soliman (2003) investigated that the effect of FDI on the export performance is a positive.

Regarding to export supply determinants, Bond (1987) also listed exchange rate, relative prices, non-price factors, export incentives, government policy institutional factors related to procedures of exports, centralized service required by exporters, whether condition, war, lack of coordination among responsible bodies domestically and resource endowment as the most cited supply side constraints in many studies. He also showed that, apart from weather condition and resource endowments, it is believed that all other determinants of export supply are influenced by domestic policies. Among the internal factors a change in real exchange rate is believed to significantly affect the performances of exports from a country favorably (or adversely) by making the exports of goods cheaper (or more expensive) to foreign buyers, respectively.

Trade policy reforms expected to increase global competitiveness of the country's economy to lay the foundations for sustained economic growth. With the objective of accelerating and achieving a higher export growth, various direct and indirect measures of trade promotion should be implemented. These are tax benefits, simplifying export credit scheme, more flexible duty exemption scheme to take care of import needs of the exporters, allowing higher FDI, incentives for R&D and creation of a technology upgradation fund scheme, etc.,. It is need to wind up unnecessary restrictions over imports because imports of capital goods, raw materials and components were thought to determine the global competitiveness of country's enterprises. FDI was encouraged because it can brings in intangible assets like technology, organizational skills, marketing strategy, and market access, which can improve country's export performance in the world market.

3.3 Review of Empirical Literature

Recent studies have concentrated on FDI-export linkages from the perspective of either the determinants of a host country's export performance or the causal relationship between inward FDI and exports. The majority of empirical studies conclude that there is a positive or one-way causal relationship between inward FDI and host countries' export performance, indicating that FDI inflows stimulate exports (Vuksic, 2006; Zhang, 2005; Liu et al, 2003; Sun, 2001; Zhang and Song, 2000). Contrary to this, several studies have found a one-way causal relationship between exports and inward FDI, indicating that exports stimulate FDI (Khan and Leng, 1997; Zhang and Felmingham, 2001). Literature surveys indicate that there may be a bi-directional causal link, i.e. that exports stimulate FDI inflows and FDI inflows promote exports (Baliamoune-Lutz, 2004; Liu et al., 2002; Pacheco-Lopez, 2005; Johnson, 2006). It is also interesting to note that some studies conclude that the positive association between inward FDI and exports is unfounded, indicating that foreign firms are not likely to stimulate exports (Alici and Ucal, 2003; Alam and Butt (2004), Sharma, 2003; Zheng et al., 2004). The majority of the above empirical studies applied causality tests based on time series data to examine the nature of any causal relationship between FDI and exports.

To sum up, from my survey of the literature we have learnt that a variety of theoretical models exist attempting to explain FDI and the location of MNEs and its relation with the host country's export. These different approaches do not necessarily replace each other but explain different aspects of the same phenomenon. It is interested to relate what role FDI plays in Ethiopia's export performance. Though Ethiopia has rich in abundant natural resources, the export sector faced immense difficulties. FDI bridges and helps exports by investing capital in the exploitation of Ethiopia's natural resources and took the risk of developing new exports. The provision of additional capital has been critical for Ethiopia to build up its initial base of labor intensive manufacturing exports.

Having the background discussion of these theoretical and empirical literatures this study has tried to test the causality between FDI inflows and export for Ethiopian case.

CHAPTER FOUR

ECONOMETRIC ANALYSIS

4.1 MODEL SPECIFICATION

This section tries to show the models that will be used in the assessment of FDI in promoting the host country's export performance. The study employed the export and FDI models in order to analyze FDI impact on the country's export performance and whether it is certain that greater FDI may increase the total value of exports of the host country. These models provide an understanding of the effects of FDI on export and examine its relationship between export performance and inward FDI in Ethiopia for the period 1974-2006. The level of exports is modeled as a function of FDI and other explanatory variables. Also the Demand for FDI is constructed as the function of export and other control variables as Marchant (2005) is used FDI and Export function for U.S; Johnson (2006) for East Asian economies, Zhang (2004) for China, Carter and Yilmaz (1999) for Turkey, Pramadhani et al (2007) for Indonesia, etc. These models should take the form of the following equations:

$$X_t = f(\text{FDI}_t, \text{FDI}_{t-i}, X_{t-j}, Z_t) \text{-----} (4.1)$$

$$\text{FDI}_t = g(X_t, X_{t-k}, \text{FDI}_{t-l}, Z_t) \text{-----} (4.2)$$

Where X_t is the value of total exports of a country at time t ; FDI_t is foreign direct investment inflows in to the host country at time t ; Z_t are parameters which shift the demand for FDI and export supply for the host country. X_{t-i} , and FDI_{t-l} , is the lagged measure of export and FDI. The subscripts i , j , k , and l are the appropriate lag lengths.

4.1.1 The Export Model

The standard formulation for the export equation is commonly based on the partial equilibrium model of international trade presented in Goldstein and Khan (1985). The theoretical underpin of the above export equation of multivariate model for long run

relationships is as follow. A standard export supply function (eq. 4.1) is presented in terms of the foreign market price relative to alternative prices in the domestic market and the economy's productive capacity to support export production. In formal terms the relationship is given as an increase (decrease) of the real exchange rate (RER) is interpreted as real exchange rate appreciation (depreciation). Where exporters are price-takers in the world market, exchange rate depreciation leaves the foreign currency price of a unit of exports unchanged, but it provides incentives to expand export production as the number of domestic currency units increases.

Goldstein and Khan (1978, 1985) and Bond (1985) used output as measure of productive capacity. Based on the theoretical discussions, it is included output as a proxy for capacity of production of host countries that positively affect export supply. Accordingly, the general form of the long run export supply function is expressed as:

$$X_s = \beta Y_d^{\beta_1} (P_x/P_d)^{\beta_2} \text{-----(4.3)}$$

Where X_s represents the value of exports, β_i are elasticities, P_x/P_d ($RER = EPX_w/P_d$) is relative the export price (export prices divided by domestic absorption deflator), and Y_d is the capacity of production. The model outlined in equation (4.3) is a standard export supply function that is used by many empirical works like Utkulu et al (2006), and Goldstein and Khan (1985)

This model can further be extended as Utkulu et al (2006) did. In this study two additional variables are added into the export supply function. Since issues addressed the FDI impact on export, inflows of Foreign Direct Investment and trade reform are incorporated and constructed the export function as a function of FDI and some variables described below. This is what the present study is trying for the Ethiopian case. One can then specify an export function simply as:

$$X_s = \beta Y_d^{\beta_1} RER^{\beta_2} FDI^{\beta_3} OPEN^{\beta_4} \text{-----(4.4)}$$

Where, **FDI** represent the inflows of Foreign Direct Investment, **OPEN** is trade liberalization (openness) and β_i are elasticities. The theoretical discussion suggests that FDI may have an impact on exports. FDI may contribute directly to increased domestic supply and it may strengthen other producers even in related sectors in the host economy. Thus, the impact of FDI may be particularly important due to the MNE's superior knowledge about foreign markets or technology and its contacts to parent firm and intra-firm markets. These are the FDI effects. It is believed that the effects of FDI on exports are especially important, since it is often argued that successful FDI promoting policies will boost host country exports. However, if one finds that FDI increases exports only by increasing export supply capacity, then any policy that promotes investment will lead to higher exports.

To test the association of FDI on exports, the empirical work is based on the export model proposed Kutan and Vuksic (2007). It is used a parsimonious model and arranging the variables as, Foreign Direct Investment (FDI), a proxy for domestic capacity (GDP), real effective exchange rate (RER), and a trade liberalization index (OPEN). Accordingly, I employ the following export model specifications:

$$X_t = \beta_0 + \beta_1 X_{t-1} + \beta_2 FDI_{t-1} + \beta_3 GDP_{t-1} + \beta_4 RER_{t-1} + \beta_5 OPEN_{t-1} + \epsilon_t \quad (4.5)$$

The role of FDI in export promotion crucially depends on the motive behind such investment. The motive behind such investment is either by pass trade barriers in the host country or motivated by the country's comparative advantage. Thus, the nature of the link between FDI and export performance is not clear cut (Srinivasan, 1998) cited in Sharam (2000).

Gross Domestic product of a country (GDP) is another factor influencing exports. It indicates the overall economic performance and productivity of a country, as well as its potential for exportation. GDP expected to be positively related with exports (Zhang and Song, 2000). It has included natural logarithm of potential output (GDP) as a proxy for capacity. The potential output variable (additional supply capacity) is reflected in increasing exports.

The Real exchange rate is an important determinant of country's exports. The main objective of exchange rate adjustments is to promote exports. It is an adequate alternative measure that captures the competitiveness country. The depreciation of the country currency tends to encourage country's exports. Exchange rate (RER), which should reflect the domestic and foreign price conditions, with an increase of the value of the variable denoting the real appreciation.

Openness is an outcome from economic activity and performance indicator of the extent to which an economy trades with the rest of the world. In other words, a high degree of trade openness of the host country has clearly increased total FDI inflows. Openness is included to examine the importance of openness of an economy to international trade. The variable measures the degree of general trade restrictions of a country. Following the same line of reasoning above, a negative relationship between openness and market-seeking FDI is expected, and a positive relationship is expected for export-oriented FDI.

4.1.2 The FDI Model

In this section it is provided an empirical model to estimate the inward direct investment. It is based on Ancharaz, (2003), and Sekkat, (2004). The functional relationship is written as follows:

$$FDI_t = \alpha_0 + \alpha_1 FDI_{t-1} + \alpha_2 X_{t-1} + \alpha_3 GDP_{t-1} + \alpha_4 RER_{t-1} + \alpha_5 OPEN_{t-1} + \epsilon_t \text{ -----(4.6)}$$

Gross Domestic Product captures the size of the host country's internal market. A higher GDP is assumed to imply better market opportunity and more attractiveness for FDI. A higher GDP is also supposed to increase the attractiveness for FDI. The export variables include in FDI equation to see the impact and role played by host country's export on FDI. It is expected that export and foreign exchange contribute lead to more FDI inflows. Trade openness measured as the ratio of trade to GDP is incorporated in the model & expecting that more open economy (liberal trade) leads to attract more FDI.

In order to test the causal relationships discussed above (eq. 4.5 and 4.6) the following multivariate VAR model is used. All variables are expressed in logarithmic form, thus the estimated parameters are elasticities. The logarithm versions of the models to be estimated are specified as:

$$\ln X_t = \beta_0 + \beta_1 \ln X_{t-1} + \beta_2 \ln FDI_{t-1} + \beta_3 \ln GDP_{t-1} + \beta_4 \ln RER_{t-1} + \beta_5 \ln OPEN_{t-1} + \mu_t \text{-----(4.5a)}$$

$$\ln FDI_t = \alpha_0 + \alpha_1 \ln FDI_{t-1} + \alpha_2 \ln X_{t-1} + \alpha_3 \ln GDP_{t-1} + \alpha_4 \ln RER_{t-1} + \alpha_5 \ln OPEN_{t-1} + \mu_t \text{-----(4.6b)}$$

Where; $\ln X_t$ = the natural logarithm of export to GDP at time t
 $\ln FDI_t$ = the natural logarithm of FDI inflow to GDP at time
 $\ln GDP_t$ = the natural logarithm of real GDP at time t
 $\ln RER_t$ = the natural logarithm real effective exchange rate
 $\ln OPEN_t$ = the natural logarithm of openness factor at time t
t = time subscript.

μ = stochastic error term, $\beta_1, \beta_2, \beta_3, \beta_4$ and β_5 ($\alpha_1, \alpha_2, \alpha_3, \alpha_4$ and α_5) are elasticities.

To analyze the causal relationship we need first to determine the optimal lag length in the autoregressive model and to identify the possible long run relationships among the variables included in the system. Once the optimum lag length was found and the congruency of the VAR was duly examined and tested for both multivariate cointegration and weak exogeneity of the variables embodied in the model by using Johansen's (1988) and Johansen and Juselius's (1992) technique. Then, with cointegrated variables, causality will further require inclusion of an error correction mechanism (ECM) in the stationary model in order to capture the short-run deviations of series from their long-run equilibrium path.

Despite the results of the cointegration analysis demonstrates that all these five variables are tied together by a long run equilibrium relationship, it does not say anything about the direction of the causality, which will be done by the analysis of results based on the VECM. Therefore, by adopting of the cointegration approach and corresponding VECM, we can detect both long run and short run relationships between non-stationary variables. Since the

study is especially concerned with the relationship between export and FDI, it is represented only the ECM for these two equations:

$$\Delta \ln X_t = \beta_{10} + \sum_{i=1}^m \beta_{11} \Delta \ln X_{t-1} + \sum_{i=1}^m \beta_{12} \Delta \ln FDI_{t-1} + \sum_{j=1}^m \beta_{13} \ln \Delta GDP_{t-1} + \sum_{k=1}^m \beta_{14} \Delta \ln RER_{t-1} + \sum_{n=1}^m \beta_{15} \Delta \ln OPEN_{t-1} + \lambda_1 ECM_{t-1} + \varepsilon_t \quad (4.7)$$

$$\Delta \ln FDI_t = \alpha_{20} + \sum_{i=1}^m \alpha_{21} \Delta \ln X_{t-1} + \sum_{i=1}^m \alpha_{22} \Delta \ln FDI_{t-1} + \sum_{j=1}^m \alpha_{23} \ln \Delta GDP_{t-1} + \sum_{k=1}^m \alpha_{24} \Delta \ln RER_{t-1} + \sum_{n=1}^m \alpha_{25} \Delta \ln OPEN_{t-1} + \lambda_2 ECM_{t-1} + \varepsilon_t \quad (4.8)$$

Where X, FDI, GDP, RER, and OPEN are export, gross domestic product, foreign direct investment, exchange rate, and trade liberalization; m is lag length, β_i , α_i , and λ are elasticities for the respective variables, ε_t is the error term respectively in period t (t=1...T). Δ is to show the first differences of variables, $_{t-1}$ is the estimated residuals from the cointegrated regression (long-run relationship) and represents the deviation from the equilibrium in time period t. $-1 < \lambda < 0$ short run parameter. ECM is the error correction model derived from the long run cointegration relationship between exports, FDI, GDP, RER, and OPEN. Given such a specification short and long run causality can be tested. The negative sign in error correction terms (model) imply that any shock in the system in the short run will return back to its long run path. Given such a specification short and long run causality can be tested. In equation 4.7, for example, the significance of the β_{12} terms implies FDI causes export in the short run. Long run causality, on the other hand can be investigated by testing the significance of the λ_1 by a t test. A similar reasoning is applied for examining whether export causes FDI, and the causal relationships between other variables in the model. (See section 4.2)

4.2 Unit Root, Cointegration and Error Correction Model (ECM)

To avoid spurious results in the causality testing we need to proceed as follows: firstly, to determine the order of integration of the series. Secondly, to identify the possible long-term relationships among the integrated variables included in the system. Then, with co integrated variables, causality will further require inclusion of an error correction term (ECT) in the

stationary model in order to capture the short-term deviations of series from their long-term equilibrium, according to Johansen's (1988) technique.

The first necessary condition to perform causality tests is to study the stationary of time series. Thus, this study has to do before estimating time series data is ensuring whether the series is stationary or not. Stationary test is expected to be first step in time series regression analysis. That is, we must distinguish between stationary and non-stationary variables since failure to do so can lead to a problem of spurious regression whereby the results suggests that there are statistically significant long run relationship between the variables in the regression model (Harris, 1995). In order to avoid this problem, unit root test is done for all variables using Augmented Dickey Fuller (ADF) unit root test. Accordingly, all variables are not stationary at level will be stationary at first difference i.e, they are I (1) significance level.

The theory of cointegration, deals with the long run relationship between the time series which are non-stationary in levels. In other words, a long-term relationship means that the non-stationary variables are co integrated if they move together and converges to equilibrium over time. Thus, even if relevant time series themselves are non-stationary, a linear combination of them may be stationary; this combination is called the cointegration equation.

The reason why in this study time series have to be examined for cointegration is that cointegration analysis help to identify long run economic relationships between two or several variables and to avoid the risk of spurious regression. Cointegration analysis is important because if two non-stationary variables are co integrated, a VAR model in the first difference is misspecified due to the effect of a common trend. If co integration relationship is identified, the model should include residuals from the vectors (lagged one period) in the dynamic Vector Error Correcting Mechanism (VECM) system. In this stage, Johansen (1988) cointegration test is used to identify cointegrating relationship among the variables.

The first step in the analysis of cointegration involves examining the rank of the estimate of the matrix Π ; that is, testing for the number of cointegrating vectors that are present. In Johansen procedures there are two tests that help to identify the number of integrating

vectors. These are the trace (λ trace) and the maximal (λ max) statistics. These tests are used given as follows (Harris, 1995).

$$\lambda \text{ trace}(r) = -T \sum_{i=r+1}^n \ln(1-\lambda_i) \text{-----(4.9)}$$

$$\lambda \text{ max} (r, r=1) = -T \ln (1 - \lambda_{r+1}), \text{-----(4.10)}$$

Where, $r = 0, 1, \dots, n-2, n-1$

λ_i = Eigen vectors,

T= number of observations

N= the number of variables

The trace statistic is used to determine whether there are at most r co integrating relationship while the maximal statistics tests the null hypothesis of r co integrating vector against the alternative of $r=1$. The magnitude of λ_i is a measure of the strength of the cointegration relation.

The two rank tests (the so called trace and maximum eigen value tests) of the Johansen ML procedure deliver the result table. The relevant null and alternative hypotheses are as displayed in rows of the table. The recommended testing strategy involves starting with the trace test and test the null of $r=0$. If this hypothesis is not rejected, then we conclude that the system is not co integrated, provided the conclusion is consistent with the outcome for the maximum eigenvalue test. If on the other hand $r=0$ is rejected, then we move on to the next null hypothesis $r < 1$. We then apply the same decision rules for this null as for the null $r=0$ and continue the process until some null is accepted or we arrive at the final alternative hypothesis.

By using the Johansen's (1988) test enables estimating and testing for the presence of multiple cointegration relationships, in a single step procedure. It is a multivariate generalization of Dickey-Fuller test. The variables under consideration are vector autoregressive (VAR) of lag (p) represented by

$$Z_t = A_1 Z_{t-1} + A_2 Z_{t-2} + \dots + A_p Z_{t-p} + \epsilon_t \text{-----(4.11)}$$

Where, Z_t is the $(n \times 1)$ vector variables (Z_{1t}, Z_{2t}, Z_{nt}) and A_i is $(n \times n)$ matrix of parameters. The error term ε_t is an independently and identically distributed n -dimensional vector with zero mean and variance matrix (Enders, 1995).

This model serves to estimate dynamic relationships among jointly endogenous variables without imposing strong prior restrictions. The system is in reduced form with each variables in Z_t regressed on only lagged valued of both it self and all other variables in the system.

The vector error correction model (VECM) from the VAR model can be formulated as (Harris, 1995 and Enders, 1995).

$$\Delta Z_t = \sum_{i=1}^{P-1} r_i \Delta Z_{t-i} + \Pi_j Z_{t-p} + \varepsilon_t \text{----- (4.12)}$$

Where:

$r_i = -(I - \sum_{i=1}^{P-1} A_i)$, containing information on the short run adjustments to changes in Z_t
 $\Pi_j = -(I - \sum_{i=1}^{P-1} A_j)$, containing information on the long-run adjustments to changes in Z_t

The above VECM contains information both on the short-run and long-run adjustment to changes in Z_t through the estimates of, r_i and Π_i respectively. Π can be represented by equation $\Pi = \alpha\beta'$, where α represents the speed of adjustment to disequilibria, while β is a matrix of long-run coefficients such that the term $\beta'Z_{t-1}$ included in equation above represent up to $(n-1)$ cointegration relationship in the multivariate model which ensure that Z_t converge to their long-run steady state path (Harris, 1995).

The important feature in the above model is the rank of matrix Π . If the rank $(\Pi) = 0$, then the matrix is null and the model is the usual VAR in the first differences. How ever if the rank $(\Pi) = n$, then the vector process is stationary. (i.e; all variables are $I(0)$). But if the rank $(\Pi) = 1$, then there is a single cointegrating vector and the expression Z_{t-p} is the error correction factor.

On the other hand, if $1 < \text{rank}(\Pi) < n$, it implies that there are multiple cointegrating vectors. The latter situation where the rank (Π) ranges between 0 and n is usually termed as reduced rank (Harris, 1995 and Enders, 1995). This implies that testing for cointegration requires finding the rank of (Π).

Economic variables have short run behavior that can be captured through dynamic modeling. If there is a long run relationship among the variables, an error correction model can be formulated that portray both dynamic and long run interaction between the variables. In the pervious section, we have seen that two or more variables that are not stationary in levels may have a stationary linear combination, which implies those variables are cointegrated. The presence of cointegration tells us the presence of error correction representation, i.e; implying that any deviation from the equilibrium point will revert back to its long run path. Therefore, an ECM depicts both the short run and the long run behavior of a system.

Having obtained the long run model estimated coefficients, and that assures the long-run relationship exists among variables and then we can employ VECM to establish the causality direction. The next task is to estimate the coefficients of the short run dynamics. So, an error correction model will be estimated that incorporates the short-term interactions and the speed of adjustment towards long run equilibrium

Causality has typically been tested by evaluating the effect of lagged values of the explanatory variable on the current value of the dependent variable. However, an appropriate assessment of the causal links between the referred variables requires estimation of a vector error correction model that emanates from the cointegrated relationship between the variables.

Although there is an apparent long run equilibrium relationship but in the short run there may be disequilibrium. Therefore, one can treat the error term as the equilibrium error. We can use this error term to tie the short run behavior of export supply to its long run values.

CHAPTER FIVE

TIME SERIES EXAMINATION AND EMPIRICAL RESULTS

My empirical estimation regarding the effect of FDI on export is composed of three steps. As a prerequisite, the stationarity (non stationarity) of the time-series data, that is, the presence of a unit root or I (1) for each variable is tested. Second, the number of co integrating vectors in the model is identified. Finally, it is employed Vector Error Correction Model (VECM) to establish the causality direction and estimate the coefficients of the short run dynamics that have an important policy implication. Akaike Information Criteria (AIC) is used in selection of lag.

5.1 RESULTS OF UNIT ROOT TEST

The Augmented Dickey-Fuller (ADF) test is conduct to find out the order of integration for each of the five variables. First, the ADF test is conducted in levels and then in first differences for the full sample. For each series the test equation includes an intercept and a trend. The results are reported in table 5.1. It is evident from the results all variables have a unit root in their levels and are stationary in their first differences. Thus, all five variables are integrated of order one.

TABLE 5:1 Result Unit Root Test

Variables	Augmented Dickey-Fuller					
	At level			At difference		
	no deterministic	Constant included	Constant and Trend	no deterministic	Constant included	Constant and Trend
lnX	-0.41351	-1.8752	-1.8432	-4.8576**	-4.7899**	-4.7238**
lnFDI	-0.48453	-2.4147	-2.3835	-7.2855**	-7.2044**	-7.1000**
lnGDP	-0.66059	-2.4490	-3.4298	-4.3276**	-4.2860**	-4.2208*
lnRER	-0.25633	-1.8466	-1.9222	-10.917**	-10.782**	-10.672**
lnOPEN	-1.10800	-1.7250	-2.3527	-7.0258**	-7.0604**	7.0015**
Critical values	5%=-1.95 1%=-2.628	5%=-2.945 1%=-3.623	5%=-3.539 1%=-4.232	5%=-1.951 1%=-2.632	5%=-2.95 1%=-3.635	5%=-3.547 1%=-4.251

** (*) refers to 1 % (5%) significance level

Table 5.1 present the unit root tests statistics failed to reject the null hypotheses in levels so they are non-stationary. Applying the same tests to the series in first differences showed that $\ln X$, $\ln FDI$, $\ln GDP$, $\ln RER$, and $\ln OPEN$ are integrated of order one $I(1)$. Moreover, it can be seen that all variables have deterministic trend becoming stationary at their first level. Since all five variables ($\ln X$, $\ln FDI$, $\ln GDP$, $\ln RER$, and $\ln OPEN$) are integrated of order one, the Johansen cointegration test is performed to determine whether there exists a cointegration among the variables. (Table 5:2)

5.2 Results of Cointegration Tests and Estimation of the long run Model

We have seen that all the time series variables under consideration are non-stationary at levels imply that the variables taken alone do not have the tendency to revert to their long run levels. After ensuring the series are non-stationary at level or $I(1)$, the next step will be to determine how many cointegrating vectors exist by adopting Johansen's framework in which the variable $\ln X_t$, $\ln FDI_t$, $\ln GDP_t$, $\ln RER_t$, & $\ln OPEN_t$, can be represented as a vector auto-regression as:

$$\begin{pmatrix} \Delta \ln X_{1t} \\ \Delta \ln FDI_{2t} \\ \Delta \ln GDP_{3t} \\ \Delta \ln REER_{4t} \\ \Delta \ln OPEN_{5t} \end{pmatrix} = \Gamma_i \begin{pmatrix} \Delta \ln X_{1t-1} \\ \Delta \ln FDI_{2t-1} \\ \Delta \ln GDP_{3t-1} \\ \Delta \ln RER_{4t-1} \\ \Delta \ln OPEN_{5t-1} \end{pmatrix} + \alpha\beta' \begin{pmatrix} \ln X_{1t-1} \\ \ln FDI_{2t-1} \\ \ln GDP_{3t-1} \\ \ln RER_{4t-1} \\ \ln OPEN_{5t-1} \end{pmatrix} \quad \text{-----(5.1)}$$

Following Johansen procedure, it is used the likelihood ratio [used to test the significance of estimates of λ_i eigen values] that uses two test stastics i.e.; the maximal eigen value (λ max stastics) and the trace stastics (λ trace) to test for cointegration and long run relationship between the variables export and FDI. These stastics are used to test the null hypothesis that there is at most r cointegrating vector against the alternative that there are $r+1$ cointegrating

vectors (Enders, 1995). The result of cointegration test based on Johansen's procedure for the variables under consideration using Pc Fiml package is presented as follow under the following table.

Table 5.2 Results of Johansen Co integration Test / Unrestricted co integration rank test /

Ho: rank=r	n-r	Eigen value (λ_i)	-T log(1- λ_{\max}) (λ_{\max})	λ_{\max} (95%)	-T \Sum log(.) (λ_{trace})	λ_{trace} (95%)
r == 0	5	0.659616	34.49*	33.50	77.58**	68.50
r <= 1	4	0.515719	23.20	27.10	43.10	47.20
r <= 2	3	0.305972	11.69	21.0	19.89	29.70
r <= 3	2	0.154718	5.379	14.10	8.207	15.40
r <= 4	1	0.084589	2.828	3.80	2.828	3.80

** (*) Denote rejection of the null at 1 % (5%) level significance

Table 5.2 is an example of the test statistics used to select the number of cointegrating relations. The maximum eigen value statistic rejects the hypothesis that $r=0$, but does not reject the hypothesis that $r \leq 1$ suggesting one cointegrating relations. It is also that the trace statistic rejects the hypothesis that $r=0$ (at the 1% level) but does not reject the hypothesis that $r \leq 1$, suggesting that the existence of one cointegrating vector.

Moreover, for the null hypothesis the value of $\lambda_{\max} = 34.49$ and $\lambda_{\text{trace}} = 77.58$ are above from their respective critical values of 33.5 and 68.5 at 5% & 1% level of significance for equations respectively. This implies that the null of no cointegrating vector is rejected while a case of one cointegrating vector is supported by both λ_{\max} and λ_{trace} statistics for both equations.

The cointegration result of the above table indicates that by testing in the presence of multivariate cointegration of five variables VAR model (X, FDI, GDP, RER, & OPEN) employing the Johansen (1988) procedure and having one cointegration vector evidence of multivariate cointegration that suggest these variables are cointegrated. So, there is long run



relationship among variables. This evidence of cointegration among the variables rules out spurious correlations and also implies at least one direction of causality.

The result of the test of no cointegration showed the existence of at list one cointegrating vector but it does not show which vector is the cointegrating vector. After establishing the existence of one cointegration vectors the next step is to test for weak exogeneity. Since in $\ln X$ are assumed as endogenous variables in our models. But we should conform our assumption by performing weak exogeneity tests for the rest of the variable (the significance of α coefficient). If a variable is weakly exogenous it means that it is possible to condition the short run model on that variable without any loss of information. Results of weak exogeneity tests for export and FDI equations are presented by the following tables.

Table 5.3 Test for Zero-restriction of α -coefficients (Weak Exogeneity of Variables)

EXPORT					
	$\ln X$	$\ln FDI$	$\ln GDP$	$\ln RER$	$\ln OPEN$
α -coefficients	-0.097479	0.23950	0.010825	0.048640	-0.10808
Chi²(1)	10.14	3.9106	0.0050659	3.1137	0.55791
P.V.	[0.0000]**	[0.0480]*	[0.9433]	[0.0776]	[0.4551]
FDI					
	$\ln FDI$	$\ln X$	$\ln GDP$	$\ln RER$	$\ln OPEN$
α -coefficients	-0.67803	-0.27597	-0.030645	-1.3770	0.30597
Chi²(1)	3.9106	10.14	0.005065	3.1137	0.55791
P.V.	[0.0480] *	[0.0000]**	[0.9433]	[0.0776]	[0.4551]

** (*) Denote reject of the null at 1 % (5%) significance level

The 5.3 table states, the zero restriction on α -coefficient is rejected for $\ln X$ and while the restriction cannot be rejected for the rest of the variables except $\ln FDI$ at 5% level significance. It is implying the fact $\ln X$ endogenous while the rest variables being exogenous. On the other hand, the zero restriction on α -coefficient is rejected for $\ln FDI$ while the restriction can not be rejected for the rest of the variables except $\ln X$ at 1% level

significance, indicating the fact that lnFDI is endogenous while the rest variables being exogenous. It is also the exogeneity tests results for GDP reported under annex VII. Therefore, the structural long run relationship derived from the cointegrating vector normalized with respect to lnX and lnFDI can be repented as:

$$\ln X = 0.28310 \ln FDI + 0.16595 \ln GDP + 0.11796 \ln RER - 0.074459 \ln OPEN \text{ ----- (5.2)}$$

$$\ln FDI = 0.35323 \ln X + 0.58618 \ln GDP - 0.41666 \ln RER + 0.26301 \ln OPEN \text{ ----- (5.3)}$$

Given the above cointegrating vectors, there is also a need to test for the significance of the long run coefficients (β) in order to identify the unique cointegrating vector. Here again a restriction is imposed on each coefficient and the results for the LR statistics are given in table 5.4.

Table 5.4 Test for Zero-restriction of β -coefficient (Long run Variables)

EXPORT					
	lnX	lnFDI	lnGDP	lnRER	lnOPEN
β-coefficients	1.0000	0.28310	0.16595	0.11796	-0.074459
Chi²(1)	3.6407	8.6239	11.012	10.887	3.8527
P.V.	[0.0456]*	[0.0033]**	[0.0009]**	[0.0010]**	[0.0497]*
FDI					
	lnFDI	lnX	lnGDP	lnRER	lnOPEN
β-coefficients	1.0000	0.35323	0.58618	-0.41666	0.26301
Chi²(1)	8.6239	3.6407	11.012	10.887	3.8527
P.V.	[0.0033]**	[0.0456]*	[0.0009]**	[0.0010]**	[0.0497]*

** (*) Denote reject of the null at 1 % (5%) significance level

The above table 5.4 depicts that the significance of the coefficient of each β (explanatory variables) was tested by imposing zero-restrictions using LR statistics. The result showed that each β coefficient is statistically significant (the null hypothesis is rejected at 1 %

significance level) and thus the FDI, gross domestic production (GDP), real exchange rate (RER), and trade liberalization (OPEN), are statistically significant at 1% in explaining export in the long run and the sign are as expected. The same is also true for FDI.

The sign and significance of α_{11} , which is the speed of adjustment with the value -0.097479 and -0.67803, has an expected sign and it is statically significant. It implies that $\ln X$ and $\ln FDI$ would adjust towards the long run steady state path with the magnitude 9.747% & 67.803% measures the speed at which $\ln X$ and $\ln FDI$ adjusts per to its long run path respectively, gives a shock in the system in a given period.

Significance test for individual variables and the overall significance of the above model are undertaken by imposing a zero restriction on each beta coefficients individually. Imposing zero-restriction using LR statistics tested the significance of each beta coefficients. The result showed that each β coefficient is statistically significant (the null hypothesis is rejected at 1 and 5 % significance level).

As above equation 5.2 shows that the coefficient on the FDI variable is positive and statistically significant, confirming the contribution of FDI to Ethiopian's overall export expansion in the period under study. This result indicates that a 1 per cent increase in FDI leads to 0.28310 per cent growth in exports in the same year. In aggregate inward FDI is of a trade promoting character. This result is consistent with Thoburn (1997), Sun (2001) and Zhang and Song (2000), which find evidence of a positive role for foreign MNEs in promoting Ethiopian's export growth. It is also exhibited a positive relation between export and FDI in equation 5.3. This result indicates that a 1 per cent increase in export leads to 0.35323 per cent growth in exports in the same year. This indicates the effect of country's export in promoting FDI inflows. Moreover, the above result is an indicative that FDI inflow to the country can enhance the country's export performance in the long run.

The country's GDP which is one of determinant of exports is rejected the null hypothesis at 1% level significance has a positive sign in a long run relationship. Thus, the result confirms the effect of GDP is significant with positive signs in explaining exports & FDI. A unit

increases in gross domestic production leads to 0.16595 units increase in export and 0.58618 units increase in FDI. As GDP increases (level of production) leads to increase the number of items (goods) export and opportunity for foreign market.

Exchange rate depreciation makes exports cheaper in international markets resulting in increased demand for exports. The positive significant results for real exchange rate in export equations substantiate the theoretical argument that depreciation in the Ethiopian Birr promotes exports and FDI. The results indicate that a 1 per cent fall in the value of the Ethiopian Birr leads to 0.11796 percent increase in overall Ethiopian exports. A lower exchange value of the Ethiopian Birr causes Ethiopian products to be cheaper in the international markets, so increasing the demand for Ethiopian exports. The depreciation of the Ethiopian Birr is an additional cause of export expansion over the period. The expected positive impact of real exchange rate on export result coincides with Sharma (2000) and Vuksiae (2005) findings as positive impact of depreciation. It is found a negative coefficient on the real exchange rate in a foreign direct investment regression (where an increase in the real exchange rate represents a real appreciation of the domestic currency). On the other hand, a real depreciation of the domestic currency raises the wealth of foreign investors and thereby increases FDI

It is important to note here that openness is likely to affect the country's FDI inflows positively through opened economic system. In other words, a high degree of trade openness of the host country has clearly increased total FDI inflows. However, the openness factor under export equation 5.2 is significant at 5% with a negative sign.

In the above long run equilibrium model estimation it is possible to conclude on the basis of the finding that all coefficients have the anticipated signs and FDI positively and significantly enhance the country's export. Moreover, it is important to note that the results above confirm the host country's export has a positive relationship and significantly contribute to attract and promote inward FDI in the long run.

5.3 Estimation of the Short Run and Error Correction Model

Prior to testing causality, first we have established the order of integration. To this end an Augmented Dickey-Filler was carried out on the time series levels and difference. On the basis of ADF test variables are found non-stationary but become stationary after difference and are integrated of order one. Then, it was identified the possible long-term relationships among the integrated variables.

The final step of causality test requires an inclusion of error term in the stationary model in order to capture the short-term deviations of series from their long-term equilibrium path. The previous analysis assures that the long-run relationship exists among variables (co integrated), and it is employed VECM to establish the causality direction. Having obtained the long run model estimated the coefficients, the next task is to estimate the coefficients of the short run dynamics that have an important policy implications. So, an error correction model will be estimated that incorporates the short-term interactions and the speed of adjustment towards long run equilibrium.

The procedure adopted the Hendry's approach of general to specific VEC modeling. In this approach, a large model is estimated first which includes as many explanatory variables and their lags as possible. Then all insignificant explanatory variables are continuously dropped until a parsimonious model with few explanatory variables but acceptable in terms of significance, economic interpretation and diagnostic validity is obtained. The error correction model (ECM) has been estimated using the OLS technique and the results are summarized in Table 5.5

Table 5.5 Results of the specific parsimonious Error Correction Model (VECM) Modeling $\Delta \ln X$ by OLS (using New Microsoft Excel Worksheet.xls).

Modeling of $\ln X$ ($\Delta \ln X$)				
Variable	Coefficient	Std.Error	t-value	t-prob
Constant	0.04159	0.032515	1.279	0.2136
$\Delta \ln FDI_{t-1}$	0.66916	0.10084	6.636	0.0000
$\Delta \ln REER_{t-2}$	-0.21018	0.050214	-4.186	0.0004
$\Delta \ln OPEN_{t-1}$	0.25035	0.098196	2.549	0.0179
ECM_1	-0.63082	0.18605	-3.391	0.0025

Diagnostic tests
 Test on the significances of each variables

Constant $F(1, 23) = 1.63655 [0.2136]$
 $\Delta \ln FDI_{t-1}$ $F(1, 23) = 44.0342 [0.0000] **$
 $\Delta \ln REER_{t-2}$ $F(1, 23) = 17.5197 [0.0004] **$
 $\Delta \ln OPEN_{t-1}$ $F(1, 23) = 6.49990 [0.0179] *$
 ECM_1 $F(1, 23) = 11.4966 [0.0025] **$

$R^2 = 0.848255$
 DW = 2.17

AR 1-1 $F(1, 22) = 0.46322 [0.5032]$
 ARCH 1 $F(1, 21) = 0.64936 [0.4294]$
 Normality $\chi^2(2) = 0.74678 [0.6884]$
 RESET $F(1, 22) = 0.93632 [0.3442]$

**(*) Denote reject of the null at 1 (5) % significance level

Table 5.6 Results of the specific parsimonious Error Correction Model (VECM) Modeling $\Delta \ln \text{FDI}$ by OLS (using New Microsoft Excel Worksheet.xls).

Modeling of $\ln \text{FDI}$ ($\Delta \ln \text{FDI}$)				
Variable	Coefficient	Std. Error	t-value	t-prob
Constant	-0.04869	0.05142	-0.947	0.3531
$\Delta \ln X_{t-1}$	1.08120	0.10355	10.441	0.0000
$\Delta \ln \text{GDP}_{t-2}$	0.42420	0.11362	3.734	0.0028
$\Delta \ln \text{REER}_{t-2}$	0.38537	0.07180	5.367	0.0000
ECM_1	-0.99758	0.59144	-1.687	0.0460
Diagnostic tests				
Test on the significances of each variables				
Constant	F(1, 27) =	0.05142	[0.3531]	
$\Delta \ln X_{t-1}$	F(1, 27) =	95.7985	[0.0000]	**
$\Delta \ln \text{GDP}_{t-2}$	F(1, 27) =	10.8412	[0.0028]	**
$\Delta \ln \text{REER}_{t-2}$	F(1, 27) =	23.4042	[0.0000]	**
ECM_1	F(1, 27) =	0.415788	[0.0460]	*
R ² = 0.868241				
DW = 2.82				
AR 1-1	F(1, 23) =	0.098018	[0.7570]	
ARCH 1	F(1, 22) =	0.02614	[0.8730]	
Normality	Chi ² (2) =	0.71943	[0.6979]	
RESET	F(1, 23) =	0.44936	[0.5093]	

**(*) Denote reject of the null at 1 (5) % significance level

Since we are especially concerned with the relationship between export and FDI, it is reported only the results for these two equations. The ECM for export and FDI regression obtained from the above tables 5.5 and 5.6 results and following Johansen and Juselius (1990), the short run dynamic model is constructed for these two models. The corresponding ECM can be written as follows:

$$\begin{aligned} \Delta \ln X = & 0.0416 + 0.6692 \Delta \ln FDI_{t-1} + 0.2503 \Delta \ln OPEN_{t-1} \\ & (SE) \quad (0.03251) \quad (0.1008) \quad (0.0982) \\ & - 0.2102 \Delta \ln REER_{t-2} - 0.6308 ECM_{-1} \text{-----} (5.4) \\ & (0.05021) \quad (0.186) \end{aligned}$$

$$\begin{aligned} \Delta \ln FDI = & - 0.04869 + 1.08120 \Delta \ln X_{t-1} + 0.42420 \Delta \ln GDP_{t-2} \\ & (SE) \quad (0.05142) \quad (0.10355) \quad (0.11362) \\ & + 0.23665 \Delta \ln REER_{t-2} - 0.99758 ECM_{-1} \text{-----} (5.5) \\ & (0.12861) \quad (0.59144) \end{aligned}$$

In the above models, the coefficients of the error correction term for export and FDI are significant (at 1% level of significance) with expected sign with magnitude 0.6308 and 0.99758 respectively. These magnitudes indicate that the deviation from the long run equilibrium is adjusted where 63.08% and 99.758% of the disequilibria are removed each year period in the model respectively. The negative sign in error correction terms imply that any shock in the system in the short run will return back to its long run path.

The FDI variable registers a positive sign and the coefficient is statistically significant at the 1 per cent level, indicating that FDI promotes exports under equation 5.4. The coefficient of FDI is highly significant, thus showing that FDI generates positive impacts on export not only in the short run but also in the long run perspective. Under equation 5.5 exports is positively and statistically significant at the 1 per cent level, indicating that export promotes FDI.

GDP with a three-period lag is positively insignificant for export equation and significant for FDI in the current period. Indeed, there are past studies that have found domestic market size to be statistically insignificant in explaining export-oriented FDI (Lipse, 1999).

The effect of real exchange rate, depreciation of real exchange rate, in the long run has been affects exports significantly. In short run real exchange rate with a two-period lag is significant for export. The openness factor under equation (5.4) is positively significant at 5% significant level. This indicates that in the senses that trade liberalization policy taken by the government does contribute in promoting export in the short run. Export, GDP, RER have a positive effect on FDI inflows into the country. However, an openness factor has a positive effect is insignificant in FDI equation in the short run.

The goodness of fit (the over all significance of the models) for $\Delta \ln X$ ($\Delta \ln FDI$) measured by R^2 shows that about 84.82% (86.82%) of the variations in the dependent variables is explained by the explanatory variables respectively. Testing for autocorrelation, as indicated above tables 5.5 and 5.6 using Durbin-Watson statistics; it is found that there is autocorrelation. DW is 2.17 for $\Delta \ln X$ whereas 2.82 for $\Delta \ln FDI$.

To sum up, FDI variables have positive sign, it is statistically significant (at 5% significant level) in affecting the short run export models. This leads us to conclude that export and FDI has a positive relationship in the short run. Moreover, regression was done to see the effect of export on FDI as indicated in equation 5.5. In both case it is found that a positive short-run causality is found. This result is supported by the theory and descriptive analysis; because it suggests that the performance of FDI stimulates more export inflow to the country. This result is consistent with those found by Liu et al (2002) for China, Balamoune-Lutz (2004) for Morocco, Pacheco-Lopez (2005) for Mexico, Johnson (2005) for East Asian countries.



CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSION

The paper has reviewed the evolution of various FDI regimes and linked them with long-term FDI performance and exports. The study has described the inflows of FDI and export in the country with a focus on the period after 1974. The World Bank data indicators illustrate and still constitute the remaining barriers of doing business in Ethiopia. Trading Across Borders (long time for export); long duration of enforcing contracts; lengthy procedure registering property; higher paid minimum capital for starting business; closing a business (higher recovery rate); paying higher profit tax; higher cost of import are some of existing remaining barriers which are found as low level as compared with the regional (SSA) and the OECD average as the World Bank Doing Business data.

Also, it has conducted an empirical analysis of the linkage between FDI and export to see the FDI's impact on Ethiopian exports. Unit root tests detected non stationarity in the time series data. Then, all series are transformed to first difference form and become stationary and all variables used in the analysis are integrated of order one $I(1)$. The Johansen procedure was applied for cointegration test.

The study examined the relationship between FDI and exports into foreign countries. For the Ethiopian economy, it is found that FDI and export are cointegrated in the long run. At the aggregate level, causality tests point to feedback effects between FDI and export both in the short and the long run. Empirical results indicated a bi-directional relationship between FDI and exports. This indicates that FDI indeed has a positive impact on Ethiopian's export. The finding of this paper, which suggests that FDI inflows tend to increase Ethiopia's exports and hence FDI inflows should be encouraged, is consistent with other works in this area (Johnson, 2006; Wang et al, 2002; and Zhang (2004).

FDI influences exports and exports influence foreign direct investment and this provides conditions for policy makers to use both FDI and export strategies to design reforms to promote FDI and export.

6.2 Recommendations

The Ethiopian government's intervention has successfully stimulated much FDI and exports, and inward FDI has had a positive influence on export performance, derives some important policy implications. Therefore, the country's export expansion attracts more benefits from Foreign Direct Investment to the host country including capital; skill and technology transfer, market access, and export promotion. To this end, I recommend the following:

- Although FDI inflows to Ethiopia have increased markedly during the last several years, a continued process of trade liberalization is necessary for realizing the country's potential in attracting FDI, stimulating exports, and accelerating GDP. In order to attract higher FDI inflows, the Ethiopian government needs to liberalize FDI and trade regimes further and to improve overall conditions for private sector development growth. Thus, the government needs to transform providing more incentives to export oriented foreign firms into a more strategic core. Liberalizing FDI and trade regimes regulations could therefore result in an increase inflows and stimulating exports.
- MNEs have played in export expansion of host countries which is explained in terms of country relative success in attracting export oriented FDI or international subcontracting deals with MNE. To this end the host country policy factors such as investment incentives and liberalization of policies might have a limited role to play in expanding FDI inflows in relatively low income agrarian economies with low levels of urbanization and poor infrastructure. A spillover of knowledge from FDI to other firm is also mixed which helps to enhance a country's production. On the other hand

buildup technological capability with further technological effort in trying to absorb, assimilate and adapt the knowledge as possible through several institutional means like provision of technological infrastructure, subsidization of enterprise R&D, protection and support to innovative enterprise constitute an aspect of the technological competence policy. Thus, invest in upgrading the technology enhance production capacity of the host country in the long run as well as in the short run and makes firms more competitive in foreign markets. The higher host country's production capacity induces a multinational to expand its operations there. So, it is a critical importance to maintain a high gross domestic product and surplus products exhaust in at the intentional market.

In sum, the above measures to be undertaken in order to promote in attracting FDI inflows and stimulating export are somewhat in general. A closer look and investigation on economic and political uncertainty, lack of adequate capital market, and the role of government in terms of building confidence of foreign investors are very important to be beneficial from and attract FDI inflows and boost export successfully

References

- Agrawal, J.P. (1980); Determinants of Foreign Direct Investment: A survey. *Weltwirtschaftliches Archiv*, 116, 739-773.
- Alguacil, M. T., Cuadros, A., and Orts, V. (2002); "Foreign Direct Investment, Exports, and Domestic Performance in Mexico: A Causality Analysis". *Economic Letters*, 77 pp. 371-376
- Alicj, A. A., and Ucal, M. S. (2003); Foreign direct investment, exports and output growth of Turkey: Causality Analysis, paper presented at the European Trade Study Group (ETSG) fifth annual conference, Madrid.
- Ancharaz V.(2003); The Determinants of Foreign Direct Investment in a Comparative Perspective: Is there a Bias against Sub-Saharan Africa? Forthcoming in the University of Mauritius Research Journal (2003) *Applied Economics* 26, 337-351.
- Aoyama Y.,(1996); Integrating Business and Location: An Overview of Two Theoretical Frameworks on Multinational Firms; *Berkeley Planning Journal* 11 (1996): 49-70
- Asiedu, Elizabeth (2003); Foreign Direct Investment to Africa: The Role of Government Policy, Governance and Political Instability. Department of Economics, University of Kansas
- Baliamoune-Lutz, M. N. (2004); Does FDI contribute to economic growth? Knowledge about the effects of FDI improves negotiating positions and reduces risk for firms investing in developing countries, *Business Economics*, 39 (2), 49-56.
- Baniak, A., Cukrowski, J., and Herczyński, J. (2000 & 2002); On Determinants Of Foreign Direct Investment In Transition : Center For Social And Economic Research (Case), Sienkiewicza Warsaw, Poland
- Benassy-Quere, Agnes; Coupet, Maylis, and Thierry, Mayer (2007); "Institutional Determinants of FDI,"
- Berhanu Lakew (2004); Determinants of Ethiopia's Export Performance: An Econometric Investigation: Presentation at the Second International Conference on the Ethiopian Economy, Addis Ababa.
- Berhanu Nega, Kibre Moges and Worku Gebeyehu (2002); Sources and uses of export support services in Ethiopia; EA/Ethiopian Economic Policy Research Institute
- Bond, M.E. (1985); "Export Demand and Supply for Groups of Non-Oil Developing Countries", *IMF Staff Papers*, March, 56-77.
- Brietzke, Paul (1974); "Private Law in Ethiopia," *Journal of African Law*, Vol 18, No 2 (autumn), 149-167
- Buckley, P. and M. Casson (1976); *The Future of the Multinational Enterprise*, London, MacMillan

- Campos, Nauro F. and Kinoshita, Yuko (2003); "Why Does FDI Go Where It Goes: Evidence from Transition Economies," IMF Working Paper WP/03/228.
- Carter, C.A., and A. Yilmaz(1999); "Foreign Direct Investment (FDI) and Trade – Substitutes or Complements? An Application to the Processed Food Industry" Paper presented at the American Agricultural Economic Association Annual Meeting, Nashville, TN.
- Dampier, Chris (2006); "Lending Africa an Invisible Hand: How Profits, Not Charity, Will Save a Starving Continent," Yale Economic Review (spring).
- Danse M, Van der Maden E, Valkman S,(2007); Development of the EHPEA Code of Practice Results of fieldwork conducted During September- December 2006
- Debel Gemechu (2001), "An Empirical Investigation on Export and Economic Growth in Ethiopia", M. Sc. Thesis, Addis Ababa University, Addis Ababa, Ethiopia
- Derrese; Degefa (2001); The parallel foreign exchange market and macroeconomic performance in Ethiopia AERC Research Paper 107 African Economic Research Consortium, Nairobi
- Diagnostic Trade Integration Study (DTIS) (2004); ETHIOPIA Trade and Transformation Synthesis Volume 2 July 2004 final version
- Dicken, P. (1994); Global -Local Tensions, Forms and States in the Global Space-Economy The Roepke Lecture in Economic Geography. *Economic Geography* 70,2: 101-128.
- Dickey, D. A. and Fuller, W. A. (1979); "Distribution of the Estimators for Autoregressive Time Series with a Unit Root" *Journal of the American Statistical Association*, 74 (366), pp.427-431.
- Dorsey, Thomas and others (2008); "The Landscape of Capital Flows to Low-Income Countries," IMF Working Paper WP/08/51
- Dunning, J. H. (1993); *Multinational Enterprises and the Global Economy*, Wokinghan England, Addison-Wesley Publishing Company
- Dunning, J. D. (1988); The eclectic paradigm of international production: a restatement and some possible extensions, *Journal of International Business studies* 19(1), 1-31.
- Dunning, J.H. (1977); Trade, location of economic activity and the MNE: a search for an eclectic approach in B. Ohlin and P.O. Hesselborn (eds.): *The International Allocation of Economic Activity*, 395-418, London, Macmillan
- Economic Commission on Africa (2006); "Economic Reform on Africa 2006: Capital Flows and Development Financing in Africa," (ECA: Addis Ababa).
- Enders, W., (1995); *Applied econometric time series*. (Wiley).
- Fan, E, (2002); "Technological Spillovers from Foreign Direct Investment" -A survey *Asian Development Review*, vol. 20, no. 1, pp. 34-56
- FIAS (2001); Foreign Investment Advisory Service, *Foreign Investment Promotion Strategy Framework of Ethiopia*, Washington, USA

- Fonte R., (2004); The relationship between FDI and International trade substitution or complementarity? A survey cite; aculdade de Economia – Universidade do Porto
- Geda, Alemayehu (2000); “Financing Development in Africa”; Institute of Social Studies (The Hague) and KIPPRA (Nairobi)
- Geda, Alemayehu (2000); “Trade and Finance in Africa”, PAL Grave, Macmillan
- Geda, Alemayehu (2005); Macroeconomic Performance in Post-Derg Ethiopia Northeast African Studies 8.1 (2001) 159-204
- Geda, Alemayehu and Degefe, Befekadu (2002); “Explaining African Growth Performance: The Case of Ethiopia,” Paper prepared for the AERC Growth Research Workshop in Nairobi.
- Goldstein, M. and Khan, M.S. (1978); “The supply and demand for exports: A simultaneous approach”, *The Review of Economics and Statistics* 60, 275–286.
- Harries, R. I. D. (1995); *Using Cointegration Analysis in Econometric Modeling*, Prentice Hall, London.
- Harrison, Andrew L., Dalkiran, Ertugrul and Elsey, Ena (2000); *International Business: Global Competition from a European Perspective*, Oxford: New York: Oxford University Press.
- Helpman, E. (1984); A simple theory of international trade with multinational corporations *Journal of Political Economy*, 92/3, 451-471.
- Horsmann, I. and Markusen, J. R. (1992); “Endogenous Market Structures in International Trade” *Journal of International Economics*, 20, pp.225-247.
- Hymer, S. H. (1976); *The international operations of national firms: A study of direct foreign investment*, The MIT Press, Cambridge.
- Hymer, Stephen. (1960); *The international operations of international firms: A study of direct foreign investment*
- Ietto-Gillies, G. (2002); ‘Hymer, the nation-state and the determinants of multinational corporations’ activities’ *Contributions to Political Economy* 21:43-54
- Ietto-Gillis G., (2004); The nation state and the theory of transnational corporation. *Journal of Transnational Corporations*, Vol 15, No.1
- Ikiara, Moses M. (2003); “Foreign Direct Investment, Technology Transfer and Poverty Alleviation: Africa’s Hopes and Dilemma,” *Africa Technologies Policy Studies Network Special Paper Series No. 16*.
- International Monetary Fund (2007) *L International Financial Statistics*, Washington D.C: International Monetary Fund.
- International Monetary Fund (2007); “The Federal Republic of Ethiopia: 2007 Article IV consultation,” *IMF Country Report No. 07/247 (July)*
- Johansen, A.(2006); FDI and Exports: the case of the High Performing East Asian Economies Paper No. 57 and 58; CESIS The Royal Institute of technology Centre of Excellence for studies in Science and Innovation
- Johansen, S. (1988); ‘Statistical analysis of cointegration vectors’. *Journal of Economics and Control*, 12, 231-254.

- Johansen, S. and Juselius, K. (1990); "Maximum likelihood estimation and inference on cointegration with application to the demand for money" *Oxford Bulletin of Economics and Statistics*, 52, pp.169-209.
- Kebede, Bereket (2008); 'Land Reform, Distribution of Land and Institutions in Rural Ethiopia: Analysis of Inequality with Dirty dData,' *Journal of African Economics* (Forthcoming)
- Khan, K., and Leng, K. (1997); Foreign direct investment, exports and economic growth, *Singapore Economic Review*, 42 (2), 40-60
- Kindleberger, C. (1969); *American Business Abroad*, Cambridge MA, MIT Press
- Kojima K (1978); *Giant multinational corporations: Merits and defects*. Hitotsubashi *Journal of Economics*, 18(2):1-17
- Kutan A. and Vuksic G. (2007); Foreign Direct Investment and Export Performance. *Journal of Regional Science*, 41 (2), 317-36.
- Lipsev, Robert, E. (1999); "The Location and Characteristics of U.S Affiliates in Asia," National Bureau of Economic Research (NBER), Working Paper, 6876
- Liu, X., Burrigge, P., and Sinclair, P.J.N. (2002); 'Relationships between economic growth, foreign direct investment and trade: evidence from China', *Applied Economics*, Vol. 34, pp. 1433-1440
- Liu X.H. and Shu,C(2003); Determinants of export performance: Evidence from Chinese Industries, *Economics of planning*, 36(1)pp 45-46
- Liu, X., Wang, C., and Wei, Y. (2001); "Causal Links between Foreign Direct Investment and Trade in China". *China Economic Review* 12, pp.190-202
- Marchant, M. A., Manukyan, T., and Koo, W. (1992); [online] *International Trade and Foreign Direct Investment: A Focus on the Free Trade Area of the Americas* Available from: <http://cnas.tamu.edu/publications/powpoint/papers/Marchant.pdf>
- Markusen, J.R. (2002); *Multinational Firms and the Theory of International Trade*, Cambridge: MIT Press.
- Markusen, J. (2000); Foreign direct investment and trade, CIES Policy Discussion Paper #0019
- Markusen, J.R. (1998); 'Multinational firms, location and trade', *World Economy*, 21: 733-756
- Markusen J.(1995); "The boundaries of Multinational Enterprises and the Theory of International Trade", *Journal of Economic perspectives*, 9, 2, 169-189.
- Markusen, J.R. (1984); Multinationals, multi-plant economies and the gains from trade, *Journal of International Economics*, 16, 205-226
- Markusen, J. R. and A. J. Venables (1998); 'Multinational Firms and the New Trade Theory,' *Journal of International Economics*, 46, 183-204
- Markusen, J. R. and A. J. Venables (1996); *The Theory of Endowment, Intra-Industry, and Multinational Trade*, NBER Working Paper no. 5529, Cambridge, Massachusetts.
- Melitz, M. (2005); "The Impact of Trade on Aggregate Industry Productivity and Intra-Industry Reallocations," *Econometrica*, 71, 1695-1726.

- National Bank of Ethiopia (NBE); Quarterly Bulletin (various issues)
- Organization for Economic Development and Cooperation (2002); "Foreign Direct Investment for Development: Maximizing Benefits, Minimizing Costs," (OECD: Paris).
- Organization for Economic Development and Cooperation (2005); "Regulatory Environment for Foreign Direct Investment," Roundtable organized under the joint auspices of NEPAD and the OECD Investment Committee, sponsored by the Government of Uganda, with the co-operation of JICA and JETRO of Japan ..
- PachecoLópez, P. (2005); "Foreign Direct Investment, Exports and Imports in Mexico" *World Economy* 28 (8), pp.1157-1172.
- Pfaffermayr, M. (1996); "Foreign direct investment and exports: A time series approach", *Applied Economics* 26, 337-351.
- Pramadhani M., Rakesh Bissoondeal and Nigel Driffield (2007); FDI, TRADE AND GROWTH, A CAUSAL LINK? Aston Academy for Research in Management is the administrative centre for all research activities at Aston Business School.
- Rogoff, Kenneth and Reinhart, Carmen (2003); "FDI to Africa: The Role of Price Stability and Currency Instability," IMF Working Paper WP/03/10.
- Rugman, A. (1985); "Internalization Is Still a General Theory of Foreign Direct Investment", *Weltwirtschaftliches Archiv*, September
- Sekkat Khalid (2004); FDI Inflows to the MENA Region: An Empirical Assessment of their Determinant and Impact on Development t, Université Libre de Bruxelles, Belgique
- Sharma, K. (2000); "Export Growth in India: Has FDI Played a Role?" at:<http://www.econ.yale.edu/~egcenter/>
- Sharma, K. (2003); Factors determining India's export performance, *Journal of Asian Economics*, 14 (3), 435-446
- Sun, H. (2001); Foreign direct investment and regional export performance in China, *Journal of Regional Science*, 41 (2), 317-36.
- Tadesse, Haile (2001); "Ethiopian Investment Climate and Opportunities," presentation given in January 2001([www, eatic.org/media/powrpoint/eia-prentation.ppt](http://www.eatic.org/media/powrpoint/eia-prentation.ppt))
- Tahir R. and Larimo J.(2002); DETERMINANTS OF LOCATION STRATEGIES OF FINNISH FIRMS IN ASIAN COUNTRIES Paper accepted for the presentation at 28th EIBA Conference in Athens, Greece
- Thoburn, J. (1997); Enterprise reform, domestic competition and export competition. *Journal of the Asia Pacific Economy*, 2/2, 166-177
- Thomsen, Stephen (2005); "Foreign Direct Investment in Africa: The Private Sector Response to Improved Governance," Chatham House International Economics Program Briefing Paper (July).
- UNCTAD (2007); World Investment Report 2007: Transnational Corporations and Export Competitiveness, Geneva
- UNCTAD (2006); World Investment Report (2006) Country Profile



- UNCTAD (2005); United Nations Conference on Trade and Development (UNCTAD), Handbook of Statistics On-Line Available a URL:<http://stats.unctad.org/fdi/eng/TableViewer>
- UNCTAD (2002); World Development Indicators 2002, CD-Room
- UNCTAD (2002); World Investment Report 2002: Transnational Corporations and Export Competitiveness, Geneva
- UNCTAD (1999); "World Investment Report 1999: Foreign Direct Investment and the Challenge of Development," (UNCTAD: Geneva).
- Utkulu, U. Dilek Seymen, & Aydın Arı (2006); Export Supply and Trade Reform: The Turkish Evidence", The Turkish Development Review No. 24, 573-589
- Vernon, Raymond. (1966); International investment and international trade in the product cycle, Quarterly Journal of Economics 80:190-207
- Vuksic, G. (2006); Impact of Foreign Direct Investment on Croatian Manufacturing Exports, Institute of Public Finance, Paper issue 27, Zagreb.
- Vuksic, G (2005); Foreign Direct Investment and Export Performance of the Transition Countries in Central and Eastern Europe Paper for presentation at the 12th Dubrovnik Economic Conference, organized by the Croatian National Bank
- Wang C, Peter J. Buckley and Jeremy Clegg (2002); 'The impact of inward FDI on the performance of Chinese manufacturing firms', Journal of International Business Studies 33: 637-655
- WorldBank(2007); World Bank Doing business Data (<http://www.doingbusiness.org>)
- Zhang, K. H. (2005); How does FDI affect a host country's export performance? The case of China, paper presented to International conference of WTO, China, and the Asian Economies, III. Xi'an, China, 25-26 June.
- Zhang, K. H. et al (2004); Multinational enterprises, foreign direct investment and trade in China. A cointegration and Granger-causality approach Promoting exports: the role of inward FDI in China.
- Zhang, K. (2001); 'Does Foreign Direct Investment Promote Economic Growth? Evidence from East Asia and Latin America', Contemporary Economic Policy, Vol. 19, Issue 2, pp. 175-185.
- Zhang, Q., and Felmingham, B. (2001); The relationship between inward direct foreign direct investment and China's provincial export trade, China Economic Review, 12, 82-99.
- Zhang, K. H., and Song, S. (2000); Promoting exports: the role of inward FDI in China, China Economic Review, 11, 385-96.

APPENDIX I—INSTITUTIONAL AND LEGAL ENVIRONMENT PRIOR TO 19991

During 1950s and 1960s, government policies were mostly market oriented and in the area of foreign international relations aimed at attracting foreign. As stipulated in the key investment proclamation of this period (No. 242/1966), foreign investors were allowed to establish and operate private companies in Ethiopia in the same way as Ethiopian nationals. However, foreigners were prohibited from owning land and investing into state enterprise owned and operated by the Imperial Government (i.e. in strategic industries such as air transport, electricity, communication).

A command system of economic management was introduced after the Derg's military coup in 1974. Specifically, In January and February 1975, the government nationalized banks, insurance companies and 100 largest industrial and commercial concerns (Brietzke, 1974). Another radical measure was embedded in the land reform proclamation of February 1975m which nationalized all rural land. Subsequently, all land was owned by the state and given to farmers on use-right basis, while commercial large-scale farms were turned into state farms. Land was allocated to individual farmers living in respective jurisdiction according to family size (Kebede, 2008). As a result of these measures, the economic performance has been weak poor for most of the second half of 1970s, while droughts constituted major setback in early 1980s.

In 1983/84 the government adopted "ten-year perspective plan" to address Ethiopia's structural weaknesses. The aim was to reduce the share of agriculture in GDP while increasing the share of industry, secure foreign exchange earnings, diversify the country's export and put the economy on sustainable path. As a part of this effort, the 1983 joint venture proclamation on FDI was approved. However, as underscored in Tsegaye (1991), the main problems associated with the joint venture law were related to its implementation, caused especially by the highly bureaucratized procedures for approving joint venture proposals (at least five governmental ministries & agencies are required to endorse the proposal) and the lack of a coordinating institution. The 1983 proclamation was revised by a special Decree No. 11/1989, which

permitted majority foreign ownership in many sectors, except o public utilities, banking and finance, trade, transportation, and communications. The decree also attempted to provide a more extensive legal protection of investors.

As a consequence of the weak economic performance, new economic reform program was declared in March 1990. It attempted to reverse the governmental policy from central planning towards market mechanism. Following the declaration of the economic reform program, a series of legislations were issued in order to implement the new policy direction and promote private sector.⁸ However, the implementation was interrupted once again with the overthrow of the Derg regime in 1991.

⁸ For example, the regulatory regimes allowed Ethiopia to accept international arbitration as a means of solving disputes that might arise between the host country and foreign investors.

DRAFT
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APPENDIX II- Summary of world Bank's doing business indicator 2007 SSA countries

	Indicator	Kenya	Uganda	Tanzania	Nigeria	Ethiopia	SSA	OECD
Starting Business	Procedures (numbers)	12	18.7	12	9	7	10.8	6.0
	Duration (days)	44	28	29	34	16	56.3	14.9
	Cost (%Gnt per capita)	46.1	92	47.1	56.6	41.3	148.1	5.1
	Paid in Min. Capital (of Gnt per capita)	0	0	0	0.0	960.0	188.8	32.5
Dealing with licen	Procedures (numbers)	10		21	18	12	18.1	14.0
	Duration (days)	100	143	308	350	128	262.5	153.3
	Cost (% of income per capita)	58.8	811.8	2365.5	1016	1,094.4	2,549.2	62.2
Employing Workers	Difficulty of Hiring Index	33	0	89	0	33	41.7	25.2
	Rigidity of House Index	0	0	40	0	40	43.9	39.2
	Difficulty of firing Index	30	10	60	20	30	42.2	27.9
	Rigidity of employment Index	21	3	63	7	34	42.6	30.8
Registering a Property	Procedures (numbers)	8	13	10	14	13	7.0	4.9
	Duration (days)	64	227	119	82	43	104.6	28.0
	Cost (% of property value)	4.2	4.6	5.3	22.2	7.5	11.1	4.6
Getting credit	Legal Rights Index	8	3	5	7	4	4.0	6.4
	Credit Information Index	4	0	0	0	2	1.3	4.8
	Public registry coverage (% Adults)	0	0	0	0	0.1	2.1	8.6
	Private bureau coverage (%Adults)	1.5	0	0	0	0.0	4.5	59.3
Protecting Investors	Disclosure Index	3	2	3	5	4	4.7	6.4
	Director Liability Index	2	5	4	7	4	3.1	5.1
	Shareholder Suits Index	10	5	8	5	5	5.0	6.5

	Investor Protection Index	5	4	5	5.7	4.3	4.3	6.0
Paying Taxes	Payments (numbers)	41	33	48	35	20	38.7	15.1
	Time (Hours)	432	237	172	1120	198	321.2	183.3
	Profit tax (%)	32.5	15.7	20.2	19.4	26.8	21.4	20.0
	Labor tax and contributions (%)	68	11.3	18	9.7	0.0	13.3	22.8
	Other taxes (%)	11.6	5.3	6.1	0.7	4.3	33.3	3.4
	Total tax rate (% profit)	50.9	32.3	44.3	29.9	31.1	68.0	46.2
Trading across borders	Documents for export (Number)	9	6	5	10	8	8.1	4.5
	Time for export (days)	29	39	24	26	46	35.6	9.8
	Cost to export (US\$ Per container)	1955	2940	1212	1026	1,617	1,660.1	905.0
	Documents for import (Number)	8	7	7	9	8	9.0	5.0
	Time for import (days)	37	37	30	46	42	43.7	10.4
	Cost to import (US\$ container)	1995	2990	1425	1047	2,793	1,985.9	986.1
Enforcing contracts	Procedures (numbers)	44	38	38	39	39	39.4	31.3
	Duration (days)	465	535	462	457	690	643.0	443.3
	Cost (% of claim)	26.7	44.9	14.3	32	15.2	48.7	17.7
Closing a business	Time (years)	4.5	2.2	3	2	3.0	3.4	1.3
	Cost (% of estate)	22	30	22	22.2	15	20.0	7.5
	Recovery rate (Cents on the dollar)	31	41.0	20.5	27.5	33.1	17.1	74.1

Source: doing business data (<http://www.doingbusiness.org>).

Appendix III: Description of the Survey Result Questionnaire Format

i) Description of the survey result

A. Point of First contact

	percentage
Local Business people	----
Foreign inventors in Ethiopia	40%
EIA	60%
Others	----

B. Which government agencies least flexible in operating business

	percentage
Custom Department	18%
Ministry of Trade and Industry	55%
EIA	27%
Others	9%

C. Most important incentive

Most important incentive	percentage
Duty exemption/ machinery and construction material	75%
Tariff protection	—
Tax holiday	—
Easy of remittance of dividends and profit x	25%
Access to local credit	—

Handwritten signature and stamp in blue ink, partially illegible.

D. Main Problems in operating business

problems	percentage
Problem with basic infrastructure e.g water electricity, telephone	80%
Availability of raw material and other input	60%
Problem of financing	---
Restrictive government regulation	20%
Cost and/or quality of labor	60%
Market conditions (level of demand, competitions)	20%
Problem of to get land	---
Taxes on raw material and finished product	60%
Intellectual property protection	---

E. Main Problems related to government regulations

Problems	percentage
Import and export regulations	20%
Tax related regulations	80%
License requirements and processing	---
Restrictions on employment of expatriate staff	---
Requirement to use local inputs of poor quality	---
Ownership of land	60%
The proportion of ownership opens to foreign firms	---

F. Main recent investment initiatives

Main recent investment initiatives	percentage
Launch of new product	40%
Expansion of existing operation	60%
Improvement of the effectiveness of existing operation	---
Simply replacement of existing equipment with minor improvement	---

ii) Questionnaire Format

Q1 Point out your first contact

- a. Local business
- b. People
- c. Foreign investors
- d. Ethiopian Investment authority
- e. Embassy
- f. Other

Q2. Do you benefit from any particular incentives for FDI

- a. Tax exemptions
 - b. Access to credit
 - c. Repatriation of profits etc. and if so what are they? What incentives do you most important for your operations? _____
-

Q3. What is the main market for your product?

- a. Domestic
- b. Foreign
- c. Both

If both, what are the shares? If foreign, what countries do you export to?

Q4. Do you have any difficulties securing inputs, including labor? Do you import any of your inputs?

Q5. Which government institutions you found most flexible and which ones least flexible for your operations?

- a. Customs
- b. Min. of Trade
- c. EIA
- d. Others

Q6. How important are local economic conditions for success of your business, how do you view future economic prospects of Ethiopia?

- a. Very good
- b. Good
- c. Satisfactory
- d. Not as expected

Q7. Have you learned from "best practices" applicable to your sector established in neighboring countries

- a. Kenya
- b. Uganda
- c. Others

Q8. What were the main motivating factors for coming to invest in Ethiopia?

- a. Low-cost labor
- b. Size of the market
- c. Other resource
- d. Similar move by competitors
- e. Success in similar countries
- f. Reputation of the country as a good place to invest etc

- Q9. What was the main factor in deciding to invest in Ethiopia?
- Profitability
 - Incentives
 - Local contribution to the investment
 - Political stability
- Q10. What do you view as main contribution of your investment to Ethiopia's development?
- Taxes
 - Employment generation
 - Technology transfer
 - Management transfer
 - Net increase in exports
 - Net increase in physical investment
- Q11. What are the main impediments to your operations in Ethiopia?
- Basic infrastructure such as roads
 - Telecommunications
 - Internet
 - Cost of raw materials and their availability
 - Financing/credit
 - Government regulations
 - Taxation of raw materials or the final product
 - Availability and cost of labor
 - Lack of middle-level management
- Q12. Main recent investment was for new product,
- Existing operations
 - Human capital etc.
- Q13. What is the main source of finance?
- Supplier credit
 - Loan from Ethiopian Bank
 - Loan from foreign bank
 - Money from a parent company
 - Equity local/foreign
- Q14. Are there any problems with securing raw materials/
- Unreliable supply
 - Too expensive
 - Do not exist locally/need to be exported
- Q15. What do you view as the main sources of non-commercial risk?
- Political instability
 - Excessive government intervention
 - Expropriation

- d. Reversal of investment incentives
- e. Failure to implement contract. Do you have any insurance against such risk?

Q16. Which government regulations are causing most trouble?

- a. Import/Export regulations
- b. Tax regulations
- c. Licensing requirements and processing
- d. Land ownership
- e. Requirements to use local inputs
- f. The proportion of ownership open to foreign firms
- g. Restriction on employment of foreign nationals etc.

Q17. What is your main "issue" in dealing with government agencies?

- a. Corruption
- b. Lack of legal framework
- c. Arbitrary decisions
- d. Lack of professional approach

Appendix IV : Largest affiliates of foreign TNCs in the host economy

A. Industrial*		
B. Tertiary		
Equatorial Business Group	United Kingdom	Trade
BASF (Ethiopia)	Germany	Trade
G C S - N C R Ethiopia	United States	Trade
Beiner	Germany	Trade
Afcor (Ethiopia)	United Kingdom	Trade
Addis Ababa Hilton International	United Kingdom	Hotels
Motor & Engineering Co Of Ethiopia	United Kingdom	Trade
Shell Ethiopia	Netherlands	Trade
A B B Midrock Industrial Services	Switzerland	Trade
Ayderus Hussein Mohamed Farag	India	Trade
Shell Chemical Company	Netherlands	Other business services
Mitsubishi Ethiopia Trading	Japan	Other business services
Ethiopian Pioneer Hi-Bred Seeds Jos Hansen & Soehne (Ethiopia)	United States Germany	Other business services Other business services..
C. Finance and Insurance		

Sources: UNCTAD WID (2005) Country Profile

*Matador Addis and Ethiopian Crown Cork & Can Manufacturing Industry Share Company are also found affiliates of foreign TNCs in the host economy.

APPENDIX V: DESCRIPTIVE STATISTICS AND CORRELATION MATRIX

A) Descriptive statistics

	lnX	lnFDI	lnGDP	lnRER	lnOPEN
Mean	-2.672583	-2.683380	4.659913	1.821380	-1.450395
Std.Devn	0.370046	0.303024	0.379636	0.475766	0.343904
Minimum	-3.895016	-3.729117	4.023897	1.188879	-2.641829
Maximum	-2.234080	-2.225237	5.193363	2.980965	-0.742929
Normality Chi ² (2)	26.558 [0.0000] **	24.501 [0.0000] **	8.3006 [0.0158] *	6.6079 [0.0367]*	10.672 [0.0048] **

B) Correlation matrix

	lnX	lnFDI	lnGDP	lnREER	lnOPEN
lnX	1.0000				
lnFDI	0.85084	1.0000			
lnGDP	-0.31679	-0.40863	1.0000		
lnRER	0.11065	0.060591	-0.62821	1.0000	
lnOPEN	0.59495	0.68269	-0.40969	0.020128	1.0000

ANNEX VI: THE CONSTRUCTION OF EFFECTIVE EXCHANGE RATE

The major sources of data for these variables are IFS database, and WB. Exchange rates were obtained from IFS database and trade weights were computed from the direction of trade of country as reported in the bulletin of NBE. The nominal exchange rate of the partner countries (currency/ USD) was obtained from IFS database and converted to birr per respective country for each partner. The year 2000 is used as a base period as the trade balance for this period is found to be relatively satisfactory.

THE MATHEMATICAL FORMULATION OF THE EFFECTIVE EXCHANGE RATES

Nominal Effective exchange Rate (NER) is a weighted average of exchange rate of the domestic currency per unit of foreign currency.

$$NER = \sum_i^n W_{ij} E_{ij}$$

Where:

W_{ij} = relevant weight (trade share of country j at time t)

E_{ij} = nominal exchange rate defined a domestic currency per foreign currency

N = number of trading partner

Real effective Exchange ate (RER) is obtained by deflating the NER by the ratio of relative prices of tradable to non-tradable. In choosing the relative price of indices, we take the whole prices index (WPI) of the partner countries as a proxy for the prices of tradable as this comprises mostly of tradable goods and Consumer Prices Index (CPI) of the country to proxy the non-tradable price.

$$RER = \sum_i^n W_{ij} E_{ij} P^*/P_t$$

Where: P^* = Wholesale price indices of partner countries

P_t = CPI of Ethiopia

THE SELECTION OF TRADING PARTNER COUNTRIES

As the selection of weights and partner countries are concerned, the trade weight was used the ratio of import plus export of the partner country to the total trade of Ethiopia one percent and above was used for selecting the country. 12 countries selected (Djibouti with 0.04352 weight not include) and which covers about 75 percent of total trade. These countries are listed below with their corresponding weight.

No.	Country	Weight
1	BELGIUM	0.025553605
2	FRANCE	0.027556403
3	GERMANY	0.092647768
4	ITALY	0.084970836
5	NETHERLANDS	0.026694308
6	SWEDEN	0.019423436
7	UNITED KINGDOM	0.044116817
8	UNITED STATES	0.094254556
9	China, mainland	0.075380396
10	INDIA	0.048366516
11	JAPAN	0.073003126
12	SAUDI ARABIA	0.123743609

ANNEX VII: EXOGENIETY TESTS FOR GDP

Test for Zero-restriction of α -coefficients (Weak Exogeneity of Variables): GDP

	lnGDP	lnX	lnFDI	lnRER	lnOPEN
α -coefficients	-0.017963	-0.16176	-0.39744	-0.80717	0.17935
Chi ² (1)	34.42	0.4551	3.9106	3.1137	0.55791
P.V.	[0.0074]**	0.4999	[0.0480]*	[0.0776]	[0.4551]

Test for Zero-restriction of β -coefficient (Long run Variables) : GDP

	lnGDP	lnX	lnFDI	lnRER	lnOPEN
β -coefficients	1.0000	0.060260	0.17060	0.071080	0.044869
Chi ² (1)	11.012	3.6407	8.6239	10.887	3.8527
P.V.	[0.0009]**	[0.0456]*	[0.0033]**	[0.0010]**	[0.0497]*

Therefore, the structural long run relationship derived from the cointegrating vector normalized with respect to lnGDP can be repeated as:

$$\ln\text{GDP} = 0.060260\ln\text{X} + 0.17060\ln\text{FDI} + 0.071080\ln\text{REER} + 0.044869\ln\text{OPEN}$$

Results of the specific parsimonious Error Correction Model (VECM) Modeling $\Delta\ln\text{GDP}$ by OLS (using def.xls) The present sample is: 7 to 37

Variable	Coefficient	Std. Error	t-value	t-prob
Constant	-0.053757	0.043465	-1.237	0.2281
DLX_3	0.37423	0.17143	2.183	0.0390
DLNFDI_1	0.41987	0.16341	2.569	0.0168
DLOPEN_1	0.84897	0.23102	3.675	0.0012
ECM_1	-0.9702	0.58744	-1.651	0.0410
R ² = 0.711997				
DW = 1.53				
AR 1- 2	F(2, 22) =	0.7256	[0.2013]	
ARCH 1	F(1, 22) =	0.6071	[0.3041]	
Normality	Chi ² (2) =	0.8177	[0.5719]	
RESET	F(1, 23) =	0.68848	[0.4152]	

The ECM for GDP regression obtained from the above tables results the short run dynamic model is constructed. The corresponding Error Correction Model (ECM) can be written as follows:

$$\ln\text{GDP} = -0.053757 + 0.37423\ln\text{X}_3 + 0.41987\ln\text{FDI}_1 + 0.84897\ln\text{OPEN}_1 - 0.9702\text{ECM}_1$$

The FDI variable registers a positive sign and the coefficient is statistically significant at the 1 per cent level, indicating that FDI promotes GDP. The coefficient of FDI is significant, that generates positive impacts on GDP not only in the short run but also in the long run perspective.