

**INSTITUTIONAL, GOVERNANCE AND ECONOMIC FACTORS
INFLUENCING FOREIGN DIRECT INVESTMENT INFLOWS IN
EAST AFRICA**

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DECLARATION

This thesis is my original work and has not been presented for award of a degree in any other university.

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DEDICATION

To my dear wife, Rose, and our children, Joy and Joe, for their support,
encouragement and patience.

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First and foremost, my sincere thanks go to the ALMIGHTY GOD, who gives knowledge through Jesus Christ our Lord. I would like to convey my sincere gratitude to my supervisors, Dr. Tom Kimani of African Economic Research Consortium, and Dr. George Kosimbei and Dr. Julius Korir of the School of Economics, Kenyatta University for their great contribution in making this thesis a great success. Special thanks go to my classmates for their encouragements and their advice. I am greatly indebted to my dear wife Rose and our children Joy and Joe for their patience, support and encouragement. I am also grateful to my colleagues at Daystar University for their continued academic, moral and spiritual support in the course of my study. Finally, thanks to all who have contributed in one way or the other in making this study a success. May God bless you all.

TABLE OF CONTENTS

DECLARATION.....II

DEDICATION.....III

ACKNOWLEDGEMENTS.....IV

TABLE OF CONTENTSIV

OPERATIONAL DEFINITIONS OF TERMS..... VI

ABBREVIATIONS AND ACRONYMS.....VIII

CHAPTER ONE.....1

INTRODUCTION.....1

3.2 RESEARCH DESIGN.....67

OPERATIONAL DEFINITIONS OF TERMS

Foreign Direct Investment: This is investment made to acquire a lasting management in an enterprise operating in a country other than that of the investor. In general, it is an investment which includes at least 10% ownership of an enterprise in a foreign country.

Inter-Foreign Direct Investment: This is the annual foreign direct investment flows from other countries in the world to each of the East African Country.

Intra-Foreign Direct Investment: This is the annual foreign direct investment flows from one East African Country to another.

Economic Growth: Refers to an increase in a country's output of goods and services, measured by changes in real Gross Domestic Product.

Gross Domestic Product: It is the total value of all goods and services produced over a given time period (usually a year) excluding net property income from abroad.

Regional Integration: This refers to a decision or process whereby two or more countries in a certain region combine into a larger economic region by removing discontinuities and discriminations existing along national frontiers, and by establishing certain elements of co-operation and co-ordinations between them.

Government Expenditure: Is the amount spent on goods and services and capital investment by the government.

External Debt: The portion of a country's debt that was borrowed from foreign lenders including commercial banks, governments or international financial institutions.

Official Development Assistance: Aid provided by donor governments to low- and middle-income countries.

ABBREVIATIONS AND ACRONYMS

AGOA	African Growth Opportunity Act
ASEAN	Association of Southeast Asian Nations
BAT	British American Tobacco
BRELA	Business Registration and Licensing Agency
COMESA	Common Market for Eastern and Southern Africa
EA	East Africa
EPZs	Export Processing Zones
ERS	Economic Recovery Strategy
FDI	Foreign Direct Investment
FTAA	Free Trade Area of the Americas
GDP	Gross Domestic Product
GNI	Gross National Income
HDI	Human Development Index
ICRG	International Country Risk Guide
EIMP	European Internal Market Program
ICT	Information Communication Technology
IPC	International Product Cycle
IT	Internationalization Theory
KIPPRA	Kenya Institute for Public Policy Research & Analysis
LSDV	Least Square Dummy Variable
M&As	Mergers and Acquisitions
MNCs	Multinational Corporations

MNEs	Multinational Enterprises
NAFTA	North American Free Trade Agreement
OLS	Ordinary Least Squares
ODA	Official Development Assistance
RPED	Regional Program on Enterprise Development
RTA	Regional Trade Agreement
RIAs	Regional Integration Agreements
SSA	Sub-Saharan Africa
TNCs	Trans-National Corporations
TRIMs	Trade-Related Investment Measures
UNCTAD	United Nations Centre for Trade and Development
US	United States

ABSTRACT

Development economists suggest that Foreign Direct Investment (FDI) is important for economic growth as it provides the much needed human and physical capital as well as improved technology for investment. East Africa exhibited the lowest in-flow of FDI when compared to other African Regions, despite the substantial policy and structural changes as well as economic integration that had been taking place in the East Africa during the study period. The main objective of this study was to examine the institutional, governance and economic factors influencing FDI Inflows in Eastern African Countries. Non-experimental panel data analysis was conducted for eight Eastern African Countries during the period 1996-2010. This study employed an econometric technique for analysis of various variables included in the model. FDI was the endogenous variable on which the exogenous variables were regressed. These exogenous variables included institutional, governance and economic factors that influenced FDI. A one-way fixed effects least squares dummy variable model was estimated. The study found that institutional and governance variables particularly control of corruption, political stability, rule of law and infrastructure significantly influenced FDI inflows to East Africa. Other than institutional variables, other factors like inflation, economic growth and rate of return on investment were also found to be significant. But external debt service did not significantly influence FDI inflows. The findings suggested that East African governments needed to strengthen their institutional base and governance as well as improve their macroeconomic environment in order to attract more FDI. The EA Countries should invest heavily on infrastructure, rule of law and control of corruption to enhance FDI inflows.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

It is widely recognized that Foreign Direct Investment (FDI) produces economic benefits to the recipient countries by providing capital, foreign exchange, technology, competition and by enhancing access to foreign markets (UNCTAD, 1991; Romer, 1993; Caves, 1996; World Bank, 1999; Crespo and Fontura, 2007). It is argued that FDI can also enhance domestic investment and innovation. Thus, developing countries that operate at low savings and investment rate, and therefore, low per capita income growth rate, may escape from the trap by importing capital from abroad in the form of foreign direct investment (Hayami, 2001).

Most developing countries are competing with each other to attract handsome amount of FDI by adopting different promotional policies, such as by liberalizing trade regimes, establishing special economic zones, and by offering incentives to the foreign investors. In 1991, for example, a total of 35 countries made almost 82 changes in their FDI policies to attract FDI (Ruffin, 1993). However, the general trend of FDI inflow to the developing countries is not very encouraging.

First, developing countries are dominated by the developed countries in attracting FDI. According to UNCTAD (2007), total FDI inflow in the world was USD 945.8 billion in 2005, of which developed countries received USD 590.3 billion, which was 62.4% of the total FDI inflow in the world, whereas developing countries received only USD 345.5 billion (37.6%).

Second, among the developing countries, only a few countries such as China, Indonesia, Egypt and Columbia were successful in attracting FDI, whereas majority of the developing countries apparently failed to attract FDI. According to UNCTAD (2007), Indonesia, Egypt and Columbia received a total of USD 96.4 billion in 2007, whereas China received nearly 31% of total FDI that flowed to developing countries. Questions arise as to why FDI inflow was low in some countries and biased towards only a few countries.

Many developing countries suffer from institutional weaknesses such as corruption, poor application of the rule of law, political instability, among others, that raise the cost of doing business and thus constrain FDI inflows. In the KIPPRA/World Bank (2004) study, investors rated institutional weaknesses such as corruption, crime, theft and disorder as major issues of concern in promoting private sector activities in Kenya. Rogoff and Reinhart (2002) argued that an obvious and powerful deterrent to FDI was political instability mainly due to wars.

Corruption is regarded as a threat to foreign investment for several reasons: it distorts the economic and financial environment, it reduces the efficiency of government and business by enabling people to assume positions of power through patronage rather than ability, and last but not least, it introduces an inherent instability into the political process. Foreign lenders and investors may find it difficult to conduct business effectively in countries where there is widespread financial corruption in the form of demands for special payments and bribes connected with import and export licenses, exchange controls, tax assessments, police protection, or loans. Corruption in the form of excessive patronage, nepotism, job reservations and “favor-for-favors” interferes with merit-based competition in free markets. This induces “popular discontent,” parallel markets and risks to private business.

The Institutional FDI Fitness model postulates that it is not the intransigent generic conditions, but rather, the institutions and their policies, and implementation that are pivotal to increasing foreign direct investment (Wilhelms and Witter, 1998). The Institutional FDI Fitness model predicts that, all else equal, countries with high Institutional Fitness experience higher inflows of foreign direct investment than countries with low Institutional Fitness. High Institutional Fitness means that a country's institutions are transparent, well-functioning, reliable and predictable.

According to Wilhelms and Witter (1998) high level of government fitness requires that the legislature's decision- and law-making processes are transparent, efficient and reasonably democratic implying that the societal groups that have to support and carry through policies are included in the government decision-making process, thus facilitating policy implementation. As far as the executive level of government is concerned, high government fitness means that policies are implemented transparently, efficiently and consistently to ensure equitable treatment of all subjects under the law. A transparent, reliable, independent, fair and equitable judiciary guarantees high government fitness of the legislature and executive branch. High government fitness is expected to increase FDI by decreasing instability and thus investment risk.

Of great concern is to assess the extent to which the Institutional FDI Fitness model may apply in the case of East African Countries. This raises the need to examine the relationship between institutional factors and FDI inflows in some of these developing countries.

1.2 Foreign Direct Investment in Africa

Since 1980s, Africa has experienced a relatively unsteady and low economic performance. For instance, the GDP growth rate of 3.2% achieved in 2002 translated into a low growth rate of 0.8% in per capital income compared with the rate of 1.9% in 2001 while in 2003, Africa's population grew at 3.6% (UNCTAD,

2003a). The low economic growth rate coupled with high population growth rate makes poverty alleviation in Africa increasingly difficult.

According to Ajayi (2005), the average annual inflows of FDI into Africa doubled in the 1980s compared with the 1970s. It also increased significantly in the 1990s and in the period 2000–2003. In the mid-1970s, Africa's share of global FDI was about 6%, which dropped to 2–3% in 2005. Among developing countries, Africa's share of FDI has remarkably dropped from 28% in 1976 to less than 9% in 2005 (UNCTAD, 2007). Compared with all other developing regions, Africa has remained aid dependent, with FDI lagging behind official development assistance (ODA). Between 1970 and 2003, FDI accounted for just one fifth of all capital flows to Africa. Despite the significant increases in the flow of FDI to Africa, the inflows have been uneven. Middle-income countries have benefited from this upsurge at the expense of lower-income countries. In spite of policy initiatives in a number of African countries, and the significant improvements in the factors governing FDI – including but not limited to economic reform, democratization, privatization, enduring peace and stability, FDI inflows to Africa still lag behind those of other regions of the world (Ajayi, 2005). The expected surge of FDI inflow into the continent has not occurred due to several factors, such as: risks, inappropriate environment, political instability and adoption of inappropriate policies.

The FDI that goes into Africa is concentrated in a few countries, with Egypt, Angola, Nigeria and South Africa getting a significant proportion. The inflows that South Africa has enjoyed in recent times has been attributed mainly to the privatization process, the return of companies that had relocated to neighbouring countries during the apartheid period, and the interest of investors in the South African large domestic market. Of the increase in FDI flows between 1995–1998 and 1987–1990, 33% went to four oil-producing countries: Angola, the Congo Republic, Equatorial Guinea and Nigeria. FDI in the oil industry remained dominant in 2002, with Angola, Algeria, Chad, Nigeria and Tunisia accounting for more than half of the 2002 inflows (UNCTAD, 2003a).

In 2002, Egypt, Angola, Nigeria and South Africa had a share of 61.9%. Given the importance of Tunisia in 2002, its inclusion brought these countries' share to 70.1% (UNCTAD, 2003). Swings of FDI to these countries have a major impact on the flows of FDI to Africa as a whole. Looking at FDI inward stock, it increased steadily over time from US\$32.2 billion in 1980, to US\$171.0 billion in 2002. In 1980, Africa had 4.6% share of global FDI inward stock. This share declined over time until it reached 2.4% in 2002 (UNCTAD, 2003a).

Similarly, Africa's share of FDI to developing countries declined over time from about 19% in the 1970s to 9% in the 1980s, about 3% in the 1990s and about 6.7% in early 2000s. This share is in contrast to that of the Latin America and the Caribbean region, which increased its share of FDI inward stock to developing

countries from 16.4% in 1980 to 32.6% in 2002. Even though Asia's share fell from 72% in 1980 to about 60% in 2002, it nevertheless attracted to itself the greatest share. In 1980, inward FDI stock was 8.2% of GDP. Ever since, the share steadily increased, reaching 30.6% in 2002 (UNCTAD, 2003a).

As shown in Table A3 in the appendix, there was a general increase in the net FDI flows to SSA in the late 1990s. The share of net FDI inflows to SSA relative to developing countries doubled from 2% in 1990–1995, to 4% in 1996–2001. The share of net FDI inflow to countries in the East African Community (Kenya, Uganda and Tanzania) relative to SSA remained fairly constant at 7% in the two periods, with Kenya losing mainly to Uganda. Kenya's share of net FDI in EAC declined from 28% in 1990–1995, to only 4% in 1996–2001, while that of Uganda increased from 8% to 54%. Tanzania's share declined from 64% to 46% over the same period.

Other regions performed better than Africa. Latin America had a ratio of 6.5% in 1980, but this rose to about 45% in 2002. Asia and Pacific had a share of 17.9% in 1980, which increased to 33.3% in 2002. Masked in Africa's aggregate figures are wide country variations. In 2002, for example, Tunisia had inward FDI stock as percentage of GDP of 66.2%. This is in contrast to Angola (98%), Zambia (70%) and Gambia (74.9%).

1.3 FDI Trends in East Africa

FDI inflows to East Africa had stagnated at around 2% of the total inflows in Africa from 1970 to 1990, after which it rose to 8% in 2000 and then dropped to 4% in 2003 (UNCTAD, 2005). According to UNCTAD's Annual Report (2011), East Africa exhibits the lowest in-flow of FDI when compared to other African recipients. While FDI inflows to Africa reached a record high of US \$ 88 billion in 2008, the inflow into East Africa represents a mere 5% (\$4 billion) of the total, almost the same as the previous year.

In 1970s and 1980s, cumulative FDI in the East African (EA) region was predominantly in Kenya, which had 87% of foreign ownership of the companies in the EA region as shown in Table A1 in the appendix. FDI grew steadily through the 1970s as Kenya was a prime choice for foreign Investors seeking to establish a presence in Eastern and Southern Africa due to the relatively high level of development, good infrastructure, market size, growth and openness (UNCTAD, 2005). Kenya also experienced remarkable growth during this period due to the rapid rise in agricultural output and the development of the industrial sector under high tariff protection.

In 1970s, Uganda experienced low levels of FDI inflows due to unfavourable political climate during Idi Amin's era (Obwona, 2001). This period was marked by "Economic War" of 1972 that resulted into the expulsion of the British-Asians, expropriation of the assets and businesses of foreign investors (mostly Asians),

and the eventual collapse of the industrial and commercial sectors. The investment climate for foreigners in Uganda during this period was very hostile due to political instability and insecurity, nationalization of industries and other businesses belonging to foreigners.

In recent period, however, Uganda and Tanzania have taken up an increasing share of FDI as shown in Figure 1.1.

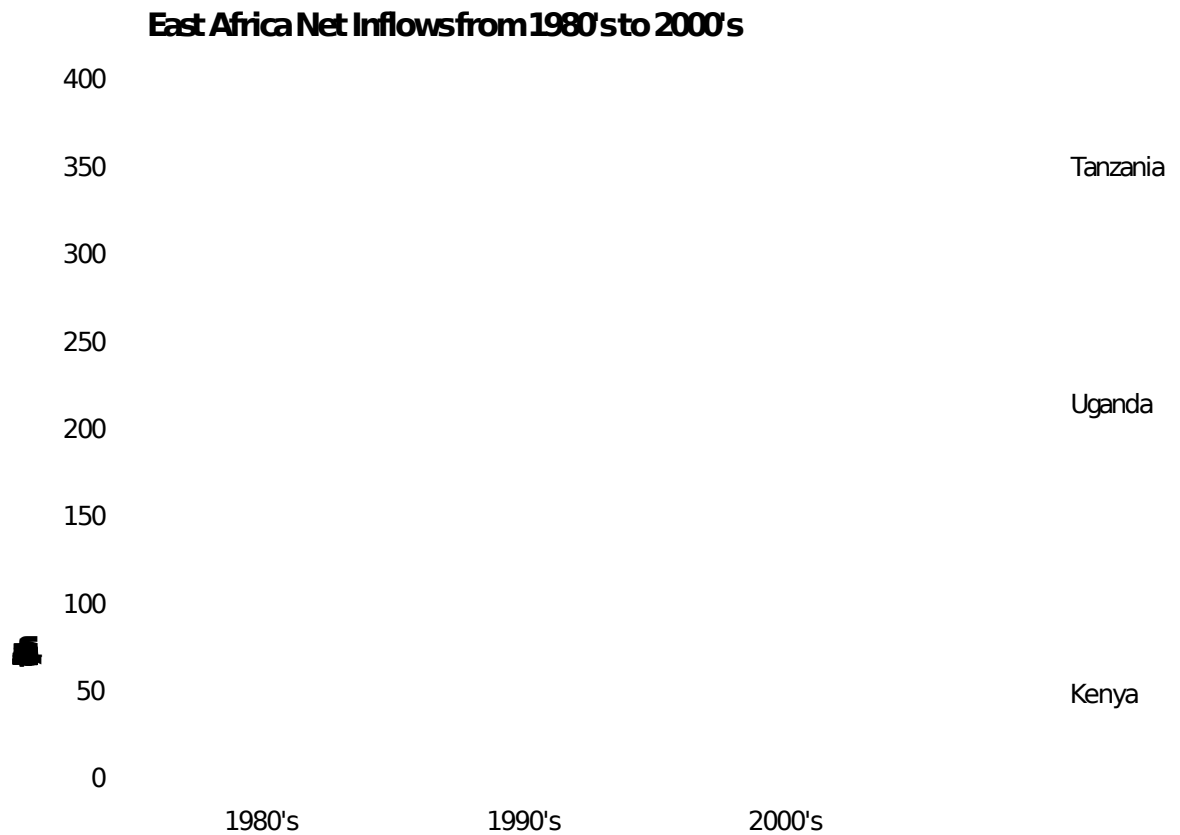


Figure 1.1 East Africa FDI Net Inflows from 1980's to 2006 in Millions of US \$

Source: UNCTAD FDI database and World Investment Directory (2008)

In the year 2002, for example, only 5.4% of foreign ownership in the East African region was in Kenya compared to 48.2% and 46.4% in Uganda and Tanzania, respectively. FDI flows to Kenya fell from 31.8% of the total in SSA, to less than 1% in the year 2002. In contrast, Uganda's share in the SSA region rose from 1.6% to 3.1%, and that of Tanzania rose from 2.0% to 2.9% during the same period.

Comparing the average FDI in the three largest economies in East Africa in the five years ending 2010; Uganda had the highest average at \$ 766 million followed by Tanzania which had \$ 654 million while Kenya had only \$210 million (World Bank Economic Update, 2013).

1.4 Investment Environment in East Africa

Foreign investment requires favourable economic, social and political conditions that enhance conducive environment for business. According to a study by Ngugi and Nyang'oro (2005), Kenya had lost FDI to other East African countries due to unfavourable business conditions. These conditions were related to cost of doing business, institutional set up, market size, infrastructure, price stability, political stability, just to mention but a few.

a) Institutional Factors

A study by KIPPRA and World Bank (2004) on enhancing the competitiveness of manufacturing sector, examined the role of investment climate on the private

sector. The study examined the impact of several business conditions such as institutional factors, cost of doing business, infrastructure, return on capital, market size and economic growth on investment, and drew a comparative analysis for the three East African Countries and South Africa. Table 1.1 shows the study findings on the firm’s perception about business environment. It shows the percentages of firms that evaluated various institutional factors as “major” and “severe” constraints.

Table 1.1: Firm’s Perception about Business Environment (% of firms evaluating constraints as “major” and “severe”)

Indicator	Kenya	Tanzania	Uganda
Corruption	73.8	51.0	38.2
Cost of finance	73.3	57.8	60.3
Crime, theft and disorder	69.8	25.4	26.8
Tax rates	68.2	73.4	48.3
Anti-competitive	65.3	24.3	31.1
Policy uncertainty	51.5	31.4	27.5
Macroeconomic instability	51.3	42.9	45.4
Tax administration	50.9	55.7	36.1
Electricity	48.1	58.8	44.5
Telecommunications	44.1	11.8	5.2
Access to finance	44.1	48.3	45.0
Customs administration	39.9	31.4	27.4
Transportation	37.4	22.8	22.9
Skills of workers	27.6	25.0	30.8
Access to land	24.6	24.6	17.3
Labour regulations	22.5	12.1	10.8
Business licensing	15.2	27.4	10.1

Source: World Bank/KIPPRA, RPED Kenya, 2003

Whereas about 70% of the investors rated corruption, cost of finance, crime, theft and disorder as major issues of concern in promoting private sector activities in Kenya, only 51% and about 58% of investors in Tanzania cited corruption and cost of finance as impediments, compared to 38% and 60% of investors in Uganda. Only 25% and 27% in Tanzania and Uganda, respectively, cited crime, theft and disorders as major impediments to investment.

Crime is a more severe deterrent to FDI flows to Kenya than to Uganda and Tanzania. In 1990s, Nairobi was rated by the UN as one of the most dangerous capital cities and was downgraded from class B to C in the UN classification of security. During the general election of 1997 and 2002, Kenya experienced internal conflicts characterized by tribal clashes, especially in Rift Valley and Coast provinces. This was compounded by the terrorist attacks in 1998 and post election violence in 2008, while Uganda and Tanzania continued to be relatively more peaceful.

Tax rates were major impediments in Tanzania (73%), followed by Kenya (68%) and finally by Uganda (48%). Telecommunication was considered a major constraint in Kenya by 44% of the investors, compared to only 12% in Tanzania and 5% in Uganda. About 65% of investors found Kenya's business environment to be anti-competitive compared to 24% in Tanzania and 31% in Uganda. Macroeconomic instability was a major concern in all the three countries.

Compared to Uganda and Tanzania, Kenya was rated more poorly in terms of policy uncertainty, customs administration, transportation and labour regulations.

As shown in Table 1.1, the firms' perception about institutional factors was generally much poorer in Kenya than in Uganda and Tanzania. Kenya was dogged by corruption, which resulted in the suspension of structural adjustment support in 1997 because of the constrained relationship between the government and development partners. All these Impediments partly explain Kenya's loss of FDI to her neighbouring countries.

b) Infrastructure Position

The deterioration in Kenya's infrastructure services and rising costs, particularly at a time of major improvements in infrastructure in other parts of the developing world, had also induced many foreign investors already established in the manufacturing sector to divest or consolidate their operations out of Kenya to Uganda and Tanzania in recent years (Ngugi and Nyang'oro, 2005).

The level of international communication, proxied by the minutes of outgoing traffic per subscriber was higher in East African (EA) countries starting with Uganda followed by Kenya and then Tanzania as compared to South Africa. While this may depict contact between residents of a specific country and other countries it may imply inefficiencies in the telecommunication channel, such that it may take longer to pass the same information in places with inefficient

telecommunication infrastructure which might explain why South Africa which was considered to be more developed had the lowest time taken by subscribers as compared to EA. The telephone per capita, as measured by telephone subscribers per 1,000 population, to capture the proportion of the population covered by the telecommunication network was found to be higher in Kenya than Tanzania and Uganda, but lower than in South Africa (Ngugi and Nyang'oro, 2005).

c) Market Size and Economic Growth

Large market size and high economic growth tend to attract horizontal FDI in a country. According to a World Bank Report (2004), Kenya had less GDP growth rate, GDP per capita and domestic investment than her neighbouring countries which might have discouraged market-seeking FDI.

d) Cost of Doing Business

The cost of doing business in terms of either operation or input costs is a key determinant of private investment in a country. Table 1.2 provides the cost of doing business across South Africa and East African Countries in 2004. The table shows that though the number of procedures and the cost of starting a business in Kenya was much less than in Uganda and Tanzania, it took much longer (47 days) to complete the process. This implied that contract enforcement took longer in Kenya than in her neighbouring countries. The high costs (as percentage of GNI

per capital) and long durations for contracts enforcement acted as a disincentive for foreign investments.

Table 1.2 Cost of Doing Business across Selected Countries

	Kenya	Tanzania	Uganda	South Africa
Starting a business (2004)				
No. of procedures	12	13	17	9
Duration (Days)	47	35	36	38
US\$ cost	223	514	306	358
Enforcing contracts details				
No. of Procedures	25	14	16	26
Duration (Days)	255	127	99	207
Cost (%GNI per capita)	49.5	3.8	10	16.7
Getting credit				
Private Bureau Coverage (borrowers per 1000 capita)	309	0	0	469
Private credit (%GDP)	25.69	4.66	5.45	72.17
Five Bank Concentration ratio (%)	57	72.60	76.30	74.90
Interest Rate spread (%)	12.94	15.47	11.83	5.08
Closing business a (2003)				
Actual time (years)	4.6	3.0	2.0	2.0
Actual cost (% of estate)	18	8	38	18

Source: World Bank Website <http://rru.worldbank.org/Doing> Business

The table also indicates that accessing financial capital (especially credit) was less difficult in Kenya as compared to Uganda and Tanzania where there were no private credit bureau coverage. However, the proportion of private credit available in Kenya was much less at about 26% of GDP than in South Africa at about 72%.

The intermediation cost was relatively higher in Kenya than in Tanzania.

Firms that are already established in Kenya took even longer (about five years) to close their business and perhaps relocate to other regions as compared to an average of about two years for the other countries. The actual cost as a proportion of the entire estimate was higher in Uganda than in other economies. The longer duration taken to close a business may make foreign firms to avoid such economies in the wake of risk.

e) Return on Capital

Despite Kenya having the largest economy in terms of GDP values, her growth rate of capital formation declined from 6.3% in the year 1996 to -0.71 in 2002, while that of Tanzania improved from -2.61% to 2.44%, with Uganda maintaining it at around 9.5% (World Bank, 2003). The growth rate for South Africa dropped slightly, which may be attributed to the size of the market as captured by its high GDP values compared to the rest of the economies. According to Ngugi and Nyangoro (2005) the low level of capital could signal higher returns for capital in Kenya as compared to neighbouring countries.

f) Tax incentives

According to Tax Justice Network-Africa and Actionaid International (2013) big tax breaks to multinationals had brought less FDI in Kenya than in Uganda and Tanzania, which had fewer holidays. FDI flows to Uganda, which provided fewer incentives than Kenya was the highest from 2006 to 2010 in EA. FDI to Tanzania

was significant but largely static while in Kenya FDI was low and erratic during this period.

1.5 The Statement of the Problem

It is widely recognized that there are several economic benefits that FDI inflows produce to recipient countries which include provision of capital, foreign exchange, technology, competition and access to foreign markets. Thus, developing countries, most of which have low investment rate and therefore, low per capita income growth rate, may improve their economic growth rate by importing capital from abroad in the form of foreign direct investment.

However, East African Countries continue to exhibit the lowest in-flow of FDI when compared to other African recipients, despite the substantial policy and structural changes as well as economic integration that have been taking place in East Africa in the last one decade. While FDI inflows to Africa reached a record high of US \$ 88 billion in 2008, the inflow into East Africa represented a mere 5% (\$4 billion) of the total, almost the same as the previous year. Moreover, there is a continuing unequal distribution of FDI flows in East African Countries. It is not clear what explains this pattern of FDI flows into the East African countries.

East African Countries suffer from institutional weaknesses such as corruption, poor application of the rule of law, political instability, among others, that raise the cost of doing business and thus constrain FDI inflows. Investors have rated institutional weaknesses such as corruption, crime, theft and disorder as major

issues of concern in promoting private sector activities in East African countries like Kenya.

There is great need to assess the extent to which the Institutional FDI Fitness model may apply in the case of East African Countries. This raises the need to examine the relationship between institutional factors and FDI inflows in some of these developing countries. Therefore, the purpose of this study is to examine the relationship between institutional factors and FDI inflows in the Eastern Africa in order to draw implications for the three East African Countries and determine the factors influencing FDI inflows.

1.6 Research Questions

- i) What are the institutional and governance factors that influence FDI inflows in East Africa?
- ii) What are the economic factors that influence FDI inflows in East Africa?
- iii) What are the policy implications of the study findings for East Africa?

1.7 Objectives of the Study

The general objective of this study is to identify the institutional, governance and economic factors influencing foreign direct inflows East Africa. Specifically, the study seeks to:-

- (i) Determine the institutional and governance factors that influence FDI flows in Eastern Africa.
- (ii) Determine the economic factors that influence FDI flows in Eastern Africa.
- (iii) Draw policy implications from the findings for East Africa.

1.8 Significance of the Study

Most of the studies that have been conducted have compared African Countries with other developing as well as developed countries (see Ngowi, 2001; Balasubramanyam, 2001; Rogoff and Reinhart, 2002; Makola, 2003; Mwege and Ngugi, 2005; Ngugi and Nyang'oro, 2005). However, as Asiedu (2001) has shown, Africa is different and thus policies that have been successful in other regions may not be equally successful in Africa. Moreover these studies have not only omitted some critical variables but have not used models that capture the uniqueness of each country in influencing the FDI.

This study has attempted to provide an empirical analysis of FDI inflows by using data from eight Eastern African countries, and drawing implications for the three East African Countries. It has estimated least squares dummy variable model and analyzed the relative importance and contribution of social, economic and political factors to FDI inflows in these countries. This would enable the policy makers to identify the key economic, social and political variables that influence FDI. The study has indicated the priority areas that should be examined by the

governments and other stake holders to improve the FDI flows in the three East African Countries. This would enable the policy makers to identify the key economic, social and political variables that influence FDI. This study has also made an empirical contribution to the literature on FDI and paved way for further research.

1.9 Scope and Limitations of the Study

The study has used data for eight Eastern African Countries and drawn implications for the three East African Countries, namely Kenya, Uganda and Tanzania during the period 1996-2010. Statistical data for some variables were not available in some countries in the Eastern African Region such as DR Congo and Burundi and hence they were not included in the study. The study relied on inter FDI inflows but did not use intra FDI inflows since the data was not available.

1.10 Organization of the Study

The study is structured as follows. The first chapter is an introduction that provides relevant facts and information about the FDI flows to Kenya, Uganda and Tanzania. Chapter two presents the theoretical and empirical literature. Chapter three focuses on the theoretical framework, empirical methodology, data collection, variables selection and data analysis. Chapter four has presented

empirical findings as well as the analysis and discussion. Finally chapter five presents the summary, conclusions and policy implications.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In this chapter, both theoretical and empirical literature on FDI is reviewed. The first section reviews the theoretical foundations that underlie FDI. The theoretical representations of the models are described. The second section reviews empirical literature on the subject, and the final section deals with the overview of the literature.

2.2 Theoretical Literature on Foreign Direct investment

Foreign direct investment (FDI) is defined by the World Bank as “investment made to acquire a lasting management in an enterprise operating in a country other than that of the investor.” In general, investment which includes at least 10% ownership of an enterprise in a foreign country is considered as FDI.

There are several theories advanced on determinants of FDI flows. These theories include; International Product Cycle (IPC); Dunning’s Eclectic Paradigm Theory (OLI); Internalization Theory (IT); Portar’s Diamond Theory, Institutional FDI Fitness Theory and Gravity Model of Trade. Each of these theories is discussed in the sections that follow.

2.2.1 International Product Cycle (IPC)

International Product Cycle Theory explains how newly developed products are first produced and exported from one developed country, but through product and competitive evolution, location of production and export of the product is shifted to other advanced countries and finally to less developed countries over time as the product matures (Vernon, 1966). The theory is based on the following three stages of product cycle:

The Stages of the Product Cycle

Figure 2.1 illustrates the three stages of product life cycle, namely: the new product, maturing product and standardized product.

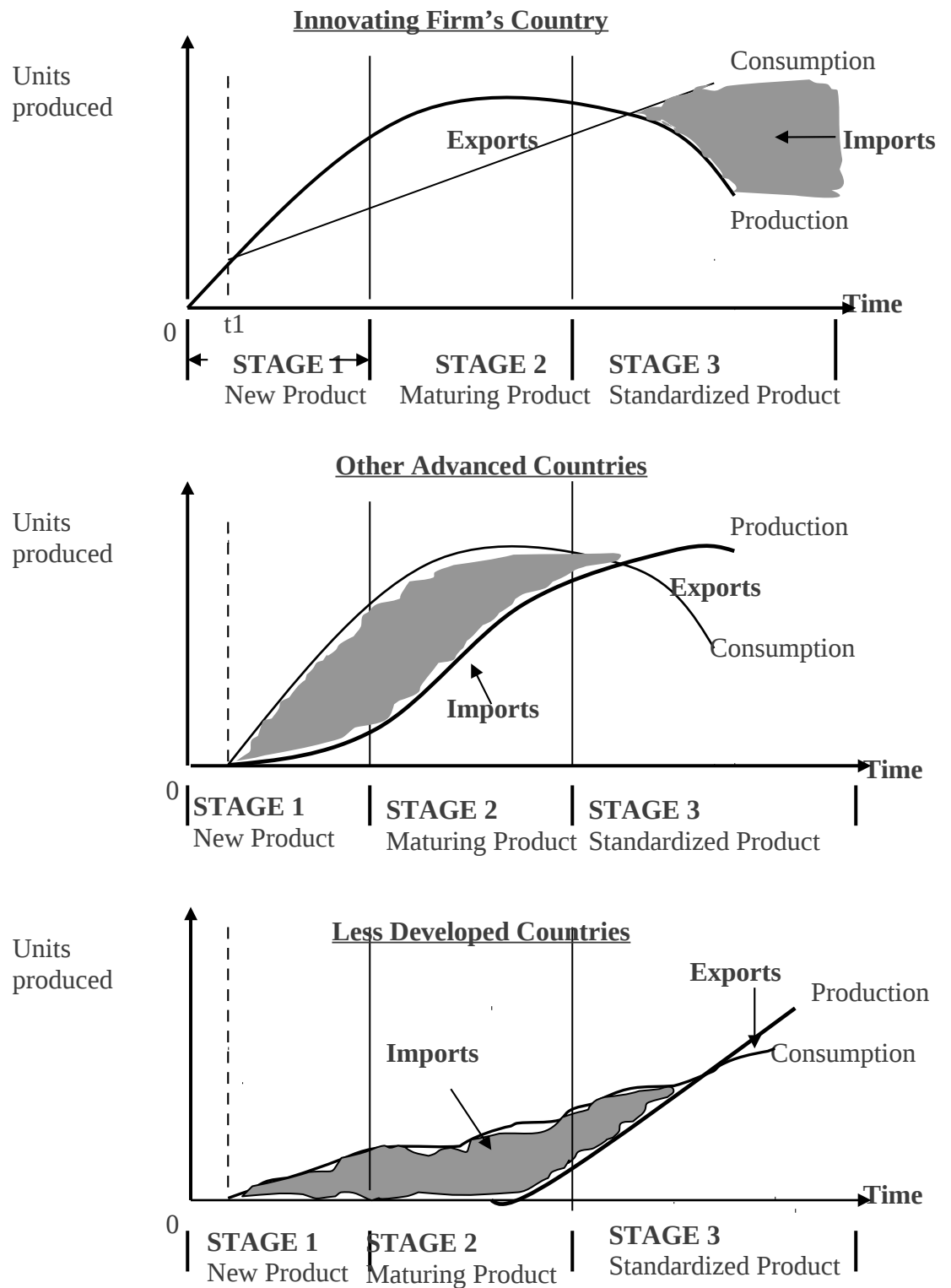


Figure 2.1: Trade Patterns and Product Cycle Theory

Source: <http://www.urenio.org>

Stage 1: The New Product Stage

During the new product stage, an innovative product is introduced by a firm in its home country in response to a perceived need in the domestic market. Given that innovation requires highly skilled labour and large quantities of capital for research and development, it can be assumed that the innovating firm is located in a developed country (Vernon, 1966). The product is produced and consumed in the country in which it is developed in the early stages from time t_0 to t_1 due to the high cost of production,. At time t_1 the innovating firm's country begins to export the product to other advanced (industrialized) countries, which then begin their own production but continue to be net importers as shown in figure 2.1.

Stage 2: The Maturing Stage

During the maturing product stage, the innovating firm establishes new plants to increase its production in order to meet the domestic and foreign demand for the product. With time the need for highly skilled labour declines as the basic technology of the product becomes more widely known and thus production capability in other industrialized countries expand. Products that are close substitute to the innovative firm's product are developed by competitors both from within and outside the country which leads to reduction of the prices and profit margin. The less developed countries begin to build their own plants to start their own production but remain to be net importers at this stage. With increased competition from foreign-based manufacturers using lower-cost labour, the firm

might decide to shift its production base abroad, preferably to less developed countries because of their competitive advantages of factor costs (Vernon, 1966).

Stage 3: The Standardized Product Stage

This stage is characterized by a relatively mass-production of the product with increasingly less-skilled labour and hence the product becomes completely standardized. The Less Developed Countries which are richly endowed with a large-sized unskilled labour population has the comparative advantage of production and thus start exporting the product to other countries. The LDCs expand their production to become net exporters as the innovating home firm's country reduces domestic production and increase imports.

2.2.2 Dunning's Eclectic Paradigm Theory (OLI)

The eclectic paradigm proposed by Dunning (1977) is basically a synthesis of other theories of international production. This theory considers two types of investment; The first one is related to economic activities that take place within national boundaries but related with goods and services directed towards foreign markets; and the second one is related to the activities of national economic agents that use resources located in a variety of countries to produce goods and services in order to supply foreign markets. According to this theory FDI occurs primarily due to the interaction of three sets of interdependent variables, namely, ownership, location and internalization' (Dunning, 1995).

a) Ownership Sub- Paradigm (O)

Ownership advantages are those that are unique to a particular firm and enable it to take advantage of investment opportunities abroad. Dunning (1995) points out that “O” specific advantages mainly refer to the resources and capabilities that firms possess in their home countries.” FDI would only occur when firms could benefit and exploit similar advantages from a foreign location. There are three main kinds of “O” specific advantages: Those relating to the possession and exploitation of monopoly power and the industrial organization (IO); Those relating to the possession of a bundle of scarce, unique and sustainable resources and capabilities; and those relating to the core competencies of firms such as technological knowhow, managerial skills and intellectual property rights.

b) Location Sub-Paradigm of Countries (and Regions)

Locational advantages are those which are specific to a country that is especially attractive for foreign investors. The location advantages (L) comprise three components: availability of resources which can only be used by firms in the location in which they are situated; immobile benefits such as special incentives in taxes and subsidies provided by a host country or a region; and the promised markets of a host country or a region.

c) Internalization Sub-Paradigm (I)

Internalization advantages are the benefits that derive from internal markets and that allow firms to bypass external markets and the costs associated with them. The I theory states that it would be more profitable for the multinational firm to exploit its “O” advantage and “L” advantage through internalization in case of existing market imperfection (Dunning, 2000).

2.2.3 Internalization Theory (IT)

The Internalization Theory (IT) explains why a firm would choose to own and operate its own factory overseas via FDI rather than use other means, such as exporting its products, franchising a brand name, or licensing technology to foreign firms. Internationalization theory is based on two main axioms:

- 1) Firms choose the least cost location for each activity they perform; and
- 2) Firms grow by internalizing markets up to a point where the benefits of further internalization are outweighed by the costs.

When the costs of internalizing a market are high, the firms opt to contract foreign firms by licensing their brand names or franchising their business operations rather than own and operate their own factories overseas. When the transaction costs of a cooperative exchange are lower than those of a market exchange, the market must be internalized in order to increase the collective efficiency of the group.

Buckley and Casson's (1976) theory of Multinational Enterprise (MNE) postulates that firms maximize profit in imperfect markets due to market imperfections and existence of incentives to internalize markets.

According to Buckley and Casson (1987) the advantages of internalization stem from market imperfections, especially when: there are long time lags to access unsatisfactory future markets and to implement alternative production processes; discriminatory pricing is needed to exploit market power efficiently; bilateral market power might be generated; there are uncertainties in the transfer of knowledge between parties; and there are imperfections deriving from government intervention by devices such as tariffs, taxation and restriction of capital movements. Buckley and Casson (1987) argue that knowledge is cheap and riskless when transmitted internally but not externally, which makes it easy to transmit across internal borders but not externally. Although this might explain why some firms generally prefer direct production abroad to licensing in their foreign operations, it certainly does not explain why firms prefer to serve foreign markets through international production rather than by exports.

The main problem with the internalization approach is that it may explain the growth of the firm but it does not explain why firms decide to take the multinational route. Another drawback is the relevance given to R&D and to the fact that MNEs tend to operate in knowledge-base industries.

2.2.4 Porter's Diamond Theory

Michael Porter (1990), in his book “the Competitive Advantage of Nations,” explains why a nation achieves international success in a particular industry, and why some nations succeed and others fail in international competition. He argues that success of a nation in a particular industry (competitiveness of national industries) and therefore success internationally comes from the interaction of four country and firm-specific elements:

- a) Factor conditions
- b) Demand conditions
- c) Related and supporting industries (the presence of world-class suppliers)
- d) Firm strategy, structure and rivalry (the commitment of companies of high standards and the presence of strong competitors to reinforce these commitments)

Porter represents these four elements as the corners of “the diamond of national advantage” presented in Figure 2.2.

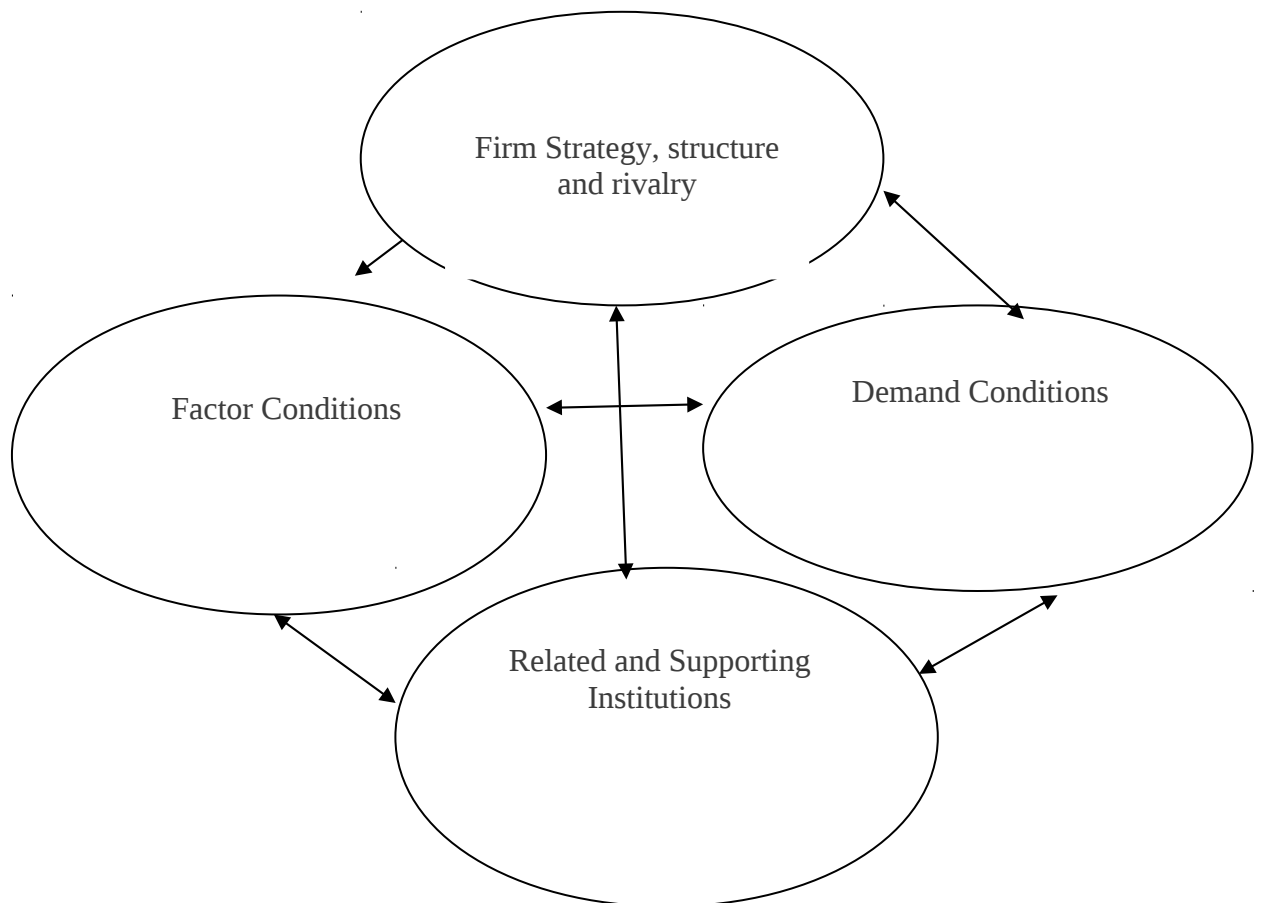


Figure 2.2 Porter's Diamond Model of National Competitive Advantage

Source:<http://www.themanager.org/models/diamonds.htm>

a) Factor Conditions

The ability of a country to compete internationally is greatly influenced by its endowment of factors of production such as skilled labor, arable land, natural resources, capital and infrastructure. According to the theory, nations are endowed with inherited and created factors with the latter being the most important. Factors can be classified into five categories: human resources (the

quantity, skills, cost of labor, management and work ethic); physical resources (cost of land, water, mineral, electricity, geographical location and cultural environment and other physical traits); knowledge resources (universities, scientific and technical research institutes); capital resources (the amount of cost of capital available to finance industry); and infrastructure (transportation system, communication system, mail and parcel delivery, payments of funds transfer, health care, housing stock and cultural institution). According to Porter (1990) nations gain competitive advantage depending on how effectively and efficiently they use their factors of production.

b) Home Demand Conditions

The existence of a large, sophisticated domestic consumer base often stimulates the development and distribution of innovative products, as firms compete for dominance in their domestic market (Porter, 1990). To satisfy the consumer's sophisticated need firms pursue innovation in production thereby gaining competitive advantage. According to Porter there are three major characteristics which lead to competitive advantage: the mix of customers' needs and wants; the demand size; and the internalization of domestic demand. A country can obtain national advantages in an industry or a market segment through perceiving the earlier signals of demand trends from domestic markets.

c) Related and Supporting Industries

An industry that is located within close proximity to its suppliers has competitive advantages from better communication and timely exchange of cost-saving ideas and inventions with those suppliers. Competition among the input suppliers is likely to lead to the industry being supplied with lower priced and technologically superior inputs which strengthens its competitiveness in the world markets. Porter (1990) points out that competitive advantage in some supplier industries confers potential advantages on a nation's firms in many other industries because it promotes innovation and internalization in many related aspects. Related industries located close to each other can have a close cooperation in several ways such as sharing of information and opportunities, thus reinforcing competitive advantage.

d) Firm Strategy, Structure and Rivalry

The domestic environment in which firms compete can hinder or enhance their international competitiveness. In a stiffly contested domestic environment, firms strive to maintain their market position through process and product innovation to reduce production costs and introduce new brands that can compete both in the domestic and international market.

Porter (1990) argues that no one managerial system is universally appropriate because it strongly ties to national culture and thus firms in different nations can have different factors like management structures, working morale or interactions.

Domestic rivalry and the search for competitive advantage within a nation can help firms to achieve such advantage on a global scale.

Porter's Diamond can be used in various ways. Organizations may use the model to create a competitive advantage in relation to others, both domestic and abroad. Governments can come up with suitable policies that would enable local industries to develop a strong global competitive position and create a more attractive investment environment for foreign investors.

According to this theory competitiveness is not totally endowed by nature. In the era of globalization, created competitive advantages are more important than natural ones. Government's real role in national competitive advantage is to influence the four determinants of the Diamond, which can be either positive or negative. Government's objective should be to create an environment in which firms can upgrade their competitive advantages. This may explain why governments all over the world today are trying to improve competitiveness through devaluation, deregulation and privatization, as well as opening market, promoting cooperation, encouraging investment, improving education, providing better infrastructure and stimulating innovation (Porter, 1990).

2.2.5 The Theory of Institutional FDI Fitness

The Institutional FDI Fitness theory postulates that it is institutions, their policies and implementation, rather than generic inflexible variables that give a country a competitive advantage in the global FDI market (Wilhelms, 1998). Generic variables control for broad underlying conditions that are intransigent or predetermined and thus seem inherent to a country. For instance, location is predetermined while total population size is an inflexible factor that responds extremely slowly to policies. According to this theory countries with high Institutional Fitness experience higher inflows of foreign direct investment than countries with low Institutional Fitness. High Institutional Fitness means that a country's institutions are transparent, well-functioning, reliable and predictable.

The term FDI Fitness refers to a country's ability to attract, absorb and retain FDI by reacting swiftly to dangers and opportunities, creativity and flexibility in carving out a niche in which a country can survive against competitors. This theory draws analogy with the Darwinian concept of the survival of the fittest by suggesting that it is not necessarily the largest and strongest countries that attract FDI but rather those which adapt most cleverly and fittingly to existing conditions.

The Institutional FDI Fitness theory explains why FDI flows are distributed so unevenly and often out of proportion to natural resources. Some seemingly disadvantaged countries have been able to attract relatively large FDI inflows

better than others that are more richly endowed with natural resources by developing favourable institutional framework, policies and laws. According to this theory there are four main FDI Fitness Institutions, namely government, markets, education and socioculture as represented by the Figure 2.3.

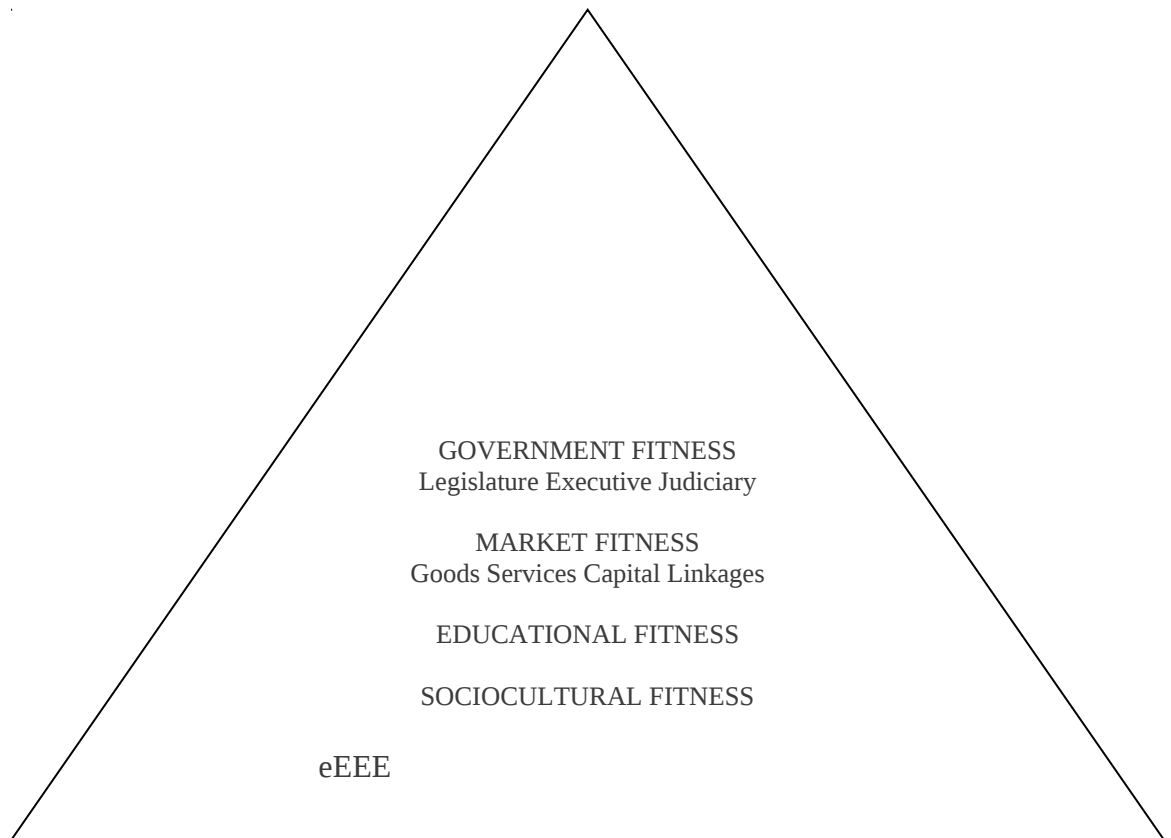


Figure 2.3 Pyramid of FDI Institutional Fitness

At the bottom of the Institutional Fitness Pyramid is the sociocultural system from which all other institutions are derived. Socioculture is the oldest, most diffused and complex of all the institutions and determines how a country's citizens are receptive to different sociocultural and business modes depending on their level of educational attainment, exposure to foreign cultures, and integration into the

global economy. The higher the degree of receptiveness and integration of a country's socioculture, the greater the capacity for attraction of FDI due to the perceived cultural proximity by foreign investors. For instance, East African region may be perceived as a suitable FDI location by investors from the region due to cultural proximity.

At the second level of FDI Fitness Institution Pyramid structure is Education, which builds human capital and equips it with the capacity to respond effectively and efficiently to the rapidly changing global economy. Educational fitness creates favourable environment for FDI through information, research, development and technology. The third level is the market fitness, which comprises the economic and financial conditions that are necessary to enhance FDI inflows. According to Wilhelms (1998), open competitive markets with protective regulation attract more FDI than markets subjected to directive regulation. Well-functioning markets are a pivotal aspect in the investment decision, because they affect the very essence of FDI projects, their financial and economic transactions.

At the top of the pyramid is the government fitness, which is responsible for regulation and coordination of the other three institutions through policies and their implementation that in turn determine FDI inflows. FDI Fitness Institutions interact in varying forms to influence one another but the net effect of this interaction affects FDI inflows.

2.2.6 The Gravity Model of Trade

The gravity model of trade is derived from Isaac Newton's Law of Gravitation which states that the attraction between two bodies is proportional to the product of their masses and inversely related to the square of the distance between them. The gravity model takes into account the population size of two places and their distance. Since larger places attract people, ideas and commodities more than smaller places, and places closer together have a greater attraction, the gravity model incorporates these two features. The relative strength of a bond between two places is determined by multiplying the population of city A by the population of city B and then dividing the product by the distance between the two cities squared.

The gravity model of trade in international economics is used to predict bilateral trade flows based on the economic sizes of (often using GDP measurements) and distance between two units (Tinbergen, 1962). The basic theoretical model for trade between two countries (i and j) takes the form of:

$$F_{ij} = G \frac{M_i M_j}{D_{ij}^2} \quad (2.1)$$

where F is the trade flow, M is the economic mass of each country, D is the distance and G is a constant. Developed in the 1960s (Linnemann, 1966), the gravity model describes the flow from an origin i to a destination j in terms of supply factors in the origin (income and population), demand factors in the destination (again, income and population) and various stimulating or restraining

factors relating to the specific flow, such as distance (as a proxy for trade costs) and trade preferences.

The gravity model has been successfully applied to flows of varying types such as migration, foreign direct investment, and more specifically to international trade flows (Tinbergen, 1962). According to this model, exports from country i to country j are explained by their economic sizes (GDP or GNP), their populations, direct geographical distances, and a set of dummies incorporating some type of institutional characteristics common to specific flows.

According to the generalized gravity model of trade, the volume of exports between pairs of countries, X_{ij} , is a function of their incomes (GDPs), their populations, their geographical distance, and a set of dummies,

$$X_{ij} = \beta_0 Y_i^{\beta_1} Y_j^{\beta_2} N_i^{\beta_3} N_j^{\beta_4} D_{ij}^{\beta_5} A_{ij}^{\beta_6} e^{u_{ij}} \quad (2.2)$$

where $Y_i(Y_j)$ indicates the GDPs of the exporter (importer), $N_i(N_j)$ are exporter (importer) populations, D_{ij} measures the distance between the capital cities or economic centres of the two countries, and A_{ij} represents any other factors aiding or preventing trade between pairs of the countries and u_{ij} is the error term.

The gravity model has also become useful in modeling regional patterns of FDI flows since the evolution of FDI over the past three decades shares some common features with the evolution of trade, (Brenton *et al.*, 1999).

2.3 Models of Multinational Activity

i) Vertical FDI

In vertical FDI models, firms locate different stages of production in different countries. The production processes are separated mainly to take advantage of factor price differentials across countries and hence, the Transnational Corporations (TNCs) activities are split according to their factor intensities. It is generally assumed that labor division within the TNCs is organized around an often skills or capital-intensive ‘headquarter’ activity, and a usually labor-intensive plant production abroad (Di Mauro, 2000).

ii) Horizontal FDI

This is a variety of FDI where similar types of production activities take place in different countries (Di Mauro, 2000). It is where multi-plant firms duplicate roughly the same activities in multiple countries. Horizontal FDI is motivated by the presence of economies of scale at the firm level. Given that firm-level scale economies exist, multinational activity in the horizontal model depends on the interplay between them and trade costs. Multinational production rises with increase in trade costs as long as plant-level economies of scale are not too high.

iii) Knowledge Capital Model

The knowledge-capital model provides a coherent framework for explaining FDI flows in a world where both horizontal and vertical TNCs co-exist. According to Carr, Markusen and Maskus (2001), the "knowledge-capital model" includes three principal assumptions: i) the services of knowledge-based and knowledge-generating activities such as R&D can be geographically separated from and supplied to production facilities at low cost; ii) these activities are skilled-labor intensive relative to production. This stimulates vertical FDI, in which production is fragmented and TNCs locate their activities according to factor prices and market size; iii) the services of knowledge-based and knowledge-generating activities have a (partial) joint-input characteristic, so that they can be supplied to many production facilities at low or zero cost. This fosters horizontal FDI in which TNCs produce the same goods or services in multiple locations.

2.4 Types of FDIs

Four types of FDIs have been distinguished in the literature on the basis of the investor's different strategic objectives (Brewer, 1993; Oxelheim, 1993; Dunning, 1994; Chudnovsky, Lopez and Porta, 1997). These include:

- a) Market-seeking FDI
- b) Efficiency-seeking FDI
- c) Natural-resources-seeking FDI

d) Strategic-assets-seeking FDI

2.4.1 Market-Seeking FDI

The market-seeking FDI is the type of investments geared towards providing access to the host country's (and sometimes also to its neighbouring countries') market (Brewer, 1993). Market seeking FDI can be classified into: defensive market-seeking investments, which are done for preventing host country's tariff or non-tariff barriers; and offensive market-seeking investments, which are done to take advantage of growing demand and to open up new markets (Brouthers and Werner, 1996).

2.4.2 Efficiency-Seeking FDI

This is the type of FDI where production is done in low-cost host countries and output is exported to the home country and/or other target markets. The FDI is motivated by low production costs "for increasing the efficiency of regional or global MNC activities" (Dunning, 1994). This FDI includes either components or final products to be exported to the home country or other countries. Most efficiency-seeking foreign investments in developing countries tend to be vertically integrated and most horizontally integrated FDIs are concentrated in the advanced industrial economies (and particularly in some of the knowledge intensive sectors).

2.4.3 Natural-Resources-Seeking FDI

The purpose of the natural-resources-seeking investments is to use the raw materials available in the host country and lacking in the home country (Brouthers

and Werner, 1996). This kind of FDI projects are "typically oriented to export for world markets rather than for the domestic host country market" (Brewer, 1993). According to Borsos-Torstila (1998), raw materials are used either for export or further processing and sale in the host country.

2.4.4 Strategic-Assets-Seeking FDI

This is an investment aimed at acquiring resources and capabilities that an investing firm believes will sustain or advance its core competencies in regional and global markets. (Dunning, 1994). These strategic assets include innovatory capability, organizational structures and access to foreign distribution channels. This kind of FDI occurs in capital, technology or information intensive sectors, and oligopolistic market sectors.

2.5 Empirical Literature

Empirical literature classifies determinants of FDI into two broad categories, namely: traditional and non-traditional factors. Traditional factors are those that are quantitative in nature and thus can be directly measured and expressed numerically. These include factors such as economic growth rate (GDP), public investment, public debt, degree of openness, inflation rate, rate of return on investment and population. Non-traditional determinants are those factors that are more qualitative in nature, and consequently, are not always susceptible to direct measurement. These factors contribute to what might be called a country's "business environment" and they can generally be gauged through surveys of the

investor firms. These non-traditional factors are usually measured indirectly through the use of proxy and dummy variables. These factors include infrastructure, quality of labour, political stability and economic integration.

Most of the research on FDI in developing countries has concentrated on the traditional factors (Tsai, 1994). But increasingly, researchers are coming to the conclusion that FDI is strongly influenced by non-traditional determinants. While non-traditional factors are more difficult to measure, their role in economic development seems undeniable. As a result, it is essential that any research on the determinants of FDI attempt to account for them.

Studies on how institutional and governance as well as other factors impact on FDI flows have been conducted using different techniques and methodologies. In this section, some of those studies are reviewed.

Wilhelms and Witter (1998) tested the Institutional FDI Fitness theory by conducting ordinary least squares (OLS) analysis for 67 developing countries between 1978 and 1995. The functional form of the model was specified as follows:

$$FDI = b_0 + b_1G + b_2M + b_3E + b_4S$$

where G, M, E and S represented government, markets, education and socioculture variables.

Economic openness to investment and trade, law and order, and a corruption free environment were the governmental fitness factors. Market fitness was reflected in a balanced tax system, high trade volume, strong financial intermediation, and sound urban and rural infrastructure.

The study found that governmental and market fitness played the central role in attracting FDI. More generic variables such as location, socioculture, and total population were not or only lowly correlated with FDI inflows. Economic policies such as high degree of openness and their implementation were found to be instrumental in attracting FDI. Favourable economic, legal and infrastructure framework had positive and significant effect on FDI. The study concluded that adjustable policy variables carried more weight than intransigent variables in line with the Institutional FDI Fitness theory.

This study was limited in its methodology, since it used OLS regression technique, yet perhaps more suitable panel data regression methods such as fixed effects or random effects model would have generated better results. The study was carried out more than a decade ago before a lot of technological, social, institutional and economic changes had taken place. During this time, a lot of data

to do with institutions was not readily available for many developing countries, especially in Africa, thus limiting the study.

Brenton and Mauro (1999) used a ‘gravity model’ approach to assess the impact of the various factors in the Central and Eastern European countries (CEECs) on FDI flows. Their model was expressed as follows:

$$L_n X_{ij} = \alpha + \beta_1 \ln Y_j + \beta_2 \ln POP_j + \beta_3 \ln Dist_{ij} + \sum \mu_1 D_{kij}$$

where X_{ij} was the value of any flow (FDI, imports or exports) or stock (FDI) from country i (source country) to country j (host country); Y_j was the income of country j ; POP_j was the population of country j ; $DIST_{ij}$ was the distance between countries i and j ; D_{kij} were dummy variables representing preferential relationships between i and j , which stimulate the flow/stock taken into account. The volume of the relevant flow into a country was explained by the level of income of that country and its absolute size as proxied by population.

Their study findings indicated that income had a positive relationship with FDI flows, while population and distance had a negative relationship. The coefficient of the EU dummy was insignificant for all investing countries except Japan where it was negative. Thus, these regression results conveyed the overall impression that host country membership in the EU did not significantly influence the stock of inward FDI. However, the sample size for each source country was between

35 and 50, so that roughly 15 EU countries could account for close to half of the sample. One of the weaknesses of this study is that since few other countries of similar per capita income were located in geographical proximity to the group, the EU dummy was likely to be correlated with the other explanatory variables. It was not entirely clear, therefore, whether the coefficient of the EU dummy provided an accurate measure of what FDI would be in the absence of European economic integration. Secondly, this study omitted non-traditional factors such as infrastructure, quality of labour and political stability.

In a study aimed at analyzing the potential changes in Estonian foreign direct investment inflows in the context of integration into the European Union, the Estonian Investment Agency and the Faculty of Economics and Business Administration of the University of Tartu carried out four surveys of foreign investors from 1997 to 2000 (Reiljan and Andresson, 2001). The sample consisted of 199 different firms that were divided into four different groups – markets-seeking investors (65%), efficiency-seeking investors (18%), natural-resources-seeking investors (10%), and strategic-assets-seeking investors (7%). FDI determinants were grouped by means of principal component analysis. The five principal components described 64.5% of the variation of initial indicators and included: stability and progress of the transformation process (C1); attractiveness of the Estonian market (C2); infrastructure (C3); labor (C4); potential of the neighbouring markets (C5)

The type of foreign investor (TFI) was used as a dependent variable and strategic-assets-seeking investors (TFI_j) was set to the base category and the principal components were used as independent variables in the multinomial logistic regression. The model was expressed in the following form:

$$\text{Log} \left[\frac{P(TFI_i)}{P(TFI_j)} \right] = B_{i0} + B_{i1}C_1 + B_{i2}C_2 + B_{i3}C_3 + B_{i4}C_4 + B_{i5}C_5 + \mu_i$$

where TFI_i denoted the type of foreign investor,

TFI_j – strategic-assets-seeking foreign investors,

C_i – the generalized component,

B_{ij} – the coefficient,

u_i – the disturbance term.

The results of the multinomial logistic regression analysis indicated that attractiveness of the Estonian market was likely to increase the flows of market-seeking and decreasing flows of natural-resources-seeking investors as compared to strategic-assets-seeking investors. The potential of the neighbouring markets was more important for all types of investors other than strategic-assets-seeking ones. Labour was a significant determinant in the case of market- and efficiency-seeking investors. Other principal components – stability and progress of transformation and infrastructure – were not significantly different from 0. Thus, there were no significant differences in the impact of these factors on the decisions taken by different groups of foreign investors.

Results of the analysis also suggested that the inflow of market-seeking foreign direct investments to Estonia would not be significantly changed after integration to the European Union. At the same time, impact of the integration on efficiency-seeking foreign investments was unambiguous. In the case of natural-resources-seeking and strategic-assets-seeking foreign investments, Estonia's integration into the European Union was not likely to increase significantly the inflows of these types of foreign investments to Estonia.

However, the above results had several limitations. First, only the type of the foreign investor had been taken into account, whereas other aspects should have also been considered. Moreover, the analysis covered only a small range of FDI determinants and the nature of the data limited the methods of analysis.

Asiedu (2002) studied the determinants of Foreign Direct Investment (FDI) in developing countries and examined why Sub-Saharan Africa (SSA) had been relatively unsuccessful in attracting FDI despite policy reform. The dependent variable was FDI/ GDP, while the independent variables included the return on investment, openness and infrastructure development for SSA and non-SSA countries, and an African dummy. The results indicated that the factors that drove FDI to developing countries had a different impact on FDI to SSA. Specifically, infrastructure development and a higher return on capital promoted FDI to non-SSA countries. In contrast, these factors had no effect on FDI to SSA. Openness to trade promoted FDI to both SSA and non-SSA countries. However, the

marginal benefit from increased openness was less for SSA – suggesting that trade liberalization would generate more FDI to non-SSA countries than SSA countries. Another important finding was that, all else being equal, FDI was uniformly lower in SSA. This indicated that there was an “adverse regional effect” for SSA: a country in SSA would receive less FDI by virtue of its geographical location, implying that Africa was different.

The results had three policy implications. First, to enhance FDI flows, African countries needed to liberalize their trade regimes. Furthermore, the full benefits to trade liberalization would be realized only if investors perceived reform as credible and not subject to reversal. As a consequence, African governments should develop mechanisms to enhance the credibility of the reform process. Second, policies that had been successful in other regions should not be blindly replicated in Africa, since these policies might have a differential impact on Africa. Finally, the results suggested that Africa was perceived as overly risky and therefore a country in the region would receive less FDI by virtue of its geographical location. This perception might be partly attributed to ignorance about countries in the continent. One way to dispel this myth was for governments to disseminate information about their countries.

The choice of independent variables for this study was constrained by data availability. For example, data on important factors such as real wages, trade policies and tax legislation were not readily available for most developing

countries, particularly for countries in SSA. Since the analysis called for the inclusion of many African countries, the study was unable to test the impact of these important variables on FDI.

Levy-Yeyati *et al.* (2002a and 2003) used the OECD database containing bilateral FDI stocks between developed and some selected developing countries. Their results suggested that regional integration, on average, contributed to attracting FDI, but the benefits were unlikely to be distributed evenly. They made a simulation and found out that the Free Trade Area of the Americas (FTAA) would clearly increase FDI from US and Canada and from the rest of the world to Latin America. However, the specific impacts could differ according to the characteristics of the different host countries.

They found that common membership in a RIA with a source country increased FDI from that source by around 27 per cent. Countries that were more open and whose factor proportions differed more from those in the source country were likely to benefit more, as they tended to receive FDI of the vertical variety. They also found that the increase in the size of the market associated with regional integration contributed to attracting more FDI to the RIA as a whole. However, only member countries that offered a more attractive overall environment for FDI were likely to be winners in this game. The study findings also indicated evidence of a small FDI diversion effect that affected on average non-member countries.

This study was limited by omission of other important factors that influenced FDI flows.

Inmaculada (2003) evaluated the determinants of bilateral trade flows among 47 countries, and particularly, the effects of preferential agreements between several economic blocs and areas: European Union (EU), North-American Free Trade Area NAFTA), Caribbean Community (CARICOM), Centro-American Common Market (CACM), and other Mediterranean countries (MEDIT). The period under study was from 1980-99. He estimated a gravity equation that allows the comparison of the weight of the influence of preferential agreements and also inferred the relevance of other determinants of bilateral trade flows such as geographic proximity, income levels, population and cultural similarities. The analysis was undertaken for each year of the sample in order to capture the temporal evolution of the impacts on trade of the different variables considered. Using the estimation results as a base, trade potentials resulting from new free trade agreements were calculated.

The estimated gravity equation was specified as:

$$\ln X_{ijt} = \alpha_{ij} + \beta_1 \ln Y_{it} + \beta_2 \ln Y_{jt} + \beta_3 \ln N_{it} + \beta_4 \ln N_{jt} + \beta_5 D_{ij} + X_h \gamma_h P_{ijh} + \mu_{ijt}$$

where:

X_{ijt} were the exports from country i to country j in period t.

Y_{it} , Y_{jt} indicated the GDP of countries i and j , respectively, in period t .

N_{it} , N_{jt} denoted the population of countries i and j , respectively, in period t .

D_{ij} was the great circle distance between countries i and j .

P_{ijh} were dummies representing preferential trade agreements.

α_{ij} were the specific effects associated to each bilateral trade flow. They are a control for all the omitted variables that were specific for each trade flow and that were time invariant.

The gravity equation above was estimated by applying several methodologies. In the year-by-year estimations, Ordinary Least Squares (OLS) were used. In the estimations for segmented sub-periods, the between estimator (averaging the data over every 5 years) was used, and for estimations with only one exporting country (Spain or Mexico), the within estimator for the whole sample period was used.

The findings of the study indicated that the exporter income elasticity remained fairly constant, declining slightly from 1.83 in 1980 to 1.53 in 1999. However, the importer income elasticity considerably decreased in magnitude from 1.32 in 1980 to 0.36 in 1999. The declining magnitude of the coefficients of the importer country indicated an increasing inelasticity of bilateral trade with respect to the income of the importing country. The population of the exporting country had a negative relationship with exports, implying that larger countries were endowed with more resources and thus would be more self-sufficient. The population coefficients of the importing country were positive, which indicated that the

country size was directly related to trade. Larger countries had a greater capacity to absorb imports than their smaller counterparts.

The results also pointed to an uneven distribution of costs and benefits of integration in favour of the bigger countries that would industrialize more rapidly. The distance variable had a negative relationship with exports. The language dummy had the expected positive sign, which implied that language and cultural differences were significant factor in creating trade resistance.

The dummy variables for membership in a trade preference scheme showed mixed results. For the EU, NAFTA and CARICOM, the coefficients were positive for all years and statistically significant, which indicated the consolidation and effectiveness of these groups as an integration scheme. Coefficients for the dummy variables for MAGREB and MASHREK were negative and insignificant for most of the years, showing the ineffectiveness of these two groups.

In a study to compare the intra and extra regional impact on FDI of two European Union (EU) enlargements (Spain and Portugal in 1986, and Austria, Finland and Sweden in 1995), De Sousa and Lochard (2004) showed that Spain and Portugal did not benefit from more FDI, whereas the 1995 enlargement generated additional foreign investment in the new member countries. In turn, according to Sekkat and Galgau (2001), the European Single Market increased FDI inflows into EU countries from other EU member states, but it did not significantly affect

FDI inflows from non-EU member states. Regarding intra-regional FDI inflows, regional integration had a strong positive impact in small EU countries, while its impact was more subdued in large EU countries where country specific structural factors played an important role in attracting FDI. When it came to extra-regional FDI, whereas no effect was found for the EU as a whole, the authors state that the Single Market had significantly increased FDI inflows from non-EU countries into some EU members. Again, this effect was stronger in small countries.

Jaumotte (2004) examined whether the market size of a RTA influenced the FDI received by participating countries. In addition to traditional determinants of FDI, the FDI model included a measure of RTA market size (for countries belonging to RTAs) as shown below:

$$\ln FDI_{i,t+1} = \lambda \ln FDI_{i,t} + \alpha_1 \ln(Y_{i,t}) + \alpha_2 (\ln REG_{i,t}) + \beta_1 \ln(g_{Yi,t}) + \beta_2 (REGg_{Yi,t}) + \gamma_1 \ln(educ_{i,t}) + \gamma_2 \ln(GAP_{educi,t}) + \delta_1 \ln(stabfin_{i,t}) + \delta_2 \ln(GAP_{stabfinai,t}) + \phi_1 \ln(tv_{i,t}) + \phi_2 \ln(GAP_{tvi,t}) + \theta_{res} (X / Y)_{it} + \mu_i + \omega_{t+1} + \varepsilon_{1,t+1}$$

where FDI denoted the stock of FDI (in 1995 U.S. dollars); Y denoted real GDP (in 1995 U.S. dollars); g_Y denoted real GDP growth; $educ$ denoted the average years of education of people over age 15; $stabfin$ was the financial risk index of the Political Risk Services Group; tv was the number of televisions per capita; $res(X/Y)$ was the measure of trade openness; REG was the market size extended to include RTA market size for countries belonging to a RTA; $REGg_Y$ was the average real growth rate in RTA partner countries (including country i); the prefix GAP was the ratio between the domestic value of the variable and the average

value for all countries sharing a RTA with country i (including country i itself), μ denoted the country's fixed effect and ω was the time effect.

The estimations were carried out on a sample of 71 developing countries over the period 1980–99 and yielded a significantly positive effect of RTA market size on FDI. However, domestic population size also appeared to matter, possibly reflecting a labor supply effect rather than a market size effect. The estimations revealed that countries within the same RTA could not benefit to the same extent as those from a different RTA. Countries with relatively higher education and financial stability tended to attract a larger share of the FDI at the expense of other RTA members. The findings also indicated some evidence of FDI diversion between RTA countries and countries which did not belong to an RTA.

Bevan and Estrinb (2004) used a panel dataset of bilateral flows of foreign direct investment (FDI) to study the determinants of FDI from Western countries, mainly in the European Union (EU), to Central and Eastern European ones from 1994 to 2000. Denoting the year by t , the source country by i and the host country by j , they estimated the following specification:

$$FDI_{ij}^t = f(GDP_i^t, GDP_j^t, distance_{i,j}, trade_j^t, ULC_j^t, r_{ij}^t, risk_j^t)$$

where $GDP_{i(j)}^t$ represented the size of the source (host) country, ULC_j^t was unit labor costs in the host country, r_{ij} measured the interest rate differential between the source and host countries, $trade_j$ measured the openness of the host

economy, and $risk_j$ captured a vector of institutional, legal and political factors in the host country.

The study found out that FDI was related positively to both source and host country GDP and related inversely to the distance between the countries and to unit labor costs. Hence, investment to the region had been both market seeking and efficiency seeking.

Ngugi and Nyangoro (2005) studied the relationship between FDI and various institutional factors for developing countries and drew implications for Kenya using panel data for the period 1990 and 2000. The study investigated how several traditional and non-traditional factors impacted on the FDI flows in Kenya, such as investment return, market size, macroeconomic stability, external shocks, institutional risk factors, infrastructure and labour factors. The study estimated an empirical model that was defined as follows:

$$Y_{it} = \alpha_i + \beta X_{it} + \mu_{it}$$

$$\mu_{it} \sim N(0, \sigma^2_{it})$$

$$i = 1, \dots, N$$

$$t = 1, \dots, T$$

where X_{it} was a vector of all the identified independent variables; Y was dependent variable; $\mu_{it} = \mu$

$i + \omega_i + v_{it}$; μ_i was unobservable individual specific effects, ω_i were the unobservable time effects, v_{it} was a stochastic disturbance term, i was the observation (country) while t was the time period.

Specifically, the empirical model was defined in general as follows:

FDI = f(Investment return; Market size; Macroeconomic variables; Institutional factors; Infrastructure; Labour factors)

The results of the study showed that both traditional and non-traditional determinants such as investment return, market size, macroeconomic variables, infrastructure, labour factors and institutional factors were important in attracting FDI. To attain the best rating for Kenya, it meant 200% improvement in law and order, 140% improvement in government stability, 100% improvement on socioeconomic status, and 30% improvement on democratic status to allow FDI flow to increase by between 0.4% and 23%. Therefore, there was need for the government to improve its macroeconomic environment and strengthen its institutional base. The study recommended that the Kenya government puts a lot of resources to curb crime and restore law and order, embrace positive democratic practices, maintain its stability and embrace zero-tolerance on corruption more emphatically to gain substantially in investment growth and more so in FDI flows.

The weaknesses of the study included looping together developing countries from all over the world and exclusion of important factors that were likely to influence

FDI flows in East Africa such as internet use. Moreover the study did not use dummy variables for each country to examine the uniqueness of each country in influencing FDI inflows.

López and Eugenia (2005) estimated the impact of various factors on FDI inflows to MERCOSUR countries using gravity model for the period 1984-2002. They employed dummy variables to capture the effect of regional integration on FDI. In their regressions they estimated the following form of the basic gravity model to explain FDI flows to country i from country j :

$$FDI_{ij,t} = \gamma RIA_{ij,t} + \eta GDP^{RIA-S}_{ij,t} + \beta_i GDP_{Host,j,t} + \beta_j GDP_{Source,i,t} + \phi ICRG_{j,t} + \lambda Priv_{j,t} + \delta INFLATION_{j,t} + \phi_t + \alpha_{ij} + u_{ijt}$$

where $FDI_{ij,t}$ stood for bilateral FDI flows (from country i to country j) at time t , $RIA_{ij,t}$ was a set of different country dummy variables which took the value of one at time t if the host country was a member of one of the following regional integration agreements: MERCOSUR, North American Free Trade Agreement (NAFTA), Andean Community (CAN), Central American Common Market (CACM), Caribbean Community (CARICOM), Australia-New Zealand Free Trade Area, Central European Free Trade Agreement (CEFTA), European Union, European Free Trade Association (EFTA), Gulf Cooperation Council (GCC) and Association of Southeast Asian Nations (ASEAN), and zero otherwise.

$GDP^{RIA-S}_{ij,t}$ was the GDP Extended RIA Source variable.

$GDP_{j,t}$ was the logarithm of the real GDP of the host country.

$GDP_{i,t}$ was the logarithm of the real GDP of the source country.

$ICRG_{j,t}$ was a variable that aimed to capture the political and institutional environment in host countries under the assumption that a good environment had a positive influence on FDI attraction. It was based on the Political Risk Index elaborated by the International Country Risk Guide (ICRG). The Index ranged from 0 to 100 points and was built with 12 weighted variables: Government Stability, Socioeconomic Conditions, Investment Profile, Internal Conflict, External Conflict, Corruption, Military in Politics, Religion in Politics, Law and Order, Ethnic Tensions, Democratic Accountability and Bureaucracy Quality. The higher the Index, the lower was the host country risks.

$Priv_{j,t}$ was the amount involved in privatizations made in the host country at period t.

$Inflation_{j,t}$ was the annual inflation rate of the host country at period t, to control for macroeconomic instability.

ϕ_t were year dummy variables for the 1984-2002 period. These variables picked up the effects of any factors affecting bilateral investments that varied over time, were constant across pairs and had not been included in the list of explanatory variables,

α_{ij} were the country pair fixed effects.

They performed the Hausman test to determine whether fixed or random effects could be employed in their estimation. Under the null hypothesis of that test, both estimators were consistent but the random effects estimator was more efficient. In this case, the null hypothesis was decisively rejected in all estimations. Hence, all reported results were based on fixed effect estimations.

The coefficient of the GDP Extended RIA Source variable was found to be negative and statistically significant in all the specifications, which implied an FDI diversion/dilution effect. FDI inflows were positively correlated with the country's GDP growth and inversely related to the inflation rates and the political risk in host countries. FDI inflows were also attracted by privatizations. Country pair factors invariant in time (such as distance, factor endowments, colonial links, common language, etc.) also impacted on FDI inflows. Their study findings indicated that regional integration agreements, in general, induced higher FDI inflows to host member countries. This implied that MERCOSUR countries could expect increases in FDI inflows as a result of both agreements under study. However, the study was inconclusive, since it suggested that the impact of regional integration on FDI could differ according to the nature of the regional agreement, the countries involved and other factors.

Tianshu (2006) used panel data to investigate the relationship between the formation and implementation of a regional trade agreement and foreign direct investment in China. The model that had FDI as a dependent variable and several

economic factors as independent variables was estimated by introducing RTAs as dummy variables to capture the effect of RTAs on FDI. Country effect was also estimated in the model. The study used RTA dummy variables to measure preferential relationships between China and country *i*, which could stimulate FDI flows.

The regression results indicated that multinational corporations did not make their investment into China just according to the distance between them and China, and their exports shares in China. They would consider total economic factors to maximize their profits. Therefore, they would decide to increase their direct investment according to China's large market size, higher market growth rate, labour and capital prices, and China's continuing economic and trade reform. Regional trade agreements were found to have an important impact on the changes of FDI stocks in China. Most of the RTAs had resulted in increasing intra-regional direct investment, thus decreasing their investment outside the region.

Mottaleb (2007) studied the determinants of FDI and its impact on economic growth in 60 developing countries from the three continents, namely, Asia, Africa and Latin America. The study estimated the following model:

$$\ln(\text{FDI})_{it} = \lambda_0 + \lambda_1 \ln(\text{GDP})_{it} + \lambda_2 \text{GDPGR}_{it} + \lambda_3 \text{INV}_{it} + \lambda_4 \text{INTER}_{it} + \lambda_5 \text{TELE}_{it} +$$

$$\lambda_8 \text{TRCit} + \lambda_9 \text{TRDit} + \lambda_{10} \text{CPIit} + \lambda_{11} \text{BCit} + \lambda_{12} \text{TRit} + z_{it}$$

where

FDI = Foreign Direct Investment

GDP = Gross Domestic Product

GDPGR = Annual growth rate of GDP per capita

INV =Industrial value added (% of GDP)

INTER =Internet user (per 1000)

TELE =Telephone mainline (per 1000)

TRC = Time required to enforce a contract (days)

TRD =Time required to start a business (days)

CPI =Corruption perception index

BC = Cost of business start-up procedures (% of GNI per capita)

TR =Trade (% of GDP)

z is the error term with white-noise properties and λ_0 is a scalar parameter

----- λ_{10}

are the parameters of interest.

i ($i=1$ -----60) stands for individual countries

and t ($t=2003, 2004, 2005$) for the sample years.

The study found out that countries with larger GDP and high GDP growth rate as well as friendly business environment with abundant modern infrastructural facilities, such as internet could successfully attract FDI. FDI, on the other hand,

significantly affected economic growth of a country. On the other hand, unfriendly business environment and high business start-up costs discouraged FDI inflow in the developing countries.

Based on the empirical findings, the study suggested that developing countries should try to create business friendly environment and develop some necessary institutions to reduce the extent of corruption and to control the factors that increase both visible and invisible business start-up costs. A reduction in corruption and the expansion of infrastructural facilities could reduce transaction, information, communication and business start-up costs. It could contribute to the development of a business friendly environment, which could encourage inflow of FDI to the developing countries and also might contribute to attainment of rapid economic growth in the developing countries. The study, however, failed to isolate continental effects by studying developing countries from each continent separately.

2.6 Overview of Literature

From the foregoing literature review, it is evident that several studies have been carried out on the factors that influence FDI, but most of these are cross-country studies, usually employing comparative analysis using several countries from all over the world. However, these studies have failed to isolate continental and regional effects, yet some studies such as Asiedu (2002) have shown that African

countries and more so the Sub-Saharan region , for instance, are unique to some extent when it comes to attraction of FDI flows. The comparison of East African countries with other developed and developing countries as is the case with most of the studies ignores the unique economic, social, political and cultural environments of these countries.

Most of the studies that have been done especially for African countries have left out some important institutional and governance factors such as internet use, among others, which are likely to be of great significance in East Africa. East African Countries have experienced several institutional and governance changes such as growth of information and communication technology (ICT) as indicated by the rapidly increasing use of internet and mobile phones, ethnic/political violence, among others, which have had their impact on FDI flows. Inclusion of these variables in the study will reflect a more accurate and detailed picture from which more suitable policy guidelines can be drawn.

Many of the previous studies have used landline telephone subscription as a measure for infrastructure. However growth in ICT has seen communication through landline telephone being gradually replaced by use of internet and mobile phone. Use of internet as a proxy variable for infrastructure is thus more reliable than use of landline telephone subscription.

Most of the studies have used ordinary least squares and at best random or fixed effects modeling technique which fail to capture the unique unobserved heterogeneity across time and individual countries. This study has addressed this limitation by conducting further tests to determine the most appropriate technique for the estimation of the model.

The current study is a cross-country study for eight Eastern African countries with implications drawn for three East African Countries, namely Kenya, Uganda and Tanzania, to determine the institutional, governance and economic factors influencing FDI inflows while including some of the above mentioned variables that have been omitted in the previous studies such as internet use and political stability. Panel data was used for a longer period from 1996 to 2010. A more appropriate one-way least squares dummy variable model was estimated to capture the unique factors that hinder or enhance FDI inflows in each country.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter presents the empirical model adopted for the study. The variables used in the study are defined. The data, the data sources and the methods to be used in data analysis are explained.

3.2 Research Design

This study aimed at determining the institutional, governance and economic factors that influence FDI flows in East Africa. For empirical analysis, data were collected for Eastern Africa comprising eight countries, namely; Rwanda, Kenya, Uganda, Tanzania, Ethiopia, Seychelles, Mauritius and Madagascar. This was necessitated by the fact that there was no sufficient data to allow for empirical analysis of the three East African Countries.

Quantitative data was used in the study to answer the research questions posed in chapter one. Non-experimental panel data analysis was used. The study used the data for the period 1996 to 2010 for the dependent and independent variables of eight Eastern African Countries. Least Squares Dummy Variable Model Estimation technique was employed for analysis of various variables included in the model. FDI was the endogenous variable on which the exogenous variables

were regressed. These exogenous variables included both traditional and non-traditional factors that influence FDI. Several diagnostic tests were conducted to examine the significance of fixed and random effects. Hausman Test was conducted to determine whether to use fixed or random effects model to estimate the panel data.

3.3 Theoretical Framework

According to Görg and Greenaway (2002), the application of gravity models to FDI issues has received theoretical foundations by the development of the knowledge-capital model. The model predicts that FDI becomes more dominant relative to domestic production and trade as countries become more similar in terms of relative size and endowments. The model also predicts that relatively similar factor endowments between countries encourage horizontal FDI and vice versa (Carr *et al.*, 2001).

3.3.1 The Empirical Model

The study estimated an empirical model that was defined as follows:

$$Y_{it} = \alpha_i + \beta X_{it} + \mu_{it} \quad \mu_{it} \sim N(0, \sigma^2_{it}) \quad i = 1, \dots, N \quad t = 1, \dots, T \quad (3.1)$$

where X_{it} was a vector of all the identified independent variables; Y was dependent variable; α and β were coefficients; i was the observation (country) while t was the time period.

$\mu_{it} = \omega_t + v_{it}$; μ_i was unobservable individual country specific effects, ω_t were the unobservable time effects, and v_{it} was a stochastic disturbance term.

Assumptions about the error term determined whether we examined fixed effects or random effects models. In a fixed effects model, μ_{it} was assumed to vary non-stochastically over i or t , making the fixed effects model analogous to a dummy variable model in one dimension. In a random effects model, μ_{it} was assumed to vary stochastically over i or t requiring special treatment of the error variance matrix.

3.3.2 The Model Specification for FDI inflows

The model for FDI inflows was specified as follows:

$$\text{FDI}_{it} = \alpha_i + \beta_1 \text{GDP}_{it} + \beta_2 \text{EXDS}_{it} + \beta_3 \text{INF}_{it} + \beta_4 \text{LIR}_{it} + \beta_5 \text{OPEN}_{it} + \beta_6 \text{CORR}_{it} + \beta_7 \text{GOVEFP}_{it} + \beta_8 \text{STABP}_{it} + \beta_9 \text{REGQUP}_{it} + \beta_{10} \text{LAWP}_{it} + \beta_{11} \text{NET}_{it} + \mu_{it}$$

(3.2)

where FDI_{it} was the ratio of foreign direct investments to nominal GDP in country i at time t , with GDP_{it} , EXD_{it} , INF_{it} , LIR_{it} , and OPEN_{it} being the corresponding GDP growth, debt service on the external debt, Inflation rate, lending interest rate and degree of openness. The corresponding institutional and

governance variables included: CORRI_{it}, GOVEFP_{it}, STABP_{it}, REGQUP_{it} and LAWPI_{it}, representing percentile ranks of Control of Corruption, Government Effectiveness, Political Stability and Absence of Violence/Terrorism, Regulatory Quality and Rule of Law. NET_{it} represent internet users per 100 people

A linear functional form of the model was used for estimation since the variables were measured in terms of rates. Using simple pooled OLS estimation method might have provided biased and inefficient estimators because of the unobserved heterogeneity among the sample countries. Therefore, appropriate estimation techniques (either fixed or random effect model) were used to estimate the equation.

3.4 Types of Panel Analytic Models

Panel data could be estimated using any of the following models:

- a) Pooled effects or constant effects models
- b) Random effects models
- c) Fixed effects models

The Hausman specification test was conducted to decide which of these models was appropriate to estimate the panel data in this study.

Pooled effects models are used under the assumption that there are no unique attributes of individuals within the measurement set, and no universal effects across time. Both intercept and slope coefficients are constant. In the event that

there is neither significant country nor significant temporal effects, we could pool all of the data and run an ordinary least squares regression model. Random effects models assume that there are unique, time constant attributes of individuals that are the results of random variation. In this case, the effects do not correlate with the individual explanatory variables.

3.5 Fixed Effects Models

These models are used when there are unique attributes of individuals that are not the results of random variation and that do not vary across time. They are used when the individual effects are correlated to the explanatory variables. The slopes are constant but intercepts differ according to the cross-sectional (group) unit—in this case the country. Although there are no significant temporal effects, there are significant differences among countries in this type of model. While the intercept is cross-section (group) specific and in this case differs from country to country, it may or may not differ over time.

Fixed effects estimators are sometimes referred to as within-groups estimators, since they depend only on deviations from their group means. If the cross-sectional effects are correlated with the regressors, then the cross-sectional effects will be correlated with the group means. Ordinary least squares estimation on the pooled sample would be inconsistent, even though the within-groups estimator would be consistent. If, however, the fixed effects are uncorrelated with the regressors, the within-groups estimator will not be efficient. If there is only

variation between the group means, then it would be permissible to use the between-groups estimator, but this would be inconsistent if the cross-sectional errors are correlated with the group means of the regressors (Davidson and MacKinnon, 1993).

The fixed effects estimator could be carried out by first transforming the variables of estimation by subtracting person-specific means and then running OLS on the transformed variables. If the variables were estimated with deviations from the mean, then the fixed effects were done away with by removing means of these variables across individual cross-sectional units. In this study a Least-Square Dummy Variable (LSDV) was estimated. In this case, a different dummy variable for each individual unit was included to remove the fixed effects from the estimation.

3.6 Stationarity Analysis

Panel unit root test was conducted to investigate whether there were any variables in the model that were non-stationary. This is a standard procedure performed to ensure that the series have a constant mean and variance, so that the resultant regression results would be meaningful (Tsay, 2001). Otherwise, if non-stationarity of the series is present and not checked, the presence of trend in the data series would mean that the regression results are spurious.

The Im-Pesaran-Shin (IPS) panel unit root was performed. The IPS estimates the t -test for unit roots in heterogeneous panels (Perron, 1998). The test allows for individual effects, time trends and common time effects. It is based on the mean of the individual Dickey-Fuller (DF) t - statistics of each unit in the panel, and assumes that all series are non-stationary (have unit roots) under the null hypothesis that all panel contain unit roots.

3.7 Diagnostic Tests

To examine whether fixed and/or random effects existed in the panel data, joint validity of fixed and period effects and Hausman's test were conducted.

3.7.1 Testing for Joint Validity of Fixed and Period Effects

The joint validity test was conducted to test the significance of time fixed effects. A time fixed effect (implemented with a time indicator variable) required regressors' variation over units within each time period. The null and alternative hypotheses were stated as follows:

H₀: both individual and period specific effects are equal to zero.

H_A: both individual and period specific effects are not all equal to 0.

Accepting the null hypothesis would imply that time effects were not jointly significant and hence a one-way fixed effects model would be preferred to two-way fixed effects model.

3.7.2 Hausman Test

The Hausman specification is a Chi-square test with $k-1$ degrees of freedom, where k =number of regressors. The null hypothesis is that the difference in coefficients is not systematic (i.e. random effects), against an alternative of systematic difference in coefficients (i. e. case of fixed effects). If the calculated χ^2 is greater than the critical value at a certain significance level, then the null for a fixed effects model is rejected. This implies that there are differences across the cross-sectional units that need to be captured.

The Hausman specification test was conducted to decide whether the fixed or random effects model should be used. This test was mainly based on the consistency and efficiency of the random and fixed effects estimators depending on the correlation between the individual effects and the regressors. The test sought to determine whether there was significant correlation between the unobserved person-specific random effects and the regressors. Absence of such correlation would imply that the random effects model would be more powerful and parsimonious. If there was such a correlation, then random effects model would be inconsistently estimated and the fixed effects model would be the model of choice.

The test for this correlation was a comparison of the covariance matrix of the regressors in the Least Squares Dummy Variable (LSDV) model with those in the random effects model. The null hypothesis was that there was no such correlation. If there was no statistically significant difference between the covariance matrices of the two models, then the correlations of the random effects with the regressors would be adjudged to be statistically insignificant.

Table 3.8 Definition and Measurement of Variables

Variable	Definition	Measurement
FDI inflows	This is the annual foreign direct investment inflows from countries in the world to each of the Eastern African Country	FDI net inflows as % of GDP
GDP growth rate	This is the average annual growth rate of real GDP	Annual % Change in GDP at constant prices
Inflation (INF)	The persistent rise in general price level of goods and services in an economy over a period of time.	Annual % changes in consumer prices.
Rate of return on investment (LIR)	The rate of return on capital for each country	The domestic lending interest rate (%) of each country
Openness to trade (OPEN)	The degree to which countries or economies permit or have trade with each other.	Summation of exports and imports as percentage of GDP of a country.
Debt service on external debt (EXDS)	The annual proportion of GDP used to refinance external debt	External debt refinance as a proportion of GDP
INTERNET (NET)	The rate of use of internet used as a proxy for the quality of infrastructure	Internet users per 100 people
Control of corruption (CORR)	Perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.	Percentile Rank of control of corruption
Government effectiveness (GOVEFP)	Perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.	Percentile Rank of Government Effectiveness
Political stability (STABP)	Perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism.	Percentile rank of Political Stability and Absence of Violence/Terrorism
Regulatory Quality (REGQUP)	Perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.	Percentile Rank of Regulatory Quality
Rule of Law (LAWP)	Perceptions of the extent to which agents have confidence in and abide by the rules of society, and the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.	Percentile Rank of Rule of Law

3.9 Data Type and Sources

The research has used secondary data from World Development Indicators (WDI) for the period 1996 to 2010 for the eight Eastern African Countries namely, Kenya, Uganda, Tanzania, Rwanda, Ethiopia, Mauritius, Madagascar and Seychelles. Other sources of data included official government documents such as Statistical Abstracts, Economic Surveys, Development Plans, Central Banks Publications, Economic Reports of the countries and World Bank updates.

CHAPTER FOUR

EMPIRICAL FINDINGS

4.1 Introduction

This chapter presents the study findings and discussions. Panel data regression analysis was used to determine the effect of economic, institutional and governance factors on FDI inflows in East African Region. First, the descriptive statistics and pairwise correlations of the variables are presented and discussed. Second, the diagnostic tests results are explained and interpreted. Finally, the panel data regression results of fixed effects models are presented and discussed. The empirical findings are presented as per the study objectives.

4.2 Descriptive Statistics

Descriptive statistics were used to describe the basic features of the data in this study. Table 4.1 presents summary statistics for the variables of the eight countries between 1996 and 2010.

Table 4.1 Overall Summary of Descriptive Statistics of Eastern Africa Countries

	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis
FDI	3.30	2.10	17.37	-0.61	3.68	1.65	5.35
GDP	5.43	5.77	13.85	-12.68	4.07	-0.96	5.75
EXDS	2.99	2.01	27.20	0.34	3.38	3.93	25.15
INFL	7.87	6.87	44.39	-8.24	7.15	2.01	10.41
LIR	18.41	16.91	49.00	7.00	8.03	1.37	5.82
CORR	40.81	34.02	82.44	8.78	21.34	0.27	1.55
GOVEFP	40.50	37.31	77.18	6.34	17.30	0.45	2.42
STABP	35.21	23.56	88.94	2.89	27.21	0.63	1.87
REGQUP	37.87	36.89	76.56	7.35	17.45	0.22	2.24
LAWP	40.66	38.15	82.30	4.31	20.76	0.56	2.47
OPEN	37.19	27.05	122.68	12.77	25.63	1.52	4.52
NET	5.62	0.66	41.00	0.001	9.37	2.27	7.85

Source: Constructed from the Study Data

Key: FDI is the ratio of foreign direct investments to nominal GDP; GDP is the GDP growth, EXD is the debt service on the external debt as per cent of GDP; INF is the inflation rate; LIR is the lending interest rate; CORR is the percentile rank of control of corruption; GOVEFP is the government effectiveness; STABP is the political stability and absence of violence/terrorism; REGQUP is the regulatory quality; LAWP is the rule of law; OPEN is the degree of openness and NET is the internet users per 100 people

The results presented in Table 4.1 show that the average FDI inflows as a per cent of GDP for all the countries over the study period was 3.3%, while the average economic growth rate for the region was 5.4% over the study period. The ranking of the five institutional and governance variables was generally poor, as it was less than 50, with the highest average being 40.8 for corruption. There was a wide variation in the mean rate of use of internet, with the highest being 40 and the lowest being 0.001. This implies that some countries in the region were lagging behind in ICT. Generally, many countries in the region had low degree of economic openness as evidenced by the low average of openness.

4.3 Pairwise Correlation Matrix

Table 4.2 shows the pairwise correlation between the variables. Most of the variables show significant correlation.

Table 4.2: Pairwise Correlation

	FDI	GDP	EXDS	INF	LIR	OPEN	CORR
FDI	1.0000						
GDP	-0.1030	1.0000					
EXDS	0.4392	-0.1417	1.0000				
INF	-0.0051	-0.1440	-0.0355	1.0000			
LIR	0.0394	-0.2130	-0.0085	-0.1059	1.0000		
OPEN	0.6260	-0.2629	0.1768	0.6795*	-0.1497	1.0000	
CORR	0.3385	-0.1949	-0.0613	0.3015	0.0083	0.7092*	1.0000
GOVEFP	0.2810	-0.1479	0.3571	-0.0262	-0.1099	0.7189*	0.7329*
STABP	0.3813	-0.2391	0.4978	-0.0982	-0.0245	0.8374*	0.8681*
REGQUP	-0.0339	-0.1269	0.0064	-0.0780	0.2338	0.2147	0.3041*
LAWP	0.3241	-0.1775	0.3066	-0.0656	-0.0376	0.7055*	0.7890*
NET	0.5675	-0.1505	0.6075	0.0872	-0.2901	0.7841*	0.4644
		GOVEFP	STABP	REGQUP	LAWP	NET	
GOVEFP		1.0000					
STABP		0.8058*	1.0000				
REGQUP		0.6248	0.3481	1.0000			
LAWP		0.8753*	0.8814*	0.5772	1.0000		
NET		0.5598	0.5664	0.2097	0.4655	1.0000	

* Significant at 5% level

Source: Constructed from the Study Data

It is worth noting that some explanatory variables were highly correlated. For instance, political stability and rule of law were highly positively correlated.

Other variables that were highly correlated to political stability included openness, corruption and government effectiveness. Openness was highly correlated to corruption, government effectiveness, rule of law and internet connectivity. Given the high correlation between some of the variables and the inherent problem of multicollinearity, some of the highly correlated variables were dropped in the estimation. Using the pairwise correlation matrix, the following explanatory variables were used in the estimation of the model: GDP growth (GDP), debt service on the external debt (EXDS), inflation (INFL), rate of return on investment (LIR), political stability (STABP), corruption (CORR), rule of law (LAWP) and internet use (NET).

4.4 Unit Root Tests

Panel unit root test was conducted to investigate whether there were any variables in the model that were non-stationary. The Im-Pesaran-Shin (IPS) panel unit root was performed. The test allowed for individual effects, time trends and common time effects. It was based on the mean of the individual Dickey Fuller (DF) t- statistics of each unit in the panel, under the null hypothesis that all panel contained unit roots (non-stationary). A summary of the IPS panel unit root tests are presented in Table 4.3

Table 4.3: Panel Unit Root Test

Variable		Constant	Constant +Trend
Foreign Direct Investment (FDI)	Level	-4.9291*** (0.009)	-2.5934*** (0.0025)
Gross Domestic Product (GDP)	Level	-3.1516*** (0.0001)	-3.5552 *** (0.0000)
Debt Service on External Loan (EXDS)	Level	-2.5841** (0.0168)	-4.1412*** (0.0000)
Inflation	Level	-3.0674*** (0.0001)	-3.1247 *** (0.0001)
Lending Interest Rate (LIR)	Level	-2.7029** (0.0327)	-2.6063** (0.0403)
Control of Corruption (CORR)	Level	-2.4613** (0.0242)	-2.6255*** (0.0042)
Political Stability (STABP)	Level	-2.8292*** (0.0023)	-2.4007*** (0.0068)
Regulatory Quality (REGUP)	Level	0.2769 (0.6091)	-1.4570 ** (0.0726)
	First difference	-4.5086*** (0.0000)	1.3683* (0.0856)
Rule of Law (LAWUP)	Level	-3.0510*** (0.001)	-0.5562 (0.7110)
Internet (NET)	Level	1.5600 (1.000)	-1.0181 (0.9592)
	First difference	-1.8069** (0.0354)	-1.6303** (0.0485)

Note: ***, **, * indicates rejection of the null hypothesis that all panels contain unit roots at 1%,5%, and 10% levels of significance, respectively. The number in parenthesis is the p value
Source: Constructed from the Study Data

All variables were stationary at levels, except regulatory quality and internet, which were only stationary at first difference. For all series, the null hypothesis of unit root test was rejected at either 1 per cent or 5 per cent level of significance.

Hence, based on IPS test, there was strong evidence that the series were in fact integrated of order zero, with the exception of regulatory quality and internet use, which became integrated at order one.

4.5 Testing for Joint Validity of Fixed and Period Effects

The joint test that all of the coefficients on the indicator variables were zero was a test of the significance of time fixed effects. A time fixed effect (implemented with a time indicator variable) required regressors' variation over units within each time period.

A test for joint validity of fixed and period effects was conducted. The null hypotheses were stated that both individual and period specific effects are equal to zero, against alternative hypothesis that both individual and period specific effects are not all equal to zero. Table 4.4 shows the results of the joint test.

Table 4.4: Test of Cross-Section and Period Fixed Effects

Fixed time effects test		
(1) period1 = 0	(2) period2 = 0	(3) period3 = 0
(4) period4 = 0	(5) period5 = 0	(6) period6 = 0
(7) period7 = 0	(8) period8 = 0	(9) period9 = 0
(10) period10 = 0	(11) period11 = 0	(12) period12 = 0
(13) period13 = 0	(14) period14 = 0	
Constraint 1 dropped		
F(13, 90) = 0.98	Prob > F = 0.4774	

Source: Constructed from the Study Data

The null hypothesis was accepted, implying that time effects were not jointly significant and hence a one-way fixed effects model was preferred to two-way fixed effects model.

4.6 Hausman's Specification Test

The Hausman's specification test for exogeneity of the regressors versus the alternative of endogeneity of regressors was conducted to choose whether to estimate a fixed effects model (FEM) or a random effects model (REM). This test was mainly based on the consistency and efficiency of the random and fixed effects estimators depending on the correlation between the individual country effects and the regressors. The test was conducted to determine which effect (fixed effect or random effect) was more relevant and significant in the panel data under the null hypothesis that individual effects were uncorrelated with any regressor in the model. The results of the test are presented in Table 4.5

Table 4.5 Hausman Test for Comparing Fixed and Random Effects

	Coefficients			
	(b) Fixed	(B) Random	(b – B) Difference	sqrt(diag (V_b- V_B)) S.E.
GDP	0.0876793	0 .0316114	0 .0560679	.
EXDS	-0.0082692	0 .1843707	-0.1926399	.
INF	-0.0549313	-0.0366918	-0.0182395	.
LIR	0 .2296301	0 .1054872	0 .1241429	0 .0052368
CORR	0 .043289	0 .0264784	0.0168106	.
STABP	-0.1250073	-0.0353742	-0.089633	.
LAWP	0 .0767509	0 .0230571	0 .0536938	0 .0181935
NET	0.2137485	0.2199168	-0.0061683	.
<p>b = consistent under Ho and Ha; obtained from xtreg B = inconsistent under Ha, efficient under Ho; obtained from xtreg Test: Ho: difference in coefficients not systematic $\text{chi2}(8) = (b-B)'[(V_b-V_B)^{-1}](b-B)$ $= 604.86$ Prob>chi2 = 0.0000</p>				

Source: Constructed from the study data

The null hypothesis of no correlation (random model preferred) was rejected on the basis of these results, leading to the conclusion that the individual effects μ_i were significantly correlated with at least one of the regressors in the model, and therefore, a fixed effect model was more appropriate than the random effect model (Greene, 2008).

4.7 Empirical Results

4.7.1 Fixed Effects Model Estimation Results

The first objective of the study was to determine the institutional and governance factors that influence FDI inflows in Eastern Africa Region, while the second objective was to determine economic factors that influence FDI inflows. A fixed effects model comprising economic, institutional and governance factors was estimated.

The test for joint validity of fixed and period effects showed that one-way fixed effects model was the most appropriate. This model acknowledged cross-section heterogeneity and assumed a different intercept for each country included in the sample by including a matrix of dummies in the estimation. These fixed effects may represent differences in political, institutional and economic policy systems that are not explicitly included in the specification, but which is accounted for when estimation is done, ultimately leading to more representative estimates. This was evident from the fact that this model had the highest adjusted R^2 value of 0.76. For this reason, the model was regarded the most representative and robust model specification.

The least squares dummy variable model (LSDV) was estimated. Some of the institutional variables were dropped owing to their high degree of correlation as

indicated earlier. One of the eight country dummies, i.e. for Uganda, was excluded from the regression equation in order to avoid perfect multicollinearity.

The specific LSDV model estimated was expressed as follows:

$$FDI_{it} = \alpha_i + \beta_1 GDP_{it} + \beta_2 EXDS_{it} + \beta_3 INF_{it} + \beta_4 LIR_{it} + \beta_5 CORR_{it} + \beta_6 STABP_{it} + \beta_7 LAWP_{it} + \beta_8 NET_{it} + \mu_1 ethi + \mu_2 ken + \mu_3 mad + \mu_4 mau + \mu_5 rwa + \mu_6 sey + \mu_7 tza + \varepsilon_{it}$$

4.1

where μ_i were the respective parameter estimates for the country dummies.

The regression results of the model are provided in the Table 4.6.

Table 4.6 Least Squares Fixed Effects Model Estimation Results

Dependent variable : Foreign Direct Investment Inflows (FDI)			
Independent Variable	Coefficient	Standard Error	Probability
Constant	-4.055947***	1.436058	0.006
GDP	0.0876793*	0.0469841	0.065
EXDS	-0.0082692	0.0768998	0.915
INF	-0.0549313**	0.02568	0.035
LIR	0.2296301***	0.0378704	0.000
CORR	0.043289*	0.0262273	0.100
STABP	-0.1250073***	0.0280776	0.000
LAWP	0.0767509**	0.0346724	0.029
NET	0.2137485***	0.0290904	0.000
ETHI	2.454844***	0.9100842	0.008
KEN	-0.7252009	0.89411	0.419
MAD	0.9806411	1.3556	0.471
MAU	-0.789619	1.64957	0.633
RWA	-1.069693	1.099579	0.333
SEY	9.138714***	1.719781	0.000
TZA	1.431108*	0.7856891	0.071
Adjusted R-squared	0.7625		
F-statistic	26.47***		
Prob(F-statistic)	0.000		
***/**/* indicate significance of the coefficient or rejection of the null hypothesis at 10%/5%/1% level of significance. Country specific fixed effects are reported in Appendix			

Source: Constructed from the Study Data

The results showed that all except the estimated coefficients of political stability had expected theoretical or hypothesized signs. The model fitted well and explained 76% of variations in the FDI inflows. All the four coefficients of macroeconomic variables except GDP growth rate and the external debt service were statistically significant at 1% or 5%.

4.8 Discussion of the Results

a) Institutional and Governance Factors

Four institutional and governance variables, namely, infrastructure (NET), rule of law (LAWP), corruption (CORR) and stability (STABP) were included in the model for estimation. The coefficients of political stability and internet use were statistically significant at 1% while rule of law was significant at 5%. Consistent with the Institutional FDI Fitness model, all the institutional and governance variables were found to significantly influence the FDI inflows in the region except control of corruption which was only significant at 10%. The Institutional FDI Fitness model postulates that it is not the intransigent generic conditions, but rather the institutions, and their policies and implementation that are pivotal to increasing foreign direct investment (Wilhelms, 1998).

The Institutional FDI Fitness model predicts that, all else equal, countries with high Institutional Fitness experience higher inflows of foreign direct investment than countries with low Institutional Fitness. High Institutional Fitness means that a country's institutions are transparent, well-functioning, reliable and predictable. Countries with high quality institutions provide an environment for both investment attraction and expansion of existing firms, since it attracts a favourable environment for operation for foreign investors. Institutional reforms that change laws, rules and regulations, create a better investment climate in an economy by reducing transaction costs, hence, creating opportunities that attract FDI.

According to this theory, one of the institutional or FDI Fitness variables with the highest correlation with FDI includes the rule of law. The coefficient of the rule of law was found in this study to be statistically significant at 5%. An increase in the percentile rank in the rule of law by 1 unit increased FDI inflows as a per cent of GDP by about 0.07 units. A strong rule of law implied a particularly low likelihood of government contract repudiation or expropriation as well as strong protection of investors' rights by the legal system (Morgan, 1998). Ngugi and Nyangoro (2005) noted that where law and order was observed, growth in FDI inflow was higher, since a risky environment discouraged investments by either reducing the investment return or scaring away potential investors.

The World Investment Report of 1998 published by UNCTAD stated that infrastructure definitely exerted its influence on the inflow of FDI. Wheeler and Moody (1992) also showed that “well developed infrastructure” was a determinant of capital investment by multinationals. In line with these findings, the study showed that infrastructure, proxied by internet use, had a positive effect on FDI, and was statistically significant at 1%. An increase of one unit of internet user per 100 people was likely to increase FDI inflows as a per cent of GDP by 0.21 units. Mottaleb (2007) found that countries with abundant modern infrastructural facilities, such as internet could successfully attract FDI. Infrastructure facilities increased the productivity of the investments, and therefore, stimulated FDI inflows into the country. Addison and Heshmati (2003)

found that ICT had significant and positive effects on FDI, leading them to conclude that developing countries should receive more support to set up ICT infrastructure if they were to attract FDI, and so that they were not left in a 'low-level ICT equilibrium trap'. Likewise, Munteanu (1991) found that Multinational Corporations' desired to operate within a developed nation, possessing a reliable infrastructure because that would result in more efficient distribution system.

The ranking of control of corruption had the expected positive sign and its coefficient was statistically significant at 10%. An increase in the percentile rank in control of corruption by 1 unit was likely to increase FDI inflows as a per cent of GDP by about 0.04 units. According to World Bank (2004), corruption was regarded as a threat to foreign investment for several reasons: it distorted the economic and financial environment; it reduced the efficiency of government and business by enabling people to assume positions of power through patronage rather than ability; and last but not least, it introduced an inherent instability into the political process. Foreign lenders and investors would find it difficult to conduct business effectively in countries where there is widespread financial corruption in the form of demands for special payments and bribes connected with import and export licenses, exchange controls, tax assessments, police protection, or loans. Due to persistent corruption, some East African countries like Kenya had suffered from suspension of foreign aid, which impacted negatively on the FDI inflows.

Interestingly, the study showed that political stability, though statistically significant at 1%, had unexpected negative coefficient. This is contrary to several studies (Basi, 1963; Aharoni, 1966; Jensen, 2003), which underscored the importance of political stability for FDI inflow. For instance, Schneider and Frey (1985) conducted a research on 80 developing countries and found that political instability in a country led to a sharp decline in the inflow of foreign capital. The unexpected negative coefficient was most likely due to the problem of multicollinearity since political stability was highly correlated to corruption. However, as Wilhelms (1995) found out, there were exceptions to the rule that Institutional Fitness determines FDI. Some countries had such strong preconditions in their favor that investors came anyway, even in the face of hostile policies and instability. The positive coefficients of country dummies implied that there were other factors enhancing FDI inflows into these countries compared to the reference country. These factors may be unobservable or even unknown to the analyst but they were there. For instance, with their unique locational advantages some East African Countries could still attract FDI despite their political instability. Moreover there was tendency for FDI to flow to developing countries that were emerging from political instability. Basemera and Mutenyo (2012) noted that although institutional indexes for East African states were at one time worsening, FDI inflows were rising. Nonetheless, many investors might in the long run pull out after enduring continued losses if political instability persists.

b) Economic Factors

Four economic variables, namely, economic growth rate (GDP), external debt service as a per cent of GDP (EXDS), inflation (INF) and lending interest rate (LIR) were included in the model for estimation. The coefficients of all the four macroeconomic variables except the one of external debt service as a per cent of GDP were statistically significant.

GDP growth was positively correlated with FDI inflows and its coefficient was statistically significant at 5%. This implies that a 1 unit increase in economic growth led to 0.09 units increase in FDI inflows as a per cent of GDP in East Africa. This implied that economic growth attracted FDI, especially the market-seeking FDI. Moreover a country with a large market as indicated by high GDP had a greater ability to consume the production capacity established by the inflows of FDI (Calhoun *et al.*, 2002). This explains why Kenya has been losing to the neighbouring countries that have been growing more rapidly as indicated by their higher GDP growth rates.

Inflation as expected had a negative effect on FDI. The coefficient was statistically significant at 5%. The model shows that a 1 unit increase in inflation would lead to a 0.05 units decrease in FDI inflows as a per cent of GDP. This implies that macroeconomic stability was crucial in enhancing FDI. Inflation not only reduces the level of business investment, but also the efficiency with which productive factors are put to use. It is thus necessary for a country to maintain

price stability to attract FDI. The higher the level of macroeconomic-instability, the higher the risk premium on investment, and the lower would be the level of investment as indicated in a study by Ngugi and Nyangoro (2005). East Africa countries had been experiencing rising inflation rate during the study period, which partly contributed to low FDI inflows.

The coefficient of the return on investment was found to be positive as expected and statistically significant at 1 per cent level of significance. This implies that 1 unit increase in lending interest rate resulted to 0.23 units increase in FDI inflows as a per cent of GDP. These findings agree with a study by Asiedu (2002), which showed that a higher return on capital promoted FDI. High returns on capital enhanced FDI, since investors prefer countries where they realize return on their investments.

c) Dummy Variables

As earlier noted, the cross-section effects and period effects represented differences in political, institutional and economic policy systems that were not explicitly included in the specification, but which was accounted for when estimation was done, ultimately leading to more representative estimates. Each country was represented by a dummy except Uganda, which was assumed to be the base and thus her dummy, DUGA, was excluded from the regression equation in order to avoid perfect multicollinearity.

The dummy coefficients ($\mu_1 - \mu_7$) were parameter estimates of country dummy variables. The parameter estimate of Uganda dummy (dropped dummy) was presented in the LSDV intercept (-4.056), which was the baseline intercept (reference point). Each of $\mu_1 - \mu_7$, represented the deviation of its country specific intercept from the baseline intercept which was -4.056 (intercept of Uganda). For instance, $\mu_1 = 2.455$ meant that the intercept of Ethiopia was 2.455 larger than the reference point, -4.056, and was statistically significant at 1%. The coefficient for Kenyan dummy (μ_2) was -0.725 which implied that her intercept was 0.725 less than that of the base country or the reference point though not statistically significant. This implied that there were other unique factors not included in the model that hindered FDI inflows to Kenya as compared to Uganda.

In general, for countries with positive coefficients, it implied that there were other factors enhancing FDI inflows into these countries (Ethiopia, Madagascar, Tanzania and Seychelles) compared to Uganda. These factors may be unobservable or even unknown to the analyst but they were there. For countries with negative signs, it implied that there were other factors constraining FDI inflows in these countries (Kenya, Rwanda and Mauritius) compared to Uganda. However these factors were only statistically significant for Tanzania at 10% as well as Ethiopia and Seychelles at 1%

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND POLICY IMPLICATIONS

5.1 Introduction

This chapter presents the summary, conclusions and policy implications of the study findings, and areas of further research. The chapter is divided into four sections; Section 5.2 presents the summary of the study, section 5.3 presents the main conclusions, section 5.4 covers the policy recommendations arising from the study findings, and section 5.5 presents areas for further research.

5.2 Summary

The current study focused on determining the institutional, governance and economic factors that influence FDI flows in Eastern Africa Region. Panel data for eight East African Countries, namely Kenya, Uganda, Tanzania, Ethiopia, Madagascar, Mauritius, Rwanda and Seychelles were collected for the period 1996 to 2010. A one-way fixed effects LSDV model with dummy variables was estimated.

The study found out that the following institutional and governance variables significantly influenced the FDI inflows in East Africa: rule of law, corruption, political stability and infrastructure (proxied by internet use).

Overall the study found out that the perception people had on the rule of law and control of corruption had positive effect on the FDI inflows. Internet use was also found to have positive effects on the FDI inflows. This finding emphasized the need for improvement in infrastructure, especially in the development of ICT. Contrary to the expectations, the study found out that political instability seemed to attract FDI inflows.

Economic growth and the return on investment were found to be positively correlated with FDI inflows. Inflation had a negative effect on FDI. The study thus underscored the importance of stable macroeconomic environment for enhancing FDI inflows.

The empirical findings showed that the significance of dummy estimates implied that some countries had unique factors that were not captured in the model that enhanced or hindered FDI inflows. These were cross-section effects and period effects that represented differences in political, institutional and economic policy systems that were not explicitly included in the specification, but which were accounted for in the estimation. This might explain why some countries would still attract FDI despite political instability.

5.3 Conclusions

This study findings yield several insights into the analysis of FDI inflows in East Africa. The study has underscored the importance of both the traditional and non-

traditional factors in determining FDI inflows. Though the non-traditional factors such as institutional and governance factors are not directly measurable and hence tend to be ignored in many studies, they have significant impact on FDI. The empirical findings have demonstrated the importance of individual institutional, governance and economic factors that are unique to each country, yet they influence the FDI inflows. This implies that though countries may share the same region they have crucial dissimilarities that may significantly affect FDI.

The study findings confirm the Institutional FDI Fitness theory which postulates that it is institutions, their policies and implementation, rather than generic inflexible variables that give a country a competitive advantage in the global FDI market. The institutional and governmental factors such as rule of law, a corruption free environment and well developed infrastructure play a key role in attracting FDI. In other words, the fewer obstacles foreign direct investors encounter, the more they will invest.

The findings also strongly suggest that economic factors such as macroeconomic stability, economic growth and high returns to investment influence positively the FDI inflows. Macroeconomic stability is crucial in enhancing FDI. The negative relationship between inflation and FDI inflows indicates that price instability hinders FDI inflows. A case in point is Kenya which was experiencing a rising inflation rate in the study period which was accompanied by declining FDI inflows.

The study also showed that each of the East African countries had different unique features that might attract or discourage FDI. This calls for differential implementation of some policies to take into account this uniqueness. For instance, Uganda is a land locked country unlike Kenya and Tanzania which in itself discourages FDI.

5.4 Policy Implications

The empirical results of this study provide invaluable information for policy formulation and implementation. These results indicate the great need for East African (EA) Countries to understand and appreciate the role of institutions and governance as well as economic factors in enhancing FDI inflows.

There is also a need to continuously reform institutions in order to improve their efficiency and productivity to attract more FDI inflows. Given that infrastructure positively and significantly influences FDI, there is need for the EA governments to develop the infrastructure to encourage FDI inflows. Internet greatly improves means of communication within and outside the country and thus promotes FDI. Well-developed infrastructure is a determinant of capital investment by multinationals. Multinational Corporations thrive in countries with a reliable infrastructure because that would result in more efficient business operations. Infrastructure facilities increase the productivity of the investments, and therefore, stimulate FDI inflows into the country.

Since the perception of people about the control of corruption significantly influences FDI inflows, EA Countries should not only develop and implement policy measures to curb corruption, but should also create awareness of its eradication. This can be done through sensitization seminars, conferences, training and workshops. Corruption is regarded as a threat to foreign investment, since it distorts the economic and financial environment, and reduces the efficiency of government and business by enabling people to assume positions of power through patronage rather than ability. Foreign lenders and investors would find it difficult to conduct business effectively in countries where there is widespread financial corruption in the form of demands for special payments and bribes connected with import and export licenses, exchange controls, tax assessments, police protection, or loans.

The EA countries should also maintain rule of law because foreign investors weigh these factors prior to investing abroad. Adherence to rule of law reduces risks and investment uncertainties, hence encouraging FDI inflows. A strong rule of law implies strong protection of investors' rights by the legal system and that creates a conducive environment for businesses to thrive. The governments should provide an economic, legal, and infrastructure framework conducive to FDI, since most people go where they feel most welcome and/or where they can succeed in their endeavors.

The EA countries should accelerate economic growth through enhanced regional integration in order to attract the market-seeking FDI. A country with a large market as indicated by high economic growth rate (GDP) has a greater ability to consume the production capacity established by the inflows of FDI. The East African Region should thus continue to promote the growth of East Africa Community that will widen the market for goods and services, and hence attract FDI. Moreover, regional economic cooperation enhances policy coordination among member states, which in turn create favourable environment for FDI. For example, members of the East Africa Community should require all participating countries to curb corruption, implement sound and stable macroeconomic policies, and adopt an ‘investor friendly’ regulatory framework (such as removing non-tariff barriers and restrictions on profit repatriation). Errant countries should face costly sanctions or be barred from membership.

However, as the study has shown each East African country might have some unique features that might attract or hinder FDI and thus policies that have been successful in one country should not be blindly replicated in another, since these policies might have differential impact. For instance, Kenya has had a higher level of capital stock compared to Uganda and Tanzania, and thus there was an increasing tendency for the latter to continue attracting FDI, while the former was still experiencing a declining trend as FDI flows reduced. The implication could have been that both Uganda and Tanzania had not hit the optimal capital stock accumulation. This implies that the future for Kenya in reverting the situation

depends on the two countries attaining the optimal FDI or starting to experience diminishing returns. Any policy implementation with regard to improvement in the returns to investment in the region should put this into consideration.

The EA Countries should enhance macroeconomic stability by controlling inflation. Macroeconomic stability is crucial in enhancing FDI, since inflation not only reduces the level of business investment, but also the efficiency with which productive factors are put to use. The higher the level of macroeconomic instability, the higher the risk premium on investment, and the lower would be the level of investment. East Africa countries had been experiencing high inflation rate during the study period, which partly contributed to low FDI inflows.

The EA Countries should seek ways of improving the returns on investment to promote FDI. This could be done by improving labour productivity by mainstreaming the relevant skills and competencies in the education system. There should be greater linkages and collaboration between the training institutions and the industries to ensure that the former produce workers or human capital whose qualifications match the demands of the latter.

5.5 Areas for Further Research

There are several directions in which further work can be done on FDI inflows in Africa or developing countries. This study relied mainly on secondary data of macroeconomic variables and institutional indices in the analysis. However, a

microeconomic study based on investor responses about the impact of the different institutional variables to their businesses could be of interest, since it provides first hand analysis of the mechanisms relating institutions to FDI inflows.

The study revealed that some countries had unique factors that were not captured in the model that enhanced or hindered FDI inflows. These were cross-section effects that represented differences in political, institutional and economic policy systems that were not explicitly included in the specification, but which were accounted for in the estimation. Further investigation and inclusion of these factors in the model for estimation would definitely generate more reliable results.

This study focused on inter FDI inflows in Eastern African countries. The inter FDI inflows reflected what each country received annually from other countries all over the world. It would be more interesting if the FDI inflows were disaggregated to capture intra FDI inflows to reflect the amount of FDI that each country received from a specific country per year.

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APPENDIX TABLE A1: East Africa's FDI Inflows 1970 – 2010 in millions of U.S. Dollars \$
Source: UNCTAD FDI Database 2011

Year	Kenya	Uganda	Tanzania
1970	14	4	3
1971	7	-1	5
1972	6	-12	8
1973	17	5	6
1974	23	2	-2
1975	17	2	-1
1976	46	2	7
1977	57	1	3
1978	34	2	6
1979	84	2	8
1980	79	4	5
1981	14	..	19
1982	13	2	17
1983	24	..	2
1984	11	..	-8
1985	29	-4	15
1986	33	..	-7
1987	39	..	0
1988	0	5	4
1989	62	-2	6
1990	57	-6	0
1991	19	1	0
1992	6	3	12
1993	2	55	20
1994	4	88	50
1995	33	125	150
1996	11	122	149
1997	53	142	158
1998	11	133	172
1999	14	140	497
2000	111	181	282
2001	5	151	467
2002	28	185	388
2003	82	202	308
2004	46	295	331
2005	21	380	494
2006	51	644	597
2007	729	792	647
2008	96	729	679
2009	141	816	645
2010	133	848	700

APPENDIX TABLE A2: East Africa's FDI Inflows and GDP 1970 – 2010 in millions of U.S. Dollars (\$) and the Net inflows (% of GDP)

Year	Kenya			Uganda			Tanzania		
	FDI Inflows	GDP	Net inflows (% of GDP)	FDI Inflows	GDP	Net inflows (% of GDP)	FDI Inflows	GDP	Net inflows (% of GDP)
1970	14	2195	0.063781	4	1380	0.028986	3	1906	0.01574
1971	7	2432	0.028783	-1	1527	-0.00655	5	2039	0.024522
1972	6	2727	0.022002	-12	1659	-0.07233	8	2321	0.034468
1973	17	3217	0.052844	5	1941	0.02576	6	2770	0.021661
1974	23	3836	0.059958	2	2351	0.008507	-2	3326	-0.00601
1975	17	4206	0.040418	2	2575	0.007767	-1	3829	-0.00261
1976	46	4483	0.10261	2	2723	0.007345	7	4147	0.01688
1977	57	5794	0.098378	1	2935	0.003407	3	4955	0.006054
1978	34	6860	0.049563	2	3016	0.006631	6	5934	0.010111
1979	84	7869	0.106748	2	2858	0.006998	8	6282	0.012735
1980	79	9165	0.086197	4	3038	0.013167	5	7310	0.00684
1981	14	8643	0.016198	..	3452	.....	19	8433	0.022531
1982	13	8324	0.015617	2	3947	0.005067	17	8924	0.01905
1983	24	7740	0.031008	..	4364	.....	2	9002	0.002222
1984	11	8015	0.013724	..	4318	.....	-8	8270	-0.00967
1985	29	7938	0.036533	-4	4437	-0.00902	15	9120	0.016447
1986	33	9364	0.035241	..	5054	.....	-7	6442	-0.01087
1987	39	10309	0.037831	..	5654	.....	0	4514	0
1988	0	11019	0	5	6465	0.007734	4	5261	0.007603
1989	62	10787	0.057477	-2	5710	-0.0035	6	5619	0.010678
1990	57	11035	0.051654	-6	4039	-0.01486	0	5480	0
1991	19	10402	0.018266	1	3274	0.003054	0	6194	0
1992	6	10283	0.005835	3	3516	0.008532	12	5528	0.021708
1993	2	7139	0.002802	55	3634	0.151348	20	5052	0.039588

1994	4	9084	0.00440 3	88	5715	0.153981	50	5210	0.09596 9
1995	33	1170 1	0.02820 3	125	6687	0.18693	150	6076	0.24687 3
1996	11	1197 3	0.00918 7	122	6776	0.180047	149	7519	0.19816 5
1997	53	1303 4	0.04066 3	142	7298	0.194574	158	8890	0.17772 8
1998	11	1401 6	0.00784 8	133	7009	0.189756	172	9679	0.17770 4
1999	14	1279 9	0.01093 8	140	6655	0.210368	497	9921	0.50095 8
2000	111	1260 4	0.08806 7	181	6341	0.285444	282	1042 4	0.27053
2001	5	1298 3	0.00385 1	151	6401	0.235901	467	1063 7	0.43903 4
2002	28	1315 1	0.02129 1	185	6670	0.277361	388	1107 0	0.35049 7
2003	82	1490 4	0.05501 9	202	7050	0.286525	308	1193 5	0.25806 5
2004	46	1609 5	0.02858	295	8436	0.349692	331	1314 2	0.25186 4
2005	21	1873 9	0.01120 7	380	1004 0	0.378486	494	1449 2	0.34087 8
2006	51	2250 4	0.02266 3	644	1101 1	0.58487	597	1473 9	0.40504 8
2007	729	2716 5	0.26836	792	1354 9	0.584545	647	1729 9	0.37401
2008	96	2998 3	0.03201 8	729	1647 2	0.442569	679	2131 8	0.31851
2009	141	2941 2	0.04793 9	816	1711 0	0.476914 0	645	2301 6	0.28023 4
2010	133	3215 2	0.04136 6	848	1837 2	0.461571 9	700	2456 8	0.28492 3

Source: UNCTAD FDI Database 2011

Appendix Table A3: FDI Inflows and Outflows for Selected World Economies

FDI Inflows and Outflows For selected economies	1970's	1980's	1990's	2000	2001	2002	2003
World totals	13,032	54,986	208,646	1402680	826177.1	626873.8	572789.6
Developing countries	3,555	8,421	36,897	257625.1	215623.1	174876	183589.9
Asia \$Pacific	947	527	24,854	252,459	111,966	94,424	107,278
Asia	811	407	24,310	146,195	111,854	94,383	107,120
Latin America & the Caribbean	1681	7,494	9,615	146,065	88,139	51,358	49,722
Africa	926	400	2,427	97,537	19,616	11,780	15,033
Sub-Saharan Africa	940.959	1313.4	4781.924	8108.935	16095.1	12933.4	16505.6
East Africa Community	39.569	55.394	226.335	593.5	642.4965	601.3674	594.7257
Kenya	30.668	30.415	20.956	110.9046	5.302623	27.61936	81.74032
Uganda	0.62	0.496	80.71	180.8121	151.496	184.648	202.192
Tanzania	4.265	5.006	120.713	282	467.2	387.6	308.2

FDI Inflows and Outflows For selected economies	2004	2005	2006	2007	2008	2009
World Totals	742386.3	982593 .4	146186 3	197094 0	174410 1	118503 0
Developing countries	293123.6	332306 .8	429458 .6	573031 .8	658002 .2	510577 .7
Asia & the Pacific						
Asia						
Latin America & the Caribbean						
Africa						
Sub-Saharan Africa	16803.48	28228. 9	26650. 26	40782. 18	51967. 91	44380. 82
East Africa Community	683.0251	910.00 47	1322.5 69	2251.1 38	1620.6 94	1729.9 97
Kenya	46.06394	21.211 62	50.674 66	729.05 15	95.583 25	140.52 27
Uganda	295.4165	379.80 83	644.26 25	792.30 58	728.86 09	815.87 48
Tanzania	330.6	494.1	597	647	679.3	645

Source: UNCTAD.ORG FDI Statistics

Appendix Table A4 Least Squares Fixed Effects Model Estimation Results

Dependent variable : Foreign Direct Investment Inflows (FDI)			
Independent Variable	Coefficient	Standard Error	Probability
Constant	-4.055947***	1.436058	0.006
GDP	0.0876793*	0.0469841	0.065
EXDS	-0.0082692	0.0768998	0.915
INF	-0.0549313**	0.02568	0.035
LIR	0.2296301***	0.0378704	0.000
CORR	0.043289*	0.0262273	0.100
STABP	-0.1250073***	0.0280776	0.000
LAWP	0.0767509**	0.0346724	0.029
NET	0.2137485***	0.0290904	0.000
DETHI	2.454844	0.9100842	0.008***
DKEN	-0.7252009	0.89411	0.419
DMAD	0.9806411	1.3556	0.471
DMAU	-0.789619	1.64957	0.633
DRWA	-1.069693	1.099579	0.333
DSEY	9.138714	1.719781	0.000***
DTZ	1.431108	0.7856891	0.071*
Adjusted R-squared	0.7625		
F-statistic	26.47***		
Prob(F-statistic)	0.000		
<p>*/**/*** indicate significance of the coefficient or rejection of the null hypothesis at 10%/5%/1% level of significance. Country specific fixed effects are reported in Appendix</p>			

Source: Constructed from the Study Data