

**A STUDY OF THE IMPACT OF FOREIGN DIRECT INVESTMENTS ON
ECONOMIC GROWTH IN KENYA**

BY

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DECLARATION

I declare this project as my original work and that to the best of my knowledge, it has not been submitted for a degree in any other university.

Signed 

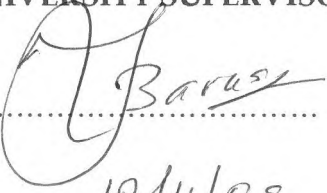
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DEDICATION

To my dear mother, Margaret Dinga, you are the reason for all this.

ACKNOWLEDGEMENTS

I wish to thank God for the blessings that he has continued to shower me with. The Almighty has continually guided my efforts so gracefully to this very end and the success of this project is a clear attestation to the unending support that I have always enjoyed from God.

Secondly I wish to recognize with all the humility the support that I have enjoyed from my supervisor, Mr. Joseph Barasa. No word of mine can adequately describe the respect and honour that I repose upon him as an acknowledgment of the commitment with which he guided me through this project. His engrossing engagements were no deterrence to him in the quest to guide me. I owe the success of this project to him no lesser than I owe it to my own effort. God bless the work of his hands.

I also acknowledge the support that I got from Mr Walter Macharia who is the Investor-Service Manager at the Kenya Investment Authority where I sourced data on FDI inflows into Kenya, Mr. Wesonga, The Librarian at the Ministry of Finance where I sourced data on GDP, Capital Formation and Total Recorded Employment.

Finally, I wish to express my gratitude to all my friends and colleagues who gave me all the moral support that I dearly needed to propel me in doing this project. I now hold the successful completion of this project as evidence to them and to all others whom I have not mentioned that their support was actually well meant.

I wish to clarify that all errors and omissions are mine and mine alone.

LIST OF ABBREVIATIONS

FDI	Foreign Direct Investment
GCFC	Gross Fixed Capital Formation
GDP	Gross Domestic Product
KIA	Kenya Investment Authority
M&A	Mergers and Acquisitions
MNCs	Multinational Corporations
MNEs	Multinational Enterprises
TRE	Total Recorded Employment
UNCTAD	United Nations Conference on Trade and Development
WIR	World Investment Report

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ABSTRACT

This study has analyzed the impact of foreign direct investment on economic growth in Kenya over the period from 1990 to 2007. It was specifically conducted to explain the influence that FDI inflows have on economic growth. However it was also designed to analyze the influence of additional variables of gross capital formation and labour on economic growth.

The study was carried out by analyzing the rate of economic growth measured by the GDP per capita as the dependent variable and FDI inflows, capital formation measured by average share in GDP of gross capital formation and labour measured by total recorded employment as independent variables. It used multiple regression model to study the relationships between these variables. SPSS was used to support the analysis and to provide a basis for the conclusions drawn.

The study has established that FDI influences economic growth though not very strongly. The findings show that the proportion of gross capital formation that comes from FDI is still very low in Kenya and perhaps is the reason why the extent of influence on economic growth is not very strong. However, capital formation emerged as the major driver of economic growth of all the three variables that were studied.

Although this study reveals that the FDI does not have a very significant effect on economic growth, it is logical to attribute this to the relatively small amounts of capital inflows into the country. The government can conduct a campaign to attract the foreign investors so as to compound the benefits of FDI inflows which have already been confirmed by this study.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

It is hypothesized that the presence of foreign direct investments (FDIs) in an economy helps to boost the rate of economic growth. Many studies have been conducted to explain the contribution that FDI inflow may have on economic growth. The findings have however been elusive pointing towards continuing need for further research on this area of study.

The rationale for increased efforts to attract more FDI stems from the belief that FDI has several positive effects which include productivity gains, technology transfers, the introduction of new processes, managerial skills, and know-how in the domestic market, employee training, international production networks, and access to markets (Alfaro and Chanda, 2002). A clear understanding of the FDI phenomenon is therefore required to provide a platform against which its impact on sustained economic growth can be assessed.

FDI is an investment made to acquire lasting interest in enterprises operating outside of the economy of the investor. The FDI relationship consists of a parent enterprise and a foreign affiliate which together form a multinational company. In order to qualify as an FDI the investment must afford the parent enterprise control over its foreign affiliate. FDI is a mode of international business where the parent company takes the responsibility for all the financing, and accordingly takes on all the risk involved in the foreign business. It involves international flow of capital as opposed to the other modes of international business.

World Investment Report (WIR), (2005) defines FDI as an investment involving a long term relationship and reflecting a lasting interest and control by a resident entity in one economy (foreign direct investor or parent enterprise) in an enterprise

resident in an economy other than that of the foreign direct investor. According to this report the foreign direct investor exerts a significant degree of influence on the management of the enterprise resident in the other economy. Such investment involves both the initial transaction between the two entities and all subsequent transactions between them and their affiliates. This report further provides that FDI may be undertaken by both individuals as well as business entities. This report gives an account of the three components of FDI as: Equity capital which refers to the foreign direct investor's purchase of shares of an enterprise in a country other than its own; Re invested earnings which comprise the direct investor's share of earnings not distributed as dividend and Intra company loans and intra company debt transactions

WIR (2005) further reveals the modes of FDI entry into an economy. According to this report firms may enter host economies through **Greenfield Investments** or **Mergers and Acquisitions (M&As)** also called **Brownfield investments**. Cross-border acquisitions involve firms trading heterogeneous corporate assets to exploit complementarities by acquiring controlling interest in companies operating in another country. It involves taking up interest in already existing enterprises in other countries. Greenfield FDI on the other hand involves building a new plant in the foreign market. In equilibrium, Greenfield FDI and cross-border acquisitions co-exist, but the composition of FDI between these modes varies with firm and country characteristics (Volker, 2004). Firms engaging in Greenfield investment are systematically more efficient than those engaging in cross-border acquisitions. Furthermore, most FDIs take the form of cross-border acquisitions when factor price differences between countries are small, while Greenfield investment plays a more important role for FDI from high-wage into low-wage countries. The choice of mode is also influenced by industry specific factors. For example Greenfield investment is more likely to be used as a mode of entry in industries in which technological skills and production technology are critical. The choice may also be influenced by institutional, cultural and transaction cost factor (WIR 2000), in particular the attitude towards takeovers, conditions in capital markets, liberalization policies,

privatization, regional integration, currency risks and the role played by intermediaries (e.g. investment banks) actively seeking acquisition opportunities and taking initiatives in making deals.

This study identifies GDP as an appropriate measure of economic growth against which the impact of FDI will be assessed (Todaro 1997). When the GDP of a nation rises economists refer to it as economic growth.

The term "economic development," on the other hand, implies much more. It typically refers to improvements in a variety of indicators such as literacy rates, life expectancy, and poverty indices. GDP is a specific measure of economic welfare that does not take into account important aspects such as leisure time, environmental quality, freedom, or social justice. Economic growth of any specific measure is not a sufficient definition of economic development. This study therefore strictly addresses the changes in FDI flows vis-à-vis the changes in the economic growth as measured by the growth rate of GDP per capita.

Although the level of FDI has been low both in absolute and in relative terms over the past decades, its impact on the economy should not be underestimated. Foreign investors in Kenya have indeed tended to make relatively small investments, but they are numerous and established across a wide variety of sectors. Foreign investors have also contributed significantly to some of the most dynamic sectors in the economy, including horticulture, and to export diversification. The underlying reasons why any consideration should be made regarding FDI in Kenya include boosting capital formation and investment, technology and skills and employment and linkages, diversification of output and exports (Investment Policy Review of Kenya, 2005).

For decades, Kenya had one of the most open regimes for FDI in Africa. The principal restrictions were contained in the Trade Licensing Act 1968, even though the FDI-related restrictions had not been enforced recently. Apart from this Act, the only formal limits on foreign ownership were in telecommunications and insurance (in which foreign ownership of a business is limited by policy to 70 per cent and 77

per cent respectively) and for companies listed on the Nairobi Stock Exchange, which are required to have at least 25 per cent national ownership. Moreover, FDI did not require screening for approval.

A new FDI entry regime was introduced in late 2004, which overturned this approach. As a result, one of the most liberal entry regimes for FDI in sub-Saharan Africa has been replaced by one of the more restrictive ones. The Investment Promotion Act of 2004, which the President ratified on 31 December 2004, introduced a mandatory investment threshold and restrictive screening procedure for all foreign investments. These became significant impediment to FDI inflows. The Act makes a formal distinction between domestic and foreign investors, and requires the latter to apply to the newly established Kenya Investment Authority (KIA) for an Investment Certificate by stating that "a foreign investor shall not invest in Kenya unless he has been issued with an investment certificate".

The conditions under which KIA is allowed to issue an Investment Certificate to a foreign investor are restrictive and include the requirements that the amount invested must be at least \$500,000 or the equivalent in another currency and the investment must be deemed by KIA to be of benefit to Kenya, including at least as a result of creation of employment for Kenyans, acquisition of new skills or technology by Kenyans, contribution to tax revenues or other government revenues, contribution to foreign exchange earnings and utilization of domestic inputs.

In contrast, domestic investors are not required to obtain investment certificates but those that do not seek them are nevertheless required to register their investment with KIA. The minimum capital investment for domestic investors seeking an Investment Certificate is lower at Ksh 5 million (\$65,000), but they must fulfill the same requirements to be deemed "beneficial to Kenya". The screening and minimum capital investment requirements for all foreign investors and the reporting requirements for domestic investors were introduced through last-minute amendments to the initial draft Investment Promotion Bill of 2004, which had been in preparation for several years and subject to substantial negotiations. These amendments thoroughly changed the spirit of the initial draft, whose thrust was to

facilitate the establishment of new domestic and foreign investment. Notwithstanding the above restrictions the flow of foreign investment into Kenya appears to be increasing over time. This is evidenced by the increase in the FDI stock as per the World Investment Report of 2005. It can be seen that FDI inflow has increased from slightly over 500 million dollars in 1990 to 1.2 billion dollars in 2004.

Table 1.1: FDI Stock (Millions of Dollars)

Year	Inward FDI stock	Outward FDI stock
1990	668	99
2000	984	134
2004	1223	370

Source: World Investment Report (2005)

Table 1 above gives the details of FDI inflows and outflows in Kenya over the last one and half decades. It shows that there has been a steady increase in the amount of FDI inflows and outflows but the inflows are much more than the outflows in any given year. Cross-border mergers and acquisitions on the other hand do not seem to have gained any roots in Kenya. Data from the WIR 2005 also indicates that until early 2000, there wasn't any transfer of ownership by a Kenyan business to a foreign firm.

Table 1.2: Cross-border M&As (Millions of Dollars)

Year	Sales	Purchase
2002	-	-
2003	-	2
2004	265	-

Source: World Investment Report (2005)

Table 2 above shows that Kenyan firms are more sold to foreign firms than they buy interests in foreign companies.

1.2 Statement of the Problem

Most developing countries have engaged in endeavours aimed at attracting FDI inflows. MacDougall-Kemp hypothesis (1964) explain that when capital moves freely from one country to another, its marginal productivity tends to equalize between the two countries which leads to improvement in efficiency in the use of resources

thereby increasing economic welfare. The host country witnesses increase in national income due to the greater magnitude of investment that is not possible in the absence of FDI inflow.

Many empirical studies that have been conducted have given conflicting findings on the exact impact of FDI inflow on the host country economy. The findings can be categorized into three; that there really exists a positive relationship between FDI inflow and economic growth; that there is no relationship between FDI and growth; that host country conditions to a large extent determines the relationship between FDI and economic growth. The latter seems to be more persuasive because most findings point to the host country conditions as a major influence on the kind of relationship that FDI inflow will have on a country. Borensztein et al. (1998) study show that the magnitude of the FDI effects on the economic growth depends on the amount of human capital available in the host country. Olofsdotter (1998) finds that an increase in the stock of FDI is positively related to growth and that the effect is stronger for host countries with a higher level of institutional capability.

The findings of other empirical studies have shown that FDI inflow has no impact on economic growth. Carkovic and Levine (2002) found that there is no robust link between inward FDI to host country economic growth. Zhang (2001) and Choe (2003) found that causality between economic growth and FDI runs in either direction but with a tendency towards growth causing FDI.

Going by the findings of the studies so far done, it is not possible to have a generalized position on the exact influence that FDI inflow has on economic growth. This is so because these studies were done in different countries under different economic and political circumstances. Moreover the studies do not look at the exact stage of economic development which varies even for the various developing countries.

The Kenyan case has not been studied empirically and this has led to the lack of clear understanding of the exact impact of FDI flows in the economy. Kenya like any other developing economies seeks to increase its stock investment locally than abroad that

the FDI inflow would contribute to this. Whether the investment stock should be financed partly by funds from outside and partly from within is not clear cut due to inadequate information on the impact of the inflow on the economy. It is on the basis of this lack of understanding on the impact of inward FDI flow on the Kenyan economy that I intend to carry out this study.

1.3 Objectives of the Study

Basing on the foregoing belief, this study seeks to establish any relationship between economic growth and the FDI inflows. Against this understanding the objectives of this study can therefore be stated as follows:

1. To establish if there exists a relationship between the capital inflows (FDI) and economic growth as measured by the change in GDP per capita over time.
2. To explain the nature and strength of the relationship between FDI inflow and economic growth.

1.4 Justification of the Study

This study is beneficial in a number of ways to different interest groups;

The Treasury may use the findings of this study to formulate an FDI policy particularly policy regarding regulation on cross-border capital flow. The study may support at a policy level, the design of an incentive scheme aimed at attracting foreigners to invest in Kenya. Still the treasury may use the findings of this study in the setting of guidelines for investment by MNCs locally.

The capital market participants may use the findings of the study in analyzing the capital market variables that may be affected by the capital inflow and advise the investors appropriately. The investment banks in particular may want to fully understand the impact of the FDI inflows into Kenya and consequently assess the effects of the economic growth on the stock market activity and inform the investing public accordingly. Commercial banks may use the findings of this study to strategically position themselves so that if the economy is expected to experience

growth, the banks may increase their stock of unsecured loans which are normally very risky and may require the backing of a strong economy.

It may also benefit the members of the academia seeking to unravel some of the mysteries surrounding the FDI phenomenon and its implications to the host country. The findings will offer a reference material to Kenyan researchers wishing to study the impact of FDI inflow on economic growth in Kenya. At an international level it may also add to the body of knowledge that has been put forward on FDI as a reference point in establishing generalizations for the future.

1.5 Scope of the Study

This study will cover the Kenyan economy over a period of 18 years from 1990 to 2007. It is foreseeable that there may be a difficulty in obtaining the requisite data on FDI in Kenya over the last two decades. This therefore justifies the choice of the last 18 years as an appropriate period for this study. It is also worth noting that the economic indicators being analyzed in this study (GDP and employment levels) are also influenced by several other factors which are not the subject of this study. The modeling of the problem will therefore take care of any possible omitted variable bias in the data analysis. For instance the changing political environment, general global economic trends have all been held constant for purposes of modeling in this study

CHAPTER TWO

2.0 LITERATURE REVIEW

This part gives a summary account of the studies previously done on the impact of FDI on economic growth. The first part gives a general overview of the theoretical literature on FDI without a sharp focus on its effects on the economy. The second part looks at the specific empirical studies that have sought to explain any relationship between FDI inflows and economic growth and concludes with a summary of how the studies were conducted and the findings in each case.

2.1.0 Theoretical Literature

The present chapter explains the motivation behind foreign direct investment as is manifest in various theories. It attempts to give a theoretical justification for MNEs decision to engage in offshore investments.

2.1.1 MacDougall-Kemp Hypothesis

One of the earliest theories of FDI developed by MacDougall (1958) and subsequently elaborated by Kemp (1964) assumes a two-country model-one being the investing country and the other the host country and that the price of capital is equal to its marginal productivity. They explain that when capital moves freely from one country to another, its marginal productivity tends to equalize between the two countries. This leads to improvement in efficiency in the use of resources which leads ultimately to an increase in welfare.

Despite the fact that the output in the investing country decreases in the wake of foreign investment, national income does not fall because the country receives returns on capital invested abroad. So long as the income from foreign investment is greater than the loss of output, the investing country continues to invest abroad because it enjoys greater national income than that prior to foreign investment. The host country too witnesses increase in national income as a sequel to the greater

magnitude of investment that is not possible in the absence of foreign investment inflow.

2.1.2 Industrial Organization Theory

This theory assumes an imperfect market characterized by product differentiation, marketing skills, proprietary technology, managerial skills, better access to capital, economies of scale and government imposed distortions which may confer an edge on the MNCs over their competitors in foreign locations and thus help compensate the additional cost of operating in an unfamiliar environment.

Hymer (1976) observed that a multinational firm is a typical oligopolistic firm that possesses some sort of superiority and that looks for control in an imperfect market with a view to maximizing profits. Despite the fact that the international firm is posted at a disadvantage in a foreign host country where it does not have intimate knowledge of language, culture, legal system and consumer preference, it possesses certain specific advantages that outweigh the disadvantages. The firm specific advantages in Hymer's view are mainly the technological advantages, special marketing skills, superior organization and improved processing.

2.1.3 Location-Specific Theory

Hood and Young (1979) stressed the role of locational factors as a motivator for cross-border investment by firms. They argue that since real wage cost varies among countries, firms with low cost technology move to low-wage countries. Again in some countries, trade barriers are created to restrict imports. The MNCs invest in such countries to start manufacturing there and so evade the trade barriers. Sometimes the availability of cheap and abundant raw material encourages the MNCs to invest in a particular country.

2.1.4 Product Cycle Theory

Whereas Hymer (1976) explained the "why" of FDI and Hood and Young explained the "where", Vernon (1966) added "when" to the "why" and "where". According to

Vernon, most products follow a life cycle that is divided into three stages. The first is known as the "innovation" stage. In order to compete with the other firms and to have a lead in the market, a firm innovates a product through research and development. The product is manufactured in the home country primarily to meet the domestic demand but a portion of the output is also exported to other countries. The quality of the product and not the price forms the basis of demand because the demand is price-inelastic at this stage.

The second stage is known as "maturing product" stage. At this stage demand for the new product in other developed countries grows substantially and becomes price elastic. Rival firms in the host country itself begin to appear at this stage to supply similar products at a lower price owing to lower distribution cost, whereas the product of the innovator involves transportation cost and tariff which are imposed by the importing government. Thus in order to compete with the rival firms, the innovator sets up a production unit in the host country itself that would eliminate the transport cost and the tariff. Uzawa and Hamada (1969) confirm the imposition of tariff as a motivator for FDI.

At the final or "standardized product" stage, the products are standardized and production techniques are no longer the exclusive possession of the innovating firm. Rival firms present stiff competition. At this stage, price competitiveness becomes even more important and the innovator shifts production to a low-cost location preferably a developing country where labour is cheap (Knickerbocker 1973).

2.1.5 Internalization Approach

Buckley and Casson (1976) too assume market imperfection, though imperfection in their view is related to the transaction cost that is involved in the intra-firm transfer of intermediate products such as knowledge or expertise. They assume that in an international firm, technology developed at one unit is transferred to other units normally free of charge. This means that the transaction cost in respect of intra-firm transfer of technology is almost zero, whereas to other firms is very expensive. Thus

it is the internalization benefit manifesting in the cost-free intra-firm flow of technology or any other knowledge that motivates a firm to go international.

2.1.6 Currency-Based Approaches

Aliber (1970) developed a theory on imperfect foreign exchange and capital market. He postulates that FDI flows depend on the relative strength of different currencies. Firms from strong-currency countries move out to weak-currency countries. In a weak-currency country, the income stream is fraught with greater exchange risk. As a result, the income of a strong-currency country firm is capitalized at a higher rate. Such a firm is therefore able to acquire a large segment of income generation in the weak-currency country.

Froot and Stein (1989) are of the view that depreciation in the real value of the currency of a country lowers the wealth of domestic residents vis-à-vis the wealth of the foreign residents. As a result it is cheaper for the foreign firms to acquire the assets of domestic firms.

2.2 Empirical Literature

Borensztein et al. (1998) examined the role of FDI in the process of technology diffusion and economic growth. His study was conducted on 69 developing countries between 1970 and 1989 and discovered a positive effect on economic growth but that the magnitude of the effect depends on the amount of human capital available in the host country. Olofsdotter (1998) in a study conducted on 50 developed and developing countries finds that an increase in the stock of FDI is positively related to growth and that the effect is stronger for host countries with a higher level of institutional capability as measured by the degree of property rights protection and bureaucratic efficiency in the host country.

FDI alone plays an ambiguous role in contributing to economic growth. However, countries with well-developed financial markets gain significantly from FDI. If foreign firms introduce new products or processes to the domestic market, domestic firms may benefit from accelerated diffusion of new technology. In other situations,

technology diffusion might occur from labour turnover as domestic employees move from foreign to domestic firms. These benefits, in addition to the direct capital financing it generates, suggest that FDI can play an important role in modernizing the national economy and promoting growth (Alfaro and Chanda, 2002). Their empirical evidence suggests that FDI plays an important role in contributing to economic growth. However, the level of development of local financial markets is crucial for these positive effects to be realized. They also provide evidence that the link between FDI and growth is causal, where FDI promotes growth through financial markets. The result of their study suggests that countries should weigh the cost of policies aimed at attracting FDI versus those that seek to improve local conditions since better local conditions not only attract foreign companies but also allow host economies to maximize the benefits of foreign investments. The argument goes that well-functioning financial markets, by lowering costs of conducting transactions, ensure capital is allocated to the projects that yield the highest returns, and therefore enhances growth rates.

In contrast Carkovic and Levine (2002) analyzed the relationship between FDI inflows and economic growth and found that there is no robust link running from inward FDI to host country economic growth. Zhang (2001) and Choe (2003) analyses the causality between FDI and economic growth and find that causality between economic growth and FDI runs in either direction but with a tendency towards growth causing FDI i.e. there is little evidence that FDI causes host country growth. Instead rapid economic growth could result in an increase in FDI inflows.

Javorcik (2004) studied the effects of FDI inflows on domestic firms' productivity. The study tested for productivity spillovers taking place through backward linkages (contacts between foreign affiliates and their domestic suppliers) and forward linkages (interactions between foreign suppliers of intermediate inputs and their domestic customers). Spillovers from FDI take place when the entry or presence of multinational corporations increases the productivity of domestic firms in a host country and the multinationals do not fully internalize the value of these benefits. Spillovers may take place when local firms improve their efficiency by copying

technologies of foreign affiliates operating in the local market either through observation or by hiring workers trained by the affiliates. Another kind of spillover occurs if multinational entry leads to more severe competition in the host country market and forces local firms to use their existing resources more efficiently or to search for new technologies. His empirical test shows the presence of productivity spillovers taking place through backward linkages which suggest that the presence of foreign affiliates is more likely to boost the productivity of their domestic suppliers than their domestic consumers.

Johnson (2005) argues that inflows of physical capital resulting from FDI could also increase the rate of economic growth but his argument narrows down on technology associated with FDI as the most important driver of economic growth. MNE operations in the host country can result in technology spillovers from FDI whereby domestic firms adopt superior MNE technology which enables them to improve their productivity. Technology spillovers thereby generate a positive externality that should allow the host country to enhance its long-run growth rate. The empirical study to support his argument reveals that FDI inflows have a positive effect on host country economic growth in developing but not in developed economies.

While there is generally a correlation between the speed of economic growth and the inflow of FDI, the direction of causality is not clear. The time sequence between FDI and economic growth can be twofold: direct capital inflow either stimulates economic growth and transformation or reacts to opportunities arising from economic growth and progress of transformation. Growth can be generated by FDI through additional investment resources and the transfer of technology and capabilities, as well as through improved access to export markets. On the other hand, foreign investors react positively to the consolidation of market-economy rules and the resumption of economic growth (Hunya and Geishecker, 2005). Their empirical study reveals that foreign affiliates through higher labour productivity and better capital endowment and use of more up-to-date technology than domestic

companies result in an increase in the host economy's growth rate. Inward FDI can stimulate local investment by increasing domestic investment through links in the production chain when foreign firms buy locally made inputs or when foreign firms supply or source intermediate inputs to local firms (Magnus and Fosu, 2006).

The gains from FDI include not only creation of employment in those sectors, which attracted overseas investors, but also of additional employment opportunities in ancillary sectors, which are supportive to all production oriented activities in the economy, (Jayaraman and Singh, 2006). Their empirical study on the impact of FDI inflows on employment and growth shows that there exists a unidirectional long run causality running from foreign direct investment to employment and a unidirectional causality running from foreign direct investment to GDP in the short-run.

2.3 Summary of the Findings of Empirical Studies

The empirical studies analyzed above do not give a clear cut position regarding the effects of FDI inflow on the GDP growth. Some studies actually establish the existence of a relationship between FDI and economic growth while others find no such relationship at all. This study has looked at 10 empirical studies out of which 5 establish that FDI inflows causes host country economic growth. 1 study by Carkovic and Levine (2002) conducted in both developed and developing countries found that there is no relationship between FDI inflow and economic growth. The other studies either peg a condition for FDI influence on economic growth or only establish causality between FDI and economic growth in which FDI can cause economic growth and vice versa. In the studies conducted by Magnus and Fosu, (2006) FDI and trade have been found to be bound together in the long run but FDI does not necessarily cause growth in the economy.

Since the findings of the empirical studies do not point towards a clear direction on the relationship between FDI inflows and GDP growth, it may therefore be said that country-specific variables play a big role in determining the extent to which the

inflow of FDI can influence an economy. One such variable is the state of the host country financial markets, human capital and whether the host country is a developing or a developed economy. A summary analysis of these studies is available in the appendix.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides a record of experiences the research went through in designing the research, sampling, data collection and the method of analysis.

3.2 Research Design

The study used descriptive research design to analyze the presence of a causal relationship between FDI inflow and the economic growth. The causality design was appropriate and consistent with the objective of the study being to establish if FDI inflows influence economic growth in Kenya.

3.3 Population

The study relied on data regarding FDI inflows, Gross Capital Formation and Total Recorded Employment in Kenya since independence. This is justified because it is the period that the Kenyan economy could be considered to be self governing in matters of economic policy.

3.4 Sampling

While it is normally appropriate to carry out a regression analysis using data from many observations, this study covers only 18 years from 1990 – 2007 due to the changing circumstances of the economy. For example, the Kenyan economy experienced liberalization in the early 1990s which opened the country more to foreign investors. At an international level, the period from early 1990s has experienced more globalization which directly influences capital movement across borders hence the FDI. Due to these changes, the most recent set of observations are therefore considered to be reflecting the current economic conditions and can give the true picture of the real impact of FDI on the economy. This study has therefore

used purposive sampling because it suits the purpose of the study being to establish the influence that FDI has on economic growth in Kenya today.

3.5 Data Collection

This study relied on secondary data obtained from the following sources; (i) World Investment Reports (2000 - 2008) (ii) Economic Survey of Kenya and (iii) Statistical Abstracts. Data on FDI inflows were obtained from the World Investment Reports available online from "United Nations Conference on Trade and Development" web site. However the information uploaded on the web from this site dates back only up to 1999. Thus the other data on FDI was obtained from the library at the Kenya Investment Authority. Data on the GDP growth rate and Gross Fixed Capital Formation was obtained from "The Economic Survey of Kenya" at The Ministry of Finance library. Data on Total Recorded Employment was obtained from Statistical Abstracts available at the Kenya Bureau of Statistics and also at The Ministry of Finance library. The set of data on the variables that have been studied are assembled in a Check List in Appendix 2.

A major difficulty that was encountered in the data collection was about The Average Annual Growth Rate of Labour. There was no data on labour in this format and this necessitated a slight change in the model to capture LABOUR in terms of Total Recorded Employment which was the only available means of incorporating LABOUR into the analysis.

3.6 Data Analysis

Earlier researches analyzing the effects of FDI on economic growth have used cross-section data and time series analysis. This study focuses on how FDI inflows affect host country economic growth. It uses OLS regression to study the relationship between GDP growth rate and FDI inflow. However, it is necessary to control for additional determinants of economic growth in order to reduce the problem of omitted variable bias. The variables CAPITAL and LABOUR are introduced in order to take into account the effects of the stocks of physical capital and labour on

economic growth respectively. Since data for stocks of physical capital are difficult to construct gross capital formation as a share of GDP for 1990 to 2007 is used as a proxy for the influence of physical capital on economic growth. The FDI component of gross capital formation has to be subtracted. LABOUR is measured as the total recorded employment during the period 1990 to 2007.

It is still too simplistic to assume that GDP would be influenced only by FDI, CAPITAL and LABOUR. There are other extraneous variables that influence economic growth. Johnson (2005) points to the difficulty of choosing among the multitude of potential determinants of economic growth when analyzing growth empirically. He argues that growth theories are not explicit enough about what variables belong in the regression. The strongest indication is found for primary schooling, the price of investment and the initial level of GDP per capita. Due to difficulties in obtaining the relevant data on schooling in Kenya, the schooling variable is omitted from this study. The GDP for 1990 is also omitted because it does not fit into the OLS method of analysis. The model then uses CAPITAL, LABOUR and FDI as explanatory variables and GDP growth rate as the dependent variable. The model is then constructed as follows:

$GROWTH = \beta_0 + \beta_1 FDI + \beta_2 CAPITAL + \beta_3 LABOUR + \varepsilon$. Table 3 provides a summary description of the variables that are used in the empirical analysis:

Table 3.1: Summary of the Model Variables and their Descriptions

Variable name	Explanation	Data source and period	Sign
Growth (dependent variable)	Average annual growth rate of real GDP per capita	Statistical Abstracts and Economic Survey of Kenya from Kenya Bureau of Statistics.	Not applicable
FDI (Independent variable)	Inflows of FDI as percentage of GDP	FDI data from Statistical Abstracts and Economic Survey of Kenya 1990-2007	+
CAPITAL (Independent variable)	Average share in GDP of gross capital formation	Capital formation data from Statistical Abstracts and Economic Survey of Kenya 1990-2007	+
LABOUR (Independent variable)	Total recorded employment	Total recorded employment from Statistical Abstracts and Economic Survey of Kenya 1990-2007	+

SPSS is used to analyze the data as a multiple regression. This is appropriate for the purpose of analyzing separately the effects of the other variables on economic growth other than the FDI inflow. An obvious question that one would ask is “are these the only explanatory variables influencing economic growth?” This is a major point of difficulty which presents serious challenges in this study. First it is too simplistic to assume that these three factors are the only drivers of economic growth. Secondly if one does appreciate that there are other factors for instance, initial GDP levels, political environment, literacy levels of the Kenyan population over time, state of the financial market and regional factors, how can these be incorporated into a quantitative model?

It is however worth noting that regression models are estimation models with inbuilt capabilities for showing the extent to which one can confidently rely on the results of the analysis. This is well captured by the tests of significance which this analysis has provided. The various tests of significance that this analysis has made include the Adjusted R square, Standard error of estimate and the F-test (ANOVA). The Adjusted R-Square provides a means of adjusting for the effects of additional explanatory variables on the value of R-Square. It is used in a multiple regression

model to reduce the effects of additional independent variables that may be introduced into the model so as to suit the requirements of a given researcher.

In multiple regression analysis, any extra independent variable that may be introduced into the model normally increases the value of R^2 even if it is not related to the dependent variable in any way. To check against this, an adjusted R^2 is computed so as to eliminate the effects of the additional independent variable on the value of R^2 . The value of Adjusted R-Square is mathematically determined as follows as; $\bar{R}^2 = 1 - (1 - R^2) \left(\frac{n-1}{n-k} \right)$. However in this study, it has been generated automatically using the SPSS.

The standard error of estimate is a measure of the variability around the regression line. It helps in determining the range of values of the dependent variable i.e. GDP within which one may have some degree of confidence that the true values lie.

The standard error of estimate is mathematically determined as $Se = \sqrt{\frac{\sum (y_a - y_e)^2}{n - k}}$

In this study, the value of s_e has been generated from the SPSS.

Analysis of variance has been used in this analysis to test the overall explanatory power of the entire regression. ANOVA uses the F statistic or F ratio to test the hypothesis that the variations in the independent variables, (i.e. FDI, CAPITAL and LABOUR) explain a significant proportion of the variation in the dependent variable (i.e. GDP). This analysis has used the F statistic to test the null hypothesis that all the regression coefficients are equal to zero against the alternative hypothesis that they are not all equal to zero.

The value of the F statistic is mathematically determined as $F = \frac{R^2 / (k - 1)}{(1 - R^2) / (n - k)}$

However it has been generated automatically using SPSS. To conduct an F test, this analysis has compared the calculated or regression value of the F statistic with the critical value from the table of the F distribution.

All the regression assumptions have been observed so as to validate the results of this analysis and give credence to the findings of the study. These assumptions include; the requirement that the error terms be independent of each other i.e. that there is no autocorrelation a condition which occurs whenever consecutive errors or residuals are correlated. Any presence of autocorrelation has been detected by using

the Durbin-Watson statistic $d = \frac{\sum_{t=2}^n (e_t - e_{t-1})^2}{\sum_{t=1}^n (e_t)^2}$; The requirement that there is no

multicollinearity a situation in which two or more explanatory variables in the regression model are highly correlated. The extent of multicollinearity has been determined by means of correlation matrix showing the extent of correlation between FDI and CAPITAL, FDI and LABOUR and CAPITAL and LABOUR in this analysis; In multiple regression analysis, the number of independent or explanatory variables in the regression must be less than the number of observations ($n > k$) for purposes of determining the degrees of freedom. This has been well taken care of since there are 18 observations against only three independent variables. The error terms e is a normally distributed random variable. This assumption has been adhered to as evidenced by the Regression Standardized Residual plot automatically generated by the SPSS.

CHAPTER FOUR

4.0. DATA ANALYSIS AND PRESENTATION

4.1 Introduction

This chapter presents the analysis of the secondary data obtained from the World Investment Reports, Economic Survey of Kenya, and Statistical Abstracts. The findings are quantitatively analyzed using SPSS and presented in the Coefficients, Correlation Matrix and Analysis of Variance tables. The analysis was based on the numerical data relating to the variables in the model.

4.1.1 Descriptive Statistics

This section gives a summary of the mean and the standard deviation of the GDP growth rate per capita, FDI inflow, Gross capital formation and the total recorded employment.

Table 4.1: Descriptive Statistics

	Mean	Std. Deviation	N
Average Annual growth rate of GDP per Capita	3.0000	2.25180	18
Inflows of FDI as a Percentage of GFCF	3.4278	3.36361	18
Average Shares in GDP of Gross capital Formation	1.3510E5	85688.25775	18
Total Recorded Employment	5.5095E3	2322.95620	18

The table above illustrates the mean and standard deviation of the GDP growth rate per capita, FDI inflow, Gross capital formation and the total recorded employment. The mean and the standard deviation have been determined by taking a simple average of the 18 observations for each of these variables from 1990 to 2007. The number of observations is represented by (N).

The mean value of 3 for growth rate of GDP shows that the Kenyan economy has been growing at a rate of 3 percent over the last 18 years. However there is a high variability in growth rate represented by a high standard deviation of 2.2518 percent.

This can be seen in the wide fluctuations in the GDP data in the appendix 2

The mean value of 3.4278 for inflow of FDI shows that the inflow of foreign direct investment into the Kenyan economy as a percentage of gross fixed capital formation is an average of 3.4278 percent over the last 18 years. This shows that FDI contributes only a small percentage of the capital formation in Kenya. The standard value of 3.36 shows a high level of variability which means that the FDI inflows fluctuate widely from period to period.

The gross capital formation has an average of Ksh. 135,510 million over the 18 year period with a big variation from period to period represented by a standard deviation of Ksh. 85,688 million.

The total recorded employment is an average of 5.5095 billion people over the 18 year period with a standard deviation of 2.232 billion people which shows that the employment levels fluctuate widely from period to period.

4.1.2 Coefficients of independent variables in the model

The independent variables in this analysis are the FDI inflow, Capital Formation and Total Recorded Employment. FDI inflow has a coefficient of 0.068 which means that the GDP changes by an average of 0.068 per unit change in FDI inflow when all other influencing factors are held constant. Capital formation has a coefficient of 5.523 which means that the GDP changes by an average of 5.523 per unit change in capital formation when all other influencing factors are held constant. Labour has a coefficient of -0.001 which means that labour has a negative influence on GDP and that the GDP decline by 0.001 every time TRE increases by 1 unit.

Table 4.2: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Collinearity Statistics	
		B	Std. Error	Beta		Tolerance	VIF
1	(Constant)	3.430	1.210		2.836		
	FDI inflows	.068	.108	.101	.629	.945	1.058
	Gross capital Formation	5.523E-5	.000	2.102	4.050	.091	11.029
	Total Recorded Employment	-.001	.001	-1.521	-2.910	.089	11.188

The table above gives the coefficients of the variables in the regression model. FDI has a coefficient of +0.068, Capital has a coefficient of +5.5 and Labour has a coefficient of -0.001.

The above coefficients show that inflow of FDI has a positive influence on economic growth though the effect is not strong. Capital positively influences economic growth to a large extent but Labour has a weak inverse relationship with economic growth. For purposes of policy formulation therefore, the government should encourage more inflow of foreign direct investments into the country and boost capital formation so as to positively influence economic growth.

4.1.2 Correlations Matrix of FDI inflows, GFCF and TRE

The correlation matrix has been generated to test if any independent variable influences another independent variable to a large extent. In any multiple regression analysis, an assumption is made that the independent variables should not influence each other. The rationale behind this assumption is that it would be difficult to isolate the impact of one independent variable on the dependent variable if it has been influenced by another independent variable. Thus the analysis has determined the extent to which FDI, Capital Formation and Labour are correlated.

Table 4.3: Correlations Matrix

		Average Annual GDP per Capita	Inflows of FDI as a Percentage	Average Shares in GDP of Gross capital	Total of recorded employment
Pearson Correlation	Average Annual GDP per Capita	1.000	.161	.671	.505
	Inflows of FDI as a Percentage	.161	1.000	.189	.223
	Average Shares in GDP of Gross capital	.671	.189	1.000	.953
	Total recorded employment	.505	.223	.953	1.000
Sig. (1-tailed)	Average Annual GDP per Capita		.262	.001	.016
	Inflows of FDI as a Percentage	.262		.226	.187
	Average Shares in GDP of Gross capital	.001	.226		.000
	Total recorded employment	.016	.187	.000	

From the results of this analysis, it is clear that FDI does not significantly influence Capital and Labour given that the values of the correlation coefficients are only 0.189 and 0.223. However Capital influences labour to a large extent but this is economically plausible.

4.1.4 Durbin Watson Model Summary

A Durbin Watson statistic has been included in this analysis to determine if the assumption of independent residuals has been adhered to. In any regression analysis, successive error terms are not supposed to be correlated otherwise the model will be considered to be a weak one. Any independence of the errors signifies a condition called serial correlation or autocorrelation which is tested by the Durbin Watson statistic. As a rule of the thumb in statistical theory a *d-value* of between 1 and 3 satisfy the requirement of the assumption of the independence of the consecutive residuals.

Table 4.4: Durbin Watson Model Summary

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate	Durbin-Watson
1	.811 ^a	.658	.585	1.45105	1.547

- a. Predictors: (Constant), Inflows of FDI as a Percentage of GFCF, Average Shares i GDP of Gross capital Formation and Total Recorded Employment.
- b. Dependent Variable: Average Annual Growth rate of GE

The value of R Square in the above table indicates that the independent variables (FDI, CAPITAL and LABOUR) explain 66% of the variability in the dependent variable (GDP). This satisfies the goodness-of-fit test as a measure of reliability of the model because it exceeds the 30% rule of the thumb in statistical theory.

The Adjusted R Square is used to analyze the effects of introducing any additional independent variable in the regression which might increase the value of R Square without having any effect on the dependent variable. In this analysis, the variables Capital and Labour have been introduced whereas the variable actually being examined is FDI. Thus it is appropriate to test their influence of the value of R-Square. In this analysis, it is clear that the additional variables have an influence of the GDP growth going by the Adjusted R-Square of 0.585.

The standard error of estimate is a test of reliability which can be used to construct confidence intervals for the predicted variable (GDP). Anyone who wishes to rely on these findings to estimate what the GDP growth would be should establish the significance level and then he will be able to determine the confidence interval for the GDP estimates.

4.1.5 Analysis of the Variance (ANOVA)

Analysis of variance has been used in this analysis to test the overall explanatory power of the entire regression. ANOVA uses the *F* statistic or *F* ratio to test the hypothesis that the variations in the independent variables, (i.e. FDI, CAPITAL and

LABOUR) explain a significant proportion of the variation in the dependent variable (i.e. GDP). This analysis has used the F statistic to test the null hypothesis that all the regression coefficients are equal to zero against the alternative hypothesis that they are not all equal to zero.

To conduct F test, this analysis has compared the calculated or regression value of the F statistic with the critical value from the table of the F distribution.

Table 4.5: Analysis of the Variance (ANOVA)

Analysis of the Variance (ANOVA)						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	56.722	3	18.907	8.980	.001
	Residual	29.478	14	2.106		
	Total	86.200	17			
a. Predictors: (Constant), Inflows of FDI as a Percentage, Average Shares in GDP of Gross capital and Total recorded employment						
b. Dependent Variable: Average Annual GDP per Capita						

Since the calculated value of the F- Statistic of 8.98 exceeds the table value or critical value of 5.56 at 99% level, then the null hypothesis that there is no statistically significant relationship between FDI, CAPITAL, LABOUR and the dependent variable GDP is rejected (i.e. the alternative hypothesis that not all coefficients are equal to zero is accepted)

4.1.6 Residuals Statistical Analysis

In regression analysis, it is assumed that the error term e is a normally distributed random variable. The predicted values of the dependent variable (GDP) vary randomly giving rise to positive residuals as well as negative residuals. The residuals statistics analysis establishes the maximum positive residual as well as the minimum residual. The residuals should have a mean value of zero if the errors are truly normally distributed.

Table 4.7: Residuals Statistical Analysis

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	.8388	7.3426	3.0000	1.82664	18
Residual	-2.55003	2.12762	.00000	1.31681	18
Std. Predicted Value	-1.183	2.377	.000	1.000	18
Std. Residual	-1.757	1.466	.000	.907	18

a. Dependent Variable: Average Annual GDP per Capita

The mean residual of zero in this analysis confirms that the assumption the error term e is a normally distributed random variable has been adhered to. The residuals have been generated by the SPSS analysis on a graph below and it is clear that the mean value of these error terms is zero.

4.1.7 Regression Standardized Residual

Regression standardized residuals provide a basis for generating an approximation of a normal distribution of the errors terms. It is used for testing the extent to which the underlying assumption that the residuals in a regression model are a normally distributed random variable.

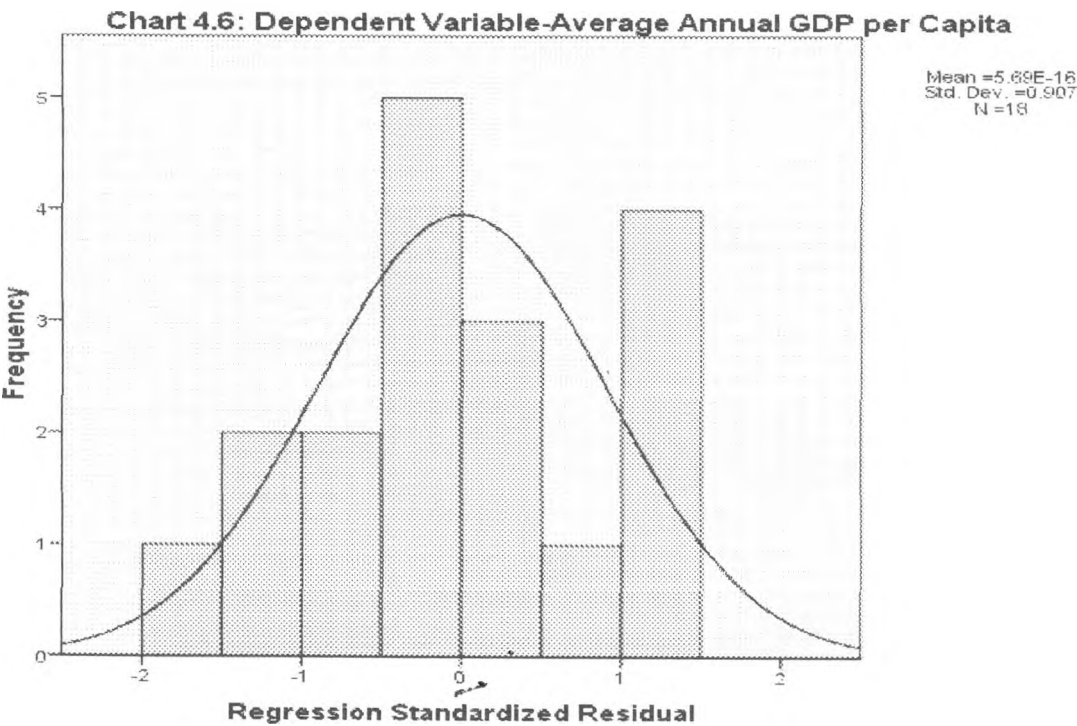


Chart 4.6 shows that the assumption about errors being normally distributed has been fully satisfied. The standardized residuals have been automatically generated in to an approximation of a normal distribution with a mean value of 5.69 and standard deviation of 0.907. This can then be used for statistical inference to determine the probability associated with some given standard errors.

4.1.8 Annual GDP Growth Pattern

The annual GDP growth is the dependent variable being studied and the analysis has established that the GDP growth rates increases gradually over the period of 18 years covered by the study. This is evidenced by the growth pattern in the chart below.

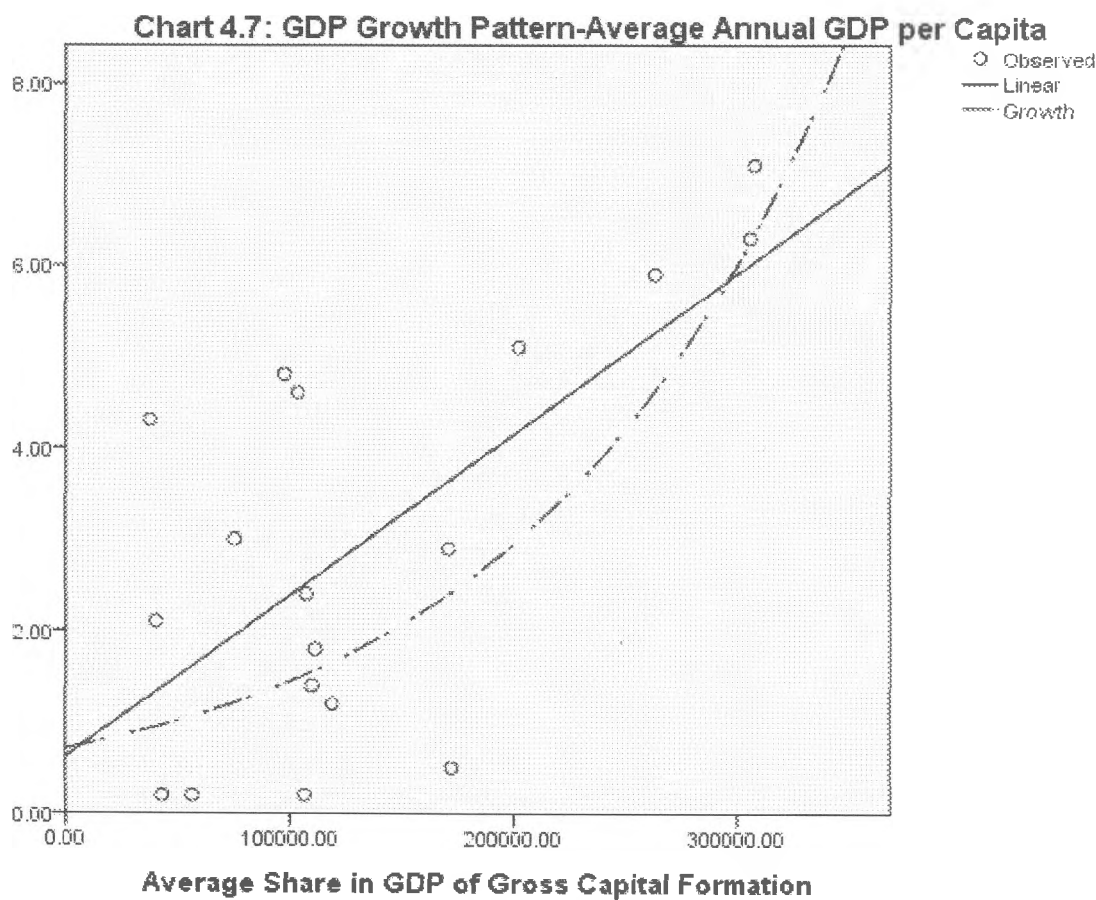


Chart 4.7 shows a graphical representation of the impact of Gross Capital Formation on the economic growth. The x-axis represents the average share in GDP of Gross Capital Formation whereas the y-axis represents the average annual GDP per capita. The SPSS has generated a line of best fit showing that the GDP increases as Gross Capital Formation increases. This confirms the findings already discussed in section 4.1.2 above that Capital Formation positively influences economic growth.

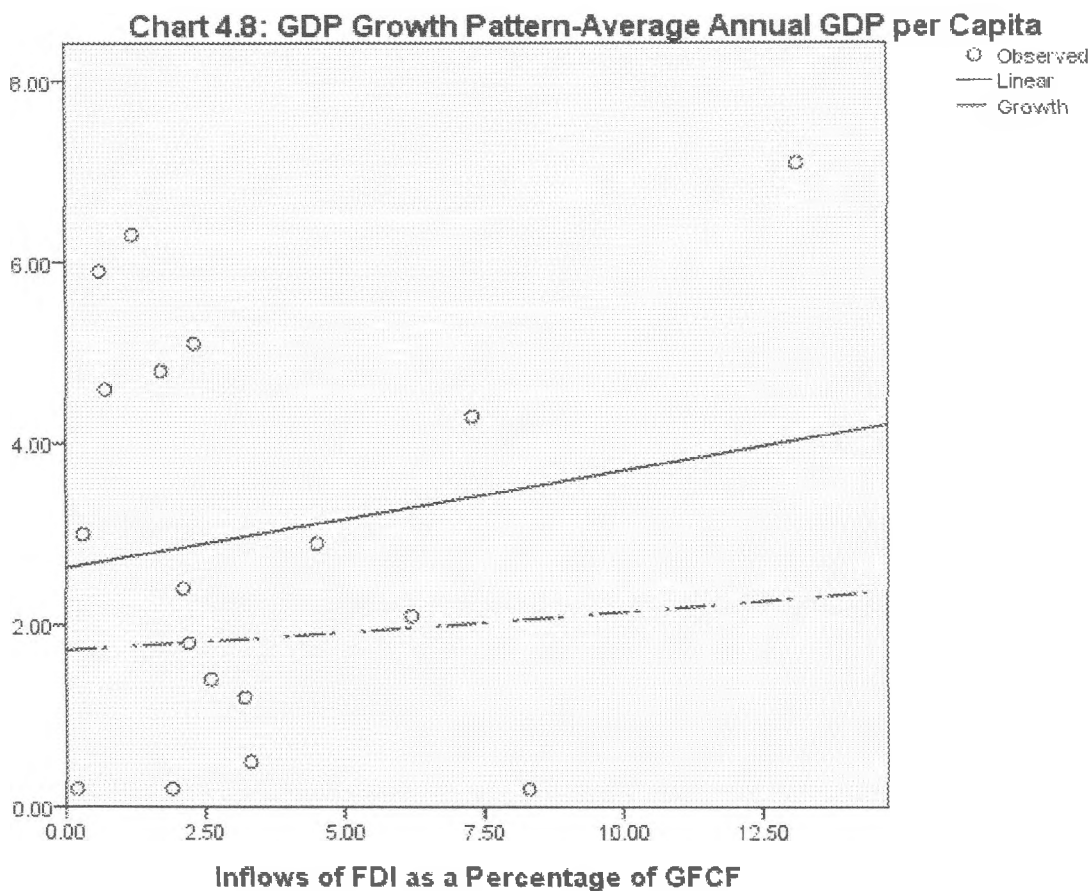


Chart 4.8 shows a graphical representation of the impact of FDI on the economic growth. The x-axis represents the inflows of FDI as a percentage of GFCF whereas the y-axis represents the average annual GDP per capita. The SPSS has generated a line of best fit showing that the GDP increases as FDI inflows increase. However the slope of the line of best fit is very gentle which confirms the findings in section 4.1.2 that the impact of FDI inflows on economic growth is not very strong.

4.2 Summary and Interpretation of the Analysis

The findings of this analysis have revealed that FDI inflows influence the GDP growth rate. This position has been established by means of the positive coefficient of 0.068 of the FDI as an explanatory variable in this model. However the extent of the influence that FDI has on economic growth is not very strong as evidenced by a lower value of the positive correlation coefficient of 0.161 only.

Capital formation has been established to be the strongest driver of economic growth in this study. The findings of this study establish a high positive correlation between capital and economic growth of 0.671. This makes capital to be the main driver of economic growth in this study.

There is a weak negative influence that labour has on economic growth. It is however appropriate to note that this model has not satisfied fully the assumption with respect to lack of multicollinearity. Thus the relationship between labour and GDP may be misleading due to a strong correlation between labour and capital evidenced by a correlation coefficient of 95.3%.

It is important to note that this analysis has not included all the possible variables that could influence economic growth. This is so because some of the variables are qualitative in nature and would not fit in a regression analysis. For example it is difficult to assign numerical values to the prevailing political environment of the country which may also have an influence on economic growth. Another variable that may be having an influence on economic growth is the initial GDP as a starting point which cannot fit in a regression model. These extraneous variable account for the unexplained variation in the economic growth rate amounting to 34.2% because this model provides for explained variation of 65.8% as evidenced by the value of R-Square.

CHAPTER FIVE

5.0. DISCUSSION AND CONCLUSION

5.1 Introduction

FDI-friendly policies in host countries can be gainfully implemented by the government through initiatives that seek to enhance the inward flow of FDI. This is evidenced by the findings of this study. This chapter presents the study results on the impact of FDI inflow on economic growth in terms of the research findings, study recommendation, conclusion and areas for further studies.

5.2 Discussion

The study established that the FDI inflows have a positive impact on economic growth since it offers an unprecedented opportunity for developing countries to achieve faster economic growth through trade and investment. The impact of FDI on economic growth is however not strong.

The study also established that Gross Capital Formation positively influences economic growth more significantly than FDI inflows. Thus an increase in the Gross Capital Formation and the inflow of FDI will lead to an increase in the GDP. However Labour has a weak inverse relationship with economic growth. This is not consistent with the economic logic which means lack of economic plausibility.

The study confirms that foreign direct investment (FDI) enhances the productivity of and promotes economic development since FDI may not only provide direct capital but also create positive externalities via the adoption of foreign technology and know-how.

The resulting net increase in domestic income as a result of foreign direct investment (FDI) is shared with government through taxation of wages and profits of foreign-owned companies

FDI may also positively affect domestic income through spillover effects such as the enhancement of human capital (skills). Given these potential benefits, policy makers should continually re-examine their tax rules and entry regulations to ensure they are attractive to inbound investment.

5.3 Limitations

A major limitation that was encountered during the course of this study is the difficulty in capturing all the capital inflows into the country. It was clear that there were some foreign investors who would come as individuals and start up businesses without going through the Kenya Investment Authority. Thus the details relating to the capital inflows on such investments are not available anywhere while they could account for substantial inflows.

5.4 Recommendations

The government of Kenya should formulate a non-discriminatory regulatory framework and build other comprehensive incentive schemes aimed at attracting FDI inflow into the country. This may involve such initiatives as building skilled and responsive labour markets, practicing good governance and maintaining a peaceful political atmosphere. The internationalization of economic processes should be encouraged since it has prompted considerable interest in Foreign Direct Investment (FDI) as a key method of attracting inward flows of capital and technology, together with associated innovation in management techniques.

The government should be fully involved in the promotion and development of physical and informational infrastructure to provide an enabling business environment to foreigners. Policy makers should formulate policies on favourable tax regime on foreign investments, friendly regulations on inflow of capital and

repatriation of profits, provision of location incentives and the enactment of labour market laws that favor business development.

The government should also review tax burdens in different countries since a widely-held view is that taxes are likely to matter more in choosing an investment location and the potential economic growth.

Finally the government should establish a better method of capturing information on capital inflow into the country as a basis of supporting comprehensive studies on FDI and related issues so as to provide a platform for policy formulation.

5.5 Conclusions

Although this study reveals that the FDI does not have a very significant effect on economic growth, it is logical to attribute this to the relatively small amounts of capital inflows into the country. The government can conduct a campaign to attract the foreign investors so as to compound the benefits of FDI inflows which have already been confirmed by this study.

5.6 Suggestion for further study

The study of the impact of FDI on economic growth suffers a major limitation in dealing with numerous qualitative factors that may also have an affect on economic growth. Of particular interest is the political situation of the host country. Since most developing countries go through some economic cycles that tend to follow some pattern revolving around political events like general elections, it is possible to study the impact of politics on the in-bound FDI.

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APPENDICES

APPENDIX 1

A summary of the earlier empirical studies on FDI and host-country economic growth

Study	Type of data	Country and period of study	Empirical approach	Assumptions	Findings
Borensztein et al. (1998)	Cross section	69 developing countries 1970-1989	OLS regression.	FDI affects the economy through technology diffusion	FDI has positive effect on economic growth but the magnitude depends on the host country human capital
Olofsdotter, (1998)	Cross section	50 developed and developing countries 1980-1990	OLS regression.	FDI affects the economy through technology spillover	Increase in inward FDI has a positive effect on economic growth rate
Zhang, (2001)	Time series	11 developing countries 1957-1997	Analysis of causality between FDI and economic growth using Granger causality tests	There can be feedback effects from economic growth to FDI inflows	There is evidence that FDI enhances growth however, the magnitude depends on host country conditions
Carkovic and Levine, (2002)	Cross section	72 developed and developing countries 1960-1995	OLS regression.	FDI generates economic growth	FDI inflows do not exert a robust, independent influence on economic growth
Alfaro and Chanda, (2002)	Cross section	71 Countries (1975-95) whose financial market variables and FDI shares is available	OLS regression.	Financial markets provide the link between FDI and economic growth.	FDI promotes growth through well functioning financial markets
Javorcik, (2004)	Cross section	Central and Eastern European countries (CEECs)	OLS Regressions and 'Olley-Pakes Regressions	FDI inflows stimulates domestic productivity	Presence of productivity spillovers take place through backward linkages

Andreas Johnson, (2005)	Cross section	64 developing and 21 developed countries	OLS regression.	Technology spillover is a pre-condition for a positive effect of FDI on economic growth	FDI inflows have a positive effect on host country economic growth in developing but not in developed economies
Hunya and Geishecker, (2005)	Cross section	10 central and eastern European countries 1990-2003	OLS regression.	A correlation exists between speed of economic growth and FDI inflow	FDI has a positive influence on the speed of growth
Jayaraman and Baljeet, (2006)	Time series	An Empirical Study of Fiji	The <i>F</i> test is used to determine whether a long-run relationship exists between the variables	There is a relationship between FDI inflow and growth	There is a causality between FDI and growth
Magnus and Fosu, (2006)	Time series	An Empirical Study of Ghana	Bounds testing approach	FDI inflows and trade affects economic growth	FDI and trade are bound together in the long run.

Source: Format adopted from Andreas Johnson, (2005)

APPENDIX 2

Check List of the Variables in the Model

Entries	Year	Average annual growth rate of real GDP per capita	Inflows of FDI as percentage of GDP	Average share in GDP of gross CAPITAL formation (Ksh Millions)	Total recorded employment (TRE in Millions)
1	1990	4.30	7.30	37599.12	2395.00
2	1991	2.10	6.20	40025.21	2557.10
3	1992	0.20	1.90	42945.04	2753.40
4	1993	0.20	0.20	56392.79	2998.20
5	1994	3.00	0.30	75389.55	3356.20
6	1995	4.80	1.70	97805.16	3858.60
7	1996	4.60	0.70	103738.21	4325.80
8	1997	2.40	2.10	107565.87	4698.40
9	1998	1.80	2.20	111373.41	5096.70
10	1999	1.40	2.60	110024.20	5492.60
11	2000	0.20	8.30	106709.93	5911.60
12	2001	1.20	3.20	119140.28	6366.90
13	2002	0.50	3.30	172576.62	6873.50
14	2003	2.90	4.50	171187.57	7510.40
15	2004	5.10	2.30	202430.49	7998.50
16	2005	5.90	0.60	263139.63	8505.00
17	2006	6.30	1.20	305876.90	8993.40
18	2007	7.10	13.10	307841.51	9478.90

Note 1. The GDP and the Gross Capital Formation have been taken at market prices to adjust for the effects of inflation over the entire period under the study.

Note 2. Information about total recorded employment force is represented by the total recorded employment because of difficulty in obtaining the data.

APPENDIX 3

Descriptive Statistics

	Mean	Std. Deviation	N
Average Annual GDP per Capita	3.0000	2.25180	18
Inflows of FDI as a Percentage of GFCF	3.4278	3.36361	18
Average Share in GDP of Gross Capital Formation	1.3510E5	85688.25775	18
Total Recorded Employment	5.5095E3	2322.95620	18

APPENDIX 4

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t
	B	Std. Error	Beta	
1 (Constant)	3.430	1.210		2.836
Inflows of FDI as a Percentage of GFCF	.068	.108	.101	.629
Average Share in GDP of Gross Capital Formation	5.523E-5	.000	2.102	4.050
Total Recorded Employment	-.001	.001	-1.521	2.910

a. Dependent Variable: Average Annual GDP per Capita

APPENDIX 5 **Correlations Matrix**

		Average Annual GDP per Capita	Inflows of FDI as a Percentage of GFCF	Average Share in GDP of Gross Capital Formation	Total Record Employment
Pearson Correlation	Average Annual GDP per Capita	1.000	.161	.671	.505
	Inflows of FDI as a Percentage of GFCF	.161	1.000	.189	.223
	Average Share in GDP of Gross Capital Formation	.671	.189	1.000	.953
	Total Recorded Employment	.505	.223	.953	1.000
Sig. (1-tailed)	Average Annual GDP per Capita		.262	.001	.016
	Inflows of FDI as a Percentage of GFCF	.262		.226	.187
	Average Share in GDP of Gross Capital Formation	.001	.226		.000
	Total Recorded Employment	.016	.187	.000	
N	Average Annual GDP per Capita	18	18	18	18
	Inflows of FDI as a Percentage of GFCF	18	18	18	18
	Average Share in GDP of Gross Capital Formation	18	18	18	18
	Total Recorded Employment	18	18	18	18

APPENDIX 6 **Durbin-Watson Model Summary**

Model	R	R Square	Adjusted Square	Std. Error of the Estimate	Durbin-Watson
1	.811 ^a	.658	.585	1.45105	1.547

b. Dependent Variable: Average Annual GDP per Capita