

AN EMPIRICAL STUDY OF LOCATION DETERMINANTS
OF FOREIGN DIRECT INVESTMENT: IN KENYA

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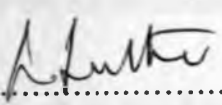
DECLARATION

I **Iseme Meuledi Mabruki** hereby declare that this research project is my original work and has not been presented for a degree in any other University.

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DEDICATION

Special dedication to my late husband Mike, whom I am greatly indebted to, he was my source of encouragement and inspiration.

To my children; Amani, Tata, Buki and Bella who through your support made it possible for me to finish what I had started. Through difficult times you have remained a continuous source of joy. Your help and patience was greatly appreciated especially throughout my project.

Finally; to my sister Maka and good friend Hilda whom I would like to thank. It was you two, who fed me the determination to realize and reach my potential.

Thank you all who held my hand. You all mean a lot to me.

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ABSTRACT

In transition and developing economies, Foreign Direct Investment (FDI) is a prime concern for policy makers economists and politicians alike. In the recent past, Kenya has found it difficult attracting FDI. The issue of the determinants of FDI arises. Understanding the determining factors of FDI inflows, and unveiling the reason why some countries are most successful than Kenya in attracting FDI, provide policy makers with useful guidance for future policy prescription.

In this study FDI is modeled by focusing on macro-economic determinants of FDI, which encompasses variables, which the government has direct control of as opposed to the micro-economic variables. The study approaches the issue at the country level consequently only broad trends about macro-economic determinants of gross FDI flows can be discerned.

We started with one dependent variable (FDI) and thirty one (31) independent variables ranging from gross private investment to domestic investment to GDP ratio. The first step was to establish the time series properties of data, i.e. establish the existence or lack of, unit root. We report that, FDI, direct taxes on corporate profits, GDP in constant market prices, gross fixed capital information, exchange rate, openness of the economy and domestic investment to GDP ratio were non-stationary in levels, but stationery in first differences, that is, they are integrated of order I (1). The final results show that FDI have long-term relationship with these variables. This suggests that economist should focus on these variables when managing FDI inflows.

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CHAPTER ONE

1.0 INTRODUCTION

1.01 BACKGROUND

Foreign Direct Investment (**FDI**) has assumed increasing importance over time, becoming a prime concern for policy makers and a debatable topic for economists and financiers alike.

The debate on FDI has several facets of particular importance to policy makers in capital starved countries are the determinants of FDI inflows as discussed by **Moosa and Cardak (2003)**. The growing importance of private flows reflects the trends toward liberalization and globalization in the areas of investments and finance. Barriers to capital movements have been abolished in many countries and investment decisions are increasingly made on a regional or global scale. Flows of foreign direct investments are contributing to the building of strong economic links between industrialized and developing countries and also amongst developing countries as observed by **Erdal and Tatoglu (2002)**. The creation of Multi-National Corporations (MNCs) in fuelling cross-border investments, hence directing the degree of globalization, raises global welfare by leading to a more efficient global allocation of resources (**UNCTAD 1998**). However the same cannot be said for Africa, as globalization has not spread evenly across the globe. In particular Sub Saharan Africa (SSA) has not benefited from these free flows and remains largely isolated as observed by **Jim Lee (2003)**.

FDI to developing countries increased substantially in the second half of the 1980s (by about 17 per cent annually) to reach \$70 billion in 1993 **Nair-Reichert and Weinheld (2001)** and almost \$180 billion in 1999; **GDF (2003)**, this clearly suggests that FDI remains a dominant source of external financing for developing countries.

Africa's share of FDI has been declining over time, from about 14 per cent in 1970s to 9 per cent in 1980s and to almost 3 per cent in the 1990s as enumerated by **Chawdhury and Mavrotas (2003)**. Accordingly **Asiedu (2002)** avers that, Africa though being in the poorest region has not

partaken in the FDI boom despite efforts to attract FDI. Over the period 1980-1989 and 1990-1998, FDI to Sub-Saharan Africa (SSA) grew by 59 per cent (excluding South Africa).

This compares with an increase of 5,200 per cent for Europe and Central Asia, 942 per cent for East Asia and the Pacific, 740 per cent for South Asia, 455 per cent for Latin America and the Caribbean, and an average of 672 per cent for all developing countries (cf. **World Bank 2000a**). The region henceforth is faced with an enormous challenge of filling a resource gap amounting to US\$64 billion badly needed for poverty alleviation; this translates to 12 per cent of Gross Domestic Product; as propounded by **Asiedu (2003)**.

The role of FDI as a source of capital has become increasingly important to SSA and indeed very crucial to the region. The subsequent decline in official development assistance in the 1990s enhances the need for FDI in these countries. Foreign aid per capita in SSA declined from an average of \$35 over the period 1989-1992 to about \$28 in the period 1993-1999 (cf **world Bank 2000a**). According to **Amoaka, Economic Commission Africa (ECA) 2004**, priorities at the global level clearly lean away from Africa and the developing regions, as each year \$300 billion supports farmers in rich countries, while less than one-sixth of that amount flows to poorer nations in the form of aid. This situation is exacerbated as most of the benefits of aid are lost through debt servicing and the "Tied-aid" donor habit thus reducing the real value of the assistance by some 25 to 40 per cent, **ECA (2004)**. It is therefore imperative for countries in the SSA region to increase their share of FDI to compensate for the decline in official assistance and to adopt a sustainable long-term approach to filling the resource gap.

Like most developing countries in the region, Kenya's level of domestic savings is generally low, standing at about 3 per cent, which is much lower than the Sub Saharan Africa average of over 10 per cent (**UNIDO, 2002**) implying therefore the capacity to harness domestic financial resources for the development of key sectors of the economy is quite limited. Economic activity is by and large dominated by private consumption that equaled 79 per cent of GDP in 2001. FDI has the capacity to play an important role in the transformation of a relative small and backward economy into a modern and dynamic one as was proved in Ireland and Singapore. In particular FDI impacts five variables: domestic investments, technology, employment generation and

labour skills, the environment and export competitiveness; as enumerated by **Linda and Vijay (2001)**. The inward flow of FDI provides the much needed capital for investment as it helps cover the current account deficit, fiscal deficit and supplements the inadequate domestic resources to finance both ownership change and capital formation; **Krkoska (2001)**. **Lipsey (1999)** contends that FDI has been the most dependable source of foreign investment for developing countries; FDI is more desirable than other forms of capital flows especially borrowings, as it is seen as being automatically hedged against downturns. Capital flight during downturns cannot happen without much capital loss; **Sebastian Morriss (2004)**. It is in this regard, that FDI is viewed as “good cholesterols”, as it is “bolted down” and cannot leave at the first sign of trouble as witnessed in the post Latin American debt and post East Asian crises period (**Hausman and Fernandez-Arias 2002**). Due to the presence of large, fixed, illiquid assets that make rapid disinvestments or reversibility more difficult, FDI is less subject to capital reversals and contagion effects.

With close to half the population in Africa living below the \$1 a day, poverty remains a daunting social and economic challenge **ECA (2003)**. Kenya like other developing countries is grappling with high poverty levels (with 56% of the population living below the poverty line) as economic performance has been very dismal, **Government of Kenya (GOK) 2003**. For the first time since independence, the country recorded a negative growth of -0.3 per cent in gross domestic product (GDP) in the year 2000. The economy has since experienced marginal improvement in the year 2001 to 2003 recording 1.2 per cent to 1.8 per cent growth respectively, (**Budget 2004**). However this is well below the 7 per cent target set by NEPAD to achieve and sustain the Millennium Development Goal by the year 2015. Thus the importance of a private led investment campaign as the engine for economic growth cannot be overemphasized. **Kabbaj (2003)** adds to this debate saying, “It is only through a strong private sector that contributes to the state coffers will the abysmally poor fiscal position of African countries be improved. FDI has potentially desirable features that affect the quality of growth with significant implication for poverty reduction **GDF (2001)**. **Klien et al (2001)** concurred that FDI generates revenues that may support the development of a safety net for the poor. While **Joon-Wan Cho (2001)** asserts

that FDI can play a key role in improving the capacity of the host country to respond to the opportunities offered by global economic integration, a goal increasingly recognized as one of the key aims of any development strategy. It is worth noting that China initiated economic reforms in 1976, with the introduction of FDI as one of the key development strategies.

It has further been argued by **Chakrabati (2001)** that FDI provides a viable alternative to capital markets in developing countries. It is worth noting that the visible growth spurts of FDI and Gross Domestic Product (GDP) growth rates in the Newly Industrialized Economies (NIES) and Association of Southeast Asian Nations (ASEAN) countries were nurtured by decades of political and economic stability.

1.02 OVERVIEW OF ECONOMIC PERFORMANCE IN KENYA

Kenya was a popular investment destination in the decade before and after independence in 1961. Overall economic performance was positive and most rapid in the 60s and early 70s despite high population growth rates, GDP grew at an average of 6.5 per cent while GDP per capital grew at 3per cent and minimal inflation was less than 3 per cent, while current account balanced with minimal external debt burden, This situation was conducive to the first wave of foreign investment under the import substitution strategy **Phillips et al (2000)**. Foreign aid flow in the country stimulated the investment of domestic resources as evidenced by the huge public sector activities in transport and communication networks, land settlements schemes, education and health programmes; **Njeru (2004)**. Between 1963 and 1982 investment as a share of GDP rose steadily and signified a healthy investment to GDP ratio. As a result there was a favourable response by foreign investors to the incentives and policies implemented to encourage location of industries in Kenya. The fiscal stance was supportive of private investments as it resulted in net savings on the current fiscal account, **Swamy (1994)**.

Up to the early 80s Kenya enjoyed political stability, a rare privilege in the African continent, under a one party political regime. By ensuring consistency of economic policies, the political stability minimized uncertainties, fostering foreign investments. However the weak institutions and poor policies, that emerged thereafter, were clearly factors in the inability of Kenyan leaders to take advantage of its economic growth potential; **Phillips et al (2000)**. It has been observed

that macro-economic instability is detrimental to investment growth and may hinder the efficient allocation of resources **Batten and Bryant (1999)**.

The Kenyan economy experienced severe external and internal shocks. Owing to distortions in the macroeconomic policy environment, these shocks resulted in fluctuations in growth performance and instability **Ronge and Kimuyu (1997)**. The oil crises of 1973/74 led to deterioration in the terms of trade and precipitated severe balance of payments (**BOP**) problems that changed the picture. According to **Were (2001)**, the growth rate decelerated to less than 4 per cent, recording a low of 2.9 per cent in 1975. This downward trend received a temporary reprieve from the coffee boom of 1977, registering a high of 8.1 per cent and 7.7 per cent in the subsequent two years. However these growth rates could not be sustained with the re-emergence of the second oil crises, which was followed by a sharp deterioration in the world commodity market. This brought with it further macroeconomic imbalance and the continued deceleration in the GDP growth rates and an increase in inflation. The drought conditions that ensued in the 1980s did not ease the situation, leading to massive food imports made possible by the availability of external loan finance. The growth of Kenya's exports earnings declined tremendously from 26 per cent in 1980 to about negative 13 per cent in 1981, which were insufficient to support the importation of adequate goods and services required to transform and develop the economy. Increased protectionism policies by developed countries tended to discriminate against less developed countries (**LDCs**) exports including Kenya, thus lowering earnings, observed **Were (2001)**. By 1986, the Kenyan economy faced a myriad of problems; high levels of domestic and foreign borrowing, rising real interest rates, low private investment, increasing real exchange rate, and high level of foreign debt service obligation; **Kiptui (2003)**.

The government of Kenya formally embraced the prescription of the World Bank and the International Monetary Fund (**IMF**) through the publication of the Sessional Paper Number One of 1986 on Economic Management for Renewed Growth. The government undertook to stabilize and reorient the economy in an attempt to make the productive sectors more efficient. The major thrust of macroeconomics policy was both demand restraint or stabilization and structural adjustment in an endeavour to move towards a more open regime and encourage exports; **Ronge and Kimuyu (1997)**. Despite the implementation of the Structural Adjustment Programmes

(SAPs) with varying degrees of intensity over the period to 1990s, the GDP remained sluggish and continued the downturn trend as observed by **Kabubo-Mariara and Kiriti (2003)**.

The decline in the economic performance has since 1980s through to the 90s been accompanied by declining investment levels, declining productivity and low employment growth coupled with a weak incentive structure for private investment, thus reducing the country's overall growth potential. Attempts to restore the growth trends achieved in the 1960s and 70s and to reduce the financial gap of the 80s led to increase in external borrowing especially under the SAPs, loan facility from the World Bank. Consequently, per capita income in constant 1982 prices declined from US\$271 in 1990 to US\$239 in 2002, **GOK (2003)**. Oppressive debt levels place a burden on the economy, **Were (2001)** avers there has been a significant net outflow since 1991 to service the debt obligations. This implies that Kenya has been paying out more funds than it receives, thereby reducing domestic resources available for development. As of end of 2002, Kenya's outstanding stock of external debt, including arrears amounted to US\$5.1 billion, which is equivalent to 49 per cent of GDP, as listed in the **IMF Report No:03/400 (2003)**.

It is worth noting that the Kenyan economy however is one of the most diversified in Africa and the largest in the region. Kenya is a member of several trade promoting organizations including, the World Trade Organisation (WTO), the East African Community (EAC) and the Common Market for East and Southern Africa (COMESA) which is relatively large in terms of both country membership (20 nations) and population of about 385 million people. There is therefore a positive implication on market size and demand, creating a challenge to Kenyans to utilize the emerging market opportunities. **UNIDO (2002)** suggests that, expanding investments and strengthening of export linkages would be realized if the relative strength of selected sectors is increased.

The period after independence saw relatively stable inflows in the country. The annual average FDI inflow amounted to US\$25 in the period 1970 to 1980s. The vitality and resilience of Kenya's private sector was one of the country's strengths, enabling it to create a strong and diversified economy depicted, by a large manufacturing sector, a dynamic tourism market and the largest exports in Africa of such agricultural products as tea and horticulture.

1.03 FDI TRENDS IN KENYA

Million of U.S. dollars (current prices)

Table 1.03

YEAR	KENYA	UGANDA	TANZANIA
1983-1988	21	0	1
1989	62	-2	6
1990	57	-6	-3
1991	19	1	3
1992	6	3	12
1993	2	3	20
1994	9	2	12
1995	32	121	150
1996	13	121	149
1997	40	175	158
1998	42	210	172
1999	42	222	517
2000	127	254	463
2001	50	229	327
2002	50	275	240

Source: IMF, International Financial Statistics

Up to 1990, Kenya was one of the key destinations of FDI in the Eastern African region, a role which has reversed as Uganda and Tanzania have since emerged as “**front runners**” in the receipt of FDI inflows to low income countries in Africa.

The investment climate deteriorated significantly occasioning a sharp decline in net FDI inflows, from an average of US\$79 million in 1980 to US\$42 million in 1999 impacting on the manufacturing sector whose growth registered a decline, from an average of 4.8 per cent during the 1980s, falling to 2.19 per cent during the 1990s, and in recent few years to only around 1 percent; **WORLD BANK (2004)**. The sharp rise in FDI inflows in the year 2000 as depicted in the table above was as a result of new investments by mobile phone companies and offshore

borrowing by private companies to finance electricity generation activities necessitated by the drought conditions which prevailed during that year. FDI as a percentage of Gross Domestic Product continued the drop from 0.7 per cent in 1990 to 0.4 per cent in 2002. **World Indicators (2004)**.

The loss of FDI competitiveness was even more dramatic in the 1990s decade, with Kenya's share in the SSA region falling from 2 per cent in the first half of the decade to less than 0.4 per cent in the second half of the decade. This was more pronounced in the rate at which foreign investment was being withdrawn from the country, from an annual outflow of US\$3million in the first half of the decade increasing to US\$32 million in the later half of the decade. Two decades ago, cumulative foreign direct investment in the East African region was predominantly in Kenya with 87 per cent of the foreign ownership of companies in the East Africa region in Kenya. By the year 2001, only 22 per cent remained in Kenya compared to 36 per cent and 42 per cent in Uganda and Tanzania respectively, thus relegated to a third position in hosting foreign direct capital stock in the region, **AECG (2003)**. The most recent comparison of foreign direct investment performance, ranked Kenya in 118th position among 140 countries, slipping from 90th place at the end of the 1980s, **UNCTAD (2003)**. Equally disturbing is Kenya's share of world exports which now stands at 0.02 per cent, half of what it was in the 1980s, **World Bank (2003)**.

The principal constraint to the decline in FDI in Kenya has been attributed to the state of the investment climate as revealed by a number of surveys, carried out by different organizations covering Africa as a whole, the East African region, and those that were specifically done in Kenya.

1.04 DETERMINANTS OF FDI

Understanding the determining factors of FDI inflows, and unveiling the reason why some countries are most successful than Kenya in attracting FDI, provide policy makers with useful guidance for future policy prescription.

The location advantages neatly synthesized in the “eclectic paradigm” of **John Dunning (1973)** forms the core of much of the discussion on the determinants of FDI in developing countries. In summary, Dunning argues that firms invest abroad because of **O** (ownership), **L** (locational), and **I** (internalization) advantages. Ownership advantage refers to the multinational’s ability to compete with their rivals. Locational advantage relate to the multinational’s willingness to invest in one host country than in others. Finally, internalization advantage refers to the ability of the multinationals to internalize the O and L advantages. **Dunning’s (1973,1981)** analyses sets in train a number of econometric analyses designed to identify the main determinants of FDI; **Scaperlanda and Mauer(1969), Agarwal(1980), Root and Ahmed (1979), Levis (1979), Balasubramanyan and Salisu (1991), Singh and Jun (1995)** to mention a few. The studies concluded that host countries with sizable; market size, resource endowments, infrastructure facilities, macroeconomic stability, political stability, and a distortion free economic and business environment, including fiscal and monetary incentives were found to affect the inflow of FDI.

In determining the factors that influence FDI, it is useful to distinguish between the types of FDI that enter a Host Country, that is; resource seeker, market seeking or non-market seeker (export oriented) FDI, both types represent motive for initial entry by a firm from his Home Country to the Host Country. The main reason for resource seeker FDI is to acquire a particular and specific resource at a lower real cost than it would have in the home country. The motivation behind this type of investment is fueled by the need to minimize cost and secure the supply of resources. These resources are mainly minerals and raw materials, agricultural products and location bound resources such as tourism safari. The main objective of market-seeking FDI is to serve domestic markets. Here goods are produced in the host country and sold in the local or regional market. As a consequence, this type of FDI is driven by domestic demand such as large markets and high income in the host country, to justify local production. On the other hand non-market seeking FDI is where intermediate or finished goods are produced in the host country but exclusively sold abroad. A pertinent factor in this type of investment is the ease with which firms can export their produce. Nevertheless factors that increase the marginal productivity of capital are relevant for both types of FDI. The type of the investment, whether service or manufacturing and the size

of the investor, be it small and medium or large multinationals all have a bearing on the location specific determinants UNCTAD (1998a).

Among the supplementary policies used to influence locational decisions, trade policy plays the most prominent role in enhancing investments. The use of both FDI and trade policies like; import duty and VAT exemption schemes, export compensation scheme and the establishment of manufacturing under bond (MUB) including the export promotion zones (EPZs), are policies that are popular with most developing countries.

Much as Kenya is currently receiving significant FDI from the privileges advanced by the African Growth and Opportunities Act (AGOA), the likelihood is that most of this FDI will be at stake once such privileges expire given the nature of the AGOA agreement. For the purpose of sustaining the economy and improving social welfare, it is crucial that FDI particularly of the value-added i.e. manufacturing type is sought to overcome the existing narrow base. It is therefore a challenge for Kenya to improve the base of existing foreign operations, stem the outflow of foreign investors from Kenya, as well as raise the level of attractiveness for new FDI.

This paper seeks to examine the determinants of foreign direct investments in Kenya, in the light of finding how the country can attract greater FDI, diversify and perhaps benefit more from it.

1.1 STATEMENT OF THE PROBLEM

There have been relatively few empirical studies, which have examined location decisions of multinational enterprises choosing Kenya as an investment location. Previous studies have relied more on collection of survey data using managerial perception for measuring the explanatory factors like the **UNIDO Investment Survey (2003)**, **Phillips et al (2000)**), the **Investment Climate Assessment (2003)**, the **Business Environment Survey (2003)** with no recent studies hitherto been recorded on country characteristics specific on Kenya drawing on econometric approaches using secondary data. Exception is a study by **Mukhwana (2001)**, who undertook a cross-country analysis, employing panel data to examine the determinants of FDI in Kenya.

The role of Foreign Direct Investment as a source of capital cannot be understated. FDI provides the needed capital for investment in addition to it having spillovers whose total impact is the acceleration of growth and development in the recipient country. **Yasheng (2001)** observe that

FDI activity can play the role of an **ersatz private sector** for a transitional economy. FDI inflows is a requirement when the domestic private sector is not yet sufficiently robust to make much macroeconomic impact; more so in a lethargic state as the case may be in Kenya. In such a context, welcoming FDI is rather like importing a ready-made private sector, capable of having a fairly immediate and positive impact on the country's macro-economy.

However, investors are rational actors who normally trade-off the risks associated with investing in a particular country against potential rewards when comparing between different location options. They see their returns rise and fall with the overall performance of the host economy and generally keep a significant amount of earnings in the host country. Countries in the SSA region that are able to offer the most attractive combination of low risk and high rewards will be among the regional winners in terms of attracting FDI; **UNIDO SURVEY- (2003)**. **Feldstien (2000)** contends that the risk faced by the owners of capital is reduced when allowed to diversify their lending and investments.

Kenya relative to other developing countries in Sub Saharan Africa has little access to international capital markets therefore lacks substantial foreign portfolio equity. We witness a substantial decline over the past two decades of official foreign (donor funding) inflows. This makes FDI crucial in Kenya. This warrants an explicit FDI policy framework to map out the role of FDI and how to attract it. Thus understanding the macro-economic determinants FDI is critical for both public and private sector alike as they reflect economic fundamentals.

This study seeks to examine the determinants of FDI in Kenya, which is country specific. The focus is on the macro-economic variables such as GDP used as a proxy for market size, openness of the economy, fiscal and monetary incentives, and social determinants like availability and quality of labour proxied by literacy ratio and wage rate among others. The study is an attempt to close the gap between the theoretical literature on determinants of FDI and the practical determinants (locational factors) of FDI and may also identify important determinants that the government may not be aware of or may have neglected in the past. Hence this study will offer some insight on the effectiveness of the current incentives offered and suggest policies that if adopted, may assist to elevate the level of FDI in Kenya.

1.2 OBJECTIVES OF THE STUDY

The general objective of the study is to investigate empirically the determinants of FDI inflows in Kenya in the year 1970 to 2002.

The specific objectives being: -

1. To determine the effect of macro-economic factors such as GDP, market size, adequacy of the basic infrastructure and openness of the host economy to FDI inflows.
2. To draw relevant policy implications from the empirical analyses and results that will make Kenya attractive to Foreign Investors

1.3 SIGNIFICANCE OF THE STUDY

The motivation behind this study is derived from the fact that Kenya faces challenges of diversifying its economy from a mainly agriculture based to other productive sectors of the economy. The government of Kenya is aware of the impact that FDI can have in the quest for effective economic development. The need for additional measures and efforts to attract FDI is recognized particularly as worldwide liberalization convergence increases the locational choice for FDI. As policy regimes become increasingly open and similar, thus losing its effectiveness as a location determinant and therefore the need to adopt pro-active measures to facilitate business transactions by foreign investors and of improving the economic determinants of FDI.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Theoretical literature Review

The theory of FDI is relatively new in the financial economics field yet it has managed to attract a significant amount of attention. **Casson (1990)** has suggested that the theory of FDI is a “logical intersection” of three distinct theories: the theory of international capital markets, which explains the financing and risk-sharing arrangements; the theory of the firm, which describes the location of headquarters, management, and input utilization; and theory of international trade, which describes location of production and destination of sales. Although each theory provides some insight about the complexity of FDI flows, an integrated theory that combines these elements in an analytically persuasive way has not been developed.

The review of the theoretical literature shall begin with the early contributions of **Hymer and Kindleberger (1960)** industrial organization approach to explain why FDI occurs. The product life cycle developed by **Vernon (1966)** seeks to explain FDI via international production and the different stages of the life of a new product. **Dunning (1977)** theory can be viewed as an attempt to synthesize the **Hymer-Kindleberger** approach with the internalisation theory.

The last section of the theoretical literature is dedicated to the different types of FDI, under Dunning’s Eclectic Theory. This section will help bring out the major determinants of FDI, depending on the interest of the Foreign Investor. The empirical literature will review similar studies that have been conducted on the determinants of FDI. The final section is dedicated to the conclusions drawn from the literature review.

2.1.1 The Hymer-Kindleberger Theory:

Steven Hymer (1960, published 1976) cited by **Dunning and Rugman (1985)** made a first attempt to explain internalization of firms. It was seen as an escape from the intelligent straightjacket neo-classical trade and financial theory and a move towards an analysis of the multinational enterprises based upon the industrial organization theory. The fundamental contribution made by Hymer-Kindleberger was in distinguishing Portfolio Foreign Investment

and Direct Foreign Investment. In the past FDI flows were treated like any other flows of resources such as Portfolio Investments, which were driven mainly by international factor price and interest rate differentials. Hymer-Kindleberger challenged this line of thought as an explanation of FDI and argued that the failure of interest rate differentials to explain FDI lies within its definition and characteristics. According to Hymer-Kindleberger, the main difference between FDI and Foreign Portfolio Investment is that FDI has a special feature which gives the investor direct control, thus making it safer in the movement of funds. In such a situation interest rate differentials are unable to explain FDI inflows. The theory notes that FDI tends to be concentrated in a particular industry in various countries, for example FDI tends to be concentrated in the mining or oil extraction sector of various countries, rather than in a particular country across various industries, as one would expect if the main determinants were interest rate differentials. Hence they conclude although FDI may involve capital movements, it cannot be equated to capital movements in its significance, effect and determination.

The theory also discards the idea that FDI is related to the growth of the firm. Growth of the firm is normally associated with the fact that firm will search for markets and expand by locating in those markets. In this case FDI becomes demand-led. However this does not explain why the extra markets are not satisfied through exporting products produced in the home country instead of by direct investment. The idea that FDI will occur when host countries have lower production costs is rejected on the basis that it does not explain why production is not undertaken by the local firm instead of the foreign firm.

Hymer-Kindleberger assumes that FDI is costly and risky, and therefore for a firm to engage in it there should be counterbalancing advantages. Among the costs of FDI abroad are costs of communication and acquisition of information that the firm will incur in the Host Country, costs due to less favourable treatment by the Host Country and costs due to exchange rate risks. The counterbalancing advantages are derived from the existence of market imperfections that may be due to government intervention, imperfections in both the goods and product market and both internal and external economies of scale. Market imperfections such as barriers to entry,

intervention by government, and imperfect market structures give MNCs an advantage, which enables them to separate markets and remove competition.

The theorists point out the motivational factors that drive FDI, the most significant being the cost reductions and weakening of competition in expectation of larger profits. Secondly motivation is derived from imperfect markets and related to the fact that firms differ in their abilities and advantages. Firms that have advantages in production and marketing will find it profitable to use this advantage to produce directly in a foreign country. This advantage can also be exploited via licensing, but it is less profitable than FDI as it involves risks of poor control of the product or the inability to keep a monopoly of the patent and technology used in production. The last and probably least significant reason of FDI is a drive towards diversification by MNCs. A subsidiary in one country may be making a loss while another subsidiary of the same firm in another country may realize profits. As a result, corporations with subsidiaries in different countries have a higher probability of making an overall profit.

This theory is considered to be path breaking as it was developed in a field where nothing existed before. The theory also points out that FDI does not always apply to movement of funds from home to host country but it can also be financed by borrowing in the host country or by using retained profits. The theory notes that FDI tends to be concentrated in the manufacturing sector of various countries.

Since Hymer's contribution the theory has evolved with the contributions of **Vernon (1966)**, **Kindleberger (1969)** **Caves (1971, 1974a, 1982)**, **Buckley and Casson (1976)**, **Dunning (1973 first published in 1979, 1981)**, **Rugman (1981)**, **Teece (1981, 1983)**, **Williamson (1981)**, and **Hennart (1982)** among others.

Vernon (1966) built on the technological advantage theories, analyzing the strategic market implications of the product life cycle. **Vernon (1979)** re-evaluated his own theory by indicating that multinational firms are now more geographically diffused than the product life cycle would warrant, and that the cycle has shortened considerably. **Caves (1982)** developed the rational for

horizontal integration (specialized intangible assets with low marginal costs of expansion) and vertical integration (reduction of uncertainty and building of barriers to entry). **Buckely and Casson (1976)** extended **Coase's (1973)** explanation as to why multinationals internalize intermediate markets: internalizing intermediate production processes reduces uncertainty by circumventing market imperfections. But **Dunning (1973 first published in 1979, 1981)** was the first to draw upon different approaches in his "eclectic theory" "in an attempt to provide a more comprehensive and general explanation of different types of international operations.

2.1.2 Dunning's Eclectic Theory

The extent and mode of overseas expansion of a firm is determined by the three factors in the eclectic theory viz., (O) ownership advantages, (L) locational advantages, and (I) internalisation incentives. A firm wishing to operate abroad must possess advantages adequate enough to more than offset the handicap faced in an alien environment and to cover the greater risks [Hymer (1976), Kindleberger (1969), Caves (1971)]. These advantages emanate from the ownership of proprietary intangible assets possessed by firms, which can be productively employed abroad. These assets could include among others; brand of goodwill, technology (patented and otherwise), managerial and marketing skills, access to cheaper sources of capital and raw materials. Initially (in the first phase of the product cycle, a la Vernon), these advantages are exploited abroad through exports from the home base of the firm. In subsequent stages production is moved closer to export markets with FDI, because locational advantages, which make it more profitable than exports, begin to emerge. These advantages arise from factors, such as tariffs and quantitative restrictions imposed on imports by host countries, communication and transport costs, and inter-country differences in input-factor prices and productivity.

Due to imperfections in the market for knowledge and other intangible assets, ownership and locational advantages usually provided sufficient conditions for FDI flows during the early post-war period. In the period following the late 1960s, however, the standardization of a wide variety of technologies, and hence, increasing competition coupled with the improved bargaining position of host country governments, provided arm's length licensing of intangible assets as an

alternative to FDI [Dunning (1983)]. Mere ownership of intangible assets and the presence of locational advantages were no longer sufficient; though still necessary, conditions for FDI.

These advantages needed to be complemented by some incentives for internalisation of the markets of intangible assets and hence undertake their transfer on intra-firm basis or through FDI [Buckley and Casson (1976), Dunning (1979), Rugman (1981), Williamson (1981), Caves (1982), Hennart (1982)]. The internalization incentives could arise because of market failures and information asymmetry involved in their transfer. The (external) market for intangible assets is an often-inefficient channel of their transfer because of a number of infirmities, which emanate from the characteristics of the intangible assets. First, because of their “public goods” like nature, the marginal cost of their use elsewhere is close to zero. Hence, they are inefficiently priced. Second, a severe information asymmetry exists which results from the inability of the seller to make a convincing disclosure about the intangible asset. This is particularly applicable in the case of unpatented process know-how. Third, the unaffiliated firms abroad may fail to recognize the productive potential of technological developments taking place in a country. Fourth, there may be buyer’s uncertainty about the claims of the supplier regarding the potential value of the intangible asset. Fifth, there may be problems with codification of knowledge. Certain kinds of knowledge may be embodied in the skills of personnel or may have a high tacit component. Hence their transfer will not be complete without physical transfer of personnel. Finally, the arm’s length market may fail to ensure uniform quality standards, which are important particularly in the case of the transfer of goodwill assets like brand names.

These infirmities lead to a high cost of market transactions (or governance costs) of intangible assets. Firms tend to avoid these costs by internalizing the transactions of the intangible assets or by undertaking FDI. However, there may be certain costs associated with internalization itself. Co-ordination of manufacturing units located in geographical areas separated by national boundaries entails certain information costs. Further, the host country government may discriminate against enterprises under foreign control and hence there may be certain political costs. In addition, there are administration costs of internal markets depending upon the degree of professionalisation of management. Therefore, firms weigh the economies arising from the

internalization of transaction and costs associated with it. Firms prefer to internalize the transaction (or undertake FDI) if the intangible assets are licensed to unaffiliated firms abroad through markets. Thus the presence of the internalization incentives provides the final requirement for explanation of FDI.

The implications of the theory are that exporting and foreign production through either licensing or FDI are alternative modes of overseas operations. In the absence of any restrictions on imports and factor price differences, firms wishing to serve a particular market will rely on exports. Seen this way, excessive trade liberalization may erode the locational advantage of the country as a location of production for the local market and lead to industrialisation. MNCs may prefer to export to the country from some other plants and their local operations may be reduced to assembling, packaging, and marketing and after-sales service type operations. The choice of the mode of foreign production is determined by the transaction costs involved in market transfer, which would be determined by the nature of intangible assets. Process technologies which are covered by intellectual property rights such as patents and which can be codified in the form of designs and drawings can be transferred easily on licensing basis. Transfer of product technologies especially the branded ones and process technologies not covered by patents, or those with high content of idiosyncratic inputs are subject to greater transaction costs. Hence, FDI generally will be a predominant mode for transfer in this case.

2.2 Empirical Literature Review

The literature on the determinants of FDI flows based on diverse methodologies is extensive and controversial. Empirical studies that evaluate the determinants of in-bound FDI are generally based on three approaches: micro-oriented econometric study, survey data analysis, and aggregate econometric analysis. Our focus is on the econometric analyses and empirical evidence developed around the lines that FDI is by and large determined by macroeconomic and sociopolitical factors.

The literature to be discussed is by no means exhaustive and is presented solely as motivation for the present study.

Scaperlanda and Mauer (1969) carried out a study on the determinants of US Direct Investment in the EEC covering the period 1956 to 1966. The formation of the EEC in 1959 implied a tariff war, considering the large size of the US investments in the EEC, which would thereby affect FDI inflows to the EEC members. The study adopted the following model; -

$$I = A_0 + A_1Y + A_2M + A_3\Delta M + A_4\Delta Y \dots\dots\dots$$

Where; I = annual change in Book Value of aggregate US direct investments in EEC

A_0 = Direct FDI in EEC

Y = EEC's GNP

M = annual US\$ imports in EEC / by intra EEC exports.

ΔM = change in M

ΔY = change in Y

The authors' use varies hypothesis to explain the expected relationship between the variables and FDI. The market size hypothesis states that FDI will take place as soon as the market is large enough to permit the capturing of economies of scale. The study uses the EEC's GNP as a measure of the market size, therefore a divided relationship between Y and I is expected. The growth hypothesis postulates that there will be a positive relationship between ΔY and I. This argument is founded on the grounds that there is a relationship between aggregate demand and the stock of capital (total investment) needed to satisfy this demand. As aggregate demand increases there will be a corresponding increase in the flow of FDI. The study used ΔY to measure the aggregate demand. The tariff discrimination hypothesis argues that investment is undertaken in countries, which are difficult to export to because of trade barriers. In order to capture the tariff imposed by the EEC, the model uses M on assumption that increased effective discrimination will decrease imports from suppliers outside the community and simultaneously increases the intra area import. Thereafter the study expected a negative (-) relationship between M and I. ΔM is incorporated in the model to assess the use of both the flow and stock formulation of tariff discrimination on foreign direct investment.

Results of the study indicated that Y ΔM and M had the wrong signs and were statistically insignificant. The only variable that was statistically significant and had the right sign was ΔY

indicating that US investors who invested in the EEC between 1952 and 1966 only responded to changes in the EEC's GNP.

Goldenberg (1972) criticized the model adopted by Scarpalanda and Mauer (1969), arguing it was insufficient in estimating determinants of US FDI in EEC. He postulated that investments became profitable when GNP reaches some critical value having allowed economies of scale to be realized under the market size hypothesis; however he failed short of indicating the magnitude of such an investment. He adopted the following model and employed Ordinary Least Square method to determine the effects of each variable on the US FDI in EEC between 1952 and 1966:-

$$I = a_0 + a_1 \Delta Y + a_2 \Delta M$$

Where; I represents 2 variables I_a , I_m = annual change in Book Value of aggregate US Direct Investments in EEC + I_m = annual change in Book Value of manufacturing US Direct Investment in EEC.

ΔY = change in EEC's GNP

ΔM = proxy for tariff discrimination used in two variations given by ΔM_d and ΔM_w , where M_d and M_w are defined as; -

$$M_w = \frac{\text{World's exports to the EEC less US and EEC exports to the EEC}}{\text{EEC exports to the EEC}}$$

$$M_d = \frac{\text{LDC's exports to the EEC less US and EEC exports to the EEC}}{\text{EEC exports to the EEC}}$$

The results indicated that ΔY was significant and correctly signed for both I_a and I_m equations. The tariff discrimination on the other hand offered mixed results. ΔM_w was positively signed but insignificant in both I_a and I_m . When ΔM_d was used instead, the coefficient was positively signed in both equations but only significant in the case of manufacturing inflows.

Root and Ahmed (1979) in a study covering manufacturing firms in 70 developing countries analysed the determinants of FDI inflows by employing multiple discriminant analyses. The authors selected determinants from the many economic, social and political features of a developing country that is critical in making a host country attractive to private foreign investors.

Results of the study revealed six (6) variables out of 37 selected as essential determinants of which; four were economic factors, one social and the last a political factor. These were; per capita GDP, GDP growth rate, economic integration, extent of urbanisation, regular (constitutional) executive transfers and commerce, transport and communication, which were found significant and positively affected FDI inflows.

Lucas (1993) carried out a study covering seven countries in East and Southern Asia as he attempted to capture the effect of prices and wages on FDI inflows. He estimated a model of traditional derived-factor demand for foreign capital of a profit maximizing multiple product monopolist for the period 1961-87. Results revealed that FDI inflow at constant prices and net of depreciation to be responsive to cost and prices for all countries with the exception of Japan. FDI inflows are also less elastic to a rise in capital than to a rise in wages. Domestic investment affected foreign inflow favorably in Korea, Malaysia, Singapore and Philippines though exhibiting a weak relationship, and inversely in Indonesia with no clear relationship seen in Taiwan and Thailand. A higher risk of currency depreciation captured in terms of months of imports covered by foreign reserves discourages FDI inflows. Greater incidence of industrial disputes also deters FDI. Enhanced size of domestic and export markets favours FDI inflows. The elasticity with respect to export market was seen to be greater than that for domestic market size. The findings however could not be generalized because the sample comprises countries that have all pursued export-oriented strategy. It should also be noted potentially important variables other than cost of capital and labour are not included in the analyses

Anyanwu (1998) carried out an investigation on the macro-economic determinants of net FDI inflow in Nigeria in the period 1973-1996, by selecting variables from both theoretical and empirical literature that he believed were suitable to Nigerian's situation. He adopted a model using co integration analysis and error correction. The model assumed the following form: -

$$\text{NFDI} = f(\text{INVGDP}, \text{GDP}, \text{OPEN}, \text{EXR}, \text{AVTR}, \text{SAP}, \text{INIDIG}, \text{COUP})$$

Where; - FDI = Net Foreign Direct Investment in Nigeria

INVFDP = Ratio of domestic investment/GDP

- GDP = Gross domestic product
- OPEN = Openness of the Economy, (Measured by the ratio of trade to GDP)
- EXR = Exchange rate of Naira to US \$
- AVTR = Average tax rate
- SAP = Structural adjustment programme dummy.
- INDIG = Dummy variable to capture the indigenization policy adopted during the period of the study
- COUP = number of coup d'etat.

The coup variable was included to capture political upsets that occurred during the period of the study. The dummy variable-INDIG reflects a period in Nigeria where FDI was seen as a tool of political and economic domination by the government and hence policies adopted were to discourage rather than promote FDI in Nigeria.

Results of the study indicated that the investment GDP Ratio; GDP and Indegenisation dummy had their theoretically predicted signs and were statistically significant, implying that in the short run as FDI increases the domestic investment increases. An increase in GDP resulted in higher FDI while the indigenisation policy significantly reduced Nigeria's net FDI inflows. A wider scope in line with openness of the economy significantly reduced net FDI inflows to Nigeria as liberalisation of trade policy led to an outflow of FDI in the form of dividends remittances and capital flight. Both the average tax rate and the Naira exchange to US \$ insignificantly affected net FDI inflows.

Erdal and Tatoglu (2002) undertook an empirical analysis of location related determinants of FDI in Turkey. They adopted a model using time series techniques as suggested by Johansen (1988), which took the following format:

$$FDI = f(Y, X/M, I, \Delta Y, \Delta E, R)$$

The two stated that Foreign direct investment is influenced by, the size of domestic market (Y), openness of the economy to foreign trade (X/Y), infrastructure of the host country (I),

attractiveness of the domestic market (ΔY), exchange rate instability (ΔE), and economic instability (R).

Results of the study suggest a positive relationship between the size of the domestic market, infrastructure of the host country and the attractiveness of the host country and were statistically significant. As the size of the market increases so does the number of customers and opportunities for foreign investors. Similarly foreign investors would prefer better infrastructure since FDI is mostly in the form of physical investment in Turkey. Attractiveness of the host country market affects FDI inflows positively and significantly, implying implementation of more liberal economic policies would certainly attract more foreign investment. Exchange rate instability appeared to have a negative impact on FDI inflows suggesting that a high volatile currency would discourage foreign investors to engage in FDI in Turkey. Economic instability though having a negative sign was not found to have a significant effect on FDI as measured by interest rate.

Elizabeth Asiedu (2002) set out to analyse the determinants of FDI in developing countries and examined the reasons why Sub Saharan Africa has been relatively unsuccessful in attracting FDI. She further examined whether the variables selected in her study have a different impact on FDI flows to SSA compared to FDI in other regions by employing cross-sectional data on seventy developing countries, 31 in the SSA region and 39 in non-SSA countries in order to increase the degrees of freedom and enhance credibility of the results.

The variables selected were, the ratio of net FDI inflows to GDP as the dependent variable, while the independent variables included; return on investment in the host country, infrastructure development and openness of the host country economy, political risk and other economic variables such as the ratio of liquid liabilities to GDP as a measure of financial depth, the ratio of government consumption to GDP as a measure of the overall economic stability of the country, and the growth rate of GDP as a measure of the attractiveness of the host country's market.

By using Ordinary Least Square for all the estimations, the results indicated that the large variation in FDI ratio can be explained by; openness to trade, infrastructure development and the return on investment to non SSA countries and thus consistent with other studies. The inclusion of a dummy variable, AFRICA to test whether countries in SSA on average receive less FDI relative to countries in other regions with the same level of openness, infrastructure and return on investment, revealed the following. FDI to SSA was found to be less responsive to changes in openness than FDI to other regions. For instance trade liberalization was found less effective in promoting FDI to Africa compared to other regions due to the perception of foreign investors who perceive government moves as transitory and subject to reversals implying lack of credibility. Infrastructure development had no significant impact on FDI flows to SSA mainly because FDI to SSA is predominantly in extractive industries and hence availability of infrastructure development is not very relevant for natural resource based investment. Extractive industries are often located in remote areas which typically lack access to basic amenities such as electricity and water. Return on Investment similarly had no significant impact on FDI flows as Africa is perceived as overtly risky due to the uncertainty of government policy which has a profound impact on FDI than other types of investments.

The significance of the African dummy suggested that Africa is indeed different, by virtue of its geographical location. The results showed a negative and significant estimated coefficient of the Africa dummy suggesting further that there may be an adverse regional effect for SSA. Asiedu expounded on two plausible explanations for this. That the continent is perceived as being inherently risky, a perception supported by the empirical evidence of **Haque et al (2000)** who found that commercial risk-rating agencies often rate African countries as riskier than warranted by the fundamentals. Secondly due to lack of knowledge about the specific country, investment decisions are often not guided by country specific conditions but rather based on inferences from the environment of neighbouring countries. Thus to some extent, foreign investors evaluate African countries as if the countries in the continent constitute "one big country", a view also supported by **Velde (2003)** who suggests that certain types of information could help to realize profitable opportunities in Africa.

Morisset (2002) focused exclusively on Africa and was of the view that African countries that undertake pro-active policies with reform oriented government can generate FDI interest which is not centered on natural resources or on local market but rather at regional and global markets. He demonstrated that a few Sub Saharan African countries have generated the interest of international investors by improving their business environment thus suggesting that they can become competitive internationally and attract FDI on a sustainable basis. He specifically singled out Mali and Mozambique who have been through a spectacular recovery during the 1990s, after several years of internal disrupt and (dis) investment by foreign firms. Controlling for the availability of natural resources by normalising the value of total FDI inflows by GDP and the total value of natural resources in each country, he carried out an econometric analysis of 29 African countries to investigate whether reforms policy undertaken by host country governments can attract FDI.

Results of the study indicated that, the GDP growth rate and trade openness were positively and significantly correlated with the investment climate in Africa. In contrast, the illiteracy rate, the number of telephone lines and the share of urban population denoting infrastructure development did not appear to have been major determinants in the business climate for FDI in the region. Similarly the impact of political and financial risks also did not appear significant in the business climate. **Morisset** closely looked at the experiences of Mali and Mozambique relative to countries like Kenya and Cameroon, which have been less successful in attracting FDI despite their larger local markets and abundant natural resources. He concluded that sustained effort in improving the business climate by the implementation of a few visible actions is essential in the strategy of attracting FDI beyond macroeconomic and political stability.

Asiedu (2003) criticised Morisset's approach stating that the measures he employed was too broad and did not accurately capture the availability of minerals and oil, the most important type of natural resource relevant for FDI to SSA region. The focus of the author's study was on the extent to which government can influence FDI flows in the region. By employing fixed-effects panel estimation on data for 22 countries in SSA over the period 1984-2000 to examine the impact of political risk, institutional framework and government policy on FDI flows, allowed

the analyst to focus on changes within different units over time. The estimation method remains unbiased even when data is missing for some time periods for some cross-sectional units. Results of the study indicated the variables selected had their predicted signs and are highly significant; market size, natural resource endowment, sound infrastructure, low inflation proxy for macroeconomic instability, an efficient legal system and a good FDI regulatory framework promoted FDI inflows. On the other hand, high inflation, corruption, political instability have the opposite effect. Governments can indeed play an important role in promoting investment to the region by implementing policies that promote macroeconomic stability.

2.3 Conclusions from the Literature Review

This chapter has surveyed both theoretical and empirical literature which forms the basis for the model developed in the next chapter. The literature brings out vividly the main determinants of FDI inflows into a Host Country and reasons why FDI flows out of the Home Country. From the review it is evident; there is convergence on market size proxied by real GDP or GDP per capita as the most robust, positive FDI determinant. Access to domestic credit, level of domestic investment, lower relative wage rates, government policy, openness of the economy do determine FDI inflows to the Host Country. Political risk, economic instability and performance requirements hinder FDI inflows. Evidence on fiscal incentives, is mixed reflecting the potential transient nature of such incentives, however all things being equal, the influence of fiscal incentives should be positive on FDI inflows.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

It has been argued that the quality of investment abounds in the host country when the macro-economy climate including the business environment is “investor friendly”.

3.1 Model Specification

The model focuses on macro-economic determinants of FDI, which encompasses variables, which the government has direct control of as opposed to the micro-economic variables, which are firm specific. The study approaches the issue at the country level consequently only broad trends about macro-economic determinants of gross FDI flows can be discerned. The variables used in the study is in line with existing literature on FDI inflow to developing countries, such as expounded in the works of Anyanwu (1998), Erdat and Tatoglu(2002), Malefane (2004) to mention a few.

While previous literature on the subject has suggested several possible explanatory variables, it is not possible to include all of them, but only those that make the model more appropriate to the Kenyan situation. Like in similar studies, the macro indicators enter the production function directly. The basic full formulation of the model to be tested takes the following form: -

$$FDI_t = f(EGS_t, IGS_t, DTCP_t, KSh_\$01_t, GDP_{cmp,t}, GDP_{comp,t}, GDP_{growth,t}, GFCI_t, LR_t, OPEE_t, \text{ and } DGDP_t, GPI_t, WAGES_t)$$

Where: -

FDI = Gross Foreign Direct Investment.

EGS = Export of Goods and Services; IGS = Imports of Goods and Services;

DTCP = Direct Taxes on Corporate Profits; KSh_ \$01 = Kenya Shillings per Dollar;

GDP_{cmp} = GDP at current market prices;

GDP_{comp} = GDP in constant market prices, 1982; GDP_{growth} = Real GDP Growth;

GFCI = Gross Fixed Capital Formation; LR = Lending Rate;

OPEE = Openness of The Economy; DGDP = Domestic Investment to GDP Ratio;

GPI = Gross Private Investment; Wages and t = time period.

3.2 Sample

The study will draw on secondary data of major locational factors impacting upon the level of FDI inflows covering the period 1970-2002. The choice of variables is in line with existing literature on FDI such as the works of **Singh and Jun (1995)**, **Asiedu (2002)**, **Anywanu (1998)** and **Ahmed and Root (1979)** to mention a few. The period selected is hoped to provide a better picture of the trend of FDI in Kenya.

3.3 Data Collection

For consistency and ease of comparison all data will be drawn annually on a time series scale from various issues of international publications i.e. *International Financial Statistics*, *Global Development Finance* and *UNCTAD World Investment Reports*. Data from government publications will be drawn from *Statistical Abstracts and Economic Surveys*.

3.4 Justification, Measurement and Expected Figures of Variables

The dependent variable FDI constitutes foreign direct equity, foreign direct capital and amount of reinvested earnings by foreign firms as defined by UNCTAD, and Global Development Finance. It is measured as gross FDI inflows in Kenya as opposed to net FDI inflows measured as inflows minus outflows.

The independent variables considered significant for the sample are:

3.4.1 Attractiveness of the Host Country's Market: The size of the market appears to be an important determinant of FDI, as fairly established by a number of authors; who agreed that GDP affects FDI via market size hypothesis. The market size hypothesis is based on the assumption that inadequate market size retards the specialization of productive factors. The rationale of the assumption is that size of the market has been insufficient to absorb efficiency of the technology, which the foreign investors desire to introduce. The market aspect emphasizes the necessity of a large market size for the efficient utilization of resources and the exploitation of economies of scale including generation of revenues. As the market size increases to some critical value approximated by GDP, foreign firms will invest or increase their investment with the expansion

of the market. **Root and Ahmed (1979)** however pointed out that GDP is a relative poor indicator of market potential for the products of foreign investors, particularly in many developing countries, since it reflects the size of the population rather than income. According to **Lucas (1993)**, enhanced size of the domestic and export market favours FDI inflows and the elasticity with respect to export markets is greater than that for domestic market size. Considering that Kenya's economy is well integrated into COMESA and EAC market, it is prudent to include both the growth rate of GDP (GDP %) as well as per capita GDP (GDPCAP), to control for actual and potential market size.

The domestic hypothesis concentrates on the proven performance of the economy. All things being equal, better economic performance provides better infrastructure facilities and greater opportunities for making profits, hence greater incentive for FDI. Both domestic and the market aspects postulate a positive relationship between FDI and GDP per capita and GDP, hence the coefficient of both GDP per capita and GDP in equation one is expected to be positive. The study shall use real GDP as at 1982 prices.

3.4.2 Domestic investments: Countries with a high domestic investment proportion may be attractive markets for foreign investors seeking to increase their participation. This variable plays the role of supplementing domestic product and changes in the product by producing additional information on immediate demand conditions and the need for greater production capacity (**Kindle 1995**). Hence the domestic investment to GDP ratio serves as a means of informing the potential investor of the output growth ratio. The higher the investment to GDP ratio the greater the amount of foreign investment in any given economy and therefore the coefficient of DGDP is expected to have a positive sign.

3.4.3 Openness of the economy: Several studies have found that countries that are open will attract more FDI due to the widespread perception that "open" economies encourage more confidence. In the FDI empirical literature, the most widely used measure of openness is the share of trade to GDP that is the ratio of the sum of exports and imports to GDP. Argument for the inclusion of the openness of the economy variable are founded on the fact that investors are

particularly sensitive to rules or trade restriction especially in a small country with a small domestic market. This variable will reflect the ability to import inputs and export their output. The study expects a positive relationship between openness of the economy and the amount of FDI inflows; hence the coefficient of openness of the economy (OPEE) is expected to have a positive sign.

3.4.4 Fiscal incentives: Tax treaties can have development implications and cannot; therefore be fully separated from the context of various monetary, fiscal, social and other policies of contracting parties. Divergent views exist based on econometric analyses and surveys of international investors on the role tax incentives play as an influential or inhibiting factor for MNCs in selecting locations. They are those who confirm that tax incentives are a poor instrument for compensation for negative factors in a country's investment climate and those who find evidence that tax incentives have a positive influence on FDI. This study will adopt the view that tax incentives are key in attracting international investors as proven by Ireland over the past two decades. Corporate tax represents costs to firms that squeeze the profit margins. The greater the corporate taxes imply reduced profits and less FDI will flow into a country. Hence relationship between corporate tax and amount of FDI inflow in a host country is expected to be negative. In order to assess the impact of the tax rate of FDI inflow a variable is used to represent tax paid out. Corporate tax is used in many studies as a determinant of FDI. **Lucas (1993)** used a proxy for corporate tax, which is constructed as the ratio of the corporate tax revenue collected relative to the value added in manufacturing sector. Such a proxy was employed because of the unavailability of the nominal tax rates, the various tax holidays and allowances awarded to foreign investors and the incidence of tax evasion. The impact on the ability to repatriate profits from FDI can also be captured by this variable. Since there is a positive relationship between ability to repatriate profits and FDI inflows, the coefficient of this dummy will capture both the tax reduction and liberalization of the current account.

3.4.5 Access to domestic credit: One policy that has greater impact on FDI inflows in a host country is access to Domestic loans. A foreign investor will invest in a country that does not only allow foreign firms to borrow but also offers low interest rates. An increase in interest rates

implies an increase in cost of capital and consequently decreases investment. However it should be noted that amount borrowed locally does not form part of FDI. It has been observed that FDI is highly leveraged domestically. After gaining control of the domestic market, a foreign investor typically resorts to the domestic credit market, to finance new investment, either by issuance of bonds or commercial paper. The decrease in investment when interest rates rise causes the foreign investor to opt to invest in other countries, which have lower interest rates hence the coefficient of interest rates variable is expected to have a negative sign.

3.4.6 Exchange rates: If domestic firms are more cash constrained than their foreign counterparts, the depreciation of the domestic currency may lead to an increase in inward FDI as foreigners outbid domestic firms. A weaker national currency makes the host country assets cheaper to foreigners who hold their wealth in other currencies. This therefore makes it attractive for the foreign investor to purchase these assets. Accordingly there will be a negative relationship between the real exchange rate and the FDI inflows, where the exchange rate is defined as amount of foreign currency (US\$) per KShs. expressed in real terms. A negative relationship can also be obtained on the basis that a weaker national currency implies an increase in the competitiveness of host country exports, thus encouraging FDI. On the other hand a depreciation of the shilling will also imply a decline in repatriated dividends and profits when converted in foreign currency, this acts as a disincentive to FDI inflows in the country. Similarly a depreciation of the exchange rate makes imported inputs more expensive thus reducing amounts of FDI in Kenya and hence a positive relationship. Therefore a relationship between exchange rate and FDI is uncertain making it a two-tailed test.

3.4.7 Wages: The standard hypothesis holds that lower relative wages costs will encourage "efficiency-seeking" FDI inflows. Wages are only effective when considering the wage differentials between home and host country wages, in that there must be a vast positive difference between wages of the host country and those of the home country in order to encourage investment. Multinationals relocate certain types of manufacturing operations away from their home bases or set up a new business in a host country to exploit international differences in factor prices. Since labour costs are an important part of total costs, especially in

labour intensive manufacturing, the lower the costs in a host country the more attractive the host country as observed by **Yingqi Wei (2003/002)**. **Hymer-Kindleberger** discards the notion that wages are a factor that influences FDI inflows. **Vernon PLC** on the other hand stresses the need for low wages as an incentive for FDI. Thus wages are included in the study as they provide a picture of costs of production. The coefficient of wages is expected to have a negative sign.

3.4.8 Availability of skilled labour: because FDI has a distinctive feature of gaining control and applying managerial value added to the domestic firm, it is important to get a measure of the absorptive capacity of the local work force towards the technology brought in by the foreign investors. The school enrolment rate is used as a proxy for the literacy level in a host country. It is therefore envisaged that the relationship will be positive, relative to the high absorptive capacity of the skilled labour.

3.4.9 Capital Formation: The inward flow of FDI provides the much needed capital for investment as it helps cover the current account deficit, fiscal deficit and supplements the inadequate domestic resources to finance both ownership change and capital formation; **Krkoska (2001)**. We expect countries with low capital formation to attract FDI. The hypothesized relationship between FDI and indicator of capital formation is negative.

3.4.10 Private Investment: FDI is by definition private investment by foreign investors. The foreign investors will only be attracted to countries that encourage private investment. Theoretically we expect a positive relationship between FDI and private investment.

3.5 Hypothesis

It is hypothesized that there exist a relationship between FDI and Macro-economic determinants used in this study. This hypothesis is drawn from the evidence from the empirical literature reviewed. The specific hypothesis to be tested is as follows:-

- a. There is a positive relationship between GDP and FDI inflow.
- b. There is a positive relationship between domestic investment and FDI inflow
- c. There is a positive relationship between openness of the economy and FDI inflow

- d. There is a relationship between exchange rates and FDI inflow
- e. There is a positive relationship between corporate tax and FDI inflow
- f. There is a negative relationship between interest rates and FDI inflow
- g. There is a negative relationship between the wage rate and FDI inflow

3.6 Estimation Method and Data Analysis

Non-stationarity of time series data has often been regarded, as a problem in empirical analyses as it leads to spurious regression results from which further inference is meaningless. Spurious regressions occur when at least one variable in the equation is non-stationary that is it displays a distinct trend and in this case it is also likely that the dependent variable will also display a similar trend. Due to this trend we are likely to obtain significant regression co-efficient and high co-efficient of determination but a low Durbin Watson (DW) statistic, even though such variables are not related.

A variable is said to be stationary if its mean and variance are constant over time, and the value of the covariance between the two periods depends only on distance or lag between the two variables and not on the actual time the covariance is computed. A variable is non-stationary if even one of the above conditions is not met. In order to avoid spurious regression the variables shall be tested for non-stationary and necessary corrections shall be applied.

Recent development in econometrics will be employed specifically, the Johansen multivariate cointegration approach, which allows for modeling of long run relationship of non-stationary variables. These econometric models include error-correcting mechanisms having the advantage of retaining information about the levels of variables and hence any long run relationships between such variables within the model. Cointegration provides formal statistical support for the use of error correcting models. The test for cointegration is actually a conditional test: conditional on the variables being $I(1)$, the discovery of an $I(0)$ linear combination would imply that the variables are cointegrated.

The process of cointegration is preceded by investigating whether the series employed are stationary or not. In principle it is important to test for the presence of unit roots since unit roots

render a variable non-stationary. Unless that variable combines with other non-stationary series to form a stationary cointegration relationship, then regressions involving the series can falsely imply the existence of meaningful relationship (Harris 1995). Some of the approaches for testing for unit roots include the Dickey-Fuller (DF) and the augmented Dickey-Fuller (ADF) both associated with Dickey and Fuller (1981).

3.6.1 Dickey Fuller (DF) and Augmented Dickey Fuller (ADF) Test

The study will use DF to test for presents of unit roots. The ADF Test will be employed in order to take into account the possibility of Auto-correlation in the error term. Among the many tests for stationarity developed, the DF and ADF are employed because of their popularity in recent studies and their simplicity or general nature. DF and ADF are employed as follows:

The null hypotheses to be tested is that $p = 1$, that is there is a unit root against the alternative hypotheses $p < 1$, that there is no unit root. If the computed absolute value of the T statistic exceeds the DF/ADF statistic we reject the null hypothesis and conclude that the given time series is stationary. If on the other hand the T statistic is less than the critical value, then the series is non-stationary

3.6.2 Cointegration

A simple means of correcting the problem of non-stationary is by differencing the variable either once or a number of times depending on the nature of the trend. However there are disadvantages associated with the differencing of non-stationary variables. Differencing will lead to a loss of information about the long-term relationship between variable and also change the theoretical meaning of the variable. In order to avoid such problems cointegration is used.

Cointegration has been defined by Engle and Granger (1987) cited by Harris (1995), as a situation where two non-stationary series integrated of the same order have a long time relationship. There are various methods for testing for cointegration among non-stationary variables. Most popular of these tests are the Engle-Granger approach which is essentially a residual base test and the Johansen technique. The later is preferred to the former as the former uses a single equation, which assumes that explanatory variable is exogenous, which may not be

the case. It also ignores the fact that there can exist more than one cointegration relationship and therefore more than two variables to be estimated in the model. Cointegration analysis requires that all variables must be integrated of the same order to form a long run relationship. Given the draw back of the Engle-Granger approach the study will adopt the Johansen maximum likelihood approach.

The Johansen technique is a multivariate autoregressive model that allows for multivariate testing particularly where there may exist more than one cointegration relationship among a set of more than two variables.

Harris (1995), notes that this type of VAR is a way of estimating dynamic relationships among jointly endogenous variable without imposing a strong priory restriction such as structural and or the exogeneity. Overall the Johansen technique requires the determination of the rank cointegration and deterministic components of the model, identification of cointegration vectors and examination of short run dynamic properties of resulting VECM.

CHAPTER 4

4.0 DATA ANALYSIS AND INTERPRATATION OF FINDINGS

4.1 Introduction

In this study an attempt is made to determine factors that determine FDI inflows. The concept of cointegration, first introduced into the literature by Granger (1981), is relevant to the problem of the determination of long-run or equilibrium relationships in economics. Co integration is the statistical implication of the existence of a long-run relationship between economic variables (Thomas, 1993). From a statistical point of view, a long-term relationship signifies that the variables move together over time so that short-term disturbances from the long-term trend will be corrected (Manning and Andrianacos, 1993). The fundamental idea behind cointegration is that if, in the long-run, two or more series move closely together, even though the series themselves are trended, the difference between them is constant. It is possible to regard these series as defining a long-run equilibrium relationship, as the difference between them is stationary (Hall and Henry, 1989). Absence of cointegration suggests that such variables have no long-run relationship and they can wander arbitrarily far away from each other (Dickey et. al., 1991).

Earlier studies of the changes in FDI have not looked at the time series properties of the macroeconomic variables that relate to FDI. The assumption was that the data were stationary, yet, recent developments in time series analysis show that most macroeconomic time series have a unit root or a stochastic trend. This property is described as difference stationarity, so that the first difference of a time series is stationary (Nelson and Plosser, 1982). This requires that the nonstationary property of the series is considered first. If both series are $I(1)$, it is necessary to perform cointegration tests. If a pair of $I(1)$ variables are cointegrated, one then proceeds to build an error correction model in order to capture the short-run and long-run causal relationship between the two series. To eliminate early studies' methodological shortcomings, cointegration analysis is applied in this study.

4.2 Data Set and Variable List

The data consist of annual observations from 1972 to 2002. The starting point was mainly influenced by availability of data. The data was obtained from the statistical bulletins published by Central Bank of Kenya, Central Bureau of Statistics (Kenya) and IMF, International Financial Statistics. The variable list include: Foreign Direct Investment (FDI); Gross Private Investment (GPI); Wages; Export of Goods and Services (EGS); Imports of Goods and Services (IGS); Direct Taxes on Corporate Profits (DTCP):Kenya Shillings Per Dollar (KSh_\$/1);GDP at current market prices(GDP_{cmp}); GDP in constant market prices,1982 (GDP_{comp}); Real GDP Growth (GDP_{growth}); Gross Fixed Capital Formation (GFCI); and Lending Rate (LR); Openness Of The Economy (OPEE); and Domestic Investment to GDP Ratio (DGDP).

4.3 Summary Statistics

There were 31 observations for each of the variables in this study over the period 1972 to 2002. The minimum FDI was in 1993 and the maximum was in the year 2000. (See table 1 below).

Table 4.1: Summary Statistics Of All The Variables In The Study

Variable	N	Mean	StDev	SE Mean	Min	Max	Q1	Q3	CoV
FDI	31	36.48	23.01	4.13	2	127	27	42	0.63
GPI	31	41003	37620	6757	2697	109074	10801	81565	0.92
Wages	31	76585	99576	17884	4085	374576	11028	117664	1.30
EGS	31	75452	80298	14422	4002	250429	13004	152596	1.06
IGS	31	89638	100823	18108	4323	317745	15860	180139	1.12
DTCP	31	12062	12077	2169	680	32465	2255	26114	1.00
KSh/\$	31	31.15	24.77	4.45	7.41	78.7	11.01	57.1	0.80
GDP _{cmp}	31	270136	291673	52386	14546	962686	46603	465272	1.08
GDP _{comp}	31	84465	23492	4219	46914	116556	63606	106510	0.28
GDP _{growth}	31	3.464	2.479	0.45	-0.80	9.118	1.438	4.69	0.72
GFCI	31	8066	7453	1339	662	21415	1874	18640	0.92
LR	31	17.72	7.98	1.43	8.5	36.24	10	22.34	0.45
OPE	31	0.600	0.077	0.014	0.478	0.774	0.537	0.651	0.129
DGDP	31	0.500	0.060	0.011	0.394	0.654	0.469	0.511	0.119

CoV = Coefficient Of Variation

4.4 Unit Root and Co-Integration Tests

The research process begins with a specification of the relationship to be estimated. In chapter 3, section 3.5 (hypothesis) present a specification of the relationships to be estimated. This test will be as presented on page twenty seven (27). However, selecting the specification requires the

variables to be included, the functional form that connects the variables and, that for time series data we capture the dynamic structure of the relationship between the variables.

The first step in co-integration test is to establish the order to which the variables of the study are integrated. The objective is to establish whether the variables are stationary or non stationary.

Dickey-Fuller tests, consider first an AR(1) process function, expressed as follows:

$$y_t = \mu + \rho y_{t-1} + \varepsilon_t$$

where μ and ρ are parameters and ε_t is assumed to be white noise. y_t is a stationary series if $-1 < \rho < 1$. If $\rho = 1$, y_t is a non stationary series (a random walk with drift); if the process is started at some point, the variance of y_t increases steadily with time and goes to infinity. If the absolute value of ρ is greater than one, the series is explosive. Therefore, the hypothesis of a stationary series can be evaluated by testing whether the absolute value of ρ is strictly less than one. Both the DF and the PP tests take the unit root as the null hypothesis: $\rho = 1$. Since explosive series do not make much economic sense, this null hypothesis is tested against the one-sided alternative: $\rho < 1$.

The test is carried out by estimating an equation with ΔY subtracted from both sides of the equation:

$$\Delta y_t = \mu + \gamma y_{t-1} + \varepsilon_t \tag{Equation 4.1}$$

where $\gamma = \rho - 1$ and the null and alternative hypotheses are:

$$H_0: \gamma = 0; H_1: \gamma \neq 0 \tag{Equation 4.2}$$

The ADF level tests results are summarized in table 2 below. We had to specify the number of lagged first difference terms to add to the test regression; selecting zero yields the DF test; choosing numbers greater than zero generate ADF tests. The usual (though not particularly useful) advice is to include lags sufficient to remove any serial correlation in the residuals. After the end adjustments we end up with 29 observations from the original 30. In the case of levels of the first series, and applying Davidson and Mackinnon (1993) critical ADF values for rejection, the null hypothesis of non-stationery cannot be rejected except for wages. Therefore the levels of all other series are non-stationary.

Table 4.2: Augmented Dickey – Fuller Unit Root Tests (Level).

Dependent Variables	Observations	ADF Test statistic	P- Value	R – Square %	F Static Decision
FDI	29	- 2.688	0.0124	35.14	7.045
DTCP	29	- .7857	0.4391	44.39	10.377
EGS	29	1.5498	0.1333	14.12	2.137
GDP CMP	29	1.594	0.1229	87.19	88.4578
GDP COMP	29	- 1.236	0.227	13.74	2.07
GDP GROWTH	29	- 2.901	0.0075	25.45	4.437
GPI	29	0.452	0.6546	16.96	2.657
IGS	29	1.4156	0.1688	12.9	1.926
GFCI	29	-0.0667	0.9473	0.7	0.092
KSH_ \$01	29	0.710	0.4841	1.979	0.2624
I.R	29	-1.361	0.1851	6.69	0.932
WAGES	29	5.434	0.0000	92.8	168
DGDP	29	-2.9909	0.0060	35.6	7.190
OPE	29	-2.2381	.0340	24	4.117

The Davidson and Mackinnon 1993 critical values for rejection of hypothesis of a unit root are (for level tests), - 3.6752 (1%); - 2.9665 (5%); and - 2.6220 (10%).

Applying the same tests for the differences (table 3 below) to determine the order of integration, the levels of all the series are non-stationary.

Table 4.3: Augmented Dickey – Fuller Unit Root Tests – First Difference.

Dependent Variables	Observations	ADF Test statistic	P- Value	R – Square %	F Static Decision
D(FDI,2)	28	- 5.009	0.000	73	33.78
D(DTCP, 2)	28	- 3.219	0.0035	32.4	6.00
D(EGS,2)	28	- 2.918	0.0073	37.8	7.61
D(GDPCMP,2)	28	- 0.478	0.6369	9.09	0.1146
D(GDP COMP,2)	28	- 3.037	0.0055	32.37	5.982
D(GDP GROWTH,2)	28	- 4.427	0.0002	48.87	11.95
D(GPI,2)	28	- 2.4635	0.0210	31.44	5.733
D(IGS,2)	28	- 2.801	0.0097	35.45	6.866
D(GFCI,2)	28	- 3.955	0.0006	53.54	14.40
D(KSH_ \$01,2)	28	- 3.728	0.001	48.71	11.87
D(I.R,2)	28	-2.931	0.0071	52.14	13.61
D(WAGES,2)	28	1.326	0.1967	9.93	1.379
D(DGDP,2)	28	-5.9112	0.000	74.97	37.44
D(OPE,2)	28	-5.8049	0.0000	.73622	34.43

4.5 Testing For The Order Of Integration

So as to establish the order of integration of the variables in our data set, we make use of DF and ADF tests. The ADF test for unit roots indicates whether an individual series, say y_t , is stationary by running an OLS regression as discussed in (Dickey and Fuller, 1979; 1981). All these tests are based on regression equations 1 and 2 presented below. The general form of ADF test can be written as follows:

$$\Delta y_t = \alpha y_{t-1} + \sum_{i=1}^m b_i \Delta y_{t-i} + d + g_t + \varepsilon_t \quad (\text{for levels}) \dots \dots \dots \text{Equation 4.3}$$

$$\Delta \Delta y_t = \alpha \Delta y_{t-1} + \sum_{i=1}^m b_i \Delta \Delta y_{t-i} + d + g_t + \varepsilon_t \quad (\text{for first differences}) \dots \dots \dots \text{Equation 4.4}$$

The Δy is the first differences of the series; t is time; and m will be the number of lags. Tables 4 and 5 present the calculated values from ADF tests on each variable in levels and first differences when we lag the variable. “The practical rule for establishing the value of $[m]$... is that it should be relatively small in order to save degrees of freedom, but large enough not to allow for the existence of autocorrelation in ε_t . For example, if for $[m] = 2$ the Durbin-Watson autocorrelation statistic is low, indicating first order autocorrelation, it would be sensible to increase m with the hope that such autocorrelation will disappear”, (Charemza and Deedman, 1992).

The DF/ADF test when we lag the variables proceeds as follows: equations 1 and 2 above are estimated by adding as many terms of differenced variables as are necessary to achieve residuals that are non-autocorrelated. In the analysis trend in levels are included, but first differences are exclude. ADF test statistics are computed using regressions with an intercept and m lagged first differences of the dependent variable ($m=0 \dots 3$). Critical values taken from MacKinnon (1991)

Table 4.4 : ADF Unit Root Tests in Levels (ADF Regression with an intercept)

Dependent Variables	ADF (0)	ADF (1)	ADF (2)	ADF (3)
FDI	- 3.813	-2.688	- 2.1182	- 2.662
DTCP	- 0.0098	- 0.7857	- 0.1454	- 0.3787
EGS	2.1742	1.5498	1.5386	0.9358
GDP CMP	9.936	1.5944	1.7999	0.5458
GDP COMP	- 1.1444	- 1.2363	- 1.0065	- 1.6963
GDP GROWTH	- 2.486	- 2.9010	- 2.3444	- 2.5240
GPI	1.3896	0.4522	0.1654	0.4781
IGS	2.1063	1.4156	1.4651	1.1262
GFCI	- 0.1450	- 0.0667	- 0.0007	0.024797
KSH_\$ 01	0.7416	0.7098	0.9652	0.5134
LR	- 1.3908	- 1.3614	- 1.5062	- 1.5156
WAGES	18.8364	5.4347	6.1378	- 2.9750
DGDP	-3.9572	-2.9909	-2.9309	-1.8502
OPE	-2.92092	-2.2381	-2.003	1.8391
5% CRITICAL VALUE	-2.9627	- 2.9665	- 2.9705	4.2311

Table 4. 5: ADF Unit Root Tests in First Differences,(ADF Regression with Intercept).

Dependent Variables	ADF (0)	ADF (1)	ADF (2)	ADF (3)
FDI	- 8.0698	- 5.0091	- 3.2598	- 3.6179
DTCP	-2.2725	- 3.2190	- 2.3382	- 2.7810
EGS	- 4.0248	- 2.9179	- 1.7117	- 1.7413
GDP CMP	- 0.44278	- 0.4778	- 0.0998	0.022731
GDP COMP	- 3.5491	- 3.0372	- 3.0676	- 2.7013
GDP GROWTH	- 4.7424	- 4.4277	- 3.3179	- 4.2908
GPI	- 3.4024	- 2.4635	- 2.6580	- 2.0574
IGS	- 3.8194	- 2.8012	- 1.8786	- 1.2604
GFCI	- 5.5240	- 3.9549	- 3.2036	- 3.1033
KSH_\$ 01	- 5.0427	- 3.7285	- 2.9750	- 2.4087
LR	- 5.2770	- 2.9314	- 2.3595	- 1.3603
WAGES	0.4492	1.3264	2.9733	3.7499
DGDP	-7.6175	-5.9112	-4.7877	3.1956
OPE	-7.0849	-5.8049	-3.4432	-2.2919
5% CRITICAL VALUE	- 2.9665	- 2.9705	2.9750	- 2.9798

In case of levels of the series in the null hypothesis of non-stationarity cannot be rejected for any series except wages i.e. the computed ADF is less than the critical values. Therefore, the levels of all series except wages are non-stationary. We therefore drop wages from co-integration test.

When we apply the same test to first differences in determining the order of integration, the critical value is less, in absolute terms than the calculated values of the test statistics for the following variables: -

FDI (-5.0091); DTCP (-3.2190); GDPCOMP (-4.4277); GFCI (-3.9549); and KSH-\$01 (-3.7285); DGDP (-5.9112) and OPE (-5.8049). These series are integrated of order I (1) and become stationary after differencing once. For this group of series, given that they are integrated of the same order, the series may be tested for a long run relationship between them i.e. co-integrated relationship. The remaining variables are of different order and are excluded from co-integration analysis.

4.6 Co-intergration Tests.

Co-integration test is applied to determine the existence of long term relationship between Foreign Direct Investment (FDI) and other variables. The Engle and Granger (1987) two step procedure for modeling the relationship between co-integrated variables is acknowledged in both finance and economics literature.

The advantage of Engle and Granger (1987) approach is that the long run equilibrium relationship can be modeled by a straightforward regression involving the levels of variables (Inder, 1993). The Engle and Granger (1987) approach reduces the number of co-efficients to be estimated and so reduces the problem of multicollinearity and the first step is estimated by ordinary least square, Holden and Thomson (1992).

We started our analysis of establishing the existence or lack of a long-run relationship between FDI and other variables by first testing whether the variables are integrated to the same order. We used DF/ADF unit root tests to identify the variables with tests to identify the variable with

the same order I (1). We use series with the same order to test for the existence of long-run relationship between them, i.e. co-integration.

The procedure employed in testing the existence of a co-integrating relationship requires that: the hypothesized long run relationship is estimated using OLS i.e. co-integrating regression:

$$ly = \alpha + \beta lx + \varepsilon_t \tag{Equation 4.5}$$

The residuals from the OLS regression are retained and subjected to DF/ADF tests:

$$\Delta \varepsilon_t = f^* \varepsilon_{t-1} + \sum_{i=1}^m i \Delta \varepsilon_{t-i} + v_t \tag{Equation 4.6}$$

then, test $H_0 : f^* = 0$; against $H_1 : f^* < 0$

The tests above are based on relevant critical values. The null hypothesis of co-integration is that the series formed by residuals of each co-integration regressions are not stationary. Note that the above equation has no intercept or time trend, since ε_t must have a zero mean because we do not expect them to have a deterministic trend.

The null hypothesis of co-integration test is that the series formed by residuals of each of the co-integrity variables is not stationary. We cannot reject the null hypothesis of non stationarity if the 5% critical values, Mackinnon (1991) are bigger than the calculated values.

A lack of co-integration suggests that variables of the study have no long-run relationship; in principal they can wander arbitrary faraway from each other (Dickey *et. al*, 1991).

A number of early researchers ignored stationarity requirement of variables. This is despite the fact that standard regression techniques are invalid, i.e. only co-integrated variables are useful in static regressions (Banerjee *et al* 1993).

Given a group of stationary series we may be interested in determining whether the series are co-integrated, and if they are, in identifying the co-integrity (long-run equilibrium) relationship.

4.7 Empirical Results: Testing for Co-integration.

We adopt Johansen (1991, 1995, and 1998) co-integration tests. Johansen's method is to test the restriction imposed by co-integration on the restricted vector autoregressions (VAR) involving the series. For example, a VAR of order p :

$$y_t = A_1 y_{t-1} + \dots + A_p y_{t-p} + \beta x_t + \varepsilon_t \quad \text{Equation 4.7}$$

where y_t is a k -vector of non stationary I (1) variables, x_t is a d vector of deterministic variables and ε_t is a vector of innovations and we model VAR as:

$$\Delta y_t = \Pi y_{t-1} + \sum_{i=1}^{p-1} \Gamma_i \Delta y_{t-i} + \beta x_t + \varepsilon_t \quad \text{Equation 4.8}$$

where:

$$\Pi = \sum_{i=1}^p A_i - I \quad \text{and} \quad \Gamma = - \sum_{j=1+i}^p A_j \quad \text{Equation 4.9}$$

Grangers theorem asserts that if the coefficient matrix Π has reduced rank $r < k$, then there exist $k \times r$ matrices α and β each with rank r such that $\Pi + \alpha \beta'$ and $\beta' y_t$ is stationery, r is the number of co-integrating relations (the co-integrity rank) and each column of β the co-integrity vector. The elements of α , are unknown as adjustment parameters in the vector error correlation model. Johansen (1991, 1995, 1998) estimate the Π matrix in unrestricted form, then proceed to test whether we can reject the restrictions implied by the reduced rank Π .

Table 4.6 Johansen Cointegration Test

Test assumption: Linear deterministic trend in the data
 Series: FDI DTCP GDPCOMP GFCI KSH_\$01 DGDP OPE

Eigenvalue	Likelihood Ratio	5 Percent Critical Value	1 Percent Critical Value	Hypothesized No. of CE(s)
0.914090	235.2161	124.24	133.57	None **
0.852464	164.0368	94.15	103.18	At most 1 **
0.801042	108.5400	68.52	76.07	At most 2 **
0.652692	61.71486	47.21	54.46	At most 3 **
0.465150	31.04608	29.68	35.65	At most 4 *
0.273798	12.89877	15.41	20.04	At most 5
0.117378	3.620889	3.76	6.65	At most 6

*(**) denotes rejection of the hypothesis at 5%(1%) significance level
 L.R. test indicates 5 cointegrating equation(s) at 5% significance level

The eigenvalues are presented in the first column, while the second column (Likelihood Ratio) gives the LR test statistic. The first row in the upper table tests the hypothesis of no cointegration, the second row tests the hypothesis of one cointegrating relation, the third row tests the hypothesis of two cointegrating relations, and so on, all against the alternative hypothesis of full rank, i.e. all series in the VAR are stationary. Critical values for this statistic are tabulated in Osterwald-Lenum (1992). The trace statistics reject the hypotheses at the 5% level. We conclude that there is cointegration among the variables.

For the co-integrated relationship the normalized co-integrating co-efficients (1 co-integrating equation with the maximum log likelihood of 772.8787 is:

$$FDI - 0.010910DTCP + 0.001034GDPCOMP - 0.01875GFCI - 0.504409KSH_\$01 - 102.9381DGDP + 31.16005OPE - 56.88784 \text{ (Constant)}.$$

In relation to the hypothesis to be tested in section 3.5, only six variables make it to this stage: direct taxes on corporate profits (DTCP); GDP in constant market prices (1982) – (GDPcomp); Gross fixed capital formation (GFCI); Kenya shillings per dollar – exchange rate (Ksh_\$01); openness of the economy (OPE) and Domestic Investment to GDP ratio (DGDP).

The findings confirm the hypothesized relationships, i.e. negative for direct taxes on corporate profits (DTCP), positive for GDP (Constant market prices 1982); negative for fixed capital

formation; and positive for exchange rate flows in summary all these variables show the theoretically predicted sign.

4.8 Discussion of Findings

The empirical approach used to evaluate the relationship between FDI and other economic indicators are in the Granger (1969) sense. Recent advances in time series analysis have permitted the investigation of long-run relationship between macro economic variables in terms of cointegration analysis and error-correction mechanism.

Earlier studies of growth of FDI have not looked at the true time series properties of variables examined. There was the implicit assumption that the data were stationery. However, recent developments in time series analysis shows that most micro-economic time series have a unit root (a stochastic trend) and this property is described as difference stationarity, further testing is necessitated to establish the order of integration of the time series.

Casson (1990) assertion was that three distinct theories explain levels of FDI; the theory of international capital markets, the theory of the firm and theory of international trade. The findings of this study seem to capture aspects of all these theories. The openers of the economy (provided by OPE) is aligned to international trade; corporation tax advantages are related to the theory of the firm, while exchange rate is related to both international trade and many markets.

Hymer (1976) find FDI costly and risky and for it to occur, there must be offsetting advantages. The advantages and disadvantages in this study relate to direct taxes on corporate profits exchange rates, GDPC in constant market prices; gross fixed capital formation; openness of the economy; and domestic investment to GPD ratio.

Of the variables that entered the final equation, corporate tax GDP did not show the theoretically predicted sign while exchange rate, gross capital formation openness of the economy showed the theoretically, predicted sign. Corporation tax and adverse exchange rates can deter FDI inflows i.e. risk of currency depreciation discourages FDI inflows. Open economies are more receptive to FDIs.

CHAPTER 5

5.0 CONCLUSION

In this study we determine variables that impact on FDI. We started with one dependent variable (FDI) and thirty one (31) independent variables ranging from gross private investment to domestic investment to GDP ratio. The first step was to establish the time series properties of data, i.e. establish the existence or lack of, unit root. We report that, FDI, direct taxes on corporate profits, GDP in constant market prices, gross fixed capital formation, exchange rate, openness of the economy and domestic investment to GDP ratio were non-stationary in levels, but stationery in first differences, that is, they are integrated of order CI (1). The final results show that FDI have long-term relationship with these variables. This suggests that economist should focus on these variables when managing FDI inflows.

5.1 Limitation of the study

A number of social and political factors such as; political stability or instability, the degree of administration efficiency or regulatory burden and corruption are important in determining FDI inflows. However, these have been excluded on the basis that they are difficult to measure and the data is not readily available.

The variable set was incomplete. It was difficult identifying an adequate proxy for literacy and distinct investment indicators. The exchange rate used was one between the US dollar and Kenya Shillings. This assumes most of FDI is from US. This might not be the case. Finally while earlier studies have used a data set of over 50 years in some cases, our data set was restricted to 30 years.

5.2 Recommendation for further research.

A comparative study amongst African or specifically within the East African region will be more informative. This will enable Kenya understand how it competes for FDI alongside African counties.

REFERENCES

- ACEG, (2002), **“Foreign Direct Investment in Kenya”**, - Unpublished: African Center for Economic Growth – A Collaborative Policy Research Institute, Nairobi.
- Agarwal, J.P. (1980), **“Determinant of Foreign Direct Investments: A Survey”** *Weltwirtschaftliches* 116: 739-77.
- Anyanwu, J.C. (1998): **“An Econometric Investigation of the Determinants of Foreign Direct Investment in Nigeria”**: Rethinking Investment for Economic Development in Nigeria, Selected papers of the 1998 Annual Conference of the Nigerian Economic Society.
- Asiedu, E (2003), **“Policy Reform and Foreign Direct Investment to Africa: Absolute Progress but Relative Decline”**, mimeo, Department of Economics, University of Kansas, United States.
- Asiedu, E (2002), **“On the Determinants of Foreign Direct Investment to Developing Countries: Is Africa Different?”** *World Development*, 30, pp.107-19.
- Balasubramanyam, V.N. and M.A. Salisu (1991), **“Export Promotion, Import Substitution and Direct Foreign in Less Developed Countries”**, in Koekkoek, A. and L.B.M. Mennes (eds.) *International Trade and Global and Global Development, Essays in Honour of Jagdish Bhagwati*, Longdon Routledge.
- Banarjee, A., Dolado, J. J., Galbraith, J. W . and Hendry, D. F. (1993). *Cointegration, Error Correction and the Econometric Analysis of Non-Stationary Data*. Oxford: Oxford University Press.
- Batten, J. and S. Bryant (1999), **“Trade Finance and Economic Development in Sub Saharan Africa”**, *The Journal of Business in Developing Nations*; Volume 3.

Buckley, P. J. and M. Casson (1976), "**A Long-Run Theory of the Multinational Enterprise**", In P.J.Buckley, and M.C.Casson, eds., *The Future of the Multinational Enterprise*", London: Macmillan: 32-65.

Budget (2004), "**The Budget For The Fiscal Year 2004/2005**" Delivered by the Minister for Finance, Republic of Kenya June 2004.

Casson, M. (1990), "**The Theory of Foreign Direct Investment**", in P.Buckley (ed.) *International Investment*. Aldershot, England: Edward Elgar Publishing Ltd.: 244-73.

Caves, R. E. (1971), "**International Corporations: the Industrial Economics of Foreign Investment**", *Economica*, 38, 1-27.

Caves, R. E. (1974a), "**Causes of Direct Investment: Foreign Firms**" Shares in Canadian and United Kingdom Manufacturing Industries", *Review of Economics and Statistics*, 56, 279-93.

CBC (2003), "**Business Environment Survey 2003-Private Sector Views**": Common Wealth Business Council.

Chakrabarti, A. (2001), "**The Determinants of Foreign Direct Investment: Sensitivity Analysis of Cross-Country Regressions**", *KYKLOS*, 54, pp.89-114.

Chawdhury, A. & G. Mavrotas (2003), "**FDI & Growth: What Causes What?**" Paper presented at the WIDER Conference on "Sharing Global Prosperity" WIDER, Helsinki.

Charemza, W.W., and Deedman, D.F., (1992), *New Direction In Econometric Practice*. Edward Elgar.

Davidson, R. And Mackinnon, J.G. (1993), *Estimation And Inference In Econometrics*, Oxford University Press.

Dickey, D.A. and W.A. Fuller (1981), "**Likelihood ratio, Statistics for Autoregressive Time Series with a Unit Root**", *Econometrica*, 49, 1057-1072.

Dickey, D.A. and W.A. Fuller (1979), "**Distribution of the Estimators for Autoregressive Time Series with Unit Root**", *Journal of the American Statistical Association*, Vol.74: 427-31.

Dunning, J.H. (1993), "**Multinational Enterprises and the Global Economy**", Reading: Addison Wesley Publishers Ltd. Wokingham England

Dunning, J.H. & A.M. Rugman, (1985), "**The Influence of Hymer's Dissertation on the Theory of Direct Foreign Investment**", *American Economic Review*, Vol. 75(2) pp228-232.

Dunning, J.H. (1983), "**Market Power of the Firm and International Transfer of Technology**", *International Journal of Industrial Organisation*, 1,333-51.

Dunning, J.H. (1980), "**Explaining Changing Patterns of International Production: In Defence of the Eclectic Theory**", *Oxford Bulletin of Economics and Statistics*, Vol. 41(4), 267-99

Dunning, J.H. (1973), "**The Determinants of International Production**", *Oxford Economic Papers* 25: 289-336. Published in 1981, *International Production and the Multinational Enterprise*. London: Allen and Urwin.

Engle, R.F. and C.W.J. Granger. (1987), "**Cointegration and Error Correction: Representation, Estimation and Testing**". *Econometrica*, Vol.55: 251-76.

ECA (2004): "**Unlocking Africa's Trade Potential**"- Economic Report on Africa 2004, United Nations Economic Commission for Africa, Addis Ababa.

ECA (2003): **“Accelerating the Pace of Development”**- Economic Report on Africa 2003, United Nations Economic Commission for Africa, Addis Ababa.

Erdal F and E. Tatoglu (2002), **“Locational Determinants of Foreign Direct Investment in an Emerging Market Economy: Evidence from Turkey”**.

Feldstein, M. (2000), **“Aspects of Global Economic Integration: Outlook for the Future”**, NBER Working Paper No.7899. Cambridge, Massachusetts: National Bureau of Economic Research.

Feyzioglu, T., V.Swaroop and Min Zhu. (1998). **“A panel Data Analysis of the Fungibility of Foreign Aid”**. *World Bank Economic Review*, Vol.65: 429-45.

FIAS (2004); **“Kenya Accelerating Reforms to Improve the Commercial Legal Frame and Remove Administrative and Regulatory Barriers to Investment”**: Foreign Investment Advisory Services, International Finance Corporation and The World Bank.

GDF (2004), **“Harnessing Cyclical Gains for Development”**: The World Bank-Global Development Finance.

GDF (2003), **“Striving for Stability in Development Finance”**: The World Bank- Global Development Finance.

GDF (2001), **“Coalition Building for Effective Development Finance”**: The World Bank-Global Development Finance.

GDF (1999), Analysis and Summary Table. Ch 3. **“Foreign Investment Resilient in the Face of Financial Crises”**-Washington, D, C: World Bank- Global Development Finance.

GOK (2003), **“Kenya Economic Recovery Strategy for Wealth and Employment Creation 2003-2007”**: Government of the Republic of Kenya.

Goldenberg, M. (1972), **“The Determinants of U.S. Direct Investment in the EEC”**, American Economic Review. Vol.52 (2) pp 215-217.

Granger, C. W. (1969), **“Investigating Causal Relations by Econometric Models and Cross-Spectral Methods”**, Econometrica, 37 (3), pp. 422-438.

Granger, C. W. (1980). **“Testing for Causality”**, Journal of Economic Dynamics and Control, 2, pp. 329-352.

Granger, C. W, J. (1981). **“Some Properties of Time Series Data and Their use in Econometric Model Specification”**, Journal of Econometrics, 16, pp.121-130.

Granger, C. W . (1994). **“Some Comments on Empirical Investigations Involving Cointegration”**, Econometric Review, 13 (3), pp 345-350.

Gujarati, D.N. (1995): **Basic Econometrics** McGraw-Hill, Singapore.

Hall, S.G.. and Henry, S.S.B. (1989), **Macroeconomic Modeling**. Amsterdam, The Netherlands: Elsevier Science Publishers.

Harris, R. (1995), **“Using Cointegration Analysis in Econometric Modelling”**, Prentice Hall/Harvester Wheatsheaf.

Haque, N. U., M. Nelson and D. J. Mathieson. (2000). **“Rating Africa: The Economic and Political Content of Risk Indicators”** in Investment and Risk in Africa, edited by Paul Collier and Catherine Pattilo.

Hausman, R and E. Fernandez-Arias, (2002), "**Foreign Direct Investment: Good Cholestral?**" Paper presented at the Seminar on *The New Wave of Capital Inflows: Sea Change or Just another Tide?* IDB Annual Meetings, New Orleans, United States.

Hennart, J.-F. (1982), "**A Theory of Multinational Enterprise**", Ann Arbor: the University of Michigan Press.

Hymer, S (1960), "**The International Operations of national Firms: A Study of Direct Foreign Investment**", Cambridge, Mass. MIT Press: (published in 1976).

IMF (2004), **International Financial Statistics**: International Monetary Fund. Washington, D. C

IMF (2003), "**Kenya: Debt Sustainability Analysis**": IMF country Report No 03/400. International Monetary Fund, Washington, D.C. Publication Services.

IMF (2000), **International Financial Statistics**: International Monetary Fund. Washington, D.C

Jim lee (2000), "**Government Policies and Foreign Direct Investment in Developing Countries**" Texas A&M University- Corpus Christi

Johansen, Soren (1991) "Estimation and Hypothesis Testing of Cointegration Vectors in Gaussian Vector Autoregressive Models," *Econometrica*, 59, 1551–1580.

Johansen, Soren (1995) *Likelihood-based Inference in Cointegrated Vector Autoregressive Models*, Oxford University Press.

Johansen, S. (1998). "**Statistical Analysis of Cointegration Vectors**", *Journal of Economic Dynamics and Control*, Vol12 pp 231-254

Joong,-W. Cho. (2002), **“Foreign Direct Investment: Determinants, Trends in Flows and Promotion Policies”**: Investment Promotion and Enterprise Development Bulletin for Asia and the Pacific.

Kabbaj, O. (2003), **“The Challenge of African Development”**, Oxford University Press.

Kabubo-Mariara, J. and T. W. Kiriti, (2003), **“Structural Adjustment, Poverty and Economic Growth: An Analysis for Kenya”**: AERC Research Paper 124.

Kindleberger, Charles. P (1969), **“American Business Abroad: Six Lectures on Direct Investment”**, New Haven and London, Yale University Press.

KIPPRA and The World Bank (2004), **“Enhancing the Competitiveness of Kenya’s Manufacturing Sector, The role of the Investment Climate”**,

Kiptui, M, (2003), **“Impact of Fiscal Policy on Private Investment in Kenya”**: a Forthcoming Publication.

Kiptui, M (2000), **“Capital Flows in a Small Open Economy: The Case of Kenya”**

Klein, M.C. Aaron and B. Hadjiimichael (2001), **“Foreign Direct Investment and Poverty Reduction”**, Paper presented at the OECD Conference on New Horizons and Policy Challenges for Foreign Direct Investment in the 21st Century, Mexico City, November 26-27,2001.

Krkoska, L. (2001), **“Foreign Direct Investment: Financing of Capital Formation in Central and Eastern Europe”**, European Bank for Reconstruction and Development. WP, No67.

Kumar, N. (1996), **“Foreign Direct Investments and Technology Transfers in Development: A Perspective on Recent Literature”**, The United Nations University- Institute for New Technologies, Discussion Paper Series 9606, The Netherlands.

Kurdle, R.T. (1984), **“The Correlates of Foreign Direct Investment in Developing Countries: A look at Recent Experience”**, in Benjamin, Roger and Robert T. Kurdle (eds.) *The Industrial Future of the Pacific Basin*, Boulder, Westview Press, 211-34.

Levis, M. (1979), **“Does Political Instability in Developing Countries Affect Foreign Investment Flow? An Empirical Examination”**, *Management International Review* 19: 59-68.

Linda, C. and V. Ramachandran (2001), **“FDI in Emerging Economies: Lessons from SSA”**.

Lipsey, R.E. (1999), **“Interpreting Developed Countries Foreign Direct Investment”**, NBER Working Paper 7810.

Lyster, M. (1996), **“Africa: The Last Frontier”**, *World Trade* Vol9 (4): 16.

Lucas, R. (1993), **“On the Determinants of Direct Foreign Investment: Evidence from East and Southeast Asia”**, *World Development*.21 (3):391-406.

MacKinnon, J. G. (1991). **“Critical Values for Cointegration Tests”**, in R. F. Engle and C. W. J. Granger (eds.), *Long-Run Economic Relationships: Readings in Cointegration*, Oxford: Oxford University Press.

Malefane, M. R. (2004), **“Determinants of Foreign Direct Investment in Lesotho: Evidence from Cointegration and Error Correction Modeling”**: Paper presented to the Ninth Annual Conference on Econometric Modelling for Africa.

Manning, L.M., and Adriacanos, D., (1993), **“Dollar Movement and Inflation: A Cointegration Analysis”**. *Applied Economics* 25, pp. 1483 – 1488.

Moosa, I. A. and B. A. Cardak, (2003), **“The Determinants of Foreign Direct Investment: An Extreme Bound Analysis”**: La Trobe University.

Morisset, J. P. (2002), **“Foreign Direct Investment in Africa: Policies Also Matter”** forthcoming publication in *Transnational Corporations*.

Mukhwana, B. W. (2001), **“Determinants of Foreign Direct Investment in Kenya: An Econometric Analyses”**, Unpublished M.A. Thesis, University of Nairobi.

Nair-Reichert, U. and D. Weinheld (2000), **“Causality Test for Cross-Country Panels: A New Look at FDI and Economic Growth in Developing Countries”**, *Oxford Bulletin of Economics and Statistics*, 63, pp.151-71.

Njeru, J. (2004), **“The Impact of Foreign Aid on Public Expenditure: The Case of Kenya”**: AERC Research Paper 135.

Nelson, C.R., and Plosser,C.L, (1982),”Trends and Random Walk in Microeconomic Series:Some Evidence and Implications”, *Journal Of Monetary Economics*,10 pp.139-162.

Osterwald-Lenum, Michael (1992) “A Note with Quantiles of the Asymptotic Distribution of the Maximum Likelihood Cointegration Rank Test Statistics,” *Oxford Bulletin of Economics and Statistics*, 54, 461–472.

Owen. R. F. (1982), **“Inter-Industry Determinants of Foreign Direct Investments: A Canadian Perpespective”**, in Alan M. Rugman (eds.), *New Theories of the Multinational Enterprise*, London, Croom Helm, 238-53.

Pesaran, M.H. and B. Pesaran. (1997): **Working with Microfit 4.0: Interactive Econometrics Analysis**, Oxford University Press.

Phillip's, L.C., M.Obwona, M.McMillan, with A.B.Ayacko (2000), **"Foreign and Local Investment in East Africa: Interactions and Policy Implications"**; African Economic Policy Discussion Paper No67, USAID Bureau for Africa –office of Sustainability Development Washington, D.C.

Pindyck & Rubinfeld (1991), **Econometric Models and Economic Forecasts**, Third Edition McGraw-Hill Inc. Singapore.

Republic of Kenya (2001), **"Poverty Reduction Strategy Paper for the Period 2001-2004"** prepared by the People and Government of Kenya.

Ronge, E. E. and Kimuyu, P. K. (1997), **"Private Investment in Kenya: Trends, Composition and Determinants"**: IPAR Discussion Paper No DP 009/97.

Root, F. & A. Ahmed. (1979), **"Empirical Determinants of Manufacturing Direct Foreign Investment in Developing Countries"**: *Economic Development and Cultural Change*, 27(4), 751-61.

Rugman, Alan. M (1981), *Inside the Multinationals: The Economics of Internal Markets*. New York: Columbia University Press.

Scaperlanda, A. E. & J. L. Mauer. (1969), **"The Determinants of US Direct Investment in the EEC"**: *American Economic Review*, Vol. 49 No.4 pp 362-372.

Sebastian, M. (2004), **"A Study of the Regional Determinants of Foreign Direct Investments in India and the Case of Gujarat"**; CGSD Working Paper No14.

Singh, H and K. W. Jun (1995), **"Some New Evidence on Determinants of Foreign Direct Investment in Developing Countries"**, Policy Research Working Paper 1531 The World Bank.

Swamy, G. (1994), "**Kenya: Patchy, Intermittent Commitment.**" Hussain, I and Faruquee, R. (Eds.) *Adjustment in Africa: Lessons from Country Case Studies*. World Bank, Washington.

Teece, D. (1983), "**Technology and Organisational Factors in the Theory of the Multinational Enterprise**", in Mark C. Casson (ed.) *The Growth of International Business*. London: Macmillan, 51-62.

Teece, D. (1981), "**The Market for Know-how and Efficient International Transfer of Technology**", *Annals of American Academy of Political and Social Science*, 458, 81-96.

Thomas, R.L., (1993), *Introductory Econometrics: Theory and Application*. 2nd Edition. Longman.

UNCTAD (2003) "**FDI Policies for Development National and International Perspectives**" World Investment Report: United Nations, New York.

UNCTAD (2001) "**Promoting Linkages**" World Investment Report: United Nations, New York.

UNCTAD (1999) "**Foreign Direct Investment in Africa; Performance and Potential**" World Investment Report: United Nations, New York.

UNCTAD (1998) "**Trends and Determinants**" World Investment Report: United Nations, New York.

UNCTAD (1993) "**Explaining and Forecasting Regional Flows of FDI**" World Investment Report: United Nations, New York.

UNIDO (2003) "**African Foreign Investor Survey 2003**"- Implication for investment promotion. United Nations Industrial Development Organisation, Vienna.

UNIDO (2002) **“Integrated Industrial development Programme Kenya”** Growth Through Market Access and Regional Integration: With Special Reference to Leather and Leather Goods, Agriculture Products, Fish and Dairy. Unpublished United Nations Industrial Development Organisation.

Velde, D. W. (2003), OECD (UK & EU) **“Home Country Measures and FDI in Developing Countries”**: A Preliminary Analysis Case Study commissioned by Department for International Development, UK.

Vernon, R. (1979) **“The Product Cycle Hypothesis in a New International Environment.”** *Oxford Bulletin of Economics and Statistics* 41:255-67.

Vernon, R. (1966) **“International Investment and International Trade in the Product Cycle”**, *Quarterly Journal of Economics*, 80, pp. 190-207.

Wells, L., N. Allen, J. Morisset, and P. Neda (2001), **“Using Tax Incentives to Compete for Foreign Investment”**. FIAS Occasional Paper15. Washington, D.C. World Bank.

Were, (2001). **“The Impact of External Debt on economic Growth in Kenya an Empirical Assessment”**: WIDER Discussion Paper No.2001/116. Prepared for the UNU/WIDER development conference on Debt Relief; Helsinki 17-18 August 2001.

Williamson, O. H. (1981), **“The Modern Corporations, Origins, Evolution, Attributes”**, *Journal of Economic Literature*, 19,499-518.

World Bank (2004) **“Growth and Competitiveness in Kenya”**: Unpublished, World Bank Africa Region Private Sector Division

World Bank (2004) World Bank Africa Database 2004 CD-ROM

World Bank (2003) World Development Indicators on CD-ROM,

Yasheng, H. (2001); “**The Benefits of FDI in a Transitional Economy: The Case of China**”, Paper presented at the OECD Global Forum on International Investment, Mexico City, 26-27 November 2001.

Yasheng, H. (2000), “**Why is FDI too Much of A Good Thing for China**”—Harvard University Asia Center, Modern Asia Series Spring.

Yingqi, W. (2003/02), “**FDI in China**”: Lancaster University Management School, Working Paper 2003/002. Paper presented at a workshop on FDI in Developing Countries—Lake District, Sept 13-14 2002.

DATA USED FOR ANALYSIS														
YEAR	FDI	GPI	WAGES	EGS	IGS	DTCP	KSh/\$	GDPcmp	GDPcomp	GDPgrowth	GFCI	LR	OPE	DGDP
1972	26	2,697.2	4,084.60	40,002.2	4,323.2	680.2513	16.48	14,545.80	46,914.33	6.40	662	8.50	0.57	0.48
1973	26	3,826.0	4,540.89	4,811.6	5,035.6	781.8118	17.81	16,876.40	48,600.27	4.00	708	9.00	0.58	0.53
1974	27	4,689.8	5,294.04	7,144.0	8,676.0	938.4514	20.67	20,443.40	52,280.25	3.10	774	9.50	0.77	0.65
1975	28	3,513.6	5,997.71	7,138.0	8,260.0	1,160.2420	7.41	24,549.80	51,096.17	2.90	828	10.00	0.63	0.48
1976	29	4,915.2	7,196.16	9,434.0	9,232.0	1,373.7150	8.37	29,781.20	52,374.98	3.61	970	10.00	0.63	0.48
1977	29	7,648.6	8,188.45	13,004.0	11,752.0	1,739.6700	8.26	38,059.80	57,347.49	9.12	1,176	10.00	0.65	0.51
1978	30	10,800.6	9,260.45	11,862.0	15,860.0	2,042.5530	7.69	42,064.60	62,987.43	8.83	1,412	10.00	0.66	0.63
1979	31	8,451.0	11,027.88	12,002.0	14,732.0	2,254.6400	7.47	46,603.40	63,606.09	3.79	1,874	10.00	0.57	0.50
1980	79	13,211.8	12,759.57	15,066.0	21,054.0	2,577.6220	7.42	53,909.80	67,415.59	5.59	2,572	10.58	0.67	0.64
1981	32	14,271.8	14,634.20	15,938.2	20,973.4	2,768.2240	9.13	62,016.80	69,209.06	3.77	2,966	12.42	0.60	0.57
1982	33	12,819.8	15,805.16	17,552.0	20,187.8	3,000.4110	11.01	70,308.00	70,308.00	1.51	2,534	14.50	0.54	0.47
1983	33	14,546.4	17,591.83	19,926.8	20,823.6	3,351.1170	13.39	79,119.60	71,229.41	1.31	2,040	15.83	0.52	0.45
1984	34	15,452.8	19,826.54	23,410.2	24,639.2	3,830.7390	14.54	89,278.80	72,128.56	1.79	3,062	14.42	0.54	0.45
1985	35	21,901.6	22,421.33	25,523.6	26,539.8	4,568.1930	16.39	100,770.40	76,426.59	4.30	3,848	14.00	0.52	0.48
1986	35	21,170.8	25,425.69	30,333.6	30,128.6	5,155.2450	16.21	117,483.40	81,042.13	7.14	4,398	14.00	0.51	0.44
1987	36	27,249.4	28,842.35	27,991.8	34,682.4	5,824.0820	16.48	131,169.20	86,098.61	5.94	4,602	14.00	0.48	0.47
1988	37	30,524.6	33,473.95	33,084.0	41,086.0	6,699.4620	17.81	151,194.20	91,449.14	6.20	7,252	15.00	0.49	0.47
1989	62	35,368.8	39,955.44	39,553.6	52,247.4	7,701.6780	20.67	171,588.80	95,724.66	4.69	6,996	17.25	0.54	0.51
1990	57	38,518.4	45,249.48	51,185.6	61,390.8	9,095.3550	23.04	195,536.40	99,342.25	4.19	8,948	18.75	0.58	0.51
1991	19	39,611.8	50,474.80	60,511.6	63,327.0	10,843.2700	27.70	224,231.60	100,341.00	1.44	7,410	19.00	0.55	0.46
1992	6	35,322.2	59,109.40	69,287.4	69,041.4	12,291.0100	32.20	264,967.00	98,865.96	(0.80)	9,352	21.07	0.52	0.39
1993	2	51,119.4	71,429.80	134,918.2	118,958.0	19,590.0000	58.00	333,612.80	99,893.70	0.35	7,630	29.99	0.76	0.51
1994	9	65,825.8	96,375.20	148,224.8	135,641.2	28,382.1900	56.10	400,679.20	99,441.35	2.63	11,474	36.24	0.71	0.50
1995	32	81,565.2	117,664.00	152,596.4	180,138.6	31,694.8600	51.40	465,272.00	106,509.90	4.41	19,951	28.80	0.72	0.56
1996	13	88,657.0	124,632.60	172,459.2	195,154.6	32,206.0200	57.10	528,739.60	110,977.70	4.15	18,813	33.79	0.70	0.54
1997	40	95,795.8	152,678.00	174,846.2	220,768.6	32,465.3500	58.80	623,235.20	112,805.90	2.09	19,474	30.25	0.63	0.51
1998	42	100,976.0	187,974.20	171,894.8	224,772.0	32,116.5000	60.40	694,028.60	113,394.70	1.61	19,113	29.49	0.57	0.47
1999	42	101,462.6	224,994.10	189,265.0	232,232.6	28,336.5000	70.30	743,478.60	113,519.80	1.29	18,640	22.38	0.57	0.45
2000	127	103,151.0	262,577.40	211,432.7	286,621.0	26,113.6800	76.20	799,245.00	115,662.20	(0.16)	19,359	22.34	0.62	0.49
2001	50	106,945.9	320,087.10	234,176.0	317,745.3	25,603.9500	78.60	878,730.70	116,555.70	1.13	21,415	19.67	0.63	0.48
2002	50	109,073.8	374,575.80	250,429.0	302,758.0	28,729.3200	78.70	962,686.00	114,865.80	1.07	19,782	18.45	0.57	0.43

DATA USED FOR ANALYSIS														
YEAR	FDI	GPI	WAGES	EGS	IGS	DTCP	KSh/\$	GDPcmp	GDPcomp	GDPgrowth	GFCI	LR	OPE	DGDP
1972	26	2,697.2	4,084.60	40,002.2	4,323.2	680.2513	16.48	14,545.80	46,914.33	6.40	662	8.50	0.57	0.48
1973	26	3,826.0	4,540.89	4,811.6	5,035.6	781.8118	17.81	16,876.40	48,600.27	4.00	708	9.00	0.58	0.53
1974	27	4,689.8	5,294.04	7,144.0	8,676.0	938.4514	20.67	20,443.40	52,280.25	3.10	774	9.50	0.77	0.65
1975	28	3,513.6	5,997.71	7,138.0	8,260.0	1,160.2420	7.41	24,549.80	51,096.17	2.90	828	10.00	0.63	0.48
1976	29	4,915.2	7,196.16	9,434.0	9,232.0	1,373.7150	8.37	29,781.20	52,374.98	3.61	970	10.00	0.63	0.48
1977	29	7,648.6	8,188.45	13,004.0	11,752.0	1,739.6700	8.26	38,059.80	57,347.49	9.12	1,176	10.00	0.65	0.51
1978	30	10,800.6	9,260.45	11,862.0	15,860.0	2,042.5530	7.69	42,064.60	62,987.43	8.83	1,412	10.00	0.66	0.63
1979	31	8,451.0	11,027.88	12,002.0	14,732.0	2,254.6400	7.47	46,603.40	63,606.09	3.79	1,874	10.00	0.57	0.50
1980	79	13,211.8	12,759.57	15,066.0	21,054.0	2,577.6220	7.42	53,909.80	67,415.59	5.59	2,572	10.58	0.67	0.64
1981	32	14,271.8	14,634.20	15,938.2	20,973.4	2,768.2240	9.13	62,016.80	69,209.06	3.77	2,966	12.42	0.60	0.57
1982	33	12,819.8	15,805.16	17,552.0	20,187.8	3,000.4110	11.01	70,308.00	70,308.00	1.51	2,534	14.50	0.54	0.47
1983	33	14,546.4	17,591.83	19,926.8	20,823.6	3,351.1170	13.39	79,119.60	71,229.41	1.31	2,040	15.83	0.52	0.45
1984	34	15,452.8	19,826.54	23,410.2	24,639.2	3,830.7390	14.54	89,278.80	72,128.56	1.79	3,062	14.42	0.54	0.45
1985	35	21,901.6	22,421.33	25,523.6	26,539.8	4,568.1930	16.39	100,770.40	76,426.59	4.30	3,848	14.00	0.52	0.48
1986	35	21,170.8	25,425.69	30,333.6	30,128.6	5,155.2450	16.21	117,483.40	81,042.13	7.14	4,398	14.00	0.51	0.44
1987	36	27,249.4	28,842.35	27,991.8	34,682.4	5,824.0820	16.48	131,169.20	86,098.61	5.94	4,602	14.00	0.48	0.47
1988	37	30,524.6	33,473.95	33,084.0	41,086.0	6,699.4620	17.81	151,194.20	91,449.14	6.20	7,252	15.00	0.49	0.47
1989	62	35,368.8	39,955.44	39,553.6	52,247.4	7,701.6780	20.67	171,588.80	95,724.66	4.69	6,996	17.25	0.54	0.51
1990	57	38,518.4	45,249.48	51,185.6	61,390.8	9,095.3550	23.04	195,536.40	99,342.25	4.19	8,948	18.75	0.58	0.51
1991	19	39,611.8	50,474.80	60,511.6	63,327.0	10,843.2700	27.70	224,231.60	100,341.00	1.44	7,410	19.00	0.55	0.46
1992	6	35,322.2	59,109.40	69,287.4	69,041.4	12,291.0100	32.20	264,967.00	98,865.96	(0.80)	9,352	21.07	0.52	0.39
1993	2	51,119.4	71,429.80	134,918.2	118,958.0	19,590.0000	58.00	333,612.80	99,893.70	0.35	7,630	29.99	0.76	0.51
1994	9	65,825.8	96,375.20	148,224.8	135,641.2	28,382.1900	56.10	400,679.20	99,441.35	2.63	11,474	36.24	0.71	0.50
1995	32	81,565.2	117,664.00	152,596.4	180,138.6	31,694.8600	51.40	465,272.00	106,509.90	4.41	19,951	28.80	0.72	0.56
1996	13	88,657.0	124,632.60	172,459.2	195,154.6	32,206.0200	57.10	528,739.60	110,977.70	4.15	18,813	33.79	0.70	0.54
1997	40	95,795.8	152,678.00	174,846.2	220,768.6	32,465.3500	58.80	623,235.20	112,805.90	2.09	19,474	30.25	0.63	0.51
1998	42	100,976.0	187,974.20	171,894.8	224,772.0	32,116.5000	60.40	694,028.60	113,394.70	1.61	19,113	29.49	0.57	0.47
1999	42	101,462.6	224,994.10	189,265.0	232,232.6	28,336.5000	70.30	743,478.60	113,519.80	1.29	18,640	22.38	0.57	0.45
2000	127	103,151.0	262,577.40	211,432.7	286,621.0	26,113.6800	76.20	799,245.00	115,662.20	(0.16)	19,359	22.34	0.62	0.49
2001	50	106,945.9	320,087.10	234,176.0	317,745.3	25,603.9500	78.60	878,730.70	116,555.70	1.13	21,415	19.67	0.63	0.48
2002	50	109,073.8	374,575.80	250,429.0	302,758.0	28,729.3200	78.70	962,686.00	114,865.80	1.07	19,782	18.45	0.57	0.43

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DATA USED FOR ANALYSIS														
YEAR	FDI	GPI	WAGES	EGS	IGS	DTCP	KSh/\$	GDPcmp	GDPcomp	GDPgrowth	GFCI	LR	OPE	DGDP
1972	26	2,697.2	4,084.60	40,002.2	4,323.2	680.2513	16.48	14,545.80	46,914.33	6.40	662	8.50	0.57	0.48
1973	26	3,826.0	4,540.89	4,811.6	5,035.6	781.8118	17.81	16,876.40	48,600.27	4.00	708	9.00	0.58	0.53
1974	27	4,689.8	5,294.04	7,144.0	8,676.0	938.4514	20.67	20,443.40	52,280.25	3.10	774	9.50	0.77	0.65
1975	28	3,513.6	5,997.71	7,138.0	8,260.0	1,160.2420	7.41	24,549.80	51,096.17	2.90	828	10.00	0.63	0.48
1976	29	4,915.2	7,196.16	9,434.0	9,232.0	1,373.7150	8.37	29,781.20	52,374.98	3.61	970	10.00	0.63	0.48
1977	29	7,648.6	8,188.45	13,004.0	11,752.0	1,739.6700	8.26	38,059.80	57,347.49	9.12	1,176	10.00	0.65	0.51
1978	30	10,800.6	9,260.45	11,862.0	15,860.0	2,042.5530	7.69	42,064.60	62,987.43	8.83	1,412	10.00	0.66	0.63
1979	31	8,451.0	11,027.88	12,002.0	14,732.0	2,254.6400	7.47	46,603.40	63,606.09	3.79	1,874	10.00	0.57	0.50
1980	79	13,211.8	12,759.57	15,066.0	21,054.0	2,577.6220	7.42	53,909.80	67,415.59	5.59	2,572	10.58	0.67	0.64
1981	32	14,271.8	14,634.20	15,938.2	20,973.4	2,768.2240	9.13	62,016.80	69,209.06	3.77	2,966	12.42	0.60	0.57
1982	33	12,819.8	15,805.16	17,552.0	20,187.8	3,000.4110	11.01	70,308.00	70,308.00	1.51	2,534	14.50	0.54	0.47
1983	33	14,546.4	17,591.83	19,926.8	20,823.6	3,351.1170	13.39	79,119.60	71,229.41	1.31	2,040	15.83	0.52	0.45
1984	34	15,452.8	19,826.54	23,410.2	24,639.2	3,830.7390	14.54	89,278.80	72,128.56	1.79	3,062	14.42	0.54	0.45
1985	35	21,901.6	22,421.33	25,523.6	26,539.8	4,568.1930	16.39	100,770.40	76,426.59	4.30	3,848	14.00	0.52	0.48
1986	35	21,170.8	25,425.69	30,333.6	30,128.6	5,155.2450	16.21	117,483.40	81,042.13	7.14	4,398	14.00	0.51	0.44
1987	36	27,249.4	28,842.35	27,991.8	34,682.4	5,824.0820	16.48	131,169.20	86,098.61	5.94	4,602	14.00	0.48	0.47
1988	37	30,524.6	33,473.95	33,084.0	41,086.0	6,699.4620	17.81	151,194.20	91,449.14	6.20	7,252	15.00	0.49	0.47
1989	62	35,368.8	39,955.44	39,553.6	52,247.4	7,701.6780	20.67	171,588.80	95,724.66	4.69	6,996	17.25	0.54	0.51
1990	57	38,518.4	45,249.48	51,185.6	61,390.8	9,095.3550	23.04	195,536.40	99,342.25	4.19	8,948	18.75	0.58	0.51
1991	19	39,611.8	50,474.80	60,511.6	63,327.0	10,843.2700	27.70	224,231.60	100,341.00	1.44	7,410	19.00	0.55	0.46
1992	6	35,322.2	59,109.40	69,287.4	69,041.4	12,291.0100	32.20	264,967.00	98,865.96	(0.80)	9,352	21.07	0.52	0.39
1993	2	51,119.4	71,429.80	134,918.2	118,958.0	19,590.0000	58.00	333,612.80	99,893.70	0.35	7,630	29.99	0.76	0.51
1994	9	65,825.8	96,375.20	148,224.8	135,641.2	28,382.1900	56.10	400,679.20	99,441.35	2.63	11,474	36.24	0.71	0.50
1995	32	81,565.2	117,664.00	152,596.4	180,138.6	31,694.8600	51.40	465,272.00	106,509.90	4.41	19,951	28.80	0.72	0.56
1996	13	88,657.0	124,632.60	172,459.2	195,154.6	32,206.0200	57.10	528,739.60	110,977.70	4.15	18,813	33.79	0.70	0.54
1997	40	95,795.8	152,678.00	174,846.2	220,768.6	32,465.3500	58.80	623,235.20	112,805.90	2.09	19,474	30.25	0.63	0.51
1998	42	100,976.0	187,974.20	171,894.8	224,772.0	32,116.5000	60.40	694,028.60	113,394.70	1.61	19,113	29.49	0.57	0.47
1999	42	101,462.6	224,994.10	189,265.0	232,232.6	28,336.5000	70.30	743,478.60	113,519.80	1.29	18,640	22.38	0.57	0.45
2000	127	103,151.0	262,577.40	211,432.7	286,621.0	26,113.6800	76.20	799,245.00	115,662.20	(0.16)	19,359	22.34	0.62	0.49
2001	50	106,945.9	320,087.10	234,176.0	317,745.3	25,603.9500	78.60	878,730.70	116,555.70	1.13	21,415	19.67	0.63	0.48
2002	50	109,073.8	374,575.80	250,429.0	302,758.0	28,729.3200	78.70	962,686.00	114,865.80	1.07	19,782	18.45	0.57	0.43

DATA USED FOR ANALYSIS														
YEAR	FDI	GPI	WAGES	EGS	IGS	DTCP	KSh/\$	GDPcmp	GDPcomp	GDPgrowth	GFCI	LR	OPE	DGDP
1972	26	2,697.2	4,084.60	40,002.2	4,323.2	680.2513	16.48	14,545.80	46,914.33	6.40	662	8.50	0.57	0.48
1973	26	3,826.0	4,540.89	4,811.6	5,035.6	781.8118	17.81	16,876.40	48,600.27	4.00	708	9.00	0.58	0.53
1974	27	4,689.8	5,294.04	7,144.0	8,676.0	938.4514	20.67	20,443.40	52,280.25	3.10	774	9.50	0.77	0.65
1975	28	3,513.6	5,997.71	7,138.0	8,260.0	1,160.2420	7.41	24,549.80	51,096.17	2.90	828	10.00	0.63	0.48
1976	29	4,915.2	7,196.16	9,434.0	9,232.0	1,373.7150	8.37	29,781.20	52,374.98	3.61	970	10.00	0.63	0.48
1977	29	7,648.6	8,188.45	13,004.0	11,752.0	1,739.6700	8.26	38,059.80	57,347.49	9.12	1,176	10.00	0.65	0.51
1978	30	10,800.6	9,260.45	11,862.0	15,860.0	2,042.5530	7.69	42,064.60	62,987.43	8.83	1,412	10.00	0.66	0.63
1979	31	8,451.0	11,027.88	12,002.0	14,732.0	2,254.6400	7.47	46,603.40	63,606.09	3.79	1,874	10.00	0.57	0.50
1980	79	13,211.8	12,759.57	15,066.0	21,054.0	2,577.6220	7.42	53,909.80	67,415.59	5.59	2,572	10.58	0.67	0.64
1981	32	14,271.8	14,634.20	15,938.2	20,973.4	2,768.2240	9.13	62,016.80	69,209.06	3.77	2,966	12.42	0.60	0.57
1982	33	12,819.8	15,805.16	17,552.0	20,187.8	3,000.4110	11.01	70,308.00	70,308.00	1.51	2,534	14.50	0.54	0.47
1983	33	14,546.4	17,591.83	19,926.8	20,823.6	3,351.1170	13.39	79,119.60	71,229.41	1.31	2,040	15.83	0.52	0.45
1984	34	15,452.8	19,826.54	23,410.2	24,639.2	3,830.7390	14.54	89,278.80	72,128.56	1.79	3,062	14.42	0.54	0.45
1985	35	21,901.6	22,421.33	25,523.6	26,539.8	4,568.1930	16.39	100,770.40	76,426.59	4.30	3,848	14.00	0.52	0.48
1986	35	21,170.8	25,425.69	30,333.6	30,128.6	5,155.2450	16.21	117,483.40	81,042.13	7.14	4,398	14.00	0.51	0.44
1987	36	27,249.4	28,842.35	27,991.8	34,682.4	5,824.0820	16.48	131,169.20	86,098.61	5.94	4,602	14.00	0.48	0.47
1988	37	30,524.6	33,473.95	33,084.0	41,086.0	6,699.4620	17.81	151,194.20	91,449.14	6.20	7,252	15.00	0.49	0.47
1989	62	35,368.8	39,955.44	39,553.6	52,247.4	7,701.6780	20.67	171,588.80	95,724.66	4.69	6,996	17.25	0.54	0.51
1990	57	38,518.4	45,249.48	51,185.6	61,390.8	9,095.3550	23.04	195,536.40	99,342.25	4.19	8,948	18.75	0.58	0.51
1991	19	39,611.8	50,474.80	60,511.6	63,327.0	10,843.2700	27.70	224,231.60	100,341.00	1.44	7,410	19.00	0.55	0.46
1992	6	35,322.2	59,109.40	69,287.4	69,041.4	12,291.0100	32.20	264,967.00	98,865.96	(0.80)	9,352	21.07	0.52	0.39
1993	2	51,119.4	71,429.80	134,918.2	118,958.0	19,590.0000	58.00	333,612.80	99,893.70	0.35	7,630	29.99	0.76	0.51
1994	9	65,825.8	96,375.20	148,224.8	135,641.2	28,382.1900	56.10	400,679.20	99,441.35	2.63	11,474	36.24	0.71	0.50
1995	32	81,565.2	117,664.00	152,596.4	180,138.6	31,694.8600	51.40	465,272.00	106,509.90	4.41	19,951	28.80	0.72	0.56
1996	13	88,657.0	124,632.60	172,459.2	195,154.6	32,206.0200	57.10	528,739.60	110,977.70	4.15	18,813	33.79	0.70	0.54
1997	40	95,795.8	152,678.00	174,846.2	220,768.6	32,465.3500	58.80	623,235.20	112,805.90	2.09	19,474	30.25	0.63	0.51
1998	42	100,976.0	187,974.20	171,894.8	224,772.0	32,116.5000	60.40	694,028.60	113,394.70	1.61	19,113	29.49	0.57	0.47
1999	42	101,462.6	224,994.10	189,265.0	232,232.6	28,336.5000	70.30	743,478.60	113,519.80	1.29	18,640	22.38	0.57	0.45
2000	127	103,151.0	262,577.40	211,432.7	286,621.0	26,113.6800	76.20	799,245.00	115,662.20	(0.16)	19,359	22.34	0.62	0.49
2001	50	106,945.9	320,087.10	234,176.0	317,745.3	25,603.9500	78.60	878,730.70	116,555.70	1.13	21,415	19.67	0.63	0.48
2002	50	109,073.8	374,575.80	250,429.0	302,758.0	28,729.3200	78.70	962,686.00	114,865.80	1.07	19,782	18.45	0.57	0.43