THE RELATIONSHIP BETWEEN EXCHANGE RATES AND FOREIGN DIRECT INVESTMENT IN THE HORTICULTURE INDUSTRY IN KENYA

BY

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A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF BUSINESS ADMINISTRATION (MBA) DEGREE, UNIVERSITY OF NAIROBI

OCTOBER, 2012

DECLARATION

STUDENT'S DECLARATION

I declare that this project is my original work and has never been submitted for a degree in any other university or college for examination/academic purposes.

Signature: …………………………………..Date:…………………………………

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D61/61778/2010

SUPERVISOR'S DECLARATION

This research project has been submitted for examination with my approval as the University Supervisor.

Signature……………………………….….Date…………………………………..

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DEDICATION

This work is dedicated to my mother Mrs. Alice Ogada and my husband Eng. Conrad Otieno

for their great support and prayers and my yet to be born child.

ACKNOWLEDGEMENT

I would like to extend my appreciation and gratitude to all those that contributed tremendous inputs towards completion of this research project

Firstly and foremost, I am grateful to my University Supervisor Dr. Josiah Aduda for his tireless assistance, invaluable support, high quality and detailed work, experience and initiatives which guided me in enriching and completing my research project.

Secondly, I owe a debt of gratitude to my family who sacrificed time so that I could get this far. A special thanks to my loving husband who especially was supportive in listening to my ideas and helping me work out logistical details throughout this long process; to my late father, Mr Joseph Ogada for instilling in me the spirit of hard work; to my mother for her undying love and belief in girl child's education; my siblings for always being there for me and my cousin Lucy, for endeavoring to put a smile on my face amidst all storms.

Finally, thanks to the almighty God for giving me sufficient grace and wisdom.

ABSTRACT

Several studies have established that exchange rate movement impact on FDI. When a currency depreciates, meaning that its value declines relative to the value of another currency, this exchange rate movement has two potential implications for FDI. First, it reduces that country's wages and production costs relative to those of its foreign counterparts. All else equal, the country experiencing real currency depreciation has enhanced locational advantage or attractiveness as a location for receiving productive capacity investments. By this relative wage channel, the exchange rate depreciation improves the overall rate of return to foreigners contemplating an overseas investment project in this country and vice versa for a currency appreciation (Goldberg, 1993).

The type of research design was the causal study that relies on control factors. The study employed a survey of horticulture industries within the period of study. The population of the study consisted of 30 horticulture companies that traded in the period 2000 to 2010 in Kenya. The study used secondary sources of data from the UNCTATED, HCDA, KFC and Investment Promotion Council for the respective horticulture companies over the period.
Data collected was used to calculate and analyse export of goods and services, Import of goods and services, exchange rates, Goss domestic product, interest rates, openness of the economy and wages for the period under study.

The study established that there is a relationship between foreign direct investment and export of goods and services, exchange rate, gross domestic product, interest rates and openness of the economy. This study recommends that government to use various economic stimulus programs in order to boost the country's gross domestic product as this will positively influence foreign direct investment in the horticultural sector, the government should also provide a conducive environment that will encourage FDI into the horticulture industry, and this may include boosting infrastructure and beefing up security in the country. The study also recommends the government through various stakeholders in the agricultural sector to have standardized wage rates, as it is, the study found that increase in wages in the sector negatively affected the foreign direct investment into the sector, this will help in increasing foreign direct investment in the horticultural sector.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF ABBREVIATIONS

ADF	Augmented Dickey Fuller test
AGOA	African Growth and Opportunity Act
BAT	British American Tobacco
CDC	Certified Development Company
DCK	Dansk Chrysanthemum and Kultuur
EAC	East African Community
EPZ	Export Processing Zone
FDI	Foreign Direct Investment
GARCH	Generalized Auto-Regressive Conditional Heteroskedacity
GDP	Gross Domestic Product
HCDA	Horticulture Crops Development Agency
IMF	International Monetary Fund
IPC	Investment Promotion Centre
KFC	Kenya Flower Council
KLM	Koninklijke Luchtvaart Maatschappij (Royal Dutch Airlines)
OECD	Organization for Economic Cooperation and Development
PPP	Purchasing Power Parity
REER	Real Effective Exchange Rate
R&D	Research and Development
SDR	Special Drawing Rights
SPSS	Statistical Package for Social Sciences
TNC	Transnational Corporation
UK	United Kingdom
UNCTAD	United Nations Conference on Trade and Development
US	United States
WTO	World Trade Organization

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

1.1.1 Foreign Direct Investment

Foreign direct investment plays a significant role in the growth and development of the Kenyan economy, through technological spillovers, job creation, improved managerial skill, productivity international production networks and access to external market. The role of FDI as a source of capital cannot be undermined especially in the backdrop of the decline in official development assistance in the 1990's. FDI in Kenya, has over the past two decades continued to deteriorate as a result of country specific factors, which include; poor economic policies, inconsistent efforts at structural reforms, corruption, bad governance, poor infrastructure, insecurity, corruption, exchange rate volatility and political instability, and external factors including the oil crisis of 1979, recent global financial crisis and the current debt crisis in the euro zone.

Foreign direct investment reflects the objective of obtaining a lasting interest by a resident entity in one economy (''direct investor'') in an entity resident in an economy other than that of the investor (''direct investment enterprise''). The lasting interest implies the existence of a long term relationship between the direct investor and the enterprise and a significant degree of influence on the management of the enterprise. Direct investment involves both the initial transaction between the two entities and all subsequent capital transactions between them and among affiliated enterprises, both incorporated and unincorporated (OECD).

According to Adegbite and Ayadi (2010) FDI helps fill the domestic revenue generation gap in a developing economy, given that most developing countries' governments do not seem to be able to generate sufficient revenue to meet their expenditure needs. Other benefits are in the form of externalities and the adoption of foreign technology.

Externalities here can be in the form of licencing, imitation, employee training and the introduction of new processes by the foreign firms (Alfaro, Chanda, Kalemli, Ozean and Sayek 2006).

Foreign direct investment consists of external resources including technology, managerial and marketing expertise and capital. All these generate a considerable impact on host nation's productive capabilities. The success of government policies in stimulating the productive base of the economy depend largely on her ability to control adequate amount of FDI comprising of managerial, capital and technological resources to boast the existing production capacity (Omankhalen, 2011).

While FDI has been in existence for many centuries, its economic, social and political impact has been widely felt in the recent years, mainly because of its widespread advantages, this has elicited much interest in trying to attract and strengthen FDI flows into countries attracting many researchers and policy makers alike. The interest stems from the theoretical linkage between FDI and exchange rate performance in any given economy. Consequently, several studies (Mabruki, 2006; Njuguna, 2009; Njoroge *et al*., 2011) have been conducted to determine the factors that influence FDI. Mabruki (2006) finds out that FDI has a long-term relationship with exchange rates.

1.1.2 Exchange Rates

It is evident therefore that various factors determine FDI inflows in a country, exchange rate being one of them. Exchange rate, which is the rate at which one currency can be converted (i.e. bought or sold) into another currency (Anderton, 2006) is one of the most important prices in an open economy, as it influences the flow of goods, services and capital in a country, and exerts strong pressure on the balance of payment, inflation and other macroeconomic variables (Yagci, 2001). Demand for foreign currency in a country comes from importers of goods and services, purchasers of foreign securities, government agencies purchasing goods and services abroad and travelers (Nyamwange, 2009).

Introduction of the structural adjustment program across Africa aimed at enhancing efficiency in the economies, this led to the liberalization of exchange rate, before this liberalization, foreign exchange markets were characterized by fixed exchange rates, high inflation, high interest rates and deteriorating terms of trade. As a result most countries experienced exchange rate volatility which impacted negatively on their balance of payment and ability to attract foreign investors. Liberalization of exchange rates markets was therefore a necessary condition and has been an integral part of the structural adjustment program.

The liberalization process of foreign exchange market in many developing countries, including those in Africa, shifted gradually from a fixed to a flexible exchange rate regime. Although ideally, liberalization should be gradual and progressive, in Kenya it was done hastily. While it was found necessary, better results could have been realized in an environment where the government policy was credible and had no risk of reversal. Kenya has undergone a series of changes in its exchange rate regimes, from 1981, the shilling was pegged on the SDR, in 1992, the central bank of Kenya depreciated the shilling by 22% against the dollar and thereafter moving to a dual exchange rate regime characterized by both official exchange rate and a 'market rate' based on foreign exchange bearer certificates, the country has experimented virtually all types of exchange rate regimes. From fixed to crawling peg to flexible or floating rates. The exchange rates are now a "managed floating" system, owing to IMF loan conditions (Nyamwange, 2009).

1.1.3 Horticulture Industry in Kenya

Kenya's horticulture industry has been growing over the years; this has partly been due to the good equatorial climate which allows year round production, fertile soils, competitive labor force and technical background (UNCTAD, 2007). Ngige (2009) further notes that, the industry has benefited immensely from the knowledge of Dutch investors who have substantially invested in Kenya and through Kenya's association with European investors, this has helped improve our marketing and enabled us leverage on the well-established networks in Europe. Investors from the UK, Israel and India have brought in their diverse

3

knowledge to give Kenya global competitiveness. The growth in this industry has been propelled by the attention that has focused on productivity and efficient use of natural resources, while observing environment safety measures. According to Kenya Flower Council (KFC) export of fresh horticulture produce were estimated at 163,000 tons in 2006 and 192,000 in 2007. This clearly indicates that if FDI in the Kenyan horticulture industry is well harnessed, it could play a key role in the country's economic development (Njoroge *et al.,2011)*.According to KFC, the country has a great potential for horticultural production which is yet to be exploited, thus increasing the need for further investment into the industry.

1.1.4 FDI Trends and Performance in Kenya

Kenya had for a long time been the economic giant in the East African region with the advantage of having a more diversified economy, in the 1960's and 1970's it was the destination of choice for investors seeking to establish presence in Eastern and Southern Africa, however over the past two decades the country's performance has been dismal. The 1980s and 1990s were characterized by a series of muted, incomplete and non-sustained attempts at macroeconomic and structural reforms. These never succeeded in putting Kenya on a sustained high-growth path, however, and only provided temporary relief based on the evolution of the world economic environment. The Government's attempts to control the fiscal deficit, although relatively successful, failed to address the issue of current expenditure and succeeded only through a drastic reduction in capital spending. This has been accompanied by the deterioration of the once reasonably efficient and well-developed public infrastructure and increasing problems of governance and insecurity, which further discouraged private investment. Despite some resurgence in growth in 1986-1989 and 1995-1996, real GDP per capita ended 5 per cent lower in 2003 than in 1980 (UNCTAD, 2005)

According to UNCTAD, FDI grew steadily through the 1970s as Kenya was a prime choice for foreign investors seeking to establish a presence in Eastern and Southern Africa. The relatively high level of development, good infrastructure, market size, growth

and openness to FDI at a time when other countries in the region had relatively closed regimes all contributed to TNCs choosing Kenya as their regional hub. FDI started at a low of around $10 million a year in the early 1970s before peaking at $80 million in 1979-1980, thereafter and owing to the country specific limitations highlighted above, a long period of low FDI started in the early 1980's and continues to date. Inflows of FDI in the period 1981-1999 averaged only $22 million a year. Although the sale of mobile phone licenses to Kenyan-foreign joint ventures pushed FDI to over $100 million in 2000, inflows fell again to around their average of the 1980s and 1990s, before rising again in 2003 on the back of textile investments in export processing zones (EPZs).

Although Kenya was the lead destination of FDI to the East African Community (EAC) in the 1970s and 1980s, the relative level of inflows was never high by developing countries' standards, considering the stock of FDI, which was only 7.5 per cent of GDP in 2003, compared with 25.3 per cent for Africa as a whole and 31.5 per cent for developing countries. Kenya's regional leadership in attracting FDI also disappeared as soon as the United Republic of Tanzania and Uganda started reforming their economies and opening up to foreign investors in the early 1990s, at a time when Kenya itself was suffering from economic stagnation. The end of apartheid in South Africa in 1994 also increased competition in the attraction of large TNCs seeking a single production or headquarters centre in English-speaking Africa. FDI inflows in 1996-2003 averaged $39 million a year, while inflows to the United Republic of Tanzania and Uganda surged to $280 million and $220 million, respectively, from negligible levels in the 1980s. In relative terms, Kenya fares even worse, as its economy was about 30 per cent larger than the United Republic of Tanzania's and twice as big as Uganda's in 2002. While developing countries as a whole attracted an annual average of $41 of FDI per capita in 1996-2003, Kenya only drew average inflows of $1.3 per capita. This ranked Kenya as 129th (out of 140 countries) on UNCTAD's FDI performance index in 2001-03. It has also never ranked better than 111th at any time since 1990 (UNCTAD, 2005).

1.1.5 FDI and Exchange Rates

Several studies have established that exchange rate movement impact on FDI. When a currency depreciates, meaning that its value declines relative to the value of another currency, this exchange rate movement has two potential implications for FDI. First, it reduces that country's wages and production costs relative to those of its foreign counterparts. All else equal, the country experiencing real currency depreciation has enhanced locational advantage or attractiveness as a location for receiving productive capacity investments. By this relative wage channel, the exchange rate depreciation improves the overall rate of return to foreigners contemplating an overseas investment project in this country and vice versa for a currency appreciation (Goldberg, 1993).

1.2 Statement of the Problem

FDI has long been recognized as an important component for economic growth and development, it has led to the revolution of several economies through technological advancements, job creation and increasing productive capacity .Given Kenya's persistent budget deficit , the country's foreign investment policy should move towards attracting and encouraging more inflow of foreign capital. The need for foreign direct investment (FDI) is further aggreviated by the underdevelopment of most parts of the country, and the fact that most of this areas have a great potential for horticultural production which is yet to be explored and tapped into, with the promalgamation of the new constitution and the advent of devolved government, it is expected that this regions will be opened up to more trade and that a conducive environment necessary to attract foreign investors will be created. Several factors affect movements in FDI, including; location, infrastructure, government policies on entry into the market, political stability, exchange rates e.t.c. Each of these factors can be assessed individually to determine their impact on the economy, ceteris paribus. This paper chooses to assess the impact of exchange rates on FDI in the horticulture industry.

Most international studies dismiss the possibility of a relationship between foreign acquisitions and exchange rates. The typicall counterargument notes that in a world with mobile capital (which, increasingly is the world we live in) risk adjusted expected returns on all international assets will be equalized (Froot and Stein, 1991), Other studies however indicate that real exchange rate volatility has a direct and deleterious effect on FDI inflows as it generates uncertainity leading to increase in variance of expected profits and fall in the net present values of the investment. Ogunleye (2008) finds out that exchange rate volatility retards FDI inflows in Nigeria and establishes endogeneity of exchange rate in the relationship, Cushman (1988) found a positive relationship between US FDI and exchange rate uncertainity. Bénassy-Quéré *et al (2001)* finds a negative impact between exchange rate volatility and OECD outward FDI.

In Kenya, most studies have focused on the causal relationship between stocks and financial variables (Nyamute, 1998, Sifunjo, 1999). Barasa (2009) studies the relationship between inflation and exchange rates, while Nyamwange (2009) investigates the relationship between real exchange rates and international trade. There have been a few other attempts at studying FDI without bias on any causal relationship, Mabruki (2006), studied locational determinants of FDI in Kenya, she found out that FDI has a long term relationship with exchange rate, direct taxes, GDP, fixed capital formation and openness of the economy. Njuguna (2009) notes in his literature review that a negative relationship exists between FDI flows into an economy and the rate of exchange. Dinga (2009) establishes that FDI inflows have a significant impact on economic growth.

The main purpose of this study was therefore to deviate from studying the determinants of FDI in the country, and specifically assess the causal relationship between exchange rate and FDI, and determine the extent and direction of such a relationship.

1.3 Objective of the Study

The objective of this study was to determine the relationship between exchange rates and FDI in the horticulture industry in Kenya

1.4 Value of the Study

The findings are hoped to be of benefit to:

Policy makers in developing investment strategy policies and developing the requisite institutional framework necessary to market Kenya as an ideal foreign investment destination, it will also help them in coming up with monetary policies that ensure exchange rate stability thus protecting the profit margins and net present values of current and potential investors alike.

The government also stands to benefit from this study as it would be able to understand the factors underlying the dismal performance, in the FDI sector specifically exchange rate volatility. This indeed would help it come up with marketing strategies especially under the brand Kenya initiative to actively market the country as the FDI destination of choice while addressing the factors that would curtail this noble initiative i.e. exchange rate volatility. It would also try to contain the political situation in the country which has for a long time impacted negatively on the exchange rates and by extension FDI inflows into the country.

The results of this study would also be invaluable to researchers and scholars, as it would form a basis for further research. The students and academicians would use this study as a basis for discussions on relationship between exchange rates and FDI in the country and Africa as a region. The study would be a source of reference material for future researchers on other related topics; it would also help other academicians who undertake the same topic in their studies.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter discusses other studies that have been done in the area of study. The specific areas covered here include theoretical literature review and empirical literature review and review of general literature on exchange rates and FDI.

2.2 Review of Theories

2.2.1 FDI Theories

2.2.1.1 Production Cycle Theory of Vernon

This theory was developed by Vernon in 1966 to explain certain types of FDI made by US companies in Western Europe after the Second World War in the manufacturing industry. He believed that there are four stages of the production cycle; innovation, growth, maturity and decline, this concept is today used in marketing in the product life cycle management. In the first stage, the US companies created new innovative products (because they possessed new technologies) for domestic consumption and if any surplus arose it would be exported to foreign markets, thus the US companies managed to invest in certain part of western Europe, this in itself is FDI.

2.2.1.2 The Hymer-Kindleberger Internalisation Theory

This theory suggest that because foreign firms experience certain disadvantages over local firms (e.g. language barriers, information on the market) they need to possess other specific advantages in order to compete effectively in foreign production. Furthermore, foreign direct investment is not about the transfer of capital as this could be supplied to local firms using other forms of international financing. It is about the international transfer of proprietary and intangible assets - technology, business techniques, and skilled

personnel (Hymer, 1960). Hymer further asserts that the existence of FDI is exclusively due to imperfections of the international markets for these assets; hence the firm supersedes the market failures through direct investment.

Hymer (1968) reckons that FDI is the most efficient internalization strategy when compared to licensing especially when the advantage is based on technology or an intangible asset as FDI would maximise profits. He presented three reasons to back his assertion; the firm's advantage may be very difficult to price; FDI eliminates the costs of defining and managing a licensing agreement; it is simply not possible to sell oligopolistic power. In his doctoral dissertation of 1976, Hymer identifies two major determinants of FDI as; the removal of competition and firm specific advantages.

Hymer-Kindleberger distinguished portfolio foreign investment and direct foreign investment, in their view, the main difference between the two, was that FDI had the distinctive feature of giving an investor direct control, thus making it safer to move funds as compared to portfolio investment. By their theory, FDI tends to be concentrated in a particular industry in various countries e.g. mining. They view FDI as being a costly and risky venture and as such must be compensated by good returns; these costs might be in the form of communication barriers, access to information, hostility by the host country and exchange rate risks. Thus in order for firms to consider investing outside their countries of origin, there must exist market imperfections which induce such moves.

Hymer-Kindleberger, cite various motivational factors that would induce FDI, they include, cost reduction and stifling competition in anticipation of larger profits, imperfect competition that would make firms make use of their core competencies and lastly a drive to diversify operations by multinationals, this is because the risks of losses in one subsidiary are hedged by potential gains in other subsidiary

2.2.1.3 The Eclectic Paradigm of Dunning

This theory was developed by professor Dunning and view FDI as a being a mix of 3 theories (O-L-I). "O" from ownership advantages, this refers to intangible assets which are exclusively possessed by an entity and may be transferred to transnational companies at low costs thus maximising revenues or minimising costs. Despite this reduced costs, the transnational companies operations are in different countries and there may be need for additional costs, thus to venture into a foreign market, a company should possess certain characteristics that gives it an advantage over and above the operational costs, this becomes the property competences or the specific benefits of the company. According to Dunning, the firm has a monopoly over its own specific advantages and using them abroad leads to higher marginal profitability or lower marginal costs than competitors.

There exist three basic types of ownership advantages that a firm can possess, these are: monopolistic advantages in the form of privileged access to output and input markets through ownership of scarce natural resources, patent rights, and the like; technology, knowledge broadly defined so as to contain all forms of innovation activities; economies of large size (advantages of common governance) such as economies of learning, economies of scale and scope, broader access to financial capital and advantages from international diversification of assets and risks.

"L" from Location. After a firm acquires the ownership rights, it would be advantageous for it to use them rather than renting them out, therefore locational advantages of different countries would be key in determining which country will be the host country. These country specific advantages can be separated into 3 classes; E - Economic advantages consists of the quantities and qualities of the factors of production, transport and telecommunications costs, scope and size of the market; P - Political Advantages include the common and specific government policies that influence inward Foreign Direct Investment flows, intra-firm trade and international production; S - Social, cultural advantages include psychic distance between the home and host country, language, cultural diversities, general attitude towards foreigners and the overall position towards free enterprise.

"I" from Internalization. This characteristic gives the firm the framework to assess different ways in which it can exploit its powers from the sale of goods and services to the various agreements it signs. The firm would thus choose internalization where the market does not exist or functions poorly so that transaction expenses of the external route are high

The 3 OLI parameters vary from company to company and would largely depend on the economic, political and social characteristics of the host country. Therefore the objectives and strategies of the firms, the magnitude and pattern of production will depend on the challenges and opportunities offered by different types of countries (Denisia, 2010)

2.2.2 Exchange Rate Theory

2.2.2.1 Purchasing power parity theory (PPP)

This theory states that the nominal exchange rate between two currencies should be equal to the ratio of aggregate price levels between the two countries, so that a unit of currency of one country will have the same purchasing power in a foreign country. The general idea behind the theory is that a unit of currency should be able to buy the same basket of goods in one country as the equivalent amount of foreign currency, at the going exchange rate, can buy in a foreign country, so that there is parity in the purchasing power of the unit of currency across the two economies (Taylor et al, 2004). This theory is used to determine the relative value of currencies by estimating the adjustment needed on the exchange rates between countries in order for the exchange to be equivalent to or in par with each currency's purchasing power (Wikipedia). The theory borrows heavily from the law of one price and would hold when there is international goods arbitrage.

PPP could be absolute or relative. Absolute purchasing power parity holds when the purchasing power of a unit of currency is exactly equal in the domestic economy and in a foreign economy, once it is converted into foreign currency at the market exchange rate. Relative PPP on the other hand holds that the percentage change in the exchange rate over

a given period just offsets the difference in inflation rates in the countries concerned over the same period (Taylor et al, 2004).

PPP theory however has inherent limitations due to the assumptions it is built around, it assumes that transportation costs are negligible, abstraction of taxes and tariffs, consumption baskets are identical, no arbitrage profits, that the costs of goods remain the same across borders, that all traders have the same amount of information regarding prices and exchange rates across all the countries and that firms would price their goods the same way across all the markets. Perfect markets seldom exist in real world and thus it would be hard for these assumptions to hold, however significant this assumptions are, they are still not compelling enough to discard the theory.

2.3 Review of Empirical Studies

Ogunleye (2008), used data spanning between 1970 and 2005 to establish the relationship between exchange rate volatility and FDI in Nigeria and South Africa, during this period, both countries were operating a flexible exchange rate system. To measure FDI he used annual data from all sectors of the host economy. He used the real exchange rate of the domestic currency vis a vis the US dollar. He then used the GARCH methodology to generate the real exchange rate volatility; and the Hausman's test for endogeneity to determine the direction of the relationship. Ordinary least squares method was used to estimate the results of the study. It was found that in Nigeria there is a statistically significant relationship between the variables with exchange rate volatility retarding FDI inflows and FDI inflows increasing exchange rate volatility. However, this relationship appears weak for South Africa as significant impact of exchange rate volatility on FDI is established at the first lag while the impact of FDI inflows on exchange rate volatility is not significant. The possible reason for this is the sound capital flows management policy of the South African reserve Bank.

Rahman *et al.* (1998) used annual data from 1973 to 1993, the ADF unit root tests was used to determine stationarity of variables, they were found to be non stationary at 5% level of significance for both countries. They further used the Granger's causality test to

determine any causal relationship between foreign direct investment and exchange rate. They found out that; inflows of nominal foreign direct investment will have no significant effects on nominal exchange rates in Sri Lanka, whereas in Pakistan, nominal exchange rate causes foreign direct investment.

Becker *et al.* (2003) examine the foreign direct investment in industrial R&D and exchange rate uncertainty in the UK using a panel of 11 manufacturing industries, and data spanning the period between 1993 and 2000. While FDI in R&D is not found to be significantly sensitive to changes in the volatility of the sterling dollar exchange rate, the variance of the euro dollar exchange does appear to play a significant role in attracting foreign R&D into the UK. The evidence suggests that an increase in the volatility of this exchange rate tends to relocate R&D investment from the Euro Area into the UK, thus the conclusion that risk diversification of multinational firms appears to be an important determinant of foreign direct investment in R&D in the UK. An appreciation in the UK real effective exchange rate is found to depress the volume of foreign R&D investment

Udomkerdmongkol *et al.* (2008) used a sample of 16 emerging countries using panel data for the period 1990-2002 collected from various official sources to assess the impact of exchange rates on US FDI in emerging markets. They used three variables; the bilateral exchange rate to the dollar to capture the value of the local currency (where a higher value implied a cheaper currency that attracts FDI), changes in real effective exchange rates index (REER) to reflect currency devaluation or appreciation and the transitory component of the bilateral exchange rate to determine volatility of the local currency. Their main aim was to test 3 hypotheses; an expected devaluation of local currency lowers current inward FDI, FDI rises when devaluation occurs and exchange rate volatility discourages FDI. They concluded that there is evidence of positive (negative) relationship of local currency devaluation (appreciation) and FDI inflows, there is evidence of the negative (positive) relationship of expectations of local currency depreciation (appreciation) and FDI inflows, there is evidence of the negative relationship of volatile exchange rates and FDI inflows

Ihrig *et al.* (1998) use quarterly time series data between 1977 and 1994, they considered both aggregate and panel data consisting of Canada, Japan and United Kingdom which are the three largest sources of FDI into the US. They use band pass filter to isolate irregular components of the series, this demonstrates that a temporally robust relationship between the real exchange rate and FDI does exist at business cycle frequencies. By extending their business cycle analysis to include a more dynamic model of FDI, they find out that the real exchange rate, net worth, and to a lesser extent, relative labor costs significantly affect FDI at time horizons of up to one year. They thus conclude that; a consistent relationship does indeed exist between FDI and real exchange rates at business cycle frequencies though they do not show the direction of this relationship.

Froot *et al.* (1991) assessed the connection between, exchange rates and foreign direct investment that arises when globally integrated capital markets are subject to informational imperfections. These imperfections cause external financing to be more expensive than internal financing, so that changes in wealth translate into changes in the demand for direct investment. They presented a simple model in which relative wealth and effectively exchange rate has a systematic effect on FDI. They found out that the correlation of FDI with exchange rate is quite different from that observed from other forms of capital inflows, its effects appear to be pervasive. They then drew the conclusion that; a depreciated currency can give foreigners an edge in buying control of productive corporate assets.

Russ (2005) argue that when the exchange rate and projected sales in the host country are jointly determined by underlying macroeconomic variables, standard regressions of FDI flows on both exchange rate levels and volatility are subject to bias. The results hinge on the interaction of macroeconomic uncertainty, a sunk cost, and heterogeneous productivity across firms. She indicates that a multinational firm's response to increases in exchange rate volatility will differ depending on whether the volatility arises from shocks in the firm's native or host country.

2.4 Types of FDI in Kenya

The form of entry of FDI has been primarily through the establishment of greenfield operations. The Government's privatization drive in the 1990s led to the sale of 207 enterprises, although with the exception of Kenya Airways these were small and medium-size companies, and around 97 per cent of buyers were Kenyans. The largest sale to date has been the acquisition of 26 per cent of Kenya Airways by KLM in 1996 (UNCTAD,2005).

The Government planned a second wave of privatizations, with 33 companies earmarked for full or partial sale. The new list include a number of big-ticket items, including the National Bank of Kenya, Kenya Commercial Bank, Kenya Power and Lighting Company, Ken-Gen, Kenya Petroleum Refineries, Kenya Ports Authority, Telkom Kenya and Kenya Railways Corporation. The methods of sale range from concessioning to sale on the Nairobi Stock Exchange or securing a strategic partnership with a major player in the relevant sector (UNCTAD, 2005).

2.5 FDI distribution by industry and Sector

The most notable recent trends in the sectoral composition of FDI are investments in the horticulture, floriculture and garments areas, in addition to continued investment in tourism. Interest in horticulture and floriculture has been in response to favourable local conditions linked to climate and transport infrastructure. Garment investment has been in response to the United States granting preferential access to its market under the African Growth and Opportunity Act (AGOA). There is a strong possibility, however, that Kenya will not continue to attract such investments in the future following the full elimination of quotas in 2005 with the integration of textile trade under normal WTO rules (UNCTAD,2005).

Kenya does not keep comprehensive data on the value of actual foreign direct investment by sector and industry. The sectoral breakdown of the 820 projects with a foreign participation that the Investment Promotion Centre (IPC) registered between 1997 and

2004 is available. The list is not indicative of all foreign investment in the country as investors are not required to liaise with the IPC and not all projects are implemented. Foreign participation in the economy has been diversified, with "other manufacturing" and "other sectors" accounting for half of the foreign investment recorded by the IPC. Other manufacturing consists of a wide variety of basic consumer and industrial goods. Other sectors include services such as transportation and construction, assembly and trading. The largest sectors of note are investments in power generation, tourism, agriculture and agroprocessing (UNCTAD,2005).

Foreign investors play a major role in floriculture and horticulture; with close to 90 per cent of flower production controlled by foreign affiliates. Foreign investors have also been in good part responsible for the success of the sector. A Dutch company, Dansk Chrysanthemum and Kultuur (DCK), the then largest world producer of chrysanthemum cuttings, was the first to set up a large flower firm in 1969, with the benefit of government incentives and a Dutch government grant. Many of its employees subsequently went on to play a role in other flower and vegetable companies. Brooke Bond of the United Kingdom also invested in a former DCK farm that became a major flower and vegetable firm. It was taken over by Homegrown in 2002 and renamed Kingfisher Farm. In the 1980s, Dutch investors formed the Oserian Development Company, which is now a leading horticulture player with approximately over 4,500 workers (UNCTAD, 2005).

2.6 FDI countries of origin

More than 200 TNCs operate in Kenya. The main traditional sources of investment are the United Kingdom, Germany and the United States. The British are the largest group, with the most long-standing investors, including Barclays, Standard Chartered, BAT, and CDC Capital Partners. However, they are only estimated at around $285 million, primarily in commerce, light manufacturing and the tourism industry.There have been two large recent British investments, Vodafone and De La Rue. US investors are General Motors, Eveready Batteries, Colgate Palmolive, Sara Lee, and Wrigley (UNCTAD,2005).

South Africa is a growing source of investment in diverse sectors. Major investors are mainly in services –Stanbic in banking, Shoprite and Metro Cash and Carry in retail,

Protea Hotels, Nandos and Steers in restaurants, and Engen in petroleum products. Participation from Far Eastern countries, including China and Japan, though small in total, is rising. Chinese companies are active in construction, tourism and some manufacturing assembly. Investment in EPZs has been dominated by foreign investors. They account for the majority of operating enterprises with 71 per cent of the total in 2003, while joint ventures between Kenyans and foreigners accounted for another 16 per cent. FDI in the EPZs is primarily from Asian countries, although the United Kingdom has a particularly large representation due to the De La Rue security printing operation. Most of the Asian investors are active in the garments sector and have established operations in Kenya in order to benefit from fiscal incentives, but mostly to take advantage of the quota-hopping opportunity to access the US market (UNCTAD, 2005).

Though the amount of FDI in the horticulture industry is not substantial compared to other sectors like light manufacturing, it is believed to be the force behind the success of the horticulture industry in the recent years. FDI in this sector stems from major global competing flower producers such as Netherlands, Israel, India and the UK.

2.7 Summary

This chapter has surveyed both theoretical and emperical literature which shall form the basis of the model developed in the next chapter. Existing literature alludes to the fact that there exists a relationship between exchange rates and FDI. While a number of factors have been identified as playing a key role in FDI, exchange rate has emerged as being a key determinant. Some studies have shown endogeneity, while others have indicated exogeneity of exchange rates on FDI, others did find a bi-directional relationship whereas others could not determine the direction all together. It is therefore clear, that there needs to be a study of the relationship between exchange rate and FDI inflows into the horticulture industry in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter is a blueprint of the methodology that was used by the researcher to find answers to the research questions. In this chapter the research methodology is presented in the following order, research design, target population, data collection methods, and how data was analyzed to produce the required information necessary for the study.

3.2 Research Design

For the purposes of this study, the researcher employed descriptive and causal research design. A descriptive study is concerned with determining the frequency with which something occurs or the relationship between variables (Bryman and Bell, 2003). Thus, this approach was appropriate for this study, since the researcher intended to collect detailed information regarding the relationship between exchange rates and FDI in order to determine the extent and direction of the relation if any, and make hypothetical constructs.

3.3 Target Population

The population of this the study is consisted of 30 horticulture industries for period between 2000 and 2010. This population was chosen since it's a good representation of the variables under study and it was expected that inference could be drawn upon the data collected from this population.

3.4 Sample

Currently, there are 1390 registered horticulture industries as per the statistics at the HCDA. Out of the 1390 companies, only sample of 30 horticulture industries was selected for this study. The study used simple random sampling to select the sample. According to Cooper and Schindler (2003), random sampling frequently minimizes the sampling error in the population. This in turn increases the precision of any estimation methods used.

3.5 Data Collection

The study used secondary sources of data from different organization such as UNCTCTAD, HCDA, KFC and IPC for various horticulture industries in Kenya for the period between 2000 and 2010.The data from horticulture industries was used to calculate Export of goods and Services, import of goods and services, Taxes, Exchange rates, Interest rates, Openness of economy and Wages for the period under study.

3.6 Data Analysis

The quantitative data collected was analyzed by the use of descriptive statistics using SPSS and presented through means, standard deviations correlation and regression analysis. The information was displayed using tables. The data was analyzed in line with the study objectives and assumptions through use of statistical package for social sciences (SPSS). Mugenda and Mugenda (1999), explains that SPSS is a comprehensive, integrated collection of computer programme for managing, analyzing and displaying data.

To establish the relationship between exchange rates and foreign direct investment in the horticulture industry in Kenya. Macro-economic determinants used to analyze the FDI of the 30 horticulture sector in the country under study. In this study,8 macro-economic determinants were used: Export of goods and Services, import of goods and services, Taxes, Exchange rates, Interest rates, Openness of economy and Wages This variables are also in line with other studies that have been conducted on FDI inflows to developing countries such as Anyanwu (1998), Malefane (2004), Erdal et al (2002) and Mabruki (2006) just to mention but a few. The model to be tested was as follows, with a specific interest on exchange rate fluctuation effects:-

$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8$

Where;

   Y = Foreign Direct Investment inflows into the horticulture industry

   X_1 = Export of goods and Services

X_2 = Import of goods and services

X_3 = Taxes

X_4 = Exchange rate i.e. Kenya Shillings per dollar

X_5 = Gross domestic product

X_6 = Interest rates

X_7 = Openness of the economy

X_8 = Wages

a = Constant representing the level of FDI that is independent of the study variables

Openness of the economy in the model was measured by the ratio of trade (imports plus exports) to GDP, interest rates were measured by the cost of capital to the investors in the horticulture industry, this effectively is the average lending rate by commercial banks over the study period, wages on the other hand were measured by the average industry real wage cost over the study period. Granger's causality test was used to draw a conclusion as to whether movement in exchange rate has an effect on FDI.

DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter presents the research findings on the relationship between foreign exchange rates and Foreign Direct Investment inflow in the horticulture industry in Kenya. The study was conducted on 30 firms, where secondary data spanning the period between 2000 and 2010 was used; regression analysis was used to analyze the data.

Granger causality Wald tests

Equation	Excluded	chi2	df	Prob > chi2
FDI	Exchange rate	14.108	35	0.007
FDI	FDI Level	6.0917	4	0.192
Exchange rate	All	19.279	39	0.013
FDI	FDI level	5.9199	35	0.205
Exchange rate	FDI level	5.4121	4	0.248
Exchange rate	All	10.121	39	0.257

Granger causality test is a statistical test of causality in the sense of determining whether lagged observations of another variable have incremental forecasting power when added to a univariate autoregressive representation of a variable. The study thus concludes that FDI inflow does not influence exchange rate, whereas exchange rate was found to influence FDI inflow. The test itself is just an F-test (or, as above, a chi-squared test) of the joint significance of the other variable(s) in a regression that includes lags of the dependent variable

4.2 Regression Analysis

Year 2000
Table 4.1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.886[a]	.785	.752	.632

Adjusted R squared is coefficient of determination which tells us the variation in the foreign direct investment due to changes in export of goods and services, import of goods

and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages. From the findings in the above table the value of adjusted R squared was 0.752 an indication that there was variation of 75.2% on foreign direct investment due to changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages at 95% confidence interval . This shows that 75.2% changes in foreign direct investment could be accounted for by changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages. R is the correlation coefficient which shows the strength of the relationship between the study variable, from the findings shown in the table above there was a strong positive relationship between the study variable as shown by a correlation coefficient 0.886.

Table 4.2: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	Constant	3.327	.534		6.227	.000
	Export of goods and Services	.118	.077	.164	1.519	.133
	Import of goods and services	-.198	.099	-.237	-2.011	.048
	Taxes	-.271	.130	-.278	-2.083	.040
	Exchange rate	.035	.124	.036	.285	.776
	Gross domestic product	.208	.093	.268	2.231	.028
	Interest rates	.112	.087	.158	1.294	.199
	Openness of the economy	.250	.107	-.305	-2.346	.021
	Wages	-.040	.079	-.032	-.512	.009

The established regression equation for year 2000 was

$Y = 3.327 + 0.118X_1 - 0.198 X_2 - 0.271 X_3 + 0.035 X_4 + 0.208 X_5 + 0.112 X_6 + 0.250 X_7 - 0.040 X_8$

From the above regression equation it was revealed that holding export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product,

23

interest rates, openness of the economy and wages to a constant zero, foreign direct investment inflows in the horticulture industry would stand at 3.327 , a unit increase in export of goods and services would lead to increase in the foreign direct investment inflows in the horticulture industry by a factor of 0.118, a unit increase in import of goods and services would lead to decrease in foreign direct investment inflows into the horticulture industry by factor of 0.198 , a unit increase in taxes would lead to decrease in foreign direct investment inflows into the horticulture industry by a factor of 0.271 , a unit increase in exchange rates would lead to increase in foreign direct investment inflows into the horticulture industry by a factor of 0.035 , a unit increase in gross domestic product would lead to increase in foreign direct investment inflows in the horticulture industry by factor of 0.208 , a unit increase in interest rate would lead to increase would in foreign direct investment inflows into the horticulture industry by a factor of 0.112, unit increase in openness of the economy would lead to increase in foreign direct investment inflows into the horticulture industry by a factor of 0.250, further unit increase in wages would lead to decrease in foreign direct investment inflows into the horticulture industry by a factor of 0.040.

Year 2001

Table 4.3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.832[a]	.692	.653	.583

Adjusted R squared is coefficient of determination which tells us the variation in the foreign direct investment inflows due to changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages. From the findings in the above table the value of adjusted R squared was 0.653 an indication that there was variation of 65.3% on foreign direct investment due to changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages at 95% confidence interval . This shows that 65.3% changes in foreign direct investment can be accounted for by changes in export of goods and services,

import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages. R is the correlation coefficient which shows the strength of the relationship between the study variable, from the findings shown in the table above there was a strong positive relationship between the study variable as shown by 0.832.

Table 4.4: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	Constant	2.809	.519		5.414	.000
	Export of goods and Services	.012	.049	.026	.256	.799
	Import of goods and services	-.016	.099	-.024	-.166	.868
	Taxes	-.102	.078	-.164	-1.301	.197
	Exchange rate	.088	.104	.104	.844	.401
	Gross domestic product	.058	.100	.075	.573	.568
	Interest rates	.162	.092	.188	1.757	.083
	Openness of the economy	.173	.076	.247	2.269	.026
	Wages	-.010	.058	-.016	-.169	.866

The established regression equation for year 2001 was

$Y = 2.809 + 0.012X_1 - 0.016 X_2 - 0.012 X_3 + 0.088 X_4 + 0.058 X_5 + 0.162 X_6 + 0.173 X_7 - 0.010 X_8$

From the above regression equation it was revealed that holding export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages to a constant zero , foreign direct investment inflows in the horticulture industry would stand at 2.809 , a unit increase in export of goods and services would lead to increase in the foreign direct investment inflows in the horticulture industry by a factor of 0.012, a unit increase in import of goods and services would lead to decrease in foreign direct investment inflows into the horticulture industry by factor of 0.016 , a unit increase in taxes would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.102 , a unit

increase in exchange rates would lead to increase in the foreign direct investment inflows in the horticulture industry by a factor of 0.088 , a unit increase in gross domestic product would lead to increase in foreign direct investment inflows in the horticulture industry by a factor of 0.058 , unit increase in interest rate would lead to increase would in foreign direct investment inflows in the horticulture industry by a factor of 0.162, unit increase in openness of the economy would lead to increase in foreign direct investment inflows in the horticulture industry by a factor of 0.173, further unit increase in wages would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.010.

Year 2002

Table 4.5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.757^a	.573	.526	.805

Adjusted R squared is coefficient of determination which tells us the variation in the foreign direct investment due to changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages. From the findings in the above table the value of adjusted R squared was 0.526 an indication that there was variation of 52.6% on the foreign direct investment due to changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages at 95% confidence interval . This shows that 52.6% changes in foreign direct investment could be accounted for by changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages. R is the correlation coefficient which shows the strength of the relationship between the study variable, from the findings shown in the table above there was a strong positive relationship between the study variable as shown by 0.757.

Table 4.6: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 Constant	2.385	.408		3.944	.348
Export of goods and Services	.209	.089	.222	2.347	.021
Import of goods and services	-.069	.095	-.080	-.732	.466
Taxes	-.134	.097	-.135	-1.375	.173
Exchange rate	.270	.091	.269	2.951	.004
Gross domestic product	.022	.092	.019	.236	.814
Interest rates	.210	.118	.182	1.769	.081
Openness of the economy	.254	.109	.281	2.322	.023
Wages	-.112	.087	-.158	-1.294	.199

The established regression equation for year 2002 was

$$Y = 2.385 + 0.209X_1 - 0.069 X_2 - 0.134 X_3 + 0.270X_4 + 0.022X_5 + 0.210 X_6 + 0.254 X_7 - 0.112X_8$$

From the above regression equation it was revealed that holding export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages to a constant zero , foreign direct investment inflows in the horticulture industry would stand at 2.385 , a unit increase in export of goods and services would lead to increase in the foreign direct investment inflows in the horticulture industry by a factor of 0.209, a unit increase in import of goods and services would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.069 , unit increase in taxes would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.134 , a unit increase in exchange rates would lead to increase in the foreign direct investment inflows in the horticulture industry by a factor of 0.270 , a unit increase in gross domestic product would lead to increase in foreign direct investment inflows in the horticulture industry by a factor of 0.022 , a unit increase in interest rate would lead to increase would in foreign direct investment inflows in the horticulture industry by a factor of 0.210, a unit increase in

openness of the economy would lead to increase in foreign direct investment inflows into the horticulture industry by a factor of 0.254, further a unit increase in wages would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.112.

Year 2003

Table 4.7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.925[a]	.855	.815	.535

Adjusted R squared is coefficient of determination which tells us the variation in the foreign direct investment due to changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rate, openness of the economy and wages. From the findings in the above table the value of adjusted R squared was 0.815 an indication that there was variation of 81.5% on the foreign direct investment due to changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages at 95% confidence interval . This shows that 81.5% changes in foreign direct investment could be accounted for by changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages. R is the correlation coefficient which shows the relationship between the study variable, from the findings shown in the table above there was a strong positive relationship between the study variable as shown by 0.925.

Table 4.8: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	Constant	1.614	.394		4.098	.000
	Export of goods and Services	.263	.067	.385	3.911	.000
	Import of goods and services	-.111	.056	-.207	-1.991	.050
	Taxes	-.233	.079	-.317	-2.940	.004
	Exchange rate	.010	.058	.016	.169	.866
	Gross domestic product	.011	.071	.016	.154	.878
	Interest rates	.069	.088	.084	.780	.438
	Openness of the economy	.066	.089	.073	.741	.461
	Wages	-.102	.078	-.164	-1.301	.197

The established regression equation for year 2003 was

$$Y = 1.614 + 0.263X_1 - 0.111X_2 - 0.233 X_3 + 0.010X_4 + 0.011X_5 + 0.069 X_6 + 0.066 X_7 - 0.102X_8$$

From the above regression equation it was revealed that holding export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages to a constant zero , foreign direct investment inflows in the horticulture industry would stand at 1.614 , a unit increase in export of goods and services would lead to increase in the foreign direct investment inflows in the horticulture industry by a factor of 0.263, unit increase in import of goods and services would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.111 , unit increase in taxes would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.233 , unit increase in exchange rates would lead to increase in the foreign direct investment inflows in the horticulture industry by a factor of 0.010 , a unit increase in gross domestic product would lead to increase in foreign direct investment inflows in the horticulture industry by a factor of 0.011 , unit increase in interest rate would lead to increase would in foreign direct investment inflows in the horticulture industry by a factor of 0069, unit increase in

openness of the economy would lead to increase in foreign direct investment inflows in the horticulture industry by a factor of 0.066, further unit increase in wages would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.102,

Year 2004

Table 4.9: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.860[a]	.740	.718	.608

Adjusted R squared is coefficient of determination which tells us the variation in the foreign direct investment due to changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages. From the findings in the above table the value of adjusted R squared was 0.718 an indication that there was variation of 71.8% on the foreign direct investment due to changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages at 95% confidence interval . This shows that 71.8% changes in foreign direct investment could be accounted to changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages. R is the correlation coefficient which shows the relationship between the study variable, from the findings there was a strong positive relationship between the study variable as shown by 0.860.

Table 4.10: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	Constant	1.908	.578		3.300	.001
	Export of goods and Services	.022	.054	.042	.410	.683
	Import of goods and services	-.032	.104	-.037	-.304	.762
	Taxes	-.340	.088	-.453	-3.886	.000
	Exchange rate	.155	.090	.189	1.721	.089
	Gross domestic product	.038	.095	.041	.400	.690
	Interest rates	.048	.077	.050	.485	.629
	Openness of the economy	.166	.073	.122	.903	.369
	Wages	-.162	.063	-.223	-2.583	.011

The established regression equation for year 2004 was

$Y = 1.908 + 0.022X_1 - 0.032X_2 - 0.340 X_3 + 0.155X_4 + 0.038X_5 + 0.048 X_6 + 0.166 X_7 - 0.162X_8$

From the above regression equation it was revealed that holding export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages to a constant zero , foreign direct investment inflows into the horticulture industry would stand at 1.908 , a unit increase in export of goods and services would lead to increase in the foreign direct investment inflows into the horticulture industry by a factor of 0.022, a unit increase in import of goods and services would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.032 , unit increase in taxes would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.340 , unit increase in exchange rates would lead to increase in the foreign direct investment inflows in the horticulture industry by a factor of 0.155 , a unit increase in gross domestic product would lead to increase in foreign direct investment inflows in the horticulture industry by a factor of 0.038 , unit increase in interest rate would lead to increase would in foreign

direct investment inflows in the horticulture industry by a factor of 0.048, unit increase in openness of the economy would lead to increase in foreign direct investment inflows in the horticulture industry by a factor of 0.166, further a unit increase in wages would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.162.

Regression analysis for Year 2005

Table 4.11: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.836[a]	.690	.678	.61978

Adjusted R squared is coefficient of determination which tells us the variation in the foreign direct investment due to changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages. From the findings in the above table the value of adjusted R squared was 0.678 an indication that there was variation of 67.8% on the foreign direct investment due to changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages at 95% confidence interval . This shows that 67.8% changes in foreign direct investment could be accounted for by changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages. R is the correlation coefficient which shows the relationship between the study variable, from the findings shown in the table above there was a strong positive relationship between the study variable as shown by 0.836.

Table 4.12: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.652	.183		9.011	.000
	Export of goods and Services	.231	.055	.250	4.237	.000
	Import of goods and services	-.309	.061	-.319	-5.035	.000
	Taxes	-.190	.068	-.162	-2.777	.006
	Exchange rate	.040	.079	.032	.512	.009
	Gross domestic product	.142	.082	.132	1.739	.014
	Interest rates	.643	.082	.586	7.835	.000
	Openness of the economy	.233	.079	.317	2.940	.004
	Wages	-.232	.083	-.246	-2.806	.006

The established regression equation for year 2005 was

$Y = 1.652 + 0.231X_1 - 0.309X_2 - 0.190 X_3 + 0.040X_4 + 0.142X_5 + 0.643 X_6 + 0.233X_7 - 0.232X_8$

From the above regression equation it was revealed that holding export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages to a constant zero , foreign direct investment inflows into the horticulture industry would stand at 1.652 , a unit increase in export of goods and services would lead to increase in the foreign direct investment inflows in the horticulture industry by a factor of 0.231, unit increase in import of goods and services would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.309 , unit increase in taxes would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.190, a unit increase in exchange rates would lead to increase in the foreign direct investment inflows in the horticulture industry by a factor of 0.040 , a unit increase in gross domestic product would lead to increase in foreign direct investment inflows in the horticulture industry by factors of 0.142, unit increase in interest rate would lead to increase would in foreign direct

33

investment inflows in the horticulture industry by a factor of 0.643, a unit increase in openness of the economy would lead to increase in foreign direct investment inflows in the horticulture industry by a factor of 0.233, further a unit increase in wages would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.232.

Regression analysis for Year 2006

Table 4.13: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.855ª	.731	.712	.52536

Adjusted R squared is coefficient of determination which tells us the variation in the foreign direct investment due to changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages. From the findings in the above table the value of adjusted R squared was 0.712 an indication that there was variation of 71.2% on the foreign direct investment due to changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages at 95% confidence interval . This shows that 71.2% changes in foreign direct investment could be accounted for by changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages. R is the correlation coefficient which shows the relationship between the study variable, from the findings shown in the table above there was a strong positive relationship between the study variable as shown by 0.855.

Table 4.14: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.161	.129		8.978	.000
	Export of goods and Services	.282	.064	.093	1.286	.199
	Import of goods and services	-.142	.050	-.232	-2.867	.004
	Taxes	-.218	.040	-.030	-.453	.651
	Exchange rate	.106	.059	.007	-.106	.916
	Gross domestic product	.232	.083	.246	2.806	.006
	Interest rates	.162	.063	.223	2.583	.011
	Openness of the economy	.190	.068	.162	2.777	.006
	Wages	-.040	.079	-.032	-.512	.009

The established regression equation for year 2006 was

$Y = 1.161 + 0.282X_1 - 0.142X_2 - 0.218 X_3 + 0.106X_4 + 0.232X_5 + 0.162 X_6 + 0.190X_7 - 0.040X_8$

From the above regression equation it was revealed that holding export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages to a constant zero , foreign direct investment inflows in the horticulture industry would stand at 1.161 , a unit increase in export of goods and services would lead to increase in the foreign direct investment inflows in the horticulture industry by a factor of 0.282, a unit increase in import of goods and services would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.142 , unit increase in taxes would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.218 , unit increase in exchange rates would lead to increase in the foreign direct investment inflows in the horticulture industry by a factor of 0.106 , a unit increase in gross domestic product would lead to increase in foreign direct investment inflows in the horticulture industry by a factor of 0.232, unit increase in interest rate would lead to increase would in foreign direct

investment inflows in the horticulture industry by a factor of 0.162, unit increase in openness of the economy would lead to increase in foreign direct investment inflows in the horticulture industry by a factor of 0.190, further unit increase in wages would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.040.

Regression analysis for Year 2007

Table 4.15: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.917[a]	.841	.807	3.69669

Adjusted R squared is coefficient of determination which tells us the variation in the foreign direct investment due to changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages. From the findings in the above table the value of adjusted R squared was 0.807 an indication that there was variation of 80.7% on the foreign direct investment due to changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages at 95% confidence interval . This shows that 80.7% changes in foreign direct investment could be accounted for by changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages. R is the correlation coefficient which shows the relationship between the study variable, from the findings shown in the table above there was a strong positive relationship between the study variable as shown by 0.917.

Table 4.16: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.128	.921		1.225	.222
	Export of goods and Services	.758	.238	.205	3.187	.002
	Import of goods and services	-.487	.291	-.122	-1.673	.095
	Taxes	-.016	.386	-.160	-2.607	.010
	Exchange rate	.177	.434	.031	.408	.683
	Gross domestic product	.132	.082	.132	1.739	.014
	Interest rates	.613	.082	.586	7.835	.000
	Openness of the economy	.232	.083	.246	2.806	.006
	Wages	-.172	.063	-.223	-2.583	.011

The established regression equation for year 2007 was

$Y = 1.128 + 0.758X_1 - 0.487X_2 - 0.016 X_3 + 0.177X_4 + 0.132X_5 + 0.613 X_6 + 0.232X_7 - 0.172X_8$

From the above regression equation it was revealed that holding export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages to a constant zero, foreign direct investment inflows in the horticulture industry would stand at 1.128 , a unit increase in export of goods and services would lead to increase in the foreign direct investment inflows in the horticulture industry by a factor of 0.758, unit increase in import of goods and services would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.487 , unit increase in taxes would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.016 , unit increase in exchange rates would lead to increase in the foreign direct investment inflows in the horticulture industry by a factor of 0.177 , a unit increase in gross domestic product would lead to increase in foreign direct investment inflows in the horticulture industry by a factor of 0.132, unit increase in interest rate would lead to increase would in foreign direct

investment inflows in the horticulture industry by a factor of 0.613, unit increase in openness of the economy would lead to increase in foreign direct investment inflows in the horticulture industry by a factor of 0.232, further unit increase in wages would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.172.

Regression analysis for Year 2008

Table 4.17: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.763[a]	.582	.565	.65445

Adjusted R squared is coefficient of determination which tells us the variation in the foreign direct investment due to changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages. From the findings in the above table the value of adjusted R squared was 0.565 an indication that there was variation of 56.5% on the foreign direct investment due to changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages at 95% confidence interval . This shows that 56.5% changes in foreign direct investment could be accounted for by changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages. R is the correlation coefficient which shows the relationship between the study variable, from the findings shown there was a strong positive relationship between the study variable as shown by 0.763.

Table 4.18: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.164	.154		6.007	.000
	Export of goods and Services	.095	.059	.119	1.607	.009
	Import of goods and services	-.082	.052	-.139	-1.581	.015
	Taxes	-.300	.074	-.273	-4.033	.000
	Exchange rate	.173	.079	.158	2.202	.029
	Gross domestic product	.045	.099	.027	.454	.650
	Interest rates	.252	.099	-.148	-2.538	.012
	Openness of the economy	.542	.105	.349	5.157	.000
	Wages	-.150	.097	-.099	-1.545	.124

The established regression equation for year 2008 was

$Y = 1.164 + 0.095X_1 - 0.082X_2 - 0.300 X_3 + 0.173X_4 + 0.045X_5 + 0.252 X_6 + 0.542X_7 - 0.150X_8$

From the above regression equation it was revealed that holding export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages to a constant zero , foreign direct investment inflows in the horticulture industry would stand at 1.164 , a unit increase in export of goods and services would lead to increase in the foreign direct investment inflows in the horticulture industry by a factor of 0.095, unit increase in import of goods and services would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.082 , unit increase in taxes would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.300 , unit increase in exchange rates would lead to increase in the foreign direct investment inflows in the horticulture industry by a factor of 0.173 , a unit increase in gross domestic product would lead to increase in foreign direct investment inflows in the horticulture industry by factors of 0.045, unit increase in interest rate would lead to increase would in foreign direct

investment inflows in the horticulture industry by a factor of 0.252, unit increase in openness of the economy would lead to increase in foreign direct investment inflows in the horticulture industry by a factor of 0.542, further unit increase in wages would lead to decrease in foreign direct investment inflows into the horticulture industry by a factor of 0.150.

Regression analysis for Year 2009

Table 4.19: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.785[a]	.616	.604	.90861

Adjusted R squared is coefficient of determination which tells us the variation in the foreign direct investment due to changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages. From the findings in the above table the value of adjusted R squared was 0.604 an indication that there was variation of 60.4% on the foreign direct investment due to changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages at 95% confidence interval . This shows that 60.4% changes in foreign direct investment could be accounted for by changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages. R is the correlation coefficient which shows the relationship between the study variable, from the findings shown in the table above there was a strong positive relationship between the study variable as shown by 0.785.

Table 4.20: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.201	.214		19.587	.000
	Export of goods and Services	.176	.082	.143	2.150	.032
	Import of goods and services	-.561	.072	-.611	-7.765	.000
	Taxes	-.804	.103	-.471	-7.789	.000
	Exchange rate	.084	.019	.343	5.351	.000
	Gross domestic product	.130	.068	.616	12.150	.000
	Interest rates	.200	.063	.155	3.193	.002
	Openness of the economy	.399	.097	.201	4.106	.000
	Wages	-.080	.076	-.065	-1.053	.023

The established regression equation for year 2009 was

$$Y = 1.201 + 0.176X_1 - 0.561X_2 - 0.804X_3 + 0.084X_4 + 0.130X_5 + 0.200 X_6 + 0.399X_7 - 0.080X_8$$

From the above regression equation it was revealed that holding export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages to a constant zero , foreign direct investment inflows in the horticulture industry would stand at 1.201 , a unit increase in export of goods and services of the company would lead to increase in the foreign direct investment inflows in the horticulture industry by a factor of 0.176, unit increase in import of goods and services would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.561, unit increase in taxes would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.804, unit increase in exchange rates would lead to increase in the foreign direct investment inflows in the horticulture industry by a factor of 0.084 , a unit increase in gross domestic product would lead to increase in foreign direct investment inflows into the horticulture industry by a factor of 0.130, unit increase in interest rate would lead to increase would in foreign direct investment inflows in the horticulture industry by a factor of 0.200, unit increase in

openness of the economy would lead to increase in foreign direct investment inflows into the horticulture industry by a factor of 0.399, further unit increase in wages would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.080.

Regression analysis for Year 2010

Table 4.21: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.858[a]	.736	.708	.93601

Adjusted R squared is coefficient of determination which tells us the variation in the foreign direct investment due to changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages. From the findings in the above table the value of adjusted R squared was 0.708 an indication that there was variation of 70.8% on the foreign direct investment due to changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages at 95% confidence interval . This shows that 70.8% changes in foreign direct investment could be accounted for by changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages. R is the correlation coefficient which shows the relationship between the study variable, from the findings there was a strong positive relationship between the study variable as shown by 0.858.

Table 4.22: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.766	.235		7.514	.000
	Export of goods and Services	.080	.076	.065	1.053	.023
	Import of goods and services	-.213	.105	-.125	-2.033	.043
	Taxes	-.629	.085	-.455	-7.431	.000
	Exchange rate	.028	.077	.024	.366	.014
	Gross domestic product	.103	.048	.124	2.136	.034
	Interest rates	.349	.052	.439	6.717	.000
	Openness of the economy	.513	.056	.619	9.225	.000
	Wages	-.086	.067	-.071	-1.288	.199

The established regression equation for year 2010 was

$$Y = 1.766 + 0.080X_1 - 0.213X_2 - 0.629 X_3 + 0.028X_4 + 0.103X_5 + 0.349 X_6 + 0.513X_7 - 0.086X_8$$

From the above regression equation it was revealed that holding export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages to a constant zero , foreign direct investment inflows in the horticulture industry would stand at 1.766 , a unit increase in export of goods and services would lead to increase in the foreign direct investment inflows into the horticulture industry by a factor of 0.080, unit increase in import of goods and services would lead to decrease in foreign direct investment inflows into the horticulture industry by a factor of 0.213 , unit increase in taxes would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.629 , unit increase in exchange rates would lead to increase in the foreign direct investment inflows into the horticulture industry by a factor of 0.028 , a unit increase in gross domestic product would lead to increase in foreign direct investment inflows in the horticulture industry by a factor of 0.103, a unit increase in interest rate would lead to increase would

in foreign direct investment inflows in the horticulture industry by a factor of 0.349, unit increase in openness of the economy would lead to increase in foreign direct investment inflows in the horticulture industry by a factor of 0.513, a further unit increase in wages would lead to decrease in foreign direct investment inflows in the horticulture industry by a factor of 0.086.

4.3 Summary and Interpretation of Findings

The study found that there was great variation in foreign direct investment due to changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages.

The study further revealed that there was strong positive relationship between foreign direct, export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages as depicted by the correlation coefficient in all the periods under study.

The study revealed that there was a positive relationship between foreign direct investment and export of goods and services, exchange rate, gross domestic product, interest rates and openness of the economy. The study further revealed that there was negative relationship between foreign direct investment and import of goods and services, taxes and wages. Although the magnitude of the relation varied from period to period, the direction of the relation remained constant over the years.

It was further established that there was a strong positive relation between foreign direct investment inflow in the horticulture industry and depreciation of the Kenya currency. The depreciation of the Kenya shilling relative to the US dollar reduces that country's wages and production costs relative to those of its foreign counterparts. Cateris paribus, Kenya has enhanced locational advantage or attractiveness as a location for receiving productive capacity investments. By this relative wage channel, the exchange rate depreciation improves the overall rate of return to foreigners contemplating an overseas investment project in Kenya thus leading to increase in FDI inflows into the agricultural sector.

According to Adegbite and Ayadi (2010), foreign direct investment helps fill the domestic revenue generation gap in a developing economy, given that most developing countries' governments do not seem to be able to generate sufficient revenue to meet their expenditure needs, it was also found that various factors determine FDI inflows in a country, exchange rate being one of them. Nyamwange (2009) states that demand for foreign currency in a country comes from importers of goods and services, purchasers of foreign securities, government agencies purchasing goods and services abroad and travelers .

Ogunleye (2008) in his study found that there is a statistically significant relationship between the variables with exchange rate volatility retarding FDI inflows and FDI inflows increasing exchange rate volatility, he further found that this relationship appears weak for South Africa as significant impact of exchange rate volatility on FDI is established at the first lag while the impact of FDI inflows on exchange rate volatility is not significant.

Rahman *et al.* (1998) used annual data from 1973 to 1993, they found the variables to be non stationary at 5% level of significance. They found out that; inflows of nominal foreign direct investment will have no significant effects on nominal exchange rates in Sri Lanka, whereas in Pakistan, nominal exchange rate causes foreign direct investment.

Becker *et al.* (2003) found that FDI in R&D is not found to be significantly sensitive to changes in the volatility of the sterling dollar exchange rate; the variance of the euro dollar exchange does appear to play a significant role in attracting foreign R&D into the UK. The evidence suggests that an increase in the volatility of this exchange rate tends to relocate R&D investment from the Euro Area into the UK. An appreciation in the UK real effective exchange rate is found to depress the volume of foreign R&D investment

Udomkerdmongkol *et al.* (2008) found that there is evidence of positive (negative) relationship of local currency devaluation (appreciation) and FDI inflows, there is evidence of the negative (positive) relationship of expectations of local currency depreciation (appreciation) and FDI inflows, there is evidence of the negative relationship of volatile exchange rates and FDI inflows. Ihrig *et al.* (1998) find out that the real exchange rate, net worth, and to a lesser extent, relative labor costs significantly affect

FDI at time horizons of up to one year.They thus conclude that; a consistent relationship does indeed exist between FDI and real exchange rates at business cycle frequencies though they do not show the direction of this relationship.

Froot *et al.* (1991) found out that the correlation of FDI with exchange rate is quite different from that observed from other forms of capital inflows, its effects appear to be pervasive. They then drew the conclusion that; a depreciated currency can give foreigners an edge in buying control of productive corporate assets. Russ (2005) argue that when the exchange rate and projected sales in the host country are jointly determined by underlying macroeconomic variables, standard regressions of FDI flows on both exchange rate levels and volatility are subject to bias.

Anderton, (2006) states that there are various factors that determine FDI inflows in a country exchange rate being one of them. Exchange rate is one of the most important prices in an open economy, as it influences the flow of goods, services and capital in a country, and exerts strong pressure on the balance of payment, inflation and other macroeconomic variables (Yagci, 2001).

Several studies have revealed that exchange rate movement impact on FDI. Goldberg, (1993) in his study found that when a currency value declines relative to the value of another currency, this exchange rate movement has two potential implications for FDI. First, it reduces that country's wages and production costs relative to those of its foreign counterparts. All else equal, the country experiencing real currency depreciation has enhanced locational advantage or attractiveness as a location for receiving productive capacity investments. By this relative wage channel, the exchange rate depreciation improves the overall rate of return to foreigners contemplating an overseas investment project in this country and vice versa for a currency appreciation.

Froot and Stein, (1991) dismiss the possibility of a relationship between foreign acquisitions and exchange rates. The typicall counterargument notes that in a world with mobile capital (which, increasingly is the world we live in) risk adjusted expected returns on all international assets will be equalized. Other studies however indicate that real

exchange rate volatility has a direct and deleterious effect on FDI inflows as it generates uncertainity leading to increase in variance of expected profits and fall in the net present values of the investment.

Bénassy-Quéré *et al (2001*) finds a negative impact between exchange rate volatility and OECD outward FDI. Russ (2005) argue that when the exchange rate and projected sales in the host country are jointly determined by underlying macroeconomic variables, standard regressions of FDI flows on both exchange rate levels and volatility are subject to bias. The results hinge on the interaction of macroeconomic uncertainty, a sunk cost, and heterogeneous productivity across firms. She indicates that a multinational firm's response to increases in exchange rate volatility will differ depending on whether the volatility arises from shocks in the firm's native or host country.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

This study was intended to determine the relationship between exchange rates and FDI in the horticulture industry in Kenya. The focus was to determine the relationship between exchange rates and FDI in the horticulture industry in Kenya. In order to achieve this objective, the study was designed to collect and analyse the relevant data for Kenyan companies. In order to determine the relationship between exchange rates and FDI in the horticulture industry in Kenya, the study sort evidence from companies in the horticulture sector. Regression analysis on data from a sample of 30 companies for 11 years period from 2000 to 2010 was conducted to examine the variables. A suitable regression model was designed in order to capture all the relevant variables of the study.

The study revealed that there was a positive relationship between foreign direct investment and export of goods and services, exchange rate, gross domestic product, interest rates and openness of the economy. The study further revealed that there was negative relationship between foreign direct investment and import of goods and services, taxes and wages. The study found that there was greater variation in foreign direct investment due to changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages, which is an indication that changes in foreign direct investment could be accounted for by changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages.

It was further established that there was a strong positive relation between foreign direct investment inflow in the horticulture industry and depreciation of the Kenya currency. The depreciation of the Kenya shilling relative to the US dollar reduces that country's wages and production costs relative to those of its foreign counterparts. Cateris paribus, Kenya has enhanced locational advantage or attractiveness as a location for receiving productive

48

capacity investments. By this relative wage channel, the exchange rate depreciation improves the overall rate of return to foreigners contemplating an overseas investment project in Kenya thus leading to increase in FDI inflows into the agricultural sector.

5.2 Conclusions

The study found that there exist a positive relationship between foreign direct investment and export of goods and services, exchange rate, gross domestic product, interest rates and openness of the economy. The study further revealed that there was negative relationship between foreign direct investment and import of goods and services, taxes and wages. The study reveals that there was greater variation in foreign direct investment due to changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages, which is an indication that changes in foreign direct investment could be accounted for by changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages.

The study further revealed that there was strong relationship between foreign direct investment due to changes in export of goods and services, import of goods and services, taxes, exchange rate, gross domestic product, interest rates, openness of the economy and wages. The study found that exchange rates were a major factor determining foreign direct investment inflows into the country. Exchange rate influences the flow of goods, services and capital in a country, and exerts strong pressure on the balance of payment, inflation and other macroeconomic variables, this strongly influence foreign direct investment inflow in the country. The demand for foreign currency in a country comes from importers of goods and services, purchasers of foreign securities, government agencies purchasing goods and services abroad and travelers.

The study revealed that when the value of the Kenya shilling declines relative to the value of another currency, the exchange rate movement reduces that country's wages and production costs relative to those of its foreign counterparts which enhance locational advantage or attractiveness as a location for receiving productive capacity investments. Through the relative wage channel, the exchange rate depreciation improves the overall

49

rate of return to foreigners contemplating an overseas investment project in this country and vice versa for a currency appreciation, thus influencing foreign direct invesrment into the country where the currency is depreciating.

5.3 Policy Recommendation

From the findings, the study recommends that there is need for the government to reduce taxes facing the horticultural firms in order to encourage foreign direct investment in the horticulture industry in Kenya which lead to better performance of the sector, the government should provide tax incentives in order to attract more and more investors, this will influence the performance of the country's economy.

There is need for the government through various stakeholders in the agricultural sector to have standardized wage rates, as it is, the study found that increase in wages in the sector negatively affected the foreign direct investment into the sector, this will help in increasing foreign direct investment in the horticultural sector.

There is need for the government to use various economic stimulus programs in order to boost the country's gross domestic product as this will positively influence foreign direct investment in the horticultural sector, the government should also provide a conducive environment that will encourage FDI into the horticulture industry, this may include boosting infrastructure and beefing up security in the country.

The study recommends that there is need for central bank to regulate the exchange rate in the country as it was found that exchange rate influences the flow of goods, services and capital in a country, and exerts strong pressure on the balance of payment, inflation and other macroeconomic variables which strongly influence foreign direct investment inflow, stabilization of the exchange rate would therefore be a necessary condition for attracting more FDI.

Agriculture is the mainstay of the kenyan economy, there is need for the government to create a conducive environment for foreign investors in the country's agricultural sector by enhancing political stability and providing subsidies, this will help increase the level

of foreign direct investment inflow thus bridging the revenue generation gap, given that most developing countries' governments are not able to generate sufficient revenue to meet their expenditure needs.

5.4 Limitations of the Study

In attaining its objective the study was limited to 30 companies in the horticultural sector. Secondary data was collected from various agencies including HCDA and CBK on foreign direct investment inflows in those companies, exchange rate, import of goods and services, export of goods and services, openness of the economy, taxes and wages.

The study was limited to the degree of precision of the data obtained from the secondary source. While the data was verifiable since it came from the publications of the HCDA, Kenya Revenue Authority and Kenya National Bureau of Statistics, it nonetheless could still be prone to shortcomings.

The study was limited to to determine the relationship between exchange rates and FDI in the horticulture industry in Kenya. For this reason other firms in the agricultural sector could not be incorporated in the study.

The study was based on an eleven year study period starting from the year 2000 to 2010. A longer duration of the study may have captured periods of various economic significances such as booms and recessions. This may have probably given a longer time focus hence given a broader dimension to the problem.

5.5 Areas for further research

The study sought to determine the relationship between exchange rates and foreign direct investment in the horticulture industry in Kenya, there is need for an in-depth study to be done on the relationship between exchange rates and financial performance in the horticulture industry in Kenya.

From the findings and conclusion the study also recommends a study to be done on effects of foreign direct investment on the financial performance of the horticulture industry in Kenya. This will help determine the impact of foreign direct investment on the performance of the critical sector of the economy.

There is need for a study to be conducted on the relationship between the country's gross domestic product and foreign direct investment in the entire economy. This will help to determine the nature of the relationship between foreign direct invetsment and the country's economic growth and whether FDI influence economic growth in a country, it will also help unearth the reason for the decline of FDI into the country over the years.

The study further recommends studies to be done on the factors influencing inflow of foreign direct investment into the country.

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APPENDICES

Appendix I: Data

Year	GDP	Goods exports	FDI	Imports	taxes	wages	Interest rate	FX
2000	12,691,278,914	1,782,219,670	6,140753,000	8,587,722,754	1,001,484,184	7,816,495,602	13.8774	77.3512
2001	12,986,519,857	1,891,369,820	5,515,448,000	8,151,137,689	1,090,170,385	8,019,192,742	13.9068	77.3736
2002	13,149,263,399	2,161,949,875	6,122,458,000	8,705,176,970	1,185,348,191	9,282,922,421	13.9169	81.4208
2003	14,903,634,448	2,412,218,824	6,862,989,000	9,600,084,489	3,568,583,366	10,412,308,745	13.924	81.5611
2004	16,096,109,637	2,725,957,989	6,916,331,000	10,786,969,987	4,350,646,035	10,949,973,284	14.1386	83.7514
2005	18,737,922,545	3,462,129,881	6,427,522,000	12,055,361,548	5,601,670,949	8,676,301,254	14.3226	85.8292
2006	22,504,084,548	3,516,244,020	6,622,076,000	14,413,420,174	6,769,490,948	9,145,948,772	14.7904	87.0422
2007	27,236,739,896	4,132,199,788	7,461,880,000	17,477,994,049	8,388,234,729	10,740,087,258	15.2126	96.2694
2008	30,519,165,009	5,039,785,012	7,548,944,000	21,279,765,994	8,658,124,465	11,972,901,851	18.5143	96.5222
2009	30,580,367,979	4,502,281,578	8,181,960,000	22,434,504,600	9,489,835,600	12,561,011,799	19.5445	99.7783
2010	32,198,151,217	5,224,735,999	8,397,455,000	27,323,513,498	10,458,427,540	12,856,183,029	20.0438	99.8319
2011	33,620,684,016	5,262,768,745	8,667,236,000	30,311,727,053	12,421,564,300	15,147,841,692	20.2789	105.961

Appendix II: List of companies

1. Naivasha Horticultural Fair, Naivasha
2. Flopa Florists, Nairobi
3. FIAN GREENS LTD, Fian building
4. W V Consultancy, Naivasha
5. Star Flowers (K) Ltd, Naivasha
6. Sote Flowers Ltd, Kitale
7. Panda Flowers Ltd, Naivasha
8. Njeru Industries Ltd, Meru
9. Pan Vegetable Processors, Naivasha
10. Nandi Hills Produce Enterprise, Eldoret
11. Mayflowers (K) Ltd, Naivasha
12. Macadamia Springs Ltd, Thika
13. Longonot Horticulture Ltd, Naivasha
14. Longonot Farm Ltd, Naivasha
15. Live Wire Ltd, Naivasha
16. Lex Plus Africa, Naivasha
17. Kitengela Fresh Produce, Athi River
18. Kenya Horticultural Exporters (1997) Ltd, Nanyuki
19. Kenya Cuttings Ltd, Murang'a
20. Kakuzi Ltd, Thika
21. Horticultural Centre (K) Ltd, Karuri
22. Homegrown Kenya Ltd, Timau
23. Homegrown-Flamingo Farm, Naivasha
24. Greenlands Agroproducer Ltd, Timau
25. Green Arts Horticulture Ltd, Nakuru
26. Fids Kenya Ltd, Embu
27. Ex-Sama Horticulture Estate, Murang'a
28. Everflora Ltd, Thika
29. Bigot Flowers (K) Ltd, Naivasha
30. Beneva Estates Ltd, Thika