RELATIONSHIP BETWEEN FOREIGN DIRECT INVESTMENT AND BALANCE OF PAYMENTS IN KENYA

BY

ERIC K. NGUKU

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION

SCHOOL OF BUSINESS

UNIVERSITY OF NAIROBI

2013
Declaration

This project is my original work and has not been submitted for a degree in any other university.

Signed………………………………….. Date……………………………………

ERICK K. NGUKU

D61/61959/2010

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

Signed………………………………….. Date……………………………………

DR. JOHN YABS

LECTURER

SCHOOL OF BUSINESS

UNIVERSITY OF NAIROBI
Acknowledgement

I thank God for giving me the wisdom and courage and for guiding me throughout my life for without Him I would not have come this far. I would also like to acknowledge the following for their contributions which facilitated the completion of this project.

Secondly, special thanks go to my supervisor Dr. John Yabs, for providing unlimited, invaluable and active guidance throughout the study. His immense command and knowledge of the subject matter enabled me to shape this research project to the product that it is now.

Thirdly, I also thank my family for letting me steal their valuable time to work on this project. It is my hope that their sacrifice has finally paid off.

Finally, I owe my gratitude to a number of people who in one way or another contributed towards completion of this project especially my fellow colleagues at work and students.
Dedication

This work is dedicated to my family
Abstract

Foreign direct investment has been argued to play a key role in accelerating growth in developing countries. Over the past two decades, world saving as a proportion of world income has fallen. As a result saving, real interest rate has declined and inflation rate has risen in the world. It is against this background FDI has appeared increasingly attractive to developing countries facing declining domestic investment and higher costs of foreign borrowing. The government of Kenya therefore has been putting up incentives to ensure that foreign companies are attracted to the country in an attempt to increase the investments to the country and improve the level of economic growth in the country. The objective of this study was to determine the relationship between foreign direct investment and balance of payments in Kenya. The study used a correlation design. The study collected secondary data from the World bank database, Central Bank of Kenya, and the Kenya National Bureau of Statistics for a 20 year period from 1993 to 2012. The data was analysed using descriptive analysis as well as OLS regression analysis after testing for non-stationarity of data using Augmented Dickey-Fuller test. Three equations were modeled for this study and used in the regression. The study found that the relative price of imports had a positive and significant impact on imports at the 1% level of significance while GDP and FDI were not significant in the model. This model accounted for 59.6% of the variance in imports and it was jointly fit in explaining the variance in imports. The study found that the relative price of exports and GDP had positive and significant impacts on exports at the 5% level of significance while FDI and lagged FDI did not have a significant impact on exports at all acceptable levels of significance. The model accounted for 52.6% of the variance in exports and was jointly fit in explaining the variance in exports. The results showed that FDI and Dummy2008 did not have a significant impact on CABECT at all acceptable levels of significance. The model accounted for only 18.4% of the variance in CABECT and it was not fit to jointly explain the impact on CABECT. The study concludes that the relative price of imports affects imports and that the relative price of exports and GDP also impact on exports. The study also concludes that FDI does not impact on exports, imports, or CABECT. There is therefore no evidence of FDI having a significant impact on balance of payments in Kenya. The study recommends that since FDI inflows have not been large enough to have a significant influence on balance of payments, it is important to policies be instituted to attract more FDI inflows in Kenya in order to gain from the advantages that come with FDI inflows.
# Table of Contents

Declaration ...................................................................................................................................................... i
Acknowledgement ............................................................................................................................................... ii
Dedication ......................................................................................................................................................... iii
Abstract ............................................................................................................................................................ iv
List of Tables .................................................................................................................................................... vii
List of Figures .................................................................................................................................................. viii
Abbreviations ................................................................................................................................................... ix

## CHAPTER ONE ................................................................................................................................. 1

### INTRODUCTION ............................................................................................................................. 1

1.1 Background of the Study ......................................................................................................................... 1
    1.1.1 International Business .................................................................................................................... 2
    1.1.2 Foreign Direct Investment ............................................................................................................. 3
    1.1.3 Direct Investments in Kenya ......................................................................................................... 7

1.2 Research Problem .................................................................................................................................... 8

1.3 Research Objective ................................................................................................................................... 10

1.4 Value of the Study .................................................................................................................................. 10

## CHAPTER TWO ............................................................................................................................... 12

### LITERATURE REVIEW ...................................................................................................................... 12

2.1 Introduction ........................................................................................................................................... 12

2.2 Theoretical Foundations ........................................................................................................................ 12
    2.2.1 Marginal Efficiency of Investment (MEI) .................................................................................... 12
    2.2.2 Neoclassical Theory ...................................................................................................................... 13
    2.2.3 Keynesian Theory of Economics .................................................................................................. 13
    2.2.4 Industrial Organization and Internalization Theories ................................................................. 14
    2.2.5 Foreign Direct Investments and BOP ........................................................................................... 15

2.3 Empirical Review ................................................................................................................................... 16

2.4 Research Gap ......................................................................................................................................... 20
List of Tables

Table 1: Summary Descriptive Results ................................................................. 30
Table 2: Unit Root Test Results ...................................................................... 31
Table 3: Relationship between FDI and Balance of Payments ...................... 33
List of Figures

Figure 1:  Trend of GDP (1993 – 2012) .................................................................................. 24
Figure 2:  Trend of Imports (1993 – 2012) .......................................................................... 25
Figure 3:  Trend of Exports (1993 – 2012) ......................................................................... 26
Figure 4:  Trend of IPR (1993 – 2012) ............................................................................... 27
Figure 5:  Trend of XPR (1993 – 2012) .............................................................................. 28
Figure 6:  Trend of FDI (1993 – 2012) ............................................................................... 29
Figure 7:  Trend of CABECT (1993 – 2012) ...................................................................... 30
### Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADF</td>
<td>Augmented Dickey-Fuller</td>
</tr>
<tr>
<td>AGOA</td>
<td>African Growth and Opportunities Act</td>
</tr>
<tr>
<td>BOP</td>
<td>Balance of Payments</td>
</tr>
<tr>
<td>EPZs</td>
<td>Export Processing Zones</td>
</tr>
<tr>
<td>FDI</td>
<td>Foreign Direct Investments</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
</tr>
<tr>
<td>MEI</td>
<td>Marginal Efficiency of Investment</td>
</tr>
<tr>
<td>MNCs</td>
<td>Multi-National Corporations</td>
</tr>
<tr>
<td>TNCs</td>
<td>Trans National Companies</td>
</tr>
</tbody>
</table>
CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

One of the economic problems of developing countries is that they do not have enough national savings to finance their investments. They are in constant need of foreign capital in forms of both direct and indirect investments. Initially, they took loans from international commercial banks. But in the 1980s the drying-up of commercial bank lending, because of debt crises, forced many countries to reform their investment policies so as to attract more stable forms of foreign capital, and FDI appeared to be one of the easiest way to get foreign capital without undertaking any risks linked to the debt. Thus, it became an attractive alternative to bank loans as a source of capital inflows (Agiomirgianakis, Asteriou, & Paphaeloma, 2003).

According to Agiomirgianakis et al., (2003), FDI is mostly defined as capital flows resulting from the behaviour of multinational companies (MNCs). Thus, the factors to affect the behaviour of MNCs may also affect the magnitude and the direction of FDI. MNCs expand their activities to a foreign country for a number of reasons including, advantages, often owing to a life-cycle pattern of their products or just because their competitors are engaged in similar activities. On the other hand, governments are also engaged in a policy competition by changing key factors of their economic policies, such as domestic labour market conditions, corporate taxes, tariff barriers, subsidies, privatization and regulatory regime polices so as to improve FDI activity in their countries.

Foreign Direct Investment (FDI) is considered to be an important source to build up physical capital, create employment opportunities, develop productive capacity, and
enhance skills of local labour and managers through transfer of technology, and integration with rest of the world. Foreign direct investment has been argued to play a key role in accelerating growth in developing countries. Over the past two decades, world saving as a proportion of world income has fallen. As a result saving, real interest rate has declined and inflation rate has risen in the world. It is against this background that foreign direct investment (FDI) has appeared increasingly attractive to developing countries facing declining domestic investment and higher costs of foreign borrowing (Perkins, 2001).

1.1.1 International Business

Revolutionary changes in technologies have provided the mechanisms that propel the growth of international business. The intensification of competition at both domestic and international levels has driven firms to look beyond their domestic markets for new opportunities. The progressive removal of barriers to trade and capital movements has stimulated greater flows of exports, imports and foreign direct investment (FDI). Multinational enterprises have emerged as the key agents of international economic coordination. They provide the capability to generate innovations and deliver new goods and services to the market; they also provide the capability to exploit these technological advances at a global level; and they are a depiction of the capacity of international managerial co-ordination to operate efficiently across international boundaries. Furthermore, the growing economic strength of the newly-industrializing countries (e.g. Taiwan, Hong Kong, Singapore, Korea) and the opening up of China and Eastern Europe have provided an additional stimulus to international business activities (Munteanu & Tudor, 2009).
International trade is not limited to commodities that some countries produce and others do not. Countries sometimes import goods that they themselves could produce more cheaply than the countries from which they get them. It has been claimed, for example, that Britain could raise dairy produce more cheaply than Denmark. But Britain nevertheless imports part of its supplies from that country and devotes its main energies to producing machinery, electrical equipment, motor vehicles and other manufactures, because its advantages over Denmark in producing these things are greater than its advantages in producing dairy produce. This concentration on manufacturers involves what is known as the principle or the law of comparative costs, or simply comparative advantages in this theory of international trade. As applied to international trade this means that a country tends to concentrate on producing those things that will give it the best return for any given investment of its productive resources. The law of comparative costs is an extension of the principle of division of labor to the international field (Gartside, 1987). The theory of international investment explains international capital movements in the context of international production and trade. International investment creates international production and is integrated via international trade. Knowledge, know-how and technology are generally transferred between countries along with financial capital.

**1.1.2 Foreign Direct Investment**

For balance of payments purposes, foreign direct investment (FDI) is defined as the holding of 10 per cent or more of the voting stock of a foreign enterprise (IMF, 1993). It takes the form of equity capital retained earnings and loans from a parent company. Direct investment is a unique form of capital inflow in that, unlike commercial lending, it comprises part of a package of technology and management, both of which can enhance the productivity of the capital transfer. Direct investment also shares in
both the risks and the rewards associated with the project financed. It is these three factors - technology, management and capital - that commend FDI for financing in developing countries.

FDI inflow is accounted as credit entry in the financial account of balance of payment (BOP) thus having direct positive impact on BOP. However, increasing volume of FDI also increases the size of imports and profit repatriation. There is a large body of empirical literature showing positive effects of FDI on receiving country’s economy including transfer of technology, employment creation, growth enhancement and tax collection. However, relatively less focused area is related to problems resulting due to FDI inflows in small open economies like Kenya. FDI inflows in developing countries may cause exchange rate appreciation (Dutch disease), trade and income account balance worsening thus having serious implications for overall balance of payments and foreign exchange reserves (Sarno and Tayler, 1999).

Systemic changes in developing countries have brought substantial net capital inflows mainly in the form of Foreign Direct Investment. A natural consequence of these inflows has been also large current account deficits, as the burden of investment income and principal repayment increases over time. For example, Average yearly FDI in New Member States of the European Community in the period 1996-2005 were approximately 20 billions €, with the exemption in 2003 when they halved. In the same period, the outflow of profits from NMS was much smaller; indeed it started with 2.5 billions € in 1996 but increased rapidly to 20 billions € in 2005. Though the inflow of capital through FDI in the period 1996-2006 far exceeded the outflow of profits the situation has been changing rapidly. Namely, the accumulated liabilities created by FDI have not been stabilized by trade surpluses. On the contrary, and with
exemption of Czech Republic in 2005 and 2006, trade deficits have been enhancing current account deficits in most NMS and they have been even growing in the Baltic countries (Mencinger, 2003).

The overall short and long run effects of FDI on current account balance vary in time and may differ from country to country; they depend of the effects, FDI has on domestic savings and economic growth. Indeed, though acquisitions of the existing assets were the predominant type of FDI in NMS, FDI was accompanied by deterioration rather than improvement in current account balance. A large share of the financial means obtained by selling the existing capital stock to foreigners was namely used to increase consumption and imports rather than capital formation. This explains why there is no positive relationship between the share of FDI and the share of gross fixed investments in GDP, why there is a strong contemporaneous negative relationship between FDI and current account balance, and, at least partly, why there is a negative relationship between FDI and growth (Mencinger, 2003).

According to Meyer (2003), foreign direct investment comes with several advantages to developing countries. Foreign direct investment is considered a large and growing source of finance that may help developing countries close the technology gap with high income countries, upgrade managerial skills, and develop their export markets and this could leads towards a spill over effect in form of improving productive efficiency in the economy. That could the reason as to why FDI over the last decade have grown at least twice as rapidly as trade. Governments try to attract FDI for expected beneficial effects on employment, wages, balance of payments, technology and growth. It is worth looking over how far the positive effect offsets the cost of the
allowance, which comes forward in the host country during the investment (Sass, 2003).

The earnings from foreign direct investment are, of course, directly related to the activities of transnational companies (TNCs). More than any other component of international transactions, they represent a strong inter-temporal as well as international dimension of those activities. The current values of investment income credits from FDI are related to the overall stock of capital invested abroad in previous years. Thus the history of foreign involvement by a particular country plays a crucial role in its current flow of earnings and, through them, in the structure of its balance of payments. For some countries their FDI history is linked to their colonial past: for example Petri (1994) notes how the countries which rank high on FDI intensity - measured as ratio of FDI to GDP - are those with long colonial roots.

The volume and the value of FDI flows increased significantly under the impact of globalization and intensification of the existing connections between different financial markets, among developed economies and the developing ones. The recent evolutions of global economy have strongly affected the dynamic of FDI and also the impact of foreign capital flows exert on economic development. The current economic crisis highlighted the fundamental role foreign flows play in the reintegration process of transition and developing economies in the structure of the global market, as FDI are appreciated to be “the definite element of the economic growth, of promoting intensive, qualitative and efficient factors. This is why, the importance of the investment, their role in the conditions of the restructuring economy are extremely real (Munteanu and Tudor, 2009).
1.1.3 Direct Investments in Kenya

Kenya is a relatively big country with a total land area of 580.4km square. Its location is strategic within East Africa and has a population of approximately 40 million people. The country is well endowed with a broad range of natural resources, flora and fauna and arable land. Kenya highlands comprise of the most successful agricultural production regions in East Africa. Foreign investment has been of considerable significance in financing development in Kenya not only in the manufacturing but also in the primary and tertiary sectors (Mwega and Ndungu, 2002).

FDI in Kenya has not only been volatile but also low since the 1970s. This led to the stagnation of the manufacturing sector which was largely been dominated by the foreign firms. This decline was blamed on the inward oriented strategy as well as the collapse of the East Africa Community in 1977. Ensuing economic distortions resulted in severe structural constraints and macro economic imbalances and firms failed to develop competitive capabilities to penetrate the international markets. The inward looking policies pursued at the time under import substitution made it difficult to effectively participate and compete keenly in the export markets. As a result the manufacturing industry failed to play a more dynamic role enough to function as an engine of country's growth and did not contribute significantly to foreign exchange (Rasiah and Gachino 2005).

Foreign firms in Kenya since the 1970s have invested in a wide range of sectors. Most notably they played a major role in floriculture and horticulture, with close to 90 percent of flowers being controlled by foreign affiliates. In the Manufacturing sector FDI has concentrated on the consumer goods sector, such as food and beverage
industries. This has changed in the recent years with the growth of the garment sector because of African Growth and Opportunities Act (AGOA). Of the 34 companies involved in AGOA 28 are foreign most of them concentrated in the Export Processing Zones (EPZs). FDI is also distributed to other sectors including services, telecommunication among others. 55 percent of the foreign firms are concentrated in Nairobi while Mombasa accounts for about 23 percent, thus Nairobi and Mombasa account for over 78 percent of FDI in Kenya. The main form of FDI establishment has been through the form of green fields establishments and Kenya has in total more than 200 multinational corporations. The main traditional sources of foreign investments are Britain, US and Germany, South Africa, Netherlands, Switzerland and of late China and India (UNCTAD, 2005).

1.2 Research Problem

Foreign direct investment has been argued to play a key role in accelerating growth in developing countries. Over the past two decades, world saving as a proportion of world income has fallen. As a result saving, real interest rate has declined and inflation rate has risen in the world. It is against this background that foreign direct investment (FDI) has appeared increasingly attractive to developing countries facing declining domestic investment and higher costs of foreign borrowing. The government of Kenya therefore has been putting up incentives to ensure that foreign companies are attracted to the country in an attempt to increase the investments to the country and improve the level of economic growth in the country (Musau, 2011).

Empirical literature finds mixed evidence on the existence of positive spill-over effects of FDI for a host country. Yet, according to the mainstream economics positive direct and spill-over effects of FDI are taken as granted. Most studies on FDI
have been concerned with how to attract FDI and not with the consequences of FDI. The benefits of FDI are considered to be confirmed by actual development which ignores inconclusive academic literature (Lipsey, 2006), positive externalities have remained to be publicized by international financial organizations, and FDI has stayed the pillar of the development strategies of most developing countries in Africa and Asia. Indeed, to attract FDI, developing countries have been willing to use various forms of subsidies: tax vacations, adaptations of the legal system, or even direct financial assistance to multinationals by which they have replaced contemptible sales of the assets in the period of speedy, often ideologically and politically inspired privatizations during which, the “family silver” in most of these countries was sold. In a decade, foreign ownership of productive assets has become major and in some sectors (financial services, telecommunications, retail trade) predominant or even exclusive type of ownership in developing countries.

Foreign Direct Investment (FDI) not only provides the African countries with much needed capital for domestic investment, but also creates employment opportunities, helps transfer of managerial skills and technology, all of which contribute to economic development. Recognizing that FDI can contribute a lot to economic development, all governments of Africa including that of Kenya want to attract it. Indeed, the world market for such investment is highly competitive, and Kenya in particular, seeks such investment to accelerate her development efforts. With liberal policy frameworks becoming common place and losing some of their traditional power to attract FDI, Kenya is paying more attention to the measures that actively facilitate it. Hence, the economic determinants remain very important. What is likely to be more critical in the future is the distinctive combination of location advantages,
especially, created assets that Kenya can offer potential investors (Nyamwange, 2009).

Studies related to the effect of foreign direct investments and economic performance in general in Kenya include, Nyamwange (2009) who carried out a study on the foreign direct investment in Kenya, Voorpijl (2011), the gains and losses of foreign direct investment in Kenya, Musau (2011), the impact of foreign direct investments (FDIs) on economic growth and development in Kenya. These studies found that foreign direct investments affect the balance of payments of a country by injecting much needed capital in the economy. This shows that most of these studies focused on economic development of the country as whole. There is therefore a literature gap as far as the relationship between foreign direct investments and the balance of payments in Kenya is concerned hence the need for this particular study. This study therefore seeks to answer the following question: What is the relationship between foreign direct investment and balance of payments in Kenya?

1.3 Research Objective

The objective of this study was to determine the relationship between foreign direct investment and balance of payments in Kenya.

1.4 Value of the Study

The study will be significant to the government in the sense that Kenya has faced fluctuating economic growth rates and an increasing budget deficit in the past decade. Understanding the effects of foreign direct investments on the balance of payments will therefore be important in explaining these fluctuations.
The findings of this study will be significant to academicians in that it will add to the knowledge of the researchers in this field of study. Researchers will also be able to borrow from the findings of this study and may even further the study by varying the various variables used in order to get more precise results.

The findings will also be significant to policymakers in that it will serve as a guide to them when making government policies such as fiscal and monetary policies. The findings of the study will be used by policymakers in basing their decisions related to issues of foreign direct investments and balance of payments of the country. Such decisions could be the levels of external borrowings and international trade.
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter presents the literature review. First, a theoretical review is provided focusing on theories that explain the effects of foreign direct investments on the economic development of a country. Secondly, the empirical review of the studies that have been done on the effects of foreign direct investments on the economic development of a country is made. The research gap is then provided.

2.2 Theoretical Foundations

This study will be guided by four main theories. These theories are Marginal Efficiency of Investment (MEI) and Accelerator Theories, Neoclassical Theory, Keynesian Theory of Economics and Industrial Organization and Internalization Theories. These are presented below

2.2.1 Marginal Efficiency of Investment (MEI)

MEI is a measure of business demand for investment decision. Investment by a firm occurs when MEI (or the Internal Rate of return) on additional investment exceeds the rate of interest or cost of funds that are incurred in making investment decisions (Keynes, 1936). MEI could thus be defined as the rate of interest, which discounts the present value of investment to zero. The higher the market rate of interest, the lower the investment rate and vice versa. The next phase of this evolution of investment theory gave rise to the accelerator theory, which makes investment a linear proportion of changes in input. The larger the gap between existing capital stock and the desired capital stock, the greater the firm’s rate of investment. The decision to make
incremental or decremental changes to the capital stock depends on the value the firm will attain (Tobin, 1969).

2.2.2 Neoclassical Theory

Early neoclassical theories explain international capital flows with differentiated rates of return across countries that lead to capital arbitrage, with capital seeking the highest return. Cockcroft and Riddell (1991) argue that the future investment flows are directly related to the package of incentives, which influence the expected rate of return; the security of the investment; the scope and speed with which companies are able to disinvest. The tax regime; investment code or guidelines; and overall macroeconomic policies are all elements affecting FDI.

Despite these changes, there is still need for action for improvement of factors that inhibited investment. These factors include lack of formal legislation, lack of legal infrastructure such as patents, price controls, labour legislation, taxation policy and foreign exchange controls. Cockcroft and Riddell (1991) suggest that addressing these problems would certainly help improve the foreign investment climate. According to Meier (1994), the major supply-side determinant of FDI in developing countries is the expectation of higher returns or higher profits by firms. Developed countries will tend to invest in poorer countries that have higher rate of return (Ekpo, 1996).

2.2.3 Keynesian Theory of Economics

Development aid to least developed countries has its origin in the colonial period, although the issue of development was not important either to colonies or to the relationship between richer and poorer countries in 1950s (Riddell, 1992). This came as a result of Keynesian economics exemplified by, for instance, Rostow, Chenery, Strout and Rosentstein-Rodan. Their concern was how to transform what is perceived
as backward areas and unproductive societies into dynamic and growing economies (Riddell, 1992). Aid has been provided to accelerate developing economies, hence the role of outside capital is not directly to raise the standards of living but to make a transition in the economy and bring about sustainable growth (Bhagwadti and Eckaus, 1970). The economic motive was also in the self interest of the developed nations to invest in developing nations to raise their own welfare. If the rate of interest is higher than the productivity of capital in developed countries and lower in developing countries, both parties will gain. If there are under-utilised resources in developed countries, which could not be activated due to balance of payments constraints, international aid will be mutually profitable by channeling such resources to developing countries (Brandt Report, 1980).

2.2.4 Industrial Organization and Internalization Theories

These theories assume that foreign companies have oligopolistic power in the host countries (Cockcroft and Riddell, 1991; Meier, 1994). It holds micro and macro-economic factors responsible for the real life deviations from the perfect market model. According to this approach, firms choose and investment location because of its comparative advantage. Meier (1994) contributes to this theory by arguing that FDI may also be taken to gain control over inputs thus creating a barrier of entry to new competitors. According to internalization theory, firms keep operations internal through a hundred percent subsidiary because they want to control the risk and retain control and market share. Multinationals engage in FDI to secure internalization advantages. Compared with external markets, the firm’s linkages, integration, transfer pricing and economies of centralization allow costs to be reduced through FDI (Meier, 1994).
2.2.5 Foreign Direct Investments and BOP

Foreign direct investment is a large and growing source of finance that may help developing countries close the technology gap with high income countries, upgrade managerial skills, and develop their export markets” and this could leads towards a spillover effect in form of improving productive efficiency in the economy. That could the reason as to why FDI over the last decade have grown at least twice as rapidly as trade Meyer (2003). However at the same time, it is also noticed that widening current account deficits is one of the less desirable macroeconomic effects of large capital inflows like FDI. Developing countries normally ran current account deficit problems and the surge in international capital flows to developing countries have coincided with widening current account deficits in many of these countries Calvo et al. (1996).

Globally current account imbalances are not strictly the phenomenon of 1990s. Following the oil prices shocks in 1970s, there have being large swings in current account balances of most countries. These imbalances are caused by mismatch between saving and investment. If international capital inflows are used to increase investment, but savings remains stable; this implies an increase in current account deficit. Hence investment and saving and ultimately current account balance may depend on capital flows. And FDI is considered to be a critical component of capital flow. And indeed empirical evidence suggests that FDI flows are significantly correlated with the current account financing requirement.

Various other studies reached the similar conclusion, in contrary few studies like Fry (1993) proved otherwise. Jansen (1995) has argued further that the impact of FDI on the current account is further complicated by the investment income payments that
arise from FDI. And according to UNCTAD (2002), unregulated FDI flows can bring about serious difficulties to balance of payments owing to high import content and profit outflows related to multinational capital. Few studies have been conducted to examine the identification of nature and direction of a causal relationship between foreign FDI inflows and current account deficit in the relevant literature. However, most of the empirical evidence about the relationship between foreign capital inflows and current account deficit are based on cross-sectional and cross-country analysis. Quite apart from general methodological flaws relating to model specification and econometric procedure, there are two fundamental limitations that make results from any cross-country study on the subject rather dubious. First, cross country regression analysis is based on the implicit assumption of “homogeneity” in the observed relationship across countries. Secondly, given vast difference among countries with respect to nature and quality of data, cross country comparison is fraught with danger.

2.3 Empirical Review

A lot of research interest has been shown on the relationship between FDI and economic growth, although most of such work is not situated in Africa especially Kenya. The focus of the research work on FDI and economic growth can be broadly classified into two. First, FDI is considered to have direct impact on trade through which the growth process is assured (Markussen and Vernables, 1998). Second, FDI is assumed to augment domestic capital thereby stimulating the productivity of domestic investments (Driffield, 2001). These two arguments are in conformity with endogenous growth theories (Romer, 1990) and cross country models on industrialization (Chenery et al., 1986) in which both the quantity and quality of factors of production as well as the transformation of the production processes are ingredients in developing a competitive advantage. FDI has empirically been found to
stimulate economic growth by a number of researchers (Glass and Saggi, 1999). Dees (1998) submits that FDI has been important in explaining China’s economic growth, while De Mello (1997) presents a positive correlation for selected Latin American countries. Inflows of foreign capital are assumed to boost investment levels.

Considerable amount of available literature on FDI helps in scrutinizing different aspects of FDI as observed throughout the world. Hossain (2007) showed that the initial impact of an inflow of FDI on BOP is positive but the medium term effect could become either positive or negative as the investors increase their imports of intermediate goods and services, and begin to repatriate profit. Jansen (1995) argued that the impact of FDI on the current account has become complicated by the investment income payments that arise from Foreign Direct Investment.

Lall and Narula (2004) argue that the identification of investment motives is the first step in determining the impact of foreign investments in a country. This is necessary since each motive reflects the stage of economic development in the country of relevance. Naturally, not only the will and motives of the investors are of importance in attracting FDI. Key feature in attracting foreign investors and increasing benefits from them are national policies. According to the United Nations report (2003), the regulatory regime of a desired country can make a location more or less attractive for foreign investors. This regime can put policies in place for maximizing the positive development effects of FDI, while minimizing negative ones.

Blomstrom et al. (1994) report that FDI exerts a positive effect on economic growth, but that there seems to be a threshold level of income above which FDI has positive effect on economic growth and below which it does not. The explanation was that only those countries that have reached a certain income level can absorb new
technologies and benefit from technology diffusion, and thus reap the extra advantages that FDI can offer. Previous works suggest human capital as one of the reasons for the differential response to FDI at different levels of income. This is because it takes a well-educated population to understand and spread the benefits of new innovations to the whole economy. Borensztein et al. (1998) also found that the interaction of FDI and human capital had important effect on economic growth, and suggest that the differences in the technological absorptive ability may explain the variation in growth effects of FDI across countries. They suggest further that countries may need a minimum threshold stock of human capital in order to experience positive effects of FDI.

Lehman (2002) found that structural change in external accounts of a country takes place due to FDI inflows. Trade openness and host country risks are found to increase affiliate profitability of FDI and earning repatriations are not determined through constant dividend payout ratio. Using data for the period 1996-2000 of Brazil and Argentina the study observed that FDI was responsible for causing huge income and profit repatriations that had caused current account deficit in both countries.

Woodward (2003) claimed that FDI flows have contributed substantially to current account deficits. Using data of six economies the results of the study showed that FDI was one of the main factors responsible for current account deficit in these countries. By making FDI analogous to loan, the study argued that subsequent repatriation of the capital from the recipient country was same as repayments of loan. Demekas et al. (2005) concluded that the benefits of FDI had long been recognized for the host countries, including knowledge and technology transfer to domestic firms and the
labour force, productivity spillovers, enhanced competition, and improved access for exports abroad, notably in the source country.

Kumar (2007) concluded that FDI inflows appeared to be risky for developing countries’ economies. FDI being foreign capital led to capital flight in times of extreme financial crisis. The study concluded that FDI may be accompanied with distress sale of domestic assets and proved harmful for the economy. The profits earned through the investment were repatriated to the countries of origin of that foreign investment that had exerted bad impact on current account balance. Mencinger (2008) discussed that the bigger the inflow of FDI led to higher current account deficit as FDI drives local competitors out of business, increases imports and decreases the efficiency acquired by firms from multinational firms. Bhagwati (1998) claimed that impact of FDI on growth appeared to be positive in case of export promoting countries not in case of small developing economies. This study also revealed that the FDI to GDP ratio and current account balance to GDP ratio of eight transition economies had shown a negative relationship.

A causal relationship between FDI and current account was checked by Siddiqui and Ahmad (2007) in Pakistan. They investigated the long-run causal relationship between FDI inflows and current account deficit on quarterly data for Pakistan economy over the period 1976-2005. The Johansen co-integration method and vector error-correction model technique were used for examining the long-run and the short-run dynamics of system respectively. The results indicated only long-run unidirectional causality from FDI to CA.
2.4 Research Gap

The empirical review above has shown the relationship between foreign direct investment and economic development of a country as well as on the balance of payments. But these studies were done in different environments and hence the results may not be generalized to Kenya specifically. There is therefore a gap in literature as regards the foreign direct investment and the balance of payments. This is a gap the present study sought to bridge.
CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the method that was used in the collection of data pertinent in answering the research questions. It is divided into research design, population and sample design, data collection, and data analysis methods.

3.2 Research Design

The study used a correlation design. This is because this method most captures the objectives of the study. In this manner, the study was able to establish the relationship between the variables in the study. This was therefore the appropriate research design in this study.

3.3 Data Collection

The study collected secondary data. This was collected from the Worldbank database, Central Bank of Kenya as well as the Kenya National Bureau of Statistics on all the variables under review. The data was collected for a 20 year period from 1993 to 2012. Annual data was used in this study. The data collected in this regard was imports data, exports data, current account balances, prices of imports, GDP, and FDI.

3.4 Data Analysis

The data so collected was organised in an Excel spreadsheet and prepared for analysis. Descriptive analysis was performed on the data to show the trends on the variables as well as the mean, median, standard deviations, minimum and maximum values. The stationarity of the variables was examined to avoid the existence of spurious estimation results. For this purpose Augmented Dickey Fuller (ADF) test was used for observing the order of integration of the variables. Long-run relationship
was tested by applying Ordinary Least Square (OLS) method. The results were presented in tables and charts.

The study estimated three equations as shown below.

\[ \ln (IMP) = \alpha + \beta_1 \ln (IPR) + \beta_2 \ln (GDP) + \beta_3 \ln (FDI) + \beta_4 \ln (FDI_{t-1}) + \mu \quad \ldots (1) \]

\[ \ln (EXP) = \alpha + \beta_1 \ln (XPR) + \beta_2 \ln (GDP) + \beta_3 \ln (FDI) + \beta_4 \ln (FDI_{t-1}) + \mu \quad \ldots (2) \]

\[ \text{CABECT} = \alpha + \beta_1 \text{FDI} + \beta_2 \text{DUM2008} + \mu \quad \ldots (3) \]

Where:

IMP is the real demand for imports.

EXP is the real exports.

CABECT is current account balance excluding current transfers.

IPR is the relative price of imports (price of imports deflated by GDP deflator).

XPR is the relative price of exports.

GDP is the real GDP.

FDI is the FDI inflows.

DUM2008 is the dummy variable for the 2008 global economic crisis.

The models in equation 1 and equation 2 were employed by Hossain (2008) to estimate the impact of FDI and Bangladesh’s balance of payments. The same are therefore used in this study to estimate the same in Kenya given that the model was applied in developing countries just like Kenya. Equation 3 was used by Jaffri et al. (2012) to examine the relationship between FDI and current account balance of Pakistan. Since Pakistan is a developing country just like Kenya, the model was deemed applicable to the Kenyan environment. This equation was deemed important
and was replicated with a slight modification for the present study by removing the September 11 dummy that was used in the previous study and replacing it with 2008 dummy.
CHAPTER FOUR
DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the results of the study and interpretation thereof. The chapter is organized as follows. The first section presents the descriptive results.

4.2 Descriptive Results

This section presents the results on the trend of the series data used in the study in charts as well as summary descriptive results in a tabular form. This analysis was aided by STATA data analysis software.

Figure 1: Trend of GDP (1993 – 2012)

Source: Research Data
Figure 1 presents the trend of GDP growth over the period covered by the study. As the results show, there has been a linear rise in GDP since 1993 as the log of GDP shows an upward movement in the trend over the years.

**Figure 2: Trend of Imports (1993 – 2012)**

![Graph showing the trend of imports from 1995 to 2015](image)

*Source: Research Data*

Figure 2 shows the trend of imports for the period covered in the study. As shown, the trend depicts an upward linear rise in the value of imports from 1993 to 2012. The value of imports has therefore been increasingly rising over the period covered in the analysis.
Figure 3: Trend of Exports (1993 – 2012)

Source: Research Data

The results in Figure 3 show the trend of exports from 1993 to 2012. As the results show, the study found that there was an upward rise in the value of exports for the entire period covered in the study as shown by the value of log of exports for the period studied. The value of exports has therefore been rising since 1993.
The results in Figure 4 show the trend of relative price of imports (IPR) over the period covered by the study. The log of IPR results shows a somehow U-shaped trend in the value of IPR from 1993 to 2012. Therefore, it can be deduced that the value of IPR reduced from 1995 then rose again towards 2012.
The results shown in Figure 5 show the trend of relative price of exports (XPR) from 1993 to 2012. As the results show, the relative price of exports has been falling over the years from the highest in 1993. In recent years since 2000, XPR has been generally rising. The general trend is a downward slide in the relative price of exports since 1993.
The results in Figure 6 show the trend of FDI from 1993 to 2012. As the results show, it is noted that there has been a cyclical movement in the trend of FDI over the period of analysis. From the chart, it can be deduced that the general trend is a rise in the value of FDI as shown by the log of FDI.

*Source: Research Data*
Figure 7: Trend of CABECT (1993 – 2012)

Source: Research Data

Figure 7 shows the trend of current account balance excluding current transfers (CABECT) for the period 1993 to 2012. As the results show, the value of current account balance has been declining over the years. As the log of current account values shows, the value of CABECT has been falling since 1993.

Table 1: Summary Descriptive Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>20</td>
<td>23.53007</td>
<td>0.529794</td>
<td>22.47278</td>
<td>24.34036</td>
</tr>
<tr>
<td>IMP</td>
<td>20</td>
<td>22.48253</td>
<td>0.636725</td>
<td>21.39264</td>
<td>23.60045</td>
</tr>
<tr>
<td>EXP</td>
<td>20</td>
<td>22.1978</td>
<td>0.513685</td>
<td>21.52869</td>
<td>23.02782</td>
</tr>
<tr>
<td>IPR</td>
<td>20</td>
<td>-1.04755</td>
<td>0.150712</td>
<td>-1.29611</td>
<td>-0.73991</td>
</tr>
<tr>
<td>XPR</td>
<td>20</td>
<td>-1.33228</td>
<td>0.172394</td>
<td>-1.60101</td>
<td>-0.94408</td>
</tr>
<tr>
<td>FDI</td>
<td>19</td>
<td>17.9519</td>
<td>1.189125</td>
<td>15.48371</td>
<td>20.40724</td>
</tr>
<tr>
<td>CABECT</td>
<td>14</td>
<td>26.84494</td>
<td>0.909267</td>
<td>24.37867</td>
<td>27.44241</td>
</tr>
</tbody>
</table>

Source: Research Data
Table 1 presents a summary descriptive results on all the variables used in the study. The results show the number of observations for each variable, the mean, standard deviation, minimum and maximum values for each of the variables in this study. As the results show in Table 1, LnGDP ranged from 22.4 to 24.34 with a mean of 23.53 and a standard deviation of 0.53. The results showed that the LnIMP ranged from 21.39 to 23.60 with a mean of 22.48 and a standard deviation of 0.63. It is also noted that LnEXP ranged from 21.53 to 23.03 with a mean of 22.19 and a standard deviation of 0.51. The LnIPR ranged from -1.29 to -0.74 with a mean of -1.05 and a standard deviation of 0.15. The results also showed that LnXPR ranged from -1.60 to -0.94 with a mean of -1.33 and a standard deviation of 0.17. It is also shown that LnFDI ranged from 15.48 to 20.41 with a mean of 17.95 and a standard deviation of 1.19. The results also showed that LnCABECT ranged from 24.38 to 27.44 with a mean of 26.84 and a standard deviation of 0.91.

### 4.3 Unit Root Test

The study tested for the existence of unit roots in the data used in the study. This test was done using ADF test in STATA software. The results are shown in Table 2.

<table>
<thead>
<tr>
<th>Variable</th>
<th>ADF Statistic</th>
<th>Level</th>
<th>1st difference</th>
<th>2nd difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>0.713 (0.8433)</td>
<td>-2.201 (0.2059)</td>
<td>-4.576 (0.0001)</td>
<td></td>
</tr>
<tr>
<td>IMP</td>
<td>-0.353 (0.9177)</td>
<td>-3.074 (0.0285)</td>
<td>-3.945 (0.0017)</td>
<td></td>
</tr>
<tr>
<td>EXP</td>
<td>0.218 (0.9733)</td>
<td>-3.127 (0.0246)</td>
<td>-6.012 (0.0000)</td>
<td></td>
</tr>
<tr>
<td>IPR</td>
<td>-0.547 (0.8825)</td>
<td>-4.447 (0.0002)</td>
<td>-6.856 (0.0000)</td>
<td></td>
</tr>
<tr>
<td>XPR</td>
<td>-2.582 (0.0969)</td>
<td>-2.867 (0.0493)</td>
<td>-6.013 (0.0000)</td>
<td></td>
</tr>
<tr>
<td>FDI</td>
<td>-3.357 (0.0125)</td>
<td>-6.251 (0.0000)</td>
<td>-6.432 (0.0000)</td>
<td></td>
</tr>
<tr>
<td>FDI_1</td>
<td>-6.251 (0.0000)</td>
<td>-0.990 (0.7569)</td>
<td>-3.704 (0.0041)</td>
<td></td>
</tr>
<tr>
<td>CABECT</td>
<td>3.754 (1.0000)</td>
<td>-0.990 (0.7569)</td>
<td>-3.704 (0.0041)</td>
<td></td>
</tr>
</tbody>
</table>

*Source: Research Data*
As the results in Table 2 show, GDP and CABECT were stationary in second difference at the 1% level of significance. The results also show that IMP, EXP, and XPR were stationary in the first difference at the 5% level of significance. IPR was stationary in the first level at the 1% level of confidence. The results also reveal that both FDI and FDI_1 were stationary in level at the 5% and 1% level of significance respectively. These results show that the OLS regression between FDI and balance of payment cannot be run as had been envisaged before and therefore the models need to be modified for an OLS regression using the stationary values only.

4.4 OLS Regression Test

The three models were modified to include only values at which the variables were stationary. The results in Table 3 present the OLS regressions of the three modified models. The results show that for model 1, relative price of imports (one-year lag on IPR) has a positive and significant impact on imports at the 1% level of significance. GDP and FDI were not significant in model 1. The model accounted for 59.6% of the variance in imports. The F statistic of 4.43 was significant at the 5% level of confidence suggesting that the model was jointly fit in explaining the variance in imports.

For model 2, relative price of exports and GDP had positive and significant impacts on exports at the 5% level of significance. FDI and lagged FDI did not have a significant impact on exports at all acceptable levels of significance. The model accounted for 52.6% of the variance in exports. The F statistic of 3.33 was significant at the 5% level of confidence suggesting that the model was jointly fit in explaining the variance in exports.
Table 3: Relationship between FDI and Balance of Payments

<table>
<thead>
<tr>
<th>Variable</th>
<th>IMP_1</th>
<th>EXP_1</th>
<th>CABECT_2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coef</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPR_1</td>
<td>0.849***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XPR._1</td>
<td>0.465**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP_2</td>
<td>0.478</td>
<td>0.540**</td>
<td></td>
</tr>
<tr>
<td>FDI</td>
<td>0.011</td>
<td>0.013</td>
<td>-0.100</td>
</tr>
<tr>
<td>FDI_1</td>
<td>0.005</td>
<td>-0.002</td>
<td></td>
</tr>
<tr>
<td>Dummy2008</td>
<td></td>
<td></td>
<td>0.053</td>
</tr>
<tr>
<td>Constant</td>
<td>-0.116</td>
<td>-0.146</td>
<td>1.698</td>
</tr>
<tr>
<td>Obs</td>
<td>17</td>
<td>17</td>
<td>11</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.596</td>
<td>0.526</td>
<td>0.184</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.461</td>
<td>0.368</td>
<td>0.020</td>
</tr>
<tr>
<td>F</td>
<td>4.43**</td>
<td>3.33**</td>
<td>0.90</td>
</tr>
</tbody>
</table>

Source: Research Data

The results in Table 3 also show that for model 3, FDI did not have a significant impact on CABECT at all acceptable levels of significance. Further, the Dummy2008 did not influence CABECT at all acceptable levels of significance. This model accounted for only 18.4% of the variance in CABECT. The F-statistic of 0.90 was also insignificant suggesting that the model was not fit to jointly explain the impact on CABECT.
CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of findings, conclusions made from the study, limitations of the study, recommendations for policy and practice, and areas for further research.

5.2 Summary of Findings

The study found that LnGDP ranged from 22.4 to 24.34 with a mean of 23.53 and a standard deviation of 0.53. The results showed that the LnIMP ranged from 21.39 to 23.60 with a mean of 22.48 and a standard deviation of 0.63. It is also noted that LnEXP ranged from 21.53 to 23.03 with a mean of 22.19 and a standard deviation of 0.51. The LnIPR ranged from -1.29 to -0.74 with a mean of -1.05 and a standard deviation of 0.15. The results also showed that LnXPR ranged from -1.60 to -0.94 with a mean of -1.33 and a standard deviation of 0.17. It is also shown that LnFDI ranged from 15.48 to 20.41 with a mean of 17.95 and a standard deviation of 1.19. The results also showed that LnCABECT ranged from 24.38 to 27.44 with a mean of 26.84 and a standard deviation of 0.91.

The study found that the relative price of imports has a positive and significant impact on imports at the 1% level of significance while GDP and FDI were not significant in the model. This model accounted for 59.6% of the variance in imports and it was jointly fit in explaining the variance in imports.

The study found that the relative price of exports and GDP had positive and significant impacts on exports at the 5% level of significance while FDI and lagged FDI did not have a significant impact on exports at all acceptable levels of
significance. The model accounted for 52.6% of the variance in exports and was jointly fit in explaining the variance in exports.

The results showed that FDI and Dummy2008 did not have a significant impact on CABECT at all acceptable levels of significance. The model accounted for only 18.4% of the variance in CABECT and it was not fit to jointly explain the impact on CABECT.

5.3 Conclusion

The study concludes that the relative price of imports affects imports. This means that the rise in the relative price of imports leads to a rise in imports. The study also concludes that the relative price of exports and GDP impact on exports. Therefore, as the relative price of exports rises, so does the value of exports. The study also concludes that FDI does not impact on exports, imports, or CABECT. There is therefore no evidence of FDI having a significant impact on balance of payments in Kenya.

5.4 Limitations of the Study

This study was focused on Kenya. This means that the results are unique to Kenya and may not be generalised to other countries which were not the focus of the present study. Therefore, such conclusions for other countries should be approached with this fact in mind.

The study also collected data for 1993 – 2012. This is a fairly long period but may not be long enough to observe the changes in the series. The sample period may not be very valuable for some of the interpretations that involve time series where long run relationships need to be established.
5.5 Implications and Recommendations

The study recommends that since FDI inflows have not been large enough to have a significant influence on balance of payments, it is important to policies be instituted to attract more FDI inflows in Kenya in order to gain from the advantages that come with FDI inflows.

The study also recommends that relative price of imports need to be focused on if the imports are to be contained in order to have a favorable balance of payment. Therefore, this needs to be kept low for the imports not to outweigh the exports and therefore hurt the balance of payments.

It is also recommended that the relative prices of exports be improved in order to improve the value and volumes of exports. Doing this will strengthen the balance of payments and therefore lead to better economic growth.

5.6 Suggestions for Further Research

The study suggests that this study be replicated in other East African countries to examine if the results in this study still hold true for other East African nations. The study suggests that the sample years need to be increased from the current to beginning of independence (1963) in order to examine how FDI has affected balance of payments. Further, if quarterly data can be used, it would provide more data points for the regressions to be performed.
REFERENCES


Demekas, D. G., B. Horváth, E. Ribakova and Yi Wu (2005), Foreign Direct Investment in Southeastern Europe: How (and how much) can policies help? *IMF Working Paper* No. 05/110, European Department, Washington, USA.


Meyer K. E., (2003), FDI Spill Over In Emerging Markets: a Literature Review and 

Munteanu, S. and Tudor, E. (2009), The influence of international economic crisis to 
Romanian foreign direct investments, The Ninth International Conference 
Investments and Economic Recovery, Economie seria Management, Vol.12, 
nr.1

Musau, K. A (2011), The impact of Foreign Direct Investments (FDIs) on Economic 
Growth and Development in Kenya. Unpublished MBA Research Paper, 
University of Nairobi.

Performance: The Case of Kenya, Draft final report prepared for the AERC 
collaborative project on Explaining African Economic Performance

Nyamwange, M (2009), Foreign direct investment in Kenya, MPRA Paper No. 34155

York.


Rasiah, R. and Gachino, G. (2005), Are Foreign Firms more Productive, and Export 
and Technological Intensive than Local Firms in Kenyan Manufacturing? 
Oxford Development Studies. 33(2): 211-228

Preference in Kenyan Export Processing Zones. South African Journal of 

Economy, 94:1002–38.

Sarno, L. and Taylor, M. (1999), Hot Money Accounting Label And Premature 
Capital Flows To Developing Countries: An Empirical Investigation, Journal 
of Development Economics, 59:337-64

Siddiqui, D. A. and Ahmad, M. H. (2007), The Causal relationship between Foreign 
Direct Investment and Current Account: An Empirical Investigation for 
Pakistan Economy. MPRA Paper No. 19743.


### Appendix A: Study Raw Data

<table>
<thead>
<tr>
<th>Year</th>
<th>LnGDP</th>
<th>LnIMP</th>
<th>LnEXP</th>
<th>LnIPR</th>
<th>LnXPR</th>
<th>LnFDI</th>
<th>FDI-1</th>
<th>LnCABECT</th>
<th>Dummy2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>22.47278</td>
<td>21.39264</td>
<td>21.52869</td>
<td>-1.08014</td>
<td>-0.94408</td>
<td>18.79675</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>1994</td>
<td>22.60012</td>
<td>21.61793</td>
<td>21.69696</td>
<td>-1.07219</td>
<td>-0.99316</td>
<td>15.82136</td>
<td>20.14662</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>1995</td>
<td>22.92562</td>
<td>21.98796</td>
<td>21.80451</td>
<td>-0.93767</td>
<td>-1.12111</td>
<td>17.56004</td>
<td>20.41519</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>23.21199</td>
<td>22.07603</td>
<td>21.83369</td>
<td>-1.13596</td>
<td>-1.3783</td>
<td>18.50385</td>
<td>20.45719</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>1997</td>
<td>23.29708</td>
<td>22.13779</td>
<td>21.81368</td>
<td>-1.15929</td>
<td>-1.48341</td>
<td>17.94421</td>
<td>20.29774</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>23.36901</td>
<td>22.12172</td>
<td>21.768</td>
<td>-1.2473</td>
<td>-1.60101</td>
<td>17.09447</td>
<td>20.31447</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td>23.28018</td>
<td>21.98408</td>
<td>21.71154</td>
<td>-1.2961</td>
<td>-1.56864</td>
<td>17.76586</td>
<td>20.40224</td>
<td>27.44241</td>
<td>0.0</td>
</tr>
<tr>
<td>2000</td>
<td>23.26529</td>
<td>22.11711</td>
<td>21.73224</td>
<td>-1.14818</td>
<td>-1.53305</td>
<td>18.52418</td>
<td>20.44745</td>
<td>27.39114</td>
<td>0.0</td>
</tr>
<tr>
<td>2001</td>
<td>23.28714</td>
<td>22.17894</td>
<td>21.81448</td>
<td>-1.1082</td>
<td>-1.47266</td>
<td>15.48371</td>
<td>20.20306</td>
<td>27.37387</td>
<td>0.0</td>
</tr>
<tr>
<td>2002</td>
<td>23.29952</td>
<td>22.10466</td>
<td>21.90913</td>
<td>-1.19486</td>
<td>-1.39038</td>
<td>17.13399</td>
<td>20.39797</td>
<td>27.42545</td>
<td>0.0</td>
</tr>
<tr>
<td>2003</td>
<td>23.42493</td>
<td>22.22247</td>
<td>22.00142</td>
<td>-1.20246</td>
<td>-1.42351</td>
<td>18.21903</td>
<td>20.44106</td>
<td>27.4095</td>
<td>0.0</td>
</tr>
<tr>
<td>2004</td>
<td>23.50179</td>
<td>22.38909</td>
<td>22.17792</td>
<td>-1.11271</td>
<td>-1.32387</td>
<td>17.64554</td>
<td>20.31428</td>
<td>27.34572</td>
<td>0.0</td>
</tr>
<tr>
<td>2005</td>
<td>23.65381</td>
<td>22.63132</td>
<td>22.39886</td>
<td>-1.02249</td>
<td>-1.25495</td>
<td>16.87006</td>
<td>20.33044</td>
<td>27.24424</td>
<td>0.0</td>
</tr>
<tr>
<td>2006</td>
<td>23.83696</td>
<td>22.86496</td>
<td>22.53176</td>
<td>-0.972</td>
<td>-1.3052</td>
<td>17.74094</td>
<td>20.40782</td>
<td>27.15465</td>
<td>0.0</td>
</tr>
<tr>
<td>2007</td>
<td>24.02783</td>
<td>23.0523</td>
<td>22.71026</td>
<td>-0.97553</td>
<td>-1.31757</td>
<td>20.40724</td>
<td>21.04417</td>
<td>27.06798</td>
<td>0.0</td>
</tr>
<tr>
<td>2008</td>
<td>24.13986</td>
<td>23.26634</td>
<td>22.85276</td>
<td>-0.8352</td>
<td>-1.2871</td>
<td>18.37553</td>
<td>18.01334</td>
<td>26.88913</td>
<td>1.0</td>
</tr>
<tr>
<td>2009</td>
<td>24.14362</td>
<td>23.16216</td>
<td>22.72282</td>
<td>-0.98147</td>
<td>-1.4208</td>
<td>18.57132</td>
<td>20.39569</td>
<td>26.84762</td>
<td>0.0</td>
</tr>
<tr>
<td>2010</td>
<td>24.19517</td>
<td>23.28026</td>
<td>22.91502</td>
<td>-0.91491</td>
<td>-1.28015</td>
<td>18.99766</td>
<td>20.4512</td>
<td>26.57768</td>
<td>0.0</td>
</tr>
<tr>
<td>2011</td>
<td>24.23841</td>
<td>23.46231</td>
<td>23.00436</td>
<td>-0.77609</td>
<td>-1.23405</td>
<td>19.63039</td>
<td>20.56916</td>
<td>25.28117</td>
<td>0.0</td>
</tr>
<tr>
<td>2012</td>
<td>24.34036</td>
<td>23.60045</td>
<td>23.02782</td>
<td>-0.73991</td>
<td>-1.31255</td>
<td>19.71472</td>
<td>24.37867</td>
<td>0.0</td>
<td></td>
</tr>
</tbody>
</table>