

**DETERMINANTS OF FOREIGN DIRECT INVESTMENT IN
MALAWI**

MA (Economics) Thesis

By

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fulfillment of the requirements of the degree of Master of Arts in Economics**

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DECLARATION

I here declare that this is my original work and that it has not been presented for a degree at this or any other university. Work of others used in this study has been appropriately acknowledged. Any errors contained here in are entirely mine.

Candidate _____

Date _____

CERTIFICATE OF APPROVAL

We declare that this thesis is from the student's own work and effort and where he has used other sources of information, it has been acknowledged. This thesis is submitted with our approval.

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LIST OF ACRONYMS

AGOA:	Africa Growth Opportunity Act
COMESA:	Common Market for Eastern and Southern Africa
EPZ:	Export Processing Zones
EU-ACP:	European Union Africa Caribbean Pacific Agreement
FDI:	Foreign Direct Investment
GDP:	Gross Domestic Product
MDG:	Millennium Development Goals
MIPA:	Malawi Investment Promotion Agency
MNEs:	Multi-National Enterprises
NEPAD:	New Partnership for Africa's Development
NSO:	National Statistical Offices
SAPs:	Structural Adjustment Programmes
SSA:	Sub Saharan African
SADC:	Southern African Development Community
TNCs:	Transnational Corporations
UNCTAD:	United Nations Conference on Trade and Development

DEDICATION

I specially dedicate this to Jane Karen Mughandira, my loved sister. You are my sister and best friend!

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ABSTRACT

The study provides an empirical assessment of the determinants of FDI in Malawi. This is coming from the background that previously most studies in Malawi have ignored this issue of FDI. But FDI is increasingly becoming a source of growth and development in the SSA. The study used a time series analysis and OLS technique to obtain the results. The factors investigated were, tax rates (tax incentives), the real exchange rate, macroeconomic instability, the political environment, openness, trade liberalization, market size and growth, and export oriented development policy. The study period covered was from 1970-2005.

The empirical results suggest that the most dominant determinants of FDI in Malawi among those that were included in the study are market size and growth, export-orientation policy, corporate taxes, the real exchange rate, the political environment and macroeconomic stability. These are followed by openness and trade liberalization which did not have a significant impact on FDI during the study period. The results show that macroeconomic stability, the political environment, a stable exchange rate, and export oriented policy have a positive significant impact on FDI flows to Malawi. In addition to this, a broad domestic market base, market potential and tax incentives play a significant role in attracting FDI in Malawi.

Malawi can therefore increase FDI inflows in the short term by streamlining its investment regulatory framework, implementing policies that promote macroeconomic economic stability. In the long run, more FDI can be attained by developing a more efficient legal framework and ensuring a favorable political atmosphere. Furthermore Malawi can attract more FDI by broadening its domestic market base. These steps will not only generate sustained growth prospects and hence market potential, but will also provide a conducive environment for FDI in Malawi.

CHAPTER ONE

INTRODUCTION

1.1 Background

This study will provide an empirical assessment of the factors that significantly influence the foreign investors' decisions to invest in a country. Foreign Direct Investment (FDI) has become increasingly recognized to provide a package of external resources that can contribute to economic development. Thus, if well managed, it offers either a complementary or alternative channel through which host countries can stimulate and sustain their economic growth rates. Bende-Nabende (2002:2). Therefore, any efforts to attract such foreign capital flows are a very important government initiative for the economic development of any country. Thus it is instrumental to identify those factors that have the potential to either impede or induce FDI flows into host countries.

In order not to confuse Foreign Direct Investment (FDI) with other kind of investments that cross national borders, this paper will use the definition of FDI as determined and reported by UNCTAD (2000:267), where FDI is defined as an investment involving a long-term relationship and reflecting a lasting interest and control of a resident entity in one economy (foreign direct investor or parent enterprise) in an enterprise resident in an economy other than that of the foreign direct investor (FDI enterprise or affiliate enterprise or foreign affiliate). it is reported. In the international reporting of statistics, FDI is regarded as investments that have the following three characteristics (ibid.):

- Equity capital; i.e. the foreign direct investor's purchase of shares of an enterprise in a country other than its own;
- Reinvested earnings; i.e. the investor's share of earnings not distributed as dividends by affiliates or earnings not remitted to the direct investor. Such retained profits by affiliates are reinvested;

- Intra-company loans or intra-company debt transactions; i.e. short- or long-term borrowing and lending of funds between direct investors (parent enterprises) and affiliate enterprises.

In the late 1970s, Malawi like the rest of the developing countries was facing serious fiscal and financial imbalances. This called for the need to undergo structural reforms, hence the Structural Adjustment Programs (SAPs) implemented since 1981. It was envisaged that these reforms would remove structural and institutional imperfections and, in consequence, encourage foreign capital flows in the country GOM (2002). Among other things, the SAPs implemented several policies and measures, some of which impacted on investment during the period and these can broadly be categorized into: price decontrols, liberalization of agricultural marketing, financial sector liberalization which included active exchange rate policy, public enterprises or parastatal reforms. In principle these reforms were aimed at allowing the free market forces to determine resource use hence the link with investment.

As part of improving the investment climate in Malawi, the government enacted several pieces of legislation. The Investment Promotion Act of 1991 provides for a conducive investment climate in Malawi, as stated in the Investment Policies. The same Act establishes MIPA¹ as an institute mandated to attract, promote and facilitate investment by ensuring streamlined investment procedures and supportive policy framework.

Thus there has been a series of investment incentives that have been instituted in Malawi in an effort to attract foreign capital in the country. Some of the general incentives include; a competitive corporate tax rate of 30% and low import duties, 40% investment allowance on qualifying expenditures for new building and machinery, duty free importation of heavy goods vehicles with capacity of at least ten tonnes, no withholding tax on dividends, duty free importation of raw materials in the manufacturing industry and many more². (MIPA, Investment Promotion Publication, 1994).

¹ MIPA- this is an acronym standing for Malawi Investment Promotion Agency. This was established in an effort to attract and facilitate foreign direct investments in Malawi.

² There are also some fiscal incentives on top of the general incentives listed above. Some of these fiscal incentives are, no licensing requirements for importing foreign exchange, full repatriation of foreign investor profits, dividends investment capital and interest principal payments for international loans, interests are market based and there are no government controls on credit

An important aspect of the Investment Promotion Act was the establishment of the procedures for setting up Export Processing Zones (EPZ) programme in 1995. EPZs give special incentives to investors involved in manufacturing of goods set for export. This programme boasts of successful operations in labour intensive industries such as in the apparel industry. Some of the operations are; zero per cent corporate tax, no withholding tax on dividends, no duty on capital equipment and raw materials, no excise taxes on locally produced raw, materials and packaging materials, no surtaxes.

1.2 Problem Statement

The role of FDI as a source of capital has become increasingly important to Sub-Saharan Africa (SSA) as this could help the continent to achieve the Millennium Development Goals (MDG) of reducing poverty rates. Since income levels and domestic savings in the region are low, a bulk of the finance will have to come from abroad official finance (such as aid from the World Bank) or from private foreign investment. The importance of private foreign investment as source to capital is reflected in the declaration of the New Partnership for Africa's Development (NEPAD) agreement, which notes that "NEPAD seeks to increase private capital flows to Africa, as an essential component of a sustainable long-term approach to filling the resource gap." Asiedu (2003).

The discussion above seems to suggest that FDI is crucial to Africa. Thus it is necessary to understand the factors that can affect FDI inflows. In Malawi most studies on FDI have tended to focus on FDI in relation to the other sectors of the economy. There is a study by Saiwa (2000) which analysed the impact of Foreign Direct Investment on domestic capital formation. Ndalama (1999) analyzed the determinants of gross domestic savings in Malawi. Very few studies have explored FDI and its determinants in Malawi. Where studies have been carried out on determinants of FDI, some important factors have been ignored. Nyirenda (2000) analyzed the determinants of capital flights in Malawi and Kumwenda (1994) did a study on determination of private investment in Malawi. These studies addressed some of the factors but notably some important factors were ignored. For instance, these studies did not address issues of market size and market growth, political environment, macroeconomic instability, FDI liberalization among other things.

Moreover despite a more liberal regime³ and efforts to attract investment including the establishments of institutions like MIPA, and various tax and financial incentives as mentioned above, FDI inflows to Malawi remain dismal. For instance, between 1993 and 2001, Malawi only managed to attract a total of US\$163.9 million⁴ FDI, much of it from South Africa. (BOP survey, 2000-2001:17).

Among other things, declining export prices for tobacco, unfavourable climatic conditions, and institutional weaknesses have contributed to low FDI inflows to Malawi (GOM, 2002:8). Thus, as far as Malawi is concerned, it is important to understand the factors that have the potential to stimulate and sustain FDI inflows into the country so that appropriate policies can be put in place which can induce FDI inflows. The study at hand will assess some of the factors that have the potential of stimulating FDI inflows but have previously been neglected in the studies cited above in Malawi.

1.3 Objective of the Study

The overall objective of this study is to provide an empirical assessment of some of the factors that influence the Transnational corporations' (TNCs') investment decision-making process in Malawi. The investigation builds on previous research on FDI in SSA and specifically focuses on the determinants of FDI in Malawi. More specifically the study seeks to;

- (i) Investigate if domestic market size and market growth have any significant impact on FDI inflows.
- (ii) Analyze whether corporate tax rate and the exchange rate have a negative significant effect on FDI inflows.
- (iii) Assess the impact of export orientation policy and trade liberalization on FDI inflows.
- (iv) Analyze whether the political environment and inflation have any effect on FDI inflows.

³ A more liberal regime here refers to the liberalization of the exchange rate, trade reforms, which among other things saw the liberalization of the exchange rate system, interest rate liberalization, and trade liberalization. Interest rate liberalization came into effect in 1987, while exchange rate and trade liberalization were instituted in 1988.

⁴ About US\$20 million per year.

1.4 Test Hypotheses

- (i) Domestic market size and market growth have no significant positive effect on FDI inflows.
- (ii) An increase in the corporate tax rate and a change in the exchange rate will increase FDI inflows.
- (iii) Export orientation policy and trade liberalization have a significant negative effect on FDI inflows.
- (iv) The Political environment and a rise in inflation increase FDI inflows

1.5 Significance of the study

This study will endeavour to establish whether the aforementioned variables do indeed significantly influence foreign investors' decisions to invest in Malawi. This paper is important to both policymakers and academics. First, with regards to the research on the determinants of FDI to Malawi, there appears to be a dearth of literature. Thus far only two studies have been identified on determinants of FDI in Malawi, as cited above. The paper also contributes to the literature by empirically examining the impact of several important variables, such as macroeconomic stability, market size and market growth, and the political environment on FDI flows to Malawi. Investor survey results suggest that these factors play a vital role in investment decisions to Malawi (BOP survey, 2000-2001). Surprisingly, studies in Malawi have ignored these variables in their analysis. Thus, the paper attempts to reconcile empirical results with the existing survey data. This study will also help in the area of policy formulation. Thus from the results of this study, appropriate policies can be put in place that can help to woo foreign investors in the country.

1.6 Organization of the Study.

The rest of the paper has been organised as follows; Chapter two highlights the trends in FDI in Malawi and also discusses the evolution of policies on FDI. Chapter three gives the theoretical economic arguments on FDI inflows and determinants and further reviews some of the empirical findings on this area. Chapter four highlights the methodology

adopted in this study. Chapter five will give estimation results and their empirical interpretation, as well as results of some diagnostic tests. Lastly chapter six will give a summary conclusion of findings and policy recommendations.

CHAPTER TWO

TRENDS IN FOREIGN DIRECT INVESTMENT IN MALAWI

2.1 Economic background and the Evolution of Policies and Investment Incentives (Since 1980)

In the late 1970s, Malawi, like the rest of the developing countries, was facing serious fiscal and financial imbalances. This called for the need to undergo structural reforms, hence the Structural Adjustment Programs (SAPs) implemented since 1981. It was envisaged that reforms would remove structural and institutional imperfections and, in consequence, encourage foreign private investment in the country, GOM, (2002:12)

Malawi has been implementing SAPs since 1981. The general objectives of the adjustment programmes were:

- (i) Diversification of Malawi's export base
- (ii) Encouragement of efficient import substitution
- (iii) Ensuring appropriate price and income policies
- (iv) Improvement of the public sectors performance
- (v) Strengthening of the government's economic planning and monitoring capabilities.

Prior to these reforms, administrative controls worked as hindrances to efficient allocation of resources due to existing price controls and structural rigidities, including bureaucratic tendencies in investment approval processes. Among other things, the SAPs implemented several policies and measures, some of which impacted on investment during the period and these can broadly be categorized into: Price decontrols; Liberalization of agricultural marketing; Financial Sector liberalization which included active exchange rate policy; Public enterprises or parastatal reforms; Liberalization of burley growing and marketing by smallholder farmers, (Ibid).

These reforms were aimed at allowing the free market forces to determine resource use hence the link with investment. The government of Malawi enacted several legislations so as to woo private investment into the country. Thus the Investment Promotion Act of 1991 provides for a conducive investment climate in Malawi, as stated in the Investment Policies. It is the same Act that established MIPA as an institution mandated to attract, promote and facilitate investment by ensuring streamlined investment procedures and supportive policy framework.

Between 1999 and 2000, the world economy was in the process of recovery following the 1998 Crisis that occurred in Asia. The Malawi economy posted slowed economic growth from 3.6 percent in 1999 to 2.1 percent in 2000, mainly on account of deceleration in the agricultural sector attributable to sluggish performance of small-scale agriculture particularly in tobacco and maize GOM, (2002). Lower than anticipated donor inflows during the period precipitated developments in the macroeconomic environment as budgetary gaps translated into heavy domestic borrowing. This put pressure on lending rates and in turn triggered further negative responses from inflation and exchange rates. According to the 2001 Economic Report, the bank rate went up from 47.0 percent in mid 2000 to 61.3 percent by the beginning of 2001. The inflation rate rose from 30.2 percent in January 2000 to 35.4 percent by December 2000. At the same time, the exchange rate of the Kwacha against the US dollar shot up from K43.6 in January 1999 to K80.5 by December 2000. These macroeconomic developments compounded the operating environment as movements in the exchange rate made business planning difficult while high interest rates scared off investments, (Ibid).

After liberalization of the exchange controls, there has been an influx of unmonitored foreign exchange inflows, and outflows in the form of private investments and remittances. The mushrooming of the foreign exchange bureaus has created another problem of misreporting and failing to report at all on foreign exchange transactions. In this regard, the balance of payments statistics are underreported. Taking cognizance of this problem and an attempt to address it, the RBM has put in place a new system for tracking private capital transactions including registration of foreign investors in Malawi.

The investor perception survey (2002) in Malawi was undertaken as part of the larger Private Capital Stocks and Flows monitoring survey. In this survey most foreign companies were interviewed on some factors that they thought were affecting their operations in the country.

Almost all the companies interviewed complained about high interest rates, inflation, and the negative effect of the depreciation of the Kwacha. The study showed that, on average, 69 percent of respondents indicated that inflation rates, interest rates and depreciation of the Malawi Kwacha negatively affect investment. The average scores for inflation and interest rates were 4.2 while that of depreciation of the Kwacha was 4.0.

In terms of domestic market size, most investors indicated that their market share has been reduced following economic liberalization that saw the influx of cheaper imported products. Given the stagnating levels of per capita income, this has implied that the domestic market in Malawi has been shrinking. However, companies that export indicated that there are market expansion opportunities under SADC and COMESA as the two trade blocks move into a freer trade regime¹¹. Furthermore, some investors did welcome the Africa Growth Opportunity Act (AGOA) and the European Union Africa Caribbean Pacific Agreement (EU-ACP) under the Everything But Arms (EBA) initiative, GOM (2002).

In assessing the impact of trade policy on investment decision, the responses of firms were normally distributed with the majority (64 percent) indicating that the prevailing trade regime generally has a positive or neutral effect on investments. In terms of sectors, positive ratings came from firms in agriculture, construction and real estate sectors while the rating of trade policy by manufacturing firms was generally adverse.

According to the survey results, the majority of investors believe that a good political system and good governance are catalytic to investment. Following the ushering in of the new political dispensation in 1993, coupled with economic liberalization policies, there was mushrooming of private industries in the country. There had particularly been a noticeable increase in the number of establishments in wholesale and retail trade, hotels and restaurants immediately after the multi-party era as evidenced by the share of this sector to GDP, which was 27.7 percent in 1994 and was at 20.8 percent in 2000. Despite receiving the biggest portion of FDI, the performance of the manufacturing sector has been so dismal, and its contribution to GDP has stagnated around 12 percent. According to the Perception Survey results, the opening up of the economy in the context of SADC and COMESA has negatively affected the industry through increased competition and removal of protection (reduced tariffs). Some respondents cited unfair competition brought about by smuggling. The survey also showed that most of the manufacturing companies depend on imported inputs, and given the depreciation of the Kwacha during the period under review, the manufacturing sector was put at a competitive disadvantage. Nevertheless, some industries benefited from COMESA, especially the tobacco industry through exportation of tobacco to non-traditional markets like Egypt. (Ibid)

2.2 Trends in Foreign Direct Investment in Malawi

2.2.1 Background and general trends in FDI inflows and Gross Domestic Product (GDP)

Figure.1 below shows the trends in real FDI from the period 1970 to 2003. From the figure, it is evident that real FDI has been fluctuating in the given time period. Real FDI fell between 1973 and 1976 from about 6million kwacha to zero and there was a sudden increase in FDI inflows from K0 million in 1976 to about K11million 1981 (see Figure.1 below). But from 1981, FDI inflows started to decrease at a steady rate until 1986. From 1987, FDI started to increase and this could be attributed to the a more liberal regime which led to the liberalization of the exchange rate, trade reforms, which among other things saw the liberalization of the exchange rate system, interest rate liberalization, and trade liberalization. Interest rate liberalization came into effect in 1987, while exchange rate and trade liberalization were instituted in 1988 (BOP survey, 2001). All these could

partly explain the sharp rise in FDI inflows from 1986 to sometime around the 90's. Malawi registered the highest level of FDI between 1998 and 1999 and immediately after the year 1999, there was a sharp fall in FDI inflows and the lowest level of FDI was recorded in 2001 (see Fig.1 below). The average Real FDI between 1970 and 2005 stood at K4.77 Million.

Figure 1: Trends in Real FDI (1970-2003)

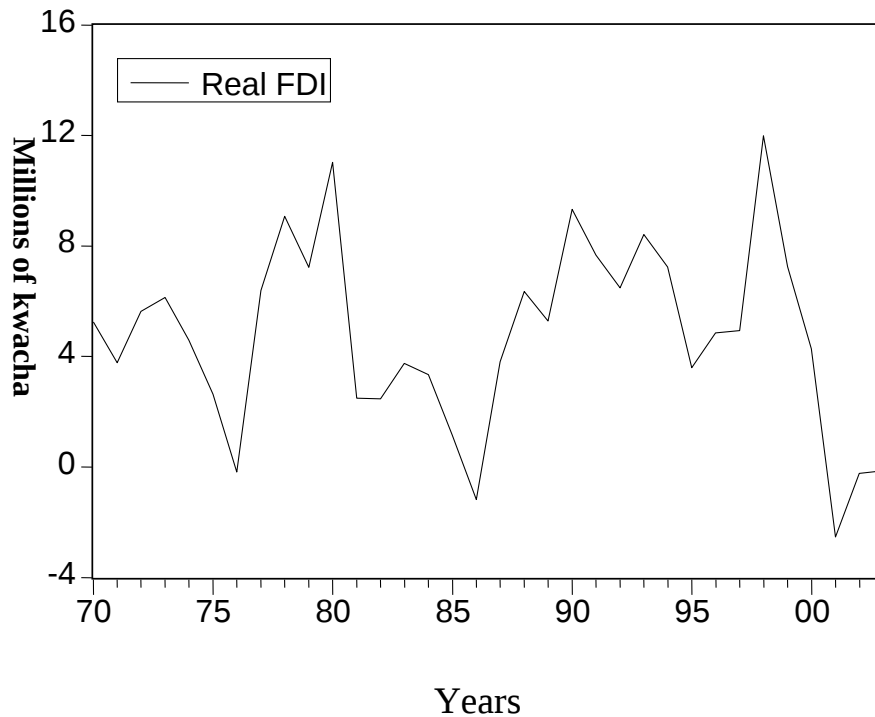


Figure.2 below shows trends in FDI expressed as a percentage of GDP. It shows that except for a spike in 1973, there was a steady decrease in FDI inflows expressed as a percentage of GDP from about 3% in 1974 to about 0% in 1979. Between 1980 and 1995, FDI inflows as a percentage of GDP were fluctuating around 0%. Following multiparty elections, there was a sudden increase in FDI inflows as a percentage of GDP from 1995

going upwards. Actually FDI inflows initially rose from 0% to about 1.3% of GDP in 1996 and fell temporarily to 0.8% in 1997 before rising again to about 2.1% in 1999. It can be noted from the graph that FDI inflows as a percentage of GDP fluctuated around 0% and 4% from 1970 to 2003.

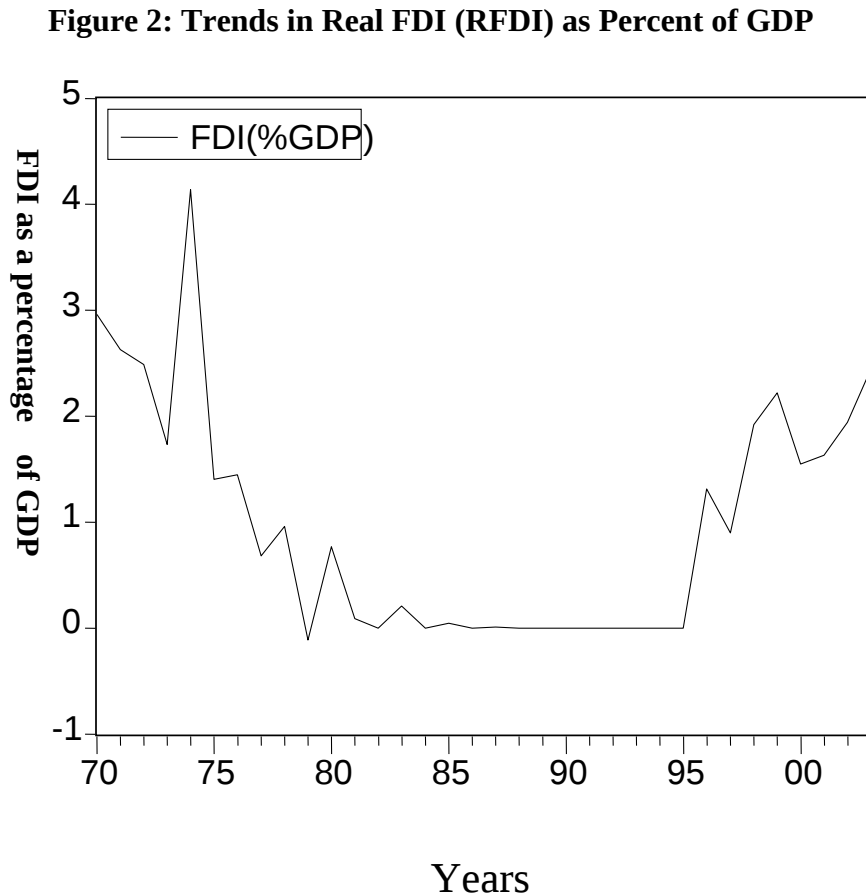


Table 1 below shows the inward FDI flows from 1980 to 2004, decomposed according to the type of investment coming in the host country. We have FDI coming in as equity, re-invested earnings and intra-company loans⁵. It is quite evident from the table below that

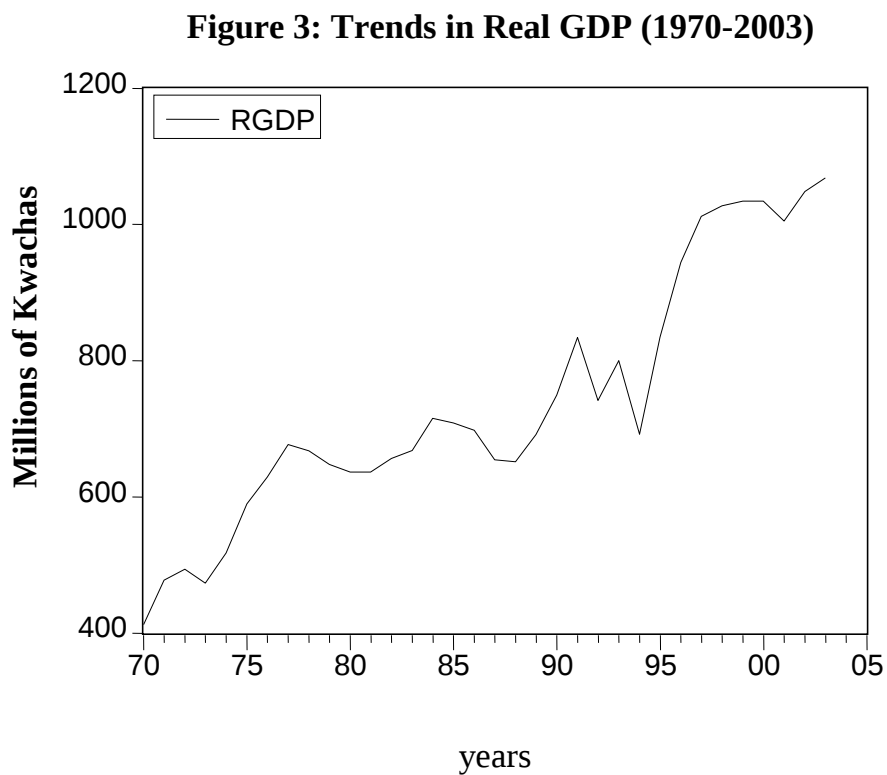
⁵ Equity capital is the foreign direct investor's purchase of shares of an enterprise in a country other than its own. Reinvested earnings comprise the direct investor's share (in proportion to direct equity participation) of earnings not distributed as dividends by affiliates, or earnings not remitted to the direct investor. Such retained profits by affiliates are reinvested. Intra-company loans or intra-company debt transactions refer to short- or long-term borrowing and lending of funds between direct investors (parent enterprises) and affiliate enterprises

most of the inward FDI came as equity or shares in companies, followed by the other two types.

Table 1: Inward FDI flows, by type of investment, 1980-2004
(Millions of Dollars)

YEAR	EQUITY	RE-INESTED EARNINGS	INTRA COMPANY LOANS	TOTAL
1980	9.5	..	..	9.5
1981	1.1	..	..	1.1
1982	..	..	..	6.0
1983	2.6	..	..	2.6
1984	..	..	..	27.3
1985	0.5	..	..	0.5
1986	0.1	..	..	-2.9
1987	..	..	..	0.1
1988	..	..	..	17.4
1989	..	..	..	9.3
1990	..	..	..	23.3
1991	..	..	..	-28.7
1992	..	..	..	-7.1
1993	..	..	..	8.0
1994	25.0	..	..	25.0
1995	5.6	..	..	5.6
1996	15.8	..	..	15.8
1997	14.9	..	..	14.9
1998	12.1	..	..	12.1
1999	58.5	...	..	58.5
2000	26.0	..	..	26.0
2001	3.3	30.4	7.7	41.4
2002	..	..	..	..
2003	..	..	..	..
2004	..	..	..	..

Fig 3 below shows some trends in Real Gross Domestic product since 1970. GDP in this study has been used as a proxy for market size. An increase in GDP indicates an increase in domestic market size. As can be seen below in the figure, real GDP has been fluctuating over the years but overall it has recorded an upward trend over the time period.



2.3 Geographical Distribution of Foreign Direct Investment in Malawi

Investors from most of the developed countries have shown diverse interest in Africa. Due to geographical proximity and postcolonial ties, western European investors have always been active in the region compared with both American and Japanese investors. The biggest investor to Malawi has been the United Kingdom (UK). In 1988 and 1993 this country alone accounted for more than 90% of Malawi's FDI stock. In terms of flows the UK was also the largest source of FDI inflows to Malawi accounting for 88% of the average annual flows during 1991 to 1993. However, inflows from the UK suffered a significant flop from 1994 to 1998 with inflows being overtaken by an influx of inflows mainly from South Africa and a diversity of inflows from countries such as U.S.A, Norway, Ireland France, china and Korea, Saiwa (2000:18). The flop or slump could be attributed to the post-cold war era that saw the western countries reduce their investments to African countries.

Apart from the developed countries, FDI to Malawi also comes from intra regional FDI⁶. And the major source of this in the late 90's has been South Africa with investments such as the PEP stores, Cambio Forex Bureau, Loita Investment Bank, Shoprite, The Game, among others.

Table 2 below just confirms that the United Kingdom (U.K.) was the major source country of FDI stocks in Malawi by year 2000. Further, it is quite evident that the U.K, the Republic of South Africa and the U.S.A are the major source countries of FDI stocks in Malawi. From within the region, it is not only South Africa that has invested in Malawi, rather Mauritius and Zimbabwe have also brought in their investments in the past although the Stocks recorded are considerably lower as compared to that from RSA.

⁶ Recently there has been an increasing trend of FDI inflows to Africa from within the African countries. Mainly FDI from within the region, has come from South Africa, Kenya, Angola, Nigeria, Botswana and many more countries rich in minerals.

Table 2: Foreign Direct Equity Investment stocks in Malawi by source

Source	Dec 31 1999		Dec 31 2000	
	(In US\$ Million)	As Percent of Total	(In US\$ Million)	As percent of Total
United Kingdom	83.3	34.0	60.2	31.9
U.S.A.	56.0	22.8	50.2	26.6
Republic of South Africa	57.2	23.4	35.8	19.0
Norway	8.6	3.5	10.6	5.6
Ireland	3.2	1.3	6.2	3.3
Switzerland	5.9	2.4	3.6	1.9
Netherlands	6.4	2.6	3.5	1.8
Isle of Man	3.9	1.6	2.5	1.3
Mauritius	3.7	1.5	2.1	1.1
Zimbabwe	2.9	1.2	2.1	1.1
Other	13.9	5.7	11.8	6.3
Total	245.1	100.0	188.7	100.0

Source: UNCTAD, FDI/TNC database

2.4 Sectoral Distribution of FDI in Malawi.

The sectoral breakdown of FDI inflows to Malawi in 1998 –2006 shows that at least 49% the services sector accounted for the largest share of FDI inflows into the country. In this sector, the telecommunications industry only accounted for 30% of the total FDI inflows during this period. The reason behind this was the coming in of the Celtel Company from the UK. The Trading sector followed and this accounted for 21% of the inflows with the coming in of the PEP stores and The Game from South Africa. Now as most of the FDI is concentrated in services and the trading sectors and not in manufacturing we find few linkages with local investors. Thus the desired benefits of the FDI may not be fully imparted to local investors. (Saiwa, p.19).

Table 3 below just shows the sectoral distribution of FDI in Malawi. It is quite evident as discussed above that most of the FDI stocks originate from the U.K, RSA and the U.S.A. The sectoral analysis of FDI stocks shows that, although the manufacturing sector performance has been poor in recent years, it has been the leading recipient of foreign direct investment, accounting for 50.0 percent of total FDI equity stocks at the end of 1999 and 47.6 percent at end 2000 (private capital stock survey, 2002, p.18). Within the manufacturing sector, the most dominant sub sectors were agro industry, chemicals and petroleum, textiles, and food and beverages as can be noted from table 3 below.

The next sector that significantly benefited from FDI equity was distribution, which accounted for 20.5 percent of the total FDI equity stocks as at end 1999 and 24.0 percent at end 2000. The agriculture sector accounted for 12.6 percent at end 1999 and 10.8 percent at end 2000 while the financial sector received 10.1 percent at end 1999 and 12.0 percent at end 2000.

Table 3: Largest affiliates of foreign TNCs in Malawi, 2000`s

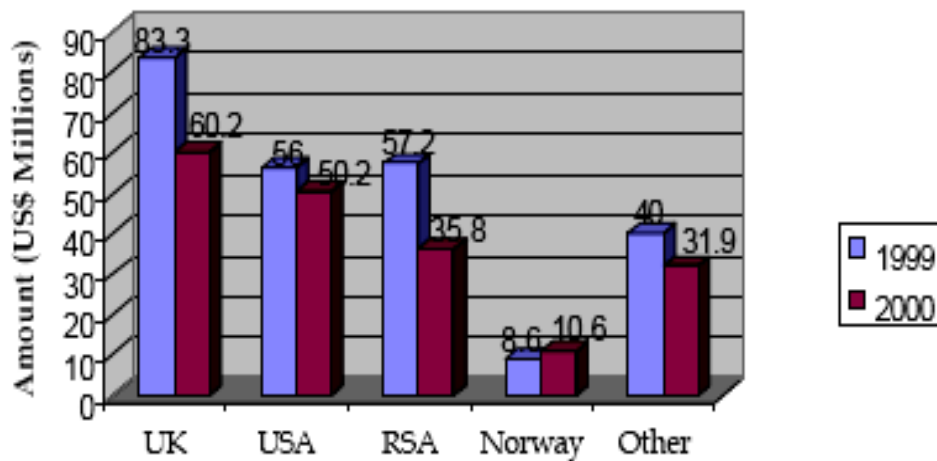
(Millions of dollars and number)

Company	Home economy	Industry
A. Industrial		
Illovo Sugar Malawi	South Africa	Agriculture
Transglobe Produce Exports	Mali	Food Products, beverages and Tobacco
Valmore paints	United Kingdom	Chemicals and Chemical Products
Limbe leaf Tobacco co. Ltd.	U.S.A.	Food Products, beverages & Tobacco
Mandala	United King	Chemicals and Chemical Products
Bata Shoe Company	Canada	Leather and Leather products
B. Tertiary		
CFAO Malawi Limited	France	Wholesale trade
Metro Cash & Carry Malawi	Germany	Distributive trade
CELTEL Malawi Limited	Kuwait	Telecommunications
Gestetner	Japan	Wholesale trade
Alexander Frobes Malawi limited	South Africa	Other business activities
Continental Discount House Limited	Mauritius	Other business activities
The Cold Chain	Zimbabwe	Wholesale trade
Lipton Tea	United Kingdom	Wholesale trade
Hertz Corporation	U.S.A	Automotive Trade and repair
Macmillan Malawi Limited	Germany	Education
Maersk Malawi Limited	Denmark	Other services
Portland Malawi	France	Other services
Price water house coopers	U.S.A	Other services
Sara Lee Corporation	U.S.A	Construction
Xerographics	U.S.A.	wholesale trade
C. Finance and Insurance		
Commercial Bank	South Africa	Finance
AON Malawi Ltd.	United States	Insurance

Source: UNCTAD WID Country Profile: Malawi

The figures show high concentration of FDI in the manufacturing, distribution and financial sectors of the economy and this has implications on the policy of diversifying the economy. (Private capital stock survey, 2002:18)

Figure 4: distribution of FDI Equity stocks in Malawi by source



Source: Private Capital stocks Survey, September 2002.

Between the year 1999 and 2000, the biggest investing countries like the United Kingdom, the United States of America and the Republic of South Africa, which accounted for 31.9, 26.6 and 19.0 percent in 2000, respectively, experienced huge reductions in FDI equity stocks. Of the FDI equity stocks from the UK, 33.9 percent was invested in the agriculture sector, 27.6 percent in manufacturing, 20.3 percent in distribution and 15.6 percent in financial intermediation, with 2.6 percent invested in other sectors in 2000. The USA mainly invested in manufacturing and distribution sectors with percentage contributions of 77.7 and 20.1 respectively of all the FDI equity stocks from USA, with the rest being invested in other sectors in 2000. Of the FDI equity stocks from the RSA, 74.9 percent was invested in manufacturing while 19.0 percent and 5.0 percent went to distribution and financial intermediation sectors, respectively, while 1.1 percent was invested in other sectors (Ibid).

CHAPTER THREE

CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW

3.1 Theoretical Framework

The starting point in trying to understand Foreign Direct Investment flows is to recognize the fundamental motivation for a firm to invest in a country different from its own. The purpose of this chapter is to present a summary of the relevant theories, hypotheses and schools of thought that contribute to the understanding and motivation of FDI flows. This will assist us in selecting appropriate data and it will support the arguments to be used in empirical estimation and discussion. Below we classify some theories according to micro and macro principles. This classification addresses the questions of why FDI is taking place, where it is destined to go, how it is possible for TNCs to compete successfully in foreign locations and who the recipients of FDI are, Jordaan (2005). But before we go to the classification, we first discuss the general theory of determinants of investment.

3.2 Determinants of Investment: Theory and Macroeconomic Factors

There is an established tradition of research on the general determinants of investment, and recently this literature has experienced some sort of revival, especially with the incorporation of risk and uncertainty factors in empirical research. Modern theory of investment has embraced four building blocks of continued development and refinement, with the level of investment thought to depend on:

$$I = I(\Delta Y, r, q, \mu)$$

Where ΔY is the expectation of future market conditions, r is the financial constraints of the firm, q is the valuation of the firm on the stock market and μ is economic and political uncertainty, (Mlambo & Oshikoya). Empirical tests of these building blocks using data from several industrial countries have been widely applied. However, the difficulties associated with testing their implications in the context of developing countries are well known. It is often noted that certain special characteristics of developing countries make the empirical testing of these theoretical models in the context of developing economies rather difficult. Key assumptions, like perfect capital markets and little or no public

investment, underlying the standard model typically are not satisfied in most developing countries. Furthermore, data on key variables such as capital stock, the labour force, wages, real financial rates for debt and equity are not readily available for most developing countries, (Ibid). As data limitations preclude the estimation of structural models, empirical studies have tended to use with some degree of success semi-reduced form frameworks to investigate the determinants of investment in developing countries, focusing mainly on testing several hypotheses advanced to explain variations in private investment in these economies. In particular, the list of usual suspects has tended to include macroeconomic factors, which is the main focus of this study, namely, market size, market growth, inflation, openness, exports and the exchange rate among other factors.

Most empirical literature on growth and investment in developing countries emphasizes the relationship between output growth and capital formation. Theoretically, this relationship can be readily derived from a flexible-accelerator model with the assumption that the underlying production function has a fixed relationship between the desired capital stock and the level of real output, (Ibid). In the same vein, private investment has been hypothesized as a positive function of income per capita. Greene and Villanueva (1991) assert that countries with higher per capita income could devote more resources to domestic savings, which could be used to finance investment projects.

3.3 Classification of Theories on Foreign Direct Investment

About the theoretical literature on FDI, there is a debate mainly on two factors. One is there is no single agreed theory that has been found that explains FDI and all of its related facts (except Dunning's eclectic theory⁷). The other factor is that given the various theories and various approaches, it would make sense to categorize them according to similar tenants.

⁷ This theory is discussed in detail below. This eclectic model was first proposed by Dunning. He provided a more comprehensive analysis based on ownership, location, and advantages of internalization. Dunning's eclectic theory tries to provide some answers about geographic distribution of FDI by analysing location factors. His taxonomy of location factors emphasizes possession of raw materials, labour costs, government incentives and servicing of local markets.

However, inconsistency in the classification of the available theories exists (Ibid). A wide range of arguments exists in support of the various sets of classifications. Hansen (1998) and Razin (2003) state that the FDI theories can essentially be divided into two categories, namely micro (or industrial) and macro theories (finance or cost of capital theories). Kojima and Ozawa (1984) also support this distinction between micro- and macro models of FDI, but place more emphasis on macro models.

3.3.1 Microeconomic classification of the theories

Razin (2003), argues that early literature explaining FDI in microeconomic terms focuses on market imperfections and on the desire of TNCs to expand their market power. More recent literature concentrates on firm-specific advantages, product superiority or cost advantages flowing from economies of scale, multi-plant economies, advantages in technology and superior marketing and distribution. According to this view, multinational enterprises will find it cheaper to expand directly into a foreign country, rather than by increasing trade, if it is a case where the advantages associated with the cost of production are based on internal, invisible assets that are founded on knowledge and technology. Alternative explanations of FDI have focused on regulatory restrictions, including tariffs and quotas. The micro theories further show that firms may have different objectives when investing abroad. Profit maximization may in the short run be overruled by other objectives such as risk diversification or market access. They may be of alternative or similar importance for the investors' decisions depending on a particular case. Razin (2003:4)

3.3.2 Macroeconomic classification of the theories

Hansen (1998:24) mentions that the macroeconomic theories on FDI are dominated by the logic of international trade theory. The macro theories concentrate on comparative advantages as well as environmental dimensions, and how the latter may affect comparative advantages. These theories mainly deal with the question of where TNCs will locate their operations. However, according to Hansen, theorists ignore the question of why TNCs invest in the first place, instead of just exporting their products to these foreign markets. He further more indicates that macro level theories ignore the question of how it is possible for TNCs to successfully compete with locally based firms in foreign

locations, in spite of disadvantages like knowledge of local market conditions, cultural, institutional and linguistic barriers, as well as communication and transport factors. As a result of these shortcomings, Hymer (1993) accentuates the fact that TNCs must have certain additional advantages not possessed by local firms (under perfect market competition, local firms would have the same access to capital and information as the foreign firms and no FDI would take place). Due to this, the work of Hymer (1993) was the main impetus for the further development of micro level theories, arguing that technological advantages including research and development (R&D) capabilities; organizational advantages such as economies-of-scale, managerial and entrepreneurial advantages; financial and monetary advantages and advantages associated with their privileged access to raw material gave TNCs advantages above local firms.

3.3.3 Micro-and macroeconomic classification of the theories {(The Ownership, Location and Internalization (OLI) framework (The Eclectic Paradigm)}.

One theory based on micro- and macroeconomic aspects, which seeks to give a general answer to locational questions related to FDI, is the eclectic theory of Dunning, Agarwal (1991:8). Moon and Roehl (1993:56) emphasize this statement by saying that none of the general theories of FDI, except perhaps Dunning's eclectic theory, which is based on the OLI (ownership, location and internationalization advantages) paradigm, succeed in satisfactorily explaining the international activities of firms.

Dunning (1977 and 1979) brought together internalization theory and traditional trade economics to create the eclectic paradigm of FDI, synthesizing the reasons for firms to operate internationally (advantages) and the mode of entry (FDI, export and licensing).

In the MNE (Multi-national enterprises) theory, FDI was explained by identifying three types of special advantages that MNEs have: *ownership, location and internalization* advantages. Ownership advantages referred to the MNE's production process, ensuring a competitive advantage over domestic firms and include patents, technical knowledge, management skills and reputation. Location advantages were motives for producing abroad including the access to protected markets, favorable tax treatments, lower production and transport costs, lower risk and favorable structure of competition. Internalization occurred due to the public good nature of ownership advantages and –

compared with licensing or exporting – had the advantage of lowering transaction costs, minimizing technology imitation and maintaining the firm's reputation through effective management and quality control. Based on these assumptions, the degree of foreign ownership in an industry should be higher, the more research-, technology- or marketing-intensive products are, Faeth (2005:43).

Dunning argued that OLI advantages varied depending on whether countries were developed or developing, large or small, industrialized or not, whether industries were high or low technology, innovatory or mature, processing or assembly, competitive or monopolistic, or whether firms were large or small, old or new, leader or follower, innovator or imitator.

Caves (1982) showed that the degree of multinationality was related to R&D, marketing expenditures, number of scientific and technical workers, product newness and complexity, and product differentiation. Dunning's OLI framework allowed for a variety of factors to be determinants of MNE activity, depending on whether the focus is on ownership, location or internalization advantages, on countries, firms or industries or on different FDI forms.

3.3.4 Other classifications of the theories

Above we have discussed micro and macro arguments, but FDI theories can also be categorized according to other sets of criteria. Boddewyn (1985) classifies the theories according to the conditions, motivations, and precipitating circumstances connected to FDI. He also mentions that these categories are general resulting in the possibility of overlapping and that it is therefore necessary to recognise that, despite common characteristics, "organisation specific" factors influence investment and disinvestment decisions. Any valid theory must consider factors such as changes in transportation and communication facilities, changes in government and so on. According to Boddewyn (1985), many alternative explanations have been offered for foreign investment, rather than accepting the earlier rationale that firms invest abroad, because it is profitable to do so (especially since the post-war period).

Agarwal (1980: 740) classifies theories of FDI into four groups, namely:

- (i) The hypotheses that assume full or nearly full competition on factor and/or product markets (these include the theories of differential rate of return, portfolio diversification and output and market size).
- (ii) Hypotheses that take market imperfections for granted and assume that the firms investing in foreign countries have one or more comparative advantages over their rivals in the host countries (these include theories of behavioural economics, product cycle, oligopolistic reaction and internalization).
- (iii) The group that includes some selected hypotheses on the propensities of countries, industries or firms to undertake FDI (liquidity and currency area theories).
- (iv) The last group is based on the propensities of countries to attract investments.

3.3.5 The Integrative School

The integrative school endeavors to transform categorical thinking on FDI by analyzing it from the perspectives of host countries as well as investors. The Integrative school, just like the eclectic paradigm discussed above, is based on micro and macro principles.

The eclectic paradigm, the firm and internalization theories, and industrial organization theories address FDI determinants from the viewpoint of the firm. The neoclassical and perfect market theories examine FDI from the perspective of free trade. An integrative FDI theory considers macro-, micro-, and meso-economic variables that determine FDI. The macro-level envelops the entire economy, the micro-level denotes firms, and the meso-level represents institutions linking the two, for example government agencies issuing investment policy to enterprises, Saskia (1998:10).

What distinguishes integrative FDI theory is that it accords more importance than previous theories to the macro- and micro-variables that determine FDI. According to this theory, the key macro and micro-variables determining FDI are host country market size, input costs - real wage rate, foreign exchange rates, level of taxation, transport costs, and cost of capital (interest rate) and the riskiness of investment, both in terms of the macroeconomic and the political environment. Bevan & Estrin (2000:5).

The study at hand dwells much on the integrative theory since in this study we are looking at the determinants of FDI in Malawi. This study borrows from the studies carried out by Bende-Nabende (2002) and Assiedu (2003). In these studies it is stipulated that FDI inflows are determined by some categories of factors. These are, the cost-related factors, the investment environment improving factors, other macro-economic factors, and the development strategy of the host country. Below is just a brief presentation on previous studies that have been carried out to assess the factors that significantly influence the choice of foreign investors to invest in a particular country.

3.4 Empirical Evidence

This section just reviews some of the studies that have been carried out on determinants of FDI both in developing and developed countries.

Bevan & Estrin (2000) carried out a study to assess the determinants of Foreign Direct Investment in Transition Economies. Using a detailed panel dataset containing information on FDI flows from established market economies to a sample of central and eastern European transition economies, they established the determinants of FDI inflows to central and eastern Europe as; country risk, unit labor costs, host market size and gravity factors.

Singh & Jun (1995) also conducted a study on FDI to find out some new evidence on the determinants of FDI in developing countries. They expanded on earlier studies of the determinants of foreign direct investment by empirically analyzing various factors – including political risk, business conditions, and macroeconomic variables - that influence direct investment flows to developing countries. They tried to fill a gap in the literature by examining qualitative factors. Using a pooled model of developing countries, they tested three groups of hypotheses on what influences direct investment - that political risk matters, that business conditions matter, that macro-economic variables matter.

Thus tests on the second hypothesis show that a general qualitative index of business operation conditions is an important determinant of FDI in countries that receive high flows. They also showed a positive relationship between taxes on international transactions and FDI flows - supporting the "tariff hopping hypothesis".

Results from tests of the third hypothesis reveal that exports generally, especially manufacturing exports, are a significant determinant of FDI flows for countries in which FDI is high. Export orientation is the strongest variable for explaining why a country attracts FDI. This finding is in line with the secular trend toward increasing complementarity between trade and FDI. Moreover, the study at hand, among other things, tries to find out if export orientation development policy has any significant impact upon FDI flows in host nations.

Faeth (2005) in her paper titled "Foreign Direct Investment in Australia: Determinants and Consequences" also found some results which are relevant to the study at hand. Determinants of FDI according to different theoretical models were discussed and tested using five types of datasets: aggregate quarterly data, country-specific annual data, industry-specific annual data, country- and industry-specific data (from the US, the UK, Japan and Germany and US) and US firm-specific data. In turn, Australian FDI inflows were found to be driven by economic growth and market size, wages and labor supply (though the signs varied across models), trade and openness (though customs duties encouraged Japanese industry-specific FDI), interest rates, exchange rate appreciation, inflation rate (which had a unexpected positive effect) and the investing country's overall

FDI outflows. Corporate tax rates were only significant in the quarterly FDI model, but they had an unpredicted positive sign.

Assiedu (2003) carried out a study on “Foreign Direct Investment to Africa: The Role of Government Policy, Governance and Political Instability”. This paper used a panel data for 22 countries in Sub-Saharan Africa over the period 1984-2000 to examine the impact of political risk, institutional framework and government policy on FDI flows. The results show that macroeconomic stability, efficient institutions, political stability and a good regulatory framework have a positive impact on FDI. An important implication of the result is that FDI to Africa is not solely driven by natural resource endowment, and that governments can play an important role in promoting investments to the region.

Lastly, Bende–Nabende (2002) also carried out a study on Foreign Direct investment determinants in Sub-Saharan Africa. He used a co-integration analysis to find out the long run determinants of FDI in Africa. The results of the study indicate that the most dominant long-run determinants of FDI in SSA are market growth, export-orientation policy and FDI liberalization. These are followed by real exchange rates and market size. Bottom on the list is openness. However, because of data limitations no definite conclusions were drawn from the results for real wage rates and human capital. Specifically then, the long-run implication is that SSA countries can improve their FDI positions by improving their macroeconomic management, liberalizing their FDI regimes and broadening their export bases.

Specifically, Bende-Nabende estimated the following equation to find the results above;

$$FDI = f([RWR, IR, XR], [OPEN, LIB], [GDP, Gr, HC], [X]) \dots \dots \dots (1)$$

where; *RWR* = real wage rates, *IR* = interest rates, *XR* = foreign exchange rates, *OPEN* = openness, *LIB* = liberalization, *GDP* = current market size, *Gr* = market growth (future market potential), *HC* = human capital and *X* = export-orientation development strategy.

According to the formulation, *RWR*, *IR*, *XR* represent cost-related factors; *OPEN*, *LIB* represent Investment environment improving factors; *GDP*, *Gr*, *HC* represent other macro-economic factors and lastly, *X* represents Policy variable.

The study at hand has adopted the model that Bende Nabende used with some few differences. The model at hand has left out the real wage rate and the interest rate due to data constraints. The rate of return on investment was to be proxied by the real deposit rate, but there is no comprehensive data on this variable for Malawi, so this variable was omitted from the model. The real effective exchange rate was used as a cost related factor to investment and not as a trade variable as is used in most cases. Human capital was omitted from the model. Two more new variables were introduced to the model, and these were inflation which measures macro economic instability, and dummy variable on politics which assesses the impact of political change from one party to multiparty in 1993 on FDI.

CHAPTER FOUR

METHODOLOGY

4.1 Model specification

Below is a presentation on the specification of the model, variable definitions and data used in the study and the method of estimation adopted.

This study draws from the models developed by Bende–Nabende (2002) which has been presented in the previous section. The other ideas are borrowed from the study done by Asiedu (2003). As discussed in the previous section, the model developed by the former rests on the notion that FDI from the locational advantage point of view is influenced by four broad categories of factors. These are, the cost-related factors, the investment environment improving factors, other macro-economic factors, and the development strategy of the host country.

Under the first category, key cost-related factors will be the host country's real wage rate, foreign exchange rates volatility, land and property rents/rates, fuel costs, local input costs (where applicable), level of taxation, transport costs, and cost of capital (i.e. lending interest rate) in relation to those of the home country Bende–Nabende (2002). Under the investment environment improving factors the central factors are seen to be the openness of the economy, the liberalization of the investment and the trade regimes. Under the macro-economic factors, there are two market familiar factors; current market size and the potential market size. Lastly, on the development strategy of the host country, the main factor is export orientation development policy. From the study carried out by Assiedu (2003), we consider Political and Governance factors. Specifically we test whether the political environment and macroeconomic instability have an impact on FDI inflows to Malawi. The majority of investors believe that a good political system and macroeconomic stability are catalytic to investment. Following the ushering in of the new political dispensation in 1993, coupled with economic liberalization policies, there was mushrooming of private industries in the country. There had particularly been a noticeable increase in the number of establishments in wholesale and retail trade, hotels and restaurants immediately after the multi -party era as evidenced by the share of this

sector to GDP, which was 27.7 percent in 1994 and was at 20.8 percent in 2000 (Private capital survey, 2002). Since, as stipulated in the previous section, data constraints make it impracticable to test all of these potential determinants of FDI in Malawi. Consequently, I have selected a limited number of variables to represent each of the categories in the analysis.

The variables and their notation are as follows; CORP = corporate taxes, XR = Real effective exchange rates, INFL = inflation, POLITICS = political environment, OPEN = openness, LIB = trade liberalization, GDP = Gross Domestic Product, GDPGRWTH = GDP growth (future market potential), and XP = exports.

Therefore the model to be estimated will be; $FDI = f(CORP, XR, INFL, POLITICS, OPEN, LIB, GDP, GDPGRWTH, XP; \mu)$ (2)

Specifically, the model will be;

$$Fdi = \beta_0 + \beta_1 Corp + \beta_2 Xr + \beta_3 Infl + \beta_4 Politics + \beta_5 Open + \beta_6 Lib + \beta_7 Gdp + \beta_8 Gdpgrwth + \beta_9 Xp + \mu.....(3)$$

4.2 Measurement of Variables.

FDI is the regressand⁸ in the model and it will be measured as Foreign Direct Investment in billions of kwacha. Below are the regressors in the model;

μ : is the white noise error term that captures the possible variables that might also impact on FDI but have been ommited from this model.

Corporate tax (Corp): These are direct taxes on corporations.

Foreign exchange rate (Xr): This will be measured as the Real effective exchange rate.

Inflation (Infl): The inflation rate will be used to proxy macroeconomic instability.

⁸ FDI is our only dependent variable in the model.

Political environment (politics): I shall employ a dummy variable to measure the effect that the change in political system in Malawi had on FDI inflows. 0 will be given to the period before multiparty elections, from 1970 to 1993. 1 will be given to the period starting from 1994, the period after multiparty elections. The period before 1993 represents one party rule and the period after 1993 represents democracy (multi-party era).

Openness (Open): This measures the degree to which a country is open to trade. It will be calculated as total imports and exports divided by Gross Domestic Product (GDP)

Trade Liberalization (Lib): This assesses whether trade liberalization has an impact on FDI inflows. It will be measured as a dummy variable with 0 representing the pre-liberalization period (i.e. up to 1987) and 1 the post liberalization period (from 1988 onwards). It relates to the liberalization of trade regimes in Malawi.

GDP (Gdp): This is Gross Domestic Product and in this study it is a proxy for current domestic market size and it is expressed in millions of kwacha

Market growth (Gdpgrwth): This will be proxied by the growth rate of GDP, and it will be calculated as $Gdpgrwth = \log GDP_{t-1} - \log GDP_t$

Exports (Xp): This assesses the impact of export-oriented development policy on FDI flows. The political ideology and hence development strategy of the host country plays a critical role, particularly, with respect to the type of investment to be undertaken. For instance, it may be a restrictive import-substitution strategy, which draws investment (defensive) geared for the domestic market. Alternatively, it may be a less restrictive export orientation strategy, which promotes investment for exports. Thus exports here are used as a proxy for export-oriented development policy in Malawi, and the exports are in millions of kwacha.

4.3 Expected signs and explanations

$\beta_1 < 0$; the co-efficient for corporate taxes is expected to be negative since higher taxes on corporations will increase the operating costs to a firm thus in turn discouraging FDI inflows.

$\beta_2 < 0$; we expect the co-efficient for the exchange rate to be negative since exchange rate volatility will result into macroeconomic uncertainty. Exchange rate volatility creates a risky business environment in which there are uncertainties about future profits as well as future payments. Exchange rate volatility also makes local banks unwilling to offer credit facilities denominated in a foreign currency because of the foreign exchange risk involved. Thus foreign investors will be discouraged to invest where the exchange rate is highly volatile.

$\beta_3 < 0$; the inflation rate is used as a proxy for macroeconomic instability. All else equal, a higher inflation should be negatively related to FDI flows. Thus we expect the co-efficient for inflation rate to be negative, since high levels of inflation will discourage FDI inflows.

$\beta_4 > 0$; the sign for the political dummy is rather ambiguous since we do not know the impact on FDI in moving from one party rule to multiparty democracy. However it was found from a survey GOM (2002), that the multiparty era resulted into an increase in FDI than a single party rule, thus we expect a positive sign.

$\beta_5 > 0$; Openness to the world economy is one factor that has a positive impact on FDI, thus a country that is open to trade will more likely attract more FDI than a country that is closed to trade and investment.

$\beta_6 > 0$; The Co-efficient for trade liberalization dummy is expected to take a positive sign since liberalizing trade regimes will have a positive effect on FDI flows into the host nation as most foreign investors are expected to trade their output.

$\beta_7 > 0$; Market size, typically measured by host country gross domestic product captures potential economies of large scale production. Foreign investors are more interested in the size of the host country markets since most of them are engaged in trade. A country with well established markets will be in a better position to attract FDI, thus we expect a positive sign on the co-efficient of GDP

$\beta_8 > 0$; The Co-efficient for the growth rate of GDP is expected to have a positive sign and the reason behind this is the higher the value of GDP implies, in addition to greater domestic markets, better infrastructure and hence provides greater incentive for FDI. Market growth can be indicator to show that a country is developing and is able to trade its output; this has a positive impact on FDI.

$\beta_9 > 0$; the argument here is that export oriented economies will attract FDI (i.e. exports precede FDI), thus we expect the co-efficient for this variable to have a positive sign. However we note that if export orientation is a signal and a magnet for attracting foreign firms, exports would Granger cause FDI, whereas if the entry of foreign firms results in greater export orientation, FDI would Granger cause exports. In this study, we investigate the effect of export orientation on FDI not the effect of FDI on exports.

4.4 Estimation Procedure

The model to be used is slightly different from the model that Bende–Nabende (2002). He used a co-integration analysis in his study to estimate the long run determinants of FDI in Sub Sahara Africa countries. He incorporated a panel data analysis of 19 Sub-Saharan African countries. The study here shall use the method of the Ordinary Least Squares (OLS) technique of estimation. This study shall adopt a time series analysis to the determinants of FDI in Malawi.

Now the estimation and hypothesis testing using OLS is based on the assumption that means, variances, and covariance of the time series are well defined and independent of time. Thus if they are not, the series are said to be non-stationary. As such econometric analysis using the OLS may not give meaningful results and may falsely predict output, and tests of significance may not be relied upon. Now it is required that a test be carried out to determine whether the time series are stationary before estimating the results. In this study, the Augmented Dickey Fuller (ADF) test for unit root will be used to examine whether the time series are stationary or not. Normally, when it is found that the time series are non-stationary, the time series are differenced to make them stationary. Order of integration of the variables is the number of times the series have to be differenced to make them stationary, i.e. if a series is differenced once to make them stationary, that

series will be integrated of order one. Thus the model estimated will not be in levels rather it will now be run in differences.

In some cases although the series can be non-stationary, their linear combination can be a stationary process such that a regression in levels would still give meaningful results. In such an instance we say the series are co-integrated. To test the hypothesis of co-integration, the study shall make use of Augmented Engel Granger (AEG) Test. In this test the residuals of the regression in levels are tested for stationarity using the Augmented Dickey Fuller (ADF) test. If the residuals are found to be stationary, then the variables are said to be co-integrated.

Lastly, I shall use E-Views package to obtain the results of the study.

4.5 Diagnostic tests

Normally, after model estimation, it is required that diagnostic tests be carried out to determine whether the model fitted has been correctly specified. Further we want to figure out whether the errors exhibit some serial correlation, or whether the errors are heteroskedastic in nature. We also try to establish whether the model has been correctly specified. Below we just discuss some of the diagnostic tests that will be carried out in this study.

4.5.1 White's Heteroskedasticity Test

This is a test for heteroskedasticity in the residuals from a least squares regression White (1980). Ordinary least squares estimates are consistent in the presence heteroskedasticity, but the conventional computed standard errors are no longer valid. If there is some evidence of heteroskedasticity, we either choose the robust standard errors option to correct the standard errors or we model the heteroskedasticity to obtain more efficient estimates using weighted least squares.

White's test is a test of the null hypothesis of no heteroskedasticity against heteroskedasticity of some unknown general form. The test statistic is computed by an auxiliary regression, where we regress the squared residuals on all possible cross products of the regressors. The test statistic is then based on the auxiliary regression.

E-Views reports two test statistics from the test regression. The F-statistic is an omitted variable test for the joint significance of all cross products, excluding the constant. It is presented for comparison purposes. The Obs*R-squared statistic is White's test statistic, computed as the number of observations times the centered from the test regression. The exact finite sample distribution of the F-statistic under is not known, but White's test statistic is asymptotically distributed with degrees of freedom equal to the number of slope coefficients (excluding the constant) in the test regression.

When there are redundant cross-products, E-Views automatically drops them from the test regression. For example, the square of a dummy variable is the dummy variable itself, so that E-Views drops the squared term to avoid perfect collinearity.

4.5.2 Serial Correlation LM Test (Breusch Godfrey Serial correlation test)

This test is for testing serial correlation. The test belongs to the class of asymptotic (large sample) tests known as Lagrange multiplier (LM) tests. Unlike the Durbin-Watson statistic for AR(1) errors, the LM test may be used to test for higher order ARMA errors, and is applicable whether or not there are lagged dependent variables. The null hypothesis of the LM test is that there is no serial correlation up to lag order p , where p is a pre-specified integer. The local alternative is ARMA(r,q) errors, where the number of lag terms $p = \max\{r,q\}$. Note that the alternative includes both AR(p) and MA(p) error processes, and that the test may have power against a variety of autocorrelation structures.

The test statistic is computed by an auxiliary regression. This is a regression of the residuals on the original regressors (X) and lagged residuals up to order p . E-Views reports two test statistics from this test regression. The F-statistic is an omitted variable test for the joint significance of all lagged residuals. Because the omitted variables are

residuals and not independent variables, the exact finite sample distribution of the F-statistic under is not known, but we still present the F-statistic for comparison purposes. The serial correlation LM test is available for residuals from least squares or two-stage least squares. The original regression may include AR and MA terms, in which case the test regression will be modified to take account of the ARMA terms. If the test indicates serial correlation in the residuals, LS standard errors are invalid and should not be used for inference.

4.5.3 Ramsey's RESET Test

RESET stands for Regression Specification Error Test and was proposed by Ramsey (1969). Here the errors are tested to determine whether the model in question has been correctly specified. Conventionally the disturbance vector in the model is presumed to have a multivariate normal distribution $N(0, I)$. Specification error is an omnibus term which covers any departure from the assumptions of the maintained model.

Serial correlation, heteroskedasticity, or non-normality of all violate the assumption that the disturbances are distributed $N(0, I)$. In contrast, RESET is a general test for the following types of specification errors:

- Omitted variables; the does not include all relevant variables.
- Incorrect functional form; some or all of the variables in y and X should be transformed to logs, powers, reciprocals, or in some other way.
- Correlation between X and y , which may be caused by measurement error in X , simultaneous equation considerations, combination of lagged y values and serially correlated disturbances. Under such specification errors, least squares estimators will be biased and inconsistent, and conventional inference procedures will be invalidated. Ramsey (1969) showed that any or all of these specification errors produce a non-zero mean vector for the residual term.

4.6 Data description and Source

The study shall use time series data and these data will be collected from issues of financial and economic reviews of Reserve Bank of Malawi, African Development Indicators, and statistical bulletin of National Statistical Offices (NSO). Specifically, data on inflation rate, exchange rate, FDI, and corporate taxes will be obtained from the reserve bank of Malawi economic reviews. Data on GDP, exports, will be obtained from African development indicators and statistical bulletin of national statistical offices. All the data are nominal. The econometric analysis will be based on data from 1970 to 2005. This sample space was chosen because there is no published data yet on FDI from 2004 onwards so FDI figures for 2004 and 2005 were just extrapolated. The data are expressed in Malawi Kwacha (MK) or otherwise stated.

CHAPTER FIVE

MODEL ESTIMATION AND RESULTS

This chapter presents results of the empirical estimation of the short run model. Before we present and interpret the results, we will present the results of stationarity test, co-integration tests and also the results of the various diagnostic tests.

5.1 Unit Root Tests Results

As discussed in the estimation technique section above, the first step is to carry out the ADF test for unit root so that we should determine whether the variables under consideration are stationary or not. The variables are tested for stationarity to avoid the possibility of a spurious regression, i.e. meaningless regression. If a time series is stationary, then its mean, variance, and auto-covariance at various lags remain the same no matter at what point we measure them. The implication is that if we have non stationary time series, then we can study its behavior only for the time period under consideration. Each set of time series data will therefore be for a particular episode. As a consequence it is not possible to generalize it to other time periods thereby making forecasting impractical, Gujarati (2003). Therefore a test for stationarity in the variables is essential so as to get meaningful results from a regression of the time series. Normally, when it is found that the time series are non-stationary, the time series are differenced to make them stationary. Order of integration of the variables is the number of times the series have to be differenced to make them stationary, i.e. if a series is differenced once to make them stationary, that series will be integrated of order one, $I(1)$. Otherwise an $I(0)$ implies a stationary time series. Now running $I(1)$ series in levels would result in a spurious regression as discussed above, thus here we need to run the model in first differences. Thus the unit root test results are presented below in table 4 and the corresponding critical values are presented in appendix 5.

TABLE 4: ADF-TEST RESULTS

Variable label	Variable	ADF Test Statistic (Levels)	ADF Test Statistic (1st Difference)	Order of integration
FDI	Foreign Direct Investment	-2.88197	-4.286569**	I(1)
CORP	Corporate Taxes	2.076828	-6.026130**	I(1)
XR	Real Effective Exchange rates	0.299144	-3.658855**	I(1)
INFL	Inflation rate	-2.014009	-3.967645**	I(1)
OPEN	Openness	-2.589174	-5.875870**	I(1)
GDP	Gross Domestic Product	2.721085	-3.289274**	I(1)
GDPGRWTH	GDP growth rate	-2.110767	-6.265622**	I(1)
XP	Exports	0.135894	-6.115318**	I(1)

** The ADF-test statistic significant at 5% level of significance.

The results of the ADF Test for unit root indicate that all the variables are non stationary in levels but they become stationary after taking their first differences. Thus all the variables are integrated of order 1, implying that they are an I (1) process. Refer to the Appendix 5 for the complete ADF test for unit root tables.

5.2 Co-Integration Test Results

As already discussed above, given a group of non-stationary series, we may be interested in determining whether the series are co integrated, and if they are, in identifying the co integrating (long-run equilibrium) relationships. It usually a common practice to estimate the model in differenced form when ever the series are non-stationary. The major drawback of this is that some valuable long run information in the data is lost in the

process of differencing. Now the concept of co integration solves this problem in that even though two or more series could be non-stationary, their linear combination might be stationary, i.e. the variables may be co integrated. In this case, regression on the levels of the variables would be preferred because it would retain valuable long run information in the data. Thus the equation estimated is will be the long run model.

5.2.1 Augmented Engle Granger test (AEG) for co integration

This test is basically the ADF Unit root test on the residuals from the model run in levels. Here the residuals are tested for stationarity, and once it is found that they are stationary then we conclude that the series in consideration are co integrated. But here since the estimated error term is based on the estimated cointegrating parameters in equation (3) above, the Dickey Fuller and Augmented Dickey Fuller critical significance values are not quite appropriate. Engle and Granger have calculated the critical values for the test and E-views reports these critical values along with other outputs. Equation (3) was run but since the variables have been found to be individually non-stationary, there is a possibility that this regression is spurious, but when we performed a unit root test on the residuals obtained from equation (3), we obtained the results in the table 5 below.

Table 5. Augmented Engle-Granger (AEG) test results

ADF Test Statistic	-3.790288	1% Critical Value*	-3.6353
		5% Critical Value	-2.9499
		10% Critical Value	-2.6133

*MacKinnon critical values for rejection of hypothesis of a unit root.

The Engle and Granger critical values were -3.63, -2.94 and -2.61 at 1%, 5% and 10% respectively. As we can be seen from the table, we see that at the lowest significance level of 1%, we reject the hypothesis of a unit root in the residuals i.e. $-3.79 > -3.63$. Thus the residuals from equation 3 are $I(0)$; that is, they are stationary, and thus we may conclude that the series are co integrated. Hence equation 3 above is a co integrating

regression and it is not spurious even though individually the variables are non stationary.

Table 6 below presents the results of the static or long run equation.

5.3 Long Run Equation Results

Table 6: Results of the Long-Run model

Dependent variable: **Log (FDI)**

Variable	Co-efficient	Standard error	T- Statistic	Probability
C	-11.21782	2.677060	-4.190351	0.0005
Log(CORP)	-1.030177	0.756640	-1.361517	0.1893
Log(XR)	0.016554	0.360115	0.045970	0.9638
Log(INFL)	- 0.310260	0.174649	-1.776481	0.0917
POLITICS	-0.413877	0.575971	-0.718572	0.4811
Log(OPEN)	3.149639	1.189438	2.648006	0.0159
LIB	0.541831	0.344852	1.571199	0.1326
Log(GDP)	3.056076	1.296595	2.357002	0.0293
Log(GDPGRWTH)	0.133294	0.106362	1.253217	0.2253
Log(XP)	-1.188739	0.739220	-1.608100	0.1243

R-squared	0.957326	Mean dependent var	-1.490181
Adjusted R-squared	0.937112	S.D. dependent var	1.738365
S.E. of regression	0.435939	Akaike info criterion	1.444168
Sum squared resid	3.610810	Schwarz criterion	1.915650
Log likelihood	-10.94044	F-statistic	47.35942
Durbin-Watson stat	1.957698	Prob(F-statistic)	0.000000

The variables in the long run model were introduced in logarithmic form and robust standard errors were used to estimate the equation. It is quite evident from table 6 above that the results of the long run model do give meaningful results. The hypothesized signs on the variables are obtained from this equation. Furthermore, the long run equation does fit the data well. Both the R^2 and adjusted R^2 have high values, 0.957 and 0.937 respectively; suggesting that about 95% of the variability in the FDI series is being explained by the regressors in the model. The D-statistic has a value of 1.96 implying that there is no first order serial autocorrelation in the model. However when we assess the significance of the individual variables, we find that most of the variables are statistically insignificant. However we would still use the results of the long run model for inferencing and prediction. So due to the insignificance of the variables in the long run model, the short run (error correction) model was run. This was run in first differences and some variables were lagged so as to whiten the error term.

5.4 Short-Run Model Equation Results (The Error Correction Model)

Table 7: Results of the short run error correction regression equation

Dependent variable: **D (FDI)**

Variable	Co-efficient	Standard error	T- Statistic	Probability
C	0.080735	0.219235	0.368257	0.7166
D(CORP(-3))	-0.000289	0.000128	-2.263269	0.0349
D(XR(-3))	-0.530604	0.082325	-6.445264	0.0000
D(INFL)	-0.049071	0.016642	-2.948527	0.0079
POLITICS	1.173863	0.509966	2.301845	0.0322
D(OPEN)	2.302455	1.926634	1.195066	0.2460
LIB	0.038837	0.389642	0.099675	0.9216
D(GDP(-4))	7.13E-05	3.31E-05	2.151455	0.0438
D(GDPGRWTH(-2))	2.172159	0.595294	3.648887	0.0016
D(XP(-3))	0.000589	0.000185	3.181237	0.0047
ECM(-1)	-0.464015	0.117050	-3.964236	0.0008
R-squared	0.854745	Mean dependent var	0.009826	
Adjusted R-squared	0.782118	S.D. dependent var	1.687238	
S.E. of regression	0.787567	Akaike info criterion	2.631685	
Sum squared resid	12.40522	Schwarz criterion	3.140519	
Log likelihood	-29.79111	F-statistic	11.76891	
Durbin-Watson stat	2.095054	Prob(F-statistic)	0.000002	

Now having established that the error term in the long run model is stationary, the short run model is formulated with a lagged value of error term (ECM_{t-1}) as one of the regressors. The short run regression model was run in first differences. Table 7 above presents the results of the short run regression model.

5.5 Diagnostic Tests

The results in the table 7 above do seem to indicate that the short run equation does fit the model well. Just looking at the F-statistic we see that it has a value of 11.768 and a corresponding probability value of 0.000. This suggests that all the variables are collectively significant 1%, 5%, 10% significance levels. Further the coefficient of determination (COD) has a value equal to 0.85 implying that about 85% of the variability in the Foreign Direct Investment is being explained by the regression model estimated in this study. Even the adjusted coefficient of determination does give us a high value equal to 0.78, implying that about 78% of the variations in FDI are being explained by the regression line. We have a Durbin-Watson statistic equal to 2.09 which seems to indicate that there is no first order serial correlation in the model. Thus all these do seem to indicate that the model is correctly specified and that the data do fit the model quite well.

The Error Correction Term (ECM) is statistically significant at all levels of significance (1%, 5%, and 10 %) and it is negative as expected. It has a coefficient with a t-statistic equal to -3.96 and a corresponding p-value equal to 0.000. Thus this implies that there is a good feed back effect of deviation of the short run model from its long run path. The coefficient of the ECM has a value of 0.46 suggesting that almost 46% of the discrepancy between the actual and the equilibrium value of FDI is corrected each period in the estimate. Thus the ECM corrects the error produced from deviating from the long run path.

Jarque-Bera histogram normality test was used to assess the hypothesis of normality in the study. The results of the test are presented in appendix 1 below. As can be seen from the results, it is quite evident that the residuals from the estimated model are normally distributed. Skewness has a value of 0 and kurtosis has a value of 2.7 which is close to 3. Further looking at the Jarque-Bera statistic, we see that it is giving us a value of 0.45 and

a corresponding probability of 0.79. Thus we cannot reject the null hypothesis that the residuals are normally distributed.

Ramsey-Reset specification test was used to assess whether the model has been correctly specified or not. The null hypothesis is that the model has been well specified against the alternative hypothesis that the model has not been well specified. The results of this test are presented in appendix 2 and we see that F-statistic has a p-value equal to 0.155310. Thus at all levels of significance, we can not reject the null hypothesis that the model has been correctly specified.

The Breusch-Godfrey LM test was used to test for autocorrelation of higher order in the model. The null hypothesis is that the errors are not correlated (no serial autocorrelation). As can be seen from appendix 3, the F-statistic has a p-value equal to 0.276520 which leads to the acceptance of the null hypothesis at all levels of significance (1%, 5%, and 10%). Therefore we can safely conclude that the errors in the model are not serially correlated.

White Heteroskedasticity Test was used to assess whether the error terms are homoskedastic or heteroskedastic. The test used White Heteroskedasticity-Consistent Standard Errors & Covariance i.e. the test used robust standard errors to correct for the presence of heteroskedasticity. The null hypothesis is that the errors are homoskedastic against the alternative hypothesis that the errors are heteroskedastic. Here we use the Obs*R-squared and from appendix 4 below we see that this statistic has a p-value equal to 0.032571 which leads us to accept the null hypothesis of homoskedasticity at 1%. Thus we can conclude that the residuals of the estimated model are homoskedastic.

5.6 Interpretation of the results of the (Error Correction) short run model

Having established that the short run model does it the data very well, and then below we proceed to give some technical and economic interpretations to the different co-efficients derived in our model.

In this study our variables of interest were domestic market size and market growth, measured by GDP and GDP growth respectively, taxes on investment measured by corporate taxes, export orientation policy measured by total exports, trade liberalization, political environment, macroeconomic instability measured by inflation and openness of the economy.

Market size (GDP) and Market Growth (GDPGRWTH)

In this study, it is quite evident that both domestic market size and market growth are very important significant factors in attracting FDI in Malawi. We see from table 7 that the co-efficients for GDP and GDPGRWTH have t-statistics equal to 2.151455 and 3.648887 respectively and both have positive signs as hypothesized. These are both significant at 5% significance level confirming the finding above. From the table above it can be seen that a 1% increase in market size will result into an average of 7.13 increase in FDI inflows. Likewise, if the domestic market grows by 1%, this would result into an increase in FDI flows by 2.17 on average. Bende-Nabende (2002) also found Market growth to be more significant in attracting FDI in most SSA economies. Indeed domestic market size and market growth can be seen to be important factors in attracting FDI in Malawi because most of the FDI coming to host nations in Africa comes as FDI in services as opposed to FDI in stocks. Malawi has over 10 million people with an average per capita income of US \$200. It is estimated that 15 per cent of the population live in urban centers, including the major cities of Blantyre, Lilongwe and Mzuzu. According to the Malawi private capital stock survey (2002), most investors indicated that their market share had been reduced following economic liberalisation that saw the influx of cheaper imported products. Given the stagnating levels of per capita income, this had implied that the domestic market in Malawi had been shrinking. However, companies that export indicated that there are market expansion opportunities under SADC and COMESA as the two trade blocks move into a freer trade regime. Furthermore, some investors did welcome the Africa Growth Opportunity Act (AGOA) and the European Union Africa Caribbean Pacific Agreement (EU-ACP) under the Everything But Arms (EBA) initiative.

Taxes on investment (CORP)

The co-efficient on CORP has a value of -0.000289 and a corresponding t-statistic of -2.2632. The P-value for this co-efficient is 0.0349 and evidently, this has a low value suggesting that this variable is significant at 5% and 10% levels of significance. And as hypothesized, the co-efficient has a negative value. Thus we conclude that taxes are an important factor in attracting FDI in Malawi although the increase in value of FDI inflows resulting from a 1% decrease in corporate taxes is considerably low (0.000289, on average). This concurs with theory that any cost to investment will tend to decrease it. Raising taxes on investment will discourage investment inflows in a host country. Thus tax incentives have a positive impact on FDI in Malawi. Malawi has a competitive corporate tax rate of 30 per cent and low import duties. In addition, Malawi offers an array of incentives, some of which are; a 40 per cent investment allowance on qualifying expenditures for new buildings and machinery, up to 20 per cent investment allowance on qualifying expenditures for used buildings and machinery, among other incentives.

Macroeconomic instability (INFL) and politics (POLITICS)

This study used the inflation rate to assess the impact of macroeconomic instability on FDI inflows. It has been found that the co-efficient of inflation has a t-statistic that is (-2.948527) and a corresponding p-value of 0.0079. Thus this variable is significant at all levels of significance (1%, 5%, 10%) suggesting that macroeconomic instability has a negative and significant impact on FDI inflows to Malawi. This concurs with what Assiedu (2003) found. He also used inflation as a proxy for assessing the macroeconomic situation of host nations trying to attract FDI. He found macroeconomic stability plays an important role in attracting FDI. So looking at the table above, if inflation rose by 1%, FDI inflows would fall by 0.049071 on average. Further, from the results of Malawi Private capital stocks survey (2002), almost all the companies interviewed complained about high interest rates, inflation, and the negative effect of the depreciation of the Kwacha. The study showed that, on average, 69 percent of respondents indicated that inflation rates, interest rates and depreciation of the Malawi Kwacha negatively affect investment. The average scores for inflation and interest rates were 4.2 while that of depreciation of the Kwacha was 4.0. To assess the impact that the political environment

have had on FDI, a dummy variable was used. The co-efficient for the politics dummy has a t-statistic of 2.301845 and a corresponding p-value of 0.032. This shows that this dummy is significant at 5%, and this suggests that the change in the political system from one party rule to democracy has had a significant impact on FDI flows in the country. Indeed the majority of investors believe that a good political system is catalytic to investment. Following the ushering in of the new political dispensation in 1993, coupled with economic liberalization policies, there was mushrooming of private industries in the country. There had particularly been a noticeable increase in the number of establishments in wholesale and retail trade, hotels and restaurants immediately after the Multi-party era as evidenced by the share of this sector to GDP, which was 27.7 percent in 1994 and was at 20.8 percent in 2000. Private capital stocks survey (2002).

Export orientation policy (XP)

Export orientation policy measured by exports is predicted to be an important factor in attracting FDI in host nations. In this study, export orientation policy has been found to be a significant factor in attracting FDI to Malawi. This is evidenced by looking at the t-statistic (3.181237) and corresponding P-value (0.0047) which clearly indicate that the co-efficient on exports (XP) is statistically significant at all levels of significance (1%, 5%, and 10%). Bende-Nabende (2002) in his study of FDI in SSA found this to be a significant factor in attracting FDI in host nations.

Openness of the economy (OPEN) and Trade liberalization (LIB)

Openness of the economy plays a very important role in the attraction of foreign investors to host nations. At least in SSA countries, it has been found that openness of the economy contributes to the attraction of FDI to these developing countries although the impact is less significant (Bende-Nabende, 2002). In this study, openness index is found to be positively correlated to FDI inflows although the relationship is not a significant one. From table 7 above, we see that the co-efficient for openness has t-value (1.195066) and a corresponding p-value (0.2460) which is insignificant at all levels of significance. Thus opening up to trade has not significantly helped Malawi attract FDI. This concurs with what Bende-Nabende found in his study, as he found this variable to be less significant in

determining FDI inflows. FDI liberalization, in this study, was measured by Trade liberalization. Contrary to what Bende-Nabende found, in this study FDI liberalization, measured by trade liberalization dummy is found to be statistically insignificant indicating that trade liberalization did not have any significant impact on FDI inflows to Malawi although there is a positive relationship between the two.

Exchange rates (XR)

The exchange rate volatility in an economy brings uncertainty to investment, so much so that if the exchange rate in a country is highly volatile, this poses as a macroeconomic uncertainty. So we expect a negative relationship between the exchange rate and FDI inflows. In this study the co-efficient for the real exchange rate has a negative value and is highly significant at all levels of significance (t-value; -6.445264 and p-value; 0.0000). A 1% change in the exchange rate will lead to a decrease in FDI by 0.530604 on average. Thus we conclude that the exchange rate in Malawi has been volatile and this has had a negative significant impact on FDI inflows. In all therefore, the exchange rate is quite a useful factor when we consider the factors that determine FDI flows to Malawi.

CHAPTER SIX

CONCLUSIONS AND POLICY IMPLICATIONS

6.1 Summary

This study set out to analyse the determinants of foreign direct investment in Malawi using the regression analysis and ordinary least squares for estimation. The study period covered was from 1970 to 2005. The factors investigated in this study were the real exchange rate, corporate taxes, market size and market growth proxied by GDP and GDP growth, macroeconomic instability proxied by the inflation rate, the political environment, openness, FDI liberalization, and export oriented development policy.

6.2 Conclusions

The empirical results are telling us that the most dominant determinants of FDI in Malawi among those that were included in the study are market size and growth, export-orientation policy, corporate taxes, the real exchange rate, the political environment and macroeconomic stability. These are followed by openness and trade liberalization which did not have a significant impact on FDI during the study period. The results show that macroeconomic stability, the political environment, a stable exchange rate, and export oriented policy have a positive significant impact on FDI flows to Malawi. In addition to this, a broad domestic market base, market potential and tax incentives play a significant role in attracting FDI in Malawi. These results do agree with the studies discussed above by Bende-Nabende (2002) and Assiedu (2003). The former found that the most dominant long-run determinants of FDI in SSA are market growth, export-orientation policy, FDI liberalization, real exchange rates, market size, and openness. However, because of data limitations no definite conclusions were drawn from the results for real wage rates and human capital. Assiedu in his study found that macroeconomic stability, efficient institutions, political stability and a good regulatory framework have a positive impact on FDI.

6.3 Policy Implications and Limitations of the Study

Thus the study has helped us to unleash some of the factors that are important in wooing FDI in Malawi but have previously been sidelined. The contribution of the study is that it sets a background for policy consideration in as far as wooing FDI is concerned in Malawi. It is quite evident from the results of the study that as a country, Malawi can attract more FDI by;

- Improving its macroeconomic position so as to ensure that the country has a stable macro economic environment.
- Ensuring a stable exchange rate and a conducive political atmosphere
- Promoting an export-orientation development policy.
- Broadening its domestic market base and adding more tax incentives to the existing ones.
- Opening up to trade and liberalizing FDI

Due to data problems, some important factors were not addressed in the empirical analysis. The return to investment is an important factor to investors, but was not included in the empirical analysis because there is no comprehensive data on this in Malawi. According to UNCTAD (1999), it is a fact that infrastructure facilitates the production and distribution process of goods and services. It then follows that less investment in infrastructure will discourage FDI inflows. The level of infrastructure in Malawi is comparatively low. The study has not addressed the impact that this could possibly have on FDI. Issues of corruption have not been comprehensively addressed although it can be claimed that this has been dealt with under the political environment.

So as a country, Malawi can in the short and medium term, increase FDI inflows by streamlining its investment regulatory framework, implementing policies that promote macroeconomic economic stability, and improving physical infrastructure. In the long run, more FDI can be attained by curbing corruption, developing a more efficient legal framework and ensuring a favorable political atmosphere. Large domestic markets remain a powerful magnet for investors. Therefore, Malawi can attract more FDI by

broadening its domestic market base. These steps will not only generate sustained growth prospects and hence market potential, but will also provide a conducive environment for FDI in Malawi.

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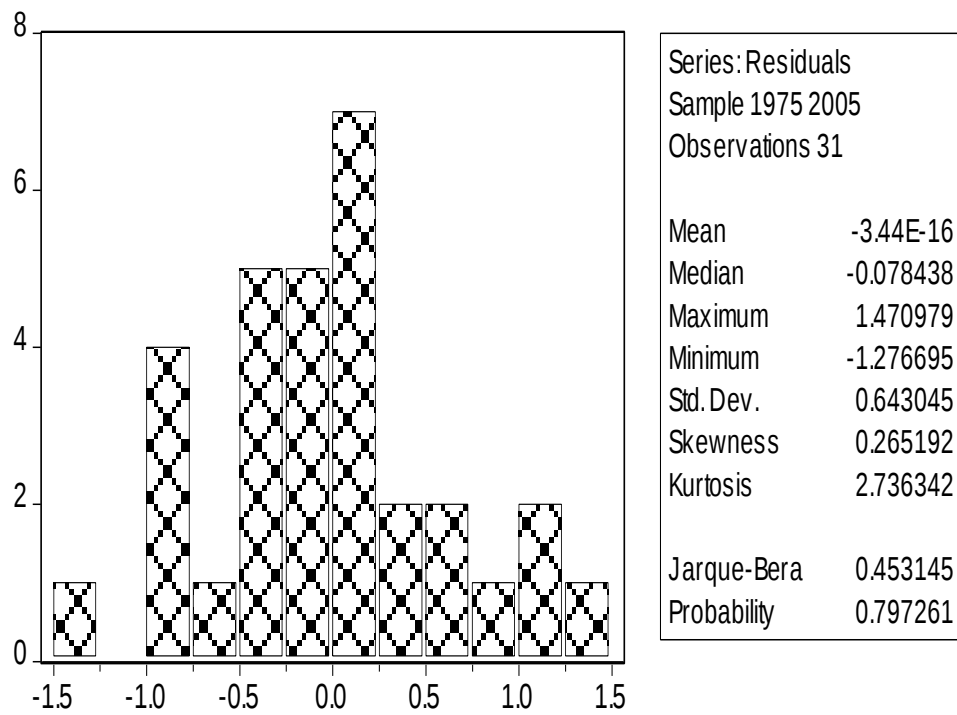
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APPENDICES

Appendix 1: Normality Test (Jarque Bera)



Appendix 2: Ramsey RESET Test

F-statistic	2.189888	Probability	0.155310
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Log likelihood ratio	3.381638	Probability	0.065927
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Test Equation:

Dependent Variable: D(FDI)

Method: Least Squares

Date: 06/18/07 Time: 09:55

Sample: 1975 2005

Included observations: 31

R-squared	0.869757	Mean dependent var	0.009826
Adjusted R-squared	0.794353	S.D. dependent var	1.687238
S.E. of regression	0.765135	Akaike info criterion	2.587116
	11.12319	Schwarz criterion	3.142207
Sum squared resid	-28.10029	F-statistic	11.53462
Log likelihood	2.312241	Prob(F-statistic)	0.000003
Durbin-Watson stat			

Appendix 3: Breusch-Godfrey Serial Correlation LM Test

F-statistic	1.255219	Probability	0.276520
Obs*R-squared	1.921075	Probability	0.165738

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 06/18/07 Time: 09:54

R-squared	0.061970	Mean dependent var	-3.58E-16
Adjusted R-squared	-0.481100	S.D. dependent var	0.643045
S.E. of regression	0.782589	Akaike info criterion	2.632227
Sum squared resid	11.63647	Schwarz criterion	3.187319
Log likelihood	-28.79952	F-statistic	0.114111
Durbin-Watson stat	1.789155	Prob(F-statistic)	0.999634

Appendix 4: White Heteroskedasticity Test

F-statistic	43.63867	Probability	0.000000
Obs*R-squared	30.53354	Probability	0.032571

Test Equation:

Dependent Variable: RESID^2

Method: Least Squares

Date: 06/19/07 Time: 11:19

Sample: 1975 2005

Included observations: 31

R-squared	0.984953	Mean dependent var	0.400168
Adjusted R-squared	0.962382	S.D. dependent var	0.536020
S.E. of regression	0.103963	Akaike info criterion	-1.412846
Sum squared resid	0.129699	Schwarz criterion	-0.533951
Log likelihood	40.89911	F-statistic	43.63867
Durbin-Watson stat	2.362829	Prob(F-statistic)	0.000000

Appendix 5: Augmented Dickey Fuller (ADF) Unit root test results

ADF Unit root test on FDI (Levels)

ADF Test Statistic	-2.898197	1%	Critical Value*	-3.6353
				-2.9499
		5%	Critical Value	
				-2.6133
		10%	Critical Value	

*MacKinnon critical values for rejection of hypothesis of a unit root.

ADF unit root test on FDI (1st Difference)

ADF Test Statistic	-4.286569	1%	Critical Value*	-3.6422
		5%	Critical Value	-2.9527
		10%	Critical Value	-2.6148

*MacKinnon critical values for rejection of hypothesis of a unit root.

ADF unit root test on Taxes (Levels)

ADF Test Statistic	2.076828	1%	Critical Value*	-4.2412
		5%	Critical Value	-3.5426
		10%	Critical Value	-3.2032

*MacKinnon critical values for rejection of hypothesis of a unit root.

ADF unit root test on taxes (1st difference)

ADF Test Statistic	-6.026130	1%	Critical Value*	-4.2505
		5%	Critical Value	-3.5468
		10%	Critical Value	-3.2056

*MacKinnon critical values for rejection of hypothesis of a unit root.

ADF unit root test on exchange rate (Levels)

ADF Test Statistic	0.299144	1%	Critical Value*	-4.2505
		5%	Critical Value	-3.5468
		10%	Critical Value	-3.2056

*MacKinnon critical values for rejection of hypothesis of a unit root.

ADF unit root test on exchange rate (1st difference)

ADF Test Statistic	-3.658855	1%	Critical Value*	-4.2605
		5%	Critical Value	-3.5514
		10%	Critical Value	-3.2081

*MacKinnon critical values for rejection of hypothesis of a unit root.

ADF unit root test on openness (levels)

ADF Test Statistic	-2.589174	1%	Critical Value*	-3.6422
		5%	Critical Value	-2.9527
		10%	Critical Value	-2.6148

*MacKinnon critical values for rejection of hypothesis of a unit root.

ADF unit root test on openness (1st difference)

ADF Test Statistic	-5.875870	1%	Critical Value*	-3.6496
		5%	Critical Value	-2.9558
		10%	Critical Value	-2.6164

*MacKinnon critical values for rejection of hypothesis of a unit root.

ADF unit root test on GDP (Levels)

ADF Test Statistic	2.721085	1%	Critical Value*	-3.6289
		5%	Critical Value	-2.9472
		10%	Critical Value	-2.6118

*MacKinnon critical values for rejection of hypothesis of a unit root.

ADF unit root test on GDP (1st difference)

ADF Test Statistic	-3.289274	1%	Critical Value*	-3.6422
		5%	Critical Value	-2.9527
		10%	Critical Value	-2.6148

*MacKinnon critical values for rejection of hypothesis of a unit root.

ADF unit root test on GDP growth (Levels)

ADF Test Statistic	-2.110767	1%	Critical Value*	-3.6353
		5%	Critical Value	-2.9499
		10%	Critical Value	-2.6133

*MacKinnon critical values for rejection of hypothesis of a unit root.

ADF unit root test on GDP growth (1st difference)

ADF Test Statistic	-6.265622	1%	Critical Value*	-3.6422
		5%	Critical Value	-2.9527
		10%	Critical Value	-2.6148

*MacKinnon critical values for rejection of hypothesis of a unit root.

ADF unit root test on export (Levels)

ADF Test Statistic	0.135894	1%	Critical Value*	-4.2412
		5%	Critical Value	-3.5426
		10%	Critical Value	-3.2032

*MacKinnon critical values for rejection of hypothesis of a unit root.

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ADF unit root test on export (1st difference)

ADF Test Statistic	-6.115318	1%	Critical Value*	-4.2505
		5%	Critical Value	-3.5468
		10%	Critical Value	-3.2056

*MacKinnon critical values for rejection of hypothesis of a unit root.

Unit root test on inflation (LEVELS)

ADF Test Statistic	-2.014009	1%	Critical Value*	-3.6496
		5%	Critical Value	-2.9558
		10%	Critical Value	-2.6164

*MacKinnon critical values for rejection of hypothesis of a unit root.

Unit root test on inflation (FIRST DIFFERENCE)

ADF Test Statistic	-3.967645	1%	Critical Value*	-3.6576
		5%	Critical Value	-2.9591
		10%	Critical Value	-2.6181

*MacKinnon critical values for rejection of hypothesis of a unit root.

Appendix 7: Data Used in the study

Year	GDP	XP	CORP	FDI	XR	OPEN	GDPGRWTH	LIB	INFL	POLITICS
1970	267.1	49.7	26.414	0.034	0.83	0.495	0.2538	0	7.9977	0
1971	334.9	59.3	33.266	0.0265	0.77	0.445	0.0723	0	7.9274	0
1972	359.1	64.49	35.508	0.041	0.85	0.466	0.0136	0	3.673	0
1973	364	79.92	41.983	0.0472	0.85	0.535	0.2679	0	5.5847	0
1974	461.5	101.31	49.38	0.0409	0.84	0.561	0.1478	0	14.806	0
1975	529.7	122.12	63.124	0.0237	0.9	0.643	0.1554	0	0.7417	0
1976	612	151.62	66.608	-0.002	0.91	0.556	0.1895	0	8.014	0
1977	728	180.33	86.037	0.0688	0.87	0.536	0.0999	0	10.041	0
1978	800.7	155.66	110.639	0.1088	0.81	0.55	0.0797	0	10.84	0
1979	864.5	181.708	133.376	0.0964	0.8	0.586	0.1626	0	10.693	0
1980	1005.1	227.98	165.084	0.1741	0.83	0.582	0.1025	0	16.84	0
1981	1108.1	243.976	170.517	0.0435	0.91	0.502	0.1236	0	9.8034	0
1982	1245.1	252.993	190.993	0.0469	1.1	0.462	0.154	0	8.5121	0
1983	1436.9	289.175	226.781	0.0807	1.3	0.454	0.1883	0	12.58	0
1984	1707.4	440.678	264.535	0.0799	1.56	0.482	0.1391	0	10.448	0
1985	1944.9	421.961	326.566	0.032	1.68	0.477	0.1299	0	13.93	0
1986	2197.6	462.247	364.062	-0.037	1.95	0.428	0.1895	0	13.791	0
1987	2614	615.055	405.573	0.1522	2.05	0.485	0.3075	0	23.718	0
1988	3417.9	751.703	591.753	0.3336	2.54	0.536	0.2286	1	27.274	0
1989	4199.2	740.608	800.219	0.3207	2.68	0.509	0.2073	1	14.621	0
1990	5069.9	1123.13	859.322	0.6312	2.65	0.535	0.2043	1	10.835	0
1991	6105.5	1332.958	950.518	0.562	2.66	0.542	0.0964	1	7.8811	0
1992	6693.8	1441.025	1098.39	0.5851	4.4	0.603	0.3249	1	20.937	0
1993	8868.9	1410.903	1208.04	0.9335	4.49	0.43	0.1641	1	20.529	0
1994	10324.7	2953.551	1709.04	1.0807	15.3	0.694	1.2104	1	29.725	1
1995	22821.9	6192.563	3111.38	0.9833	15.3	0.589	0.5571	1	60.601	1
1996	35535.6	7358.761	4782.61	1.8271	15.32	0.476	0.1695	1	31.922	1
1997	41558.8	8483.809	5499.98	2.031	21.23	0.513	0.3183	1	8.7566	1
1998	54788.6	16667.4	6979.08	6.395	43.88	0.665	0.4568	1	26.08	1
1999	79817.8	17581.8	15824	5.6012	44.09	0.606	0.2958	1	36.972	1
2000	103425.2	23624.6	16490.3	4.2819	59.55	0.541	0.1921	1	25.909	1
2001	123291.2	31816.6	21802	-3.099	72.20	0.578	0.197	1	20.457	1
2002	147580.7	31407.4	23729.9	-0.329	76.69	0.563	0.1167	1	13.76	1
2003	164804.2	36140.9	30469	-0.2	97.44	0.572	-1	1	9.1558	1
2004	183455.3	36434.6	34456.6	-0.453	98.56	0.563	0.2215	1	9.634	1
2005	165238.5	38012.5	37734.5	0.3455	97.44	0.585	-0.6544	1	9.1234	1

