

Determinants of Foreign Direct Investment in Malawi

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ABSTRACT

This study examines empirically the determinants of Foreign Direct Investment in Malawi, by employing annual data that covered the period 1970-2016. The study used a dynamic model, the Autoregressive Distributed Lag bounds-testing approach to co-integration and error correction model, to explore these determinants. The study found that a long run relationship between Foreign Direct Investment and the selected determinants: market size, infrastructure, human capital, broad money, real exchange rate, population growth, government consumption, and inflation. The study further found that the determinants that were significantly associated with attracting Foreign Direct Investment in Malawi included infrastructure, broad money and government consumption. Specifically, the study results found that government consumption is negatively and significantly associated with Foreign Direct Investment both in the short and long run; infrastructure is positively and significantly associated with Foreign Direct Investment in the long run; broad money is positively and significantly associated with Foreign Direct Investment in the long run; and no significant relationship was found between market size, human capital, real exchange rate, population growth, and inflation both in the short and long run. These results have important policy implications for Malawi. These include the need for Malawian authorities to focus on strategies that create incentives to increase the level of physical infrastructure in the country; implementing monetary policies, fiscal incentives and subsidies that promote financial development; as well as promoting FDI-friendly government policies that minimise the impact of distortionary fiscal policies such as distortionary taxation and deregulation.

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LIST OF ABBREVIATIONS

ADF	Augmented Dickey- Fuller
ARDL	Autoregressive Distributed Lag
EGENCO	Electricity Generation Company
EGENCO	Electricity Generation Company
ESCOM	Electricity Supply Corporation of Malawi
ESCOM	Electricity Supply Corporation of Malawi
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
MGGSP	Mining Government and Growth Support Project
MITC	Malawi Investment Trade Centre
MITC	Malawi Investment Trade Centre
MNC	Multi-National Companies
MNE	Multinational Enterprises
MNE	Multi National Enterprises
NSO	National Statistics Office
OECD	Organisation of Economic Co-operation Development
OLI	Ownership Location Internalisation
OLS	Ordinary Least Squares
PSIP	Public Sector Investment Programme
R & D	Research and Development
RBM	Reserve Bank of Malawi
SSA	Sub-Saharan Africa
UNCTAD	United Nations Conference on Trade and Development
US DoS	United State Department of State

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CHAPTER 1: INTRODUCTION

1.1 Background to the Study

Foreign Direct Investment (FDI) is one of the drivers of economic development and a tool for economic growth in both developed and developing countries. According to the United Nations Conference on Trade (UNCTAD, 2002), FDI inflows are commonly received in developing countries, countries with economies in transition, and in countries with the fastest growing economies. Many researchers have found FDI as well as the accumulation of physical and human capital as essential ingredients for a nation's economic development and poverty reduction (Loksha and Leelavathy, 2012; Gomes de Castro *et al.*, 2013).

According to Pradhan and Singh (2008), attracting investment in the globalised world depends on competitive factors of production which are essential determinants of FDI inflows and outflows. Empirical evidence has also shown that most developing economies in the world have moved away from state-led economies to implementing more of market-oriented development strategies with the central aim of attracting FDI to alleviate financial and technological skills deficits, and positively influence economic growth and employment creation in the host nation (Singh *et al.*, 2008; Gomes de Castro *et al.*, 2013). For this reason, many developing economies, including Malawi, have started to undertake various reforms and are implementing structural adjustment programs (or SAPs) to reduce the factors that inhibit FDI inflows or outflows (Singh *et al.*, 2008).

Chervin (2009) further notes that increased FDI inflows have helped reduce the annual resource gap, brought technological and managerial skills to Africa and have created employment. Kamara (2013) stresses that the importance of this source of external finance is evident in the efforts made by many Sub-Saharan African nations to attract FDI through the adoption of FDI-friendly policies. Research has revealed that when Multinational Enterprises (MNEs) invest in a country, the investment can create jobs, upturn productivity through the provision of capital and technology, as well as instil advanced Research and Development skills (R&D) to the host nation. In addition, it might even have spill-over effects such as the development of managerial and technological skills, and the improvement of companies' access to international markets. As a result, FDI can bring increased revenues for the host country and boost the growth of the economy. Owing to this, emerging and developing countries are interested in attracting higher levels of FDI not only because of its stability but also for its potentially broad set of benefits for the host country (Aykut *et al.*, 2017). Lydon and Williams (2005) also observed that several factors determine FDI decision and account for significant variations in the volume of FDI inflows to different countries and regions. In addition, Khrawish and Siam (2010) further explained that host governments that do not

promote a stable political environment prevent investment as political risk discourages firms that intend to inject their capital in other nations.

There are different industries and sectors through which Malawi has received FDI: these sectors include mainly agriculture, tourism, manufacturing, energy and mining. Nevertheless, over the years, Malawi has not been able to attract significant FDI despite the country's efforts in creating a conducive environment for FDI flows. In addition, there has been little improvement in the areas that are expected to attract foreign investors despite some of Malawi's neighbouring countries' implementation of FDI-related reforms to attract direct investment. For instance, Kazembe and Namizinga (2007) observed that although tax incentives are reasonable to investors, the economic environment has not been stable. They further reported that Malawi's economy is hampered by problems like high inflation rate, irregular power supply and water shortages, among others, which adversely affects the production of manufacturing companies. All this is happening despite having political stability and openness to trade.

In this study, therefore, the determinants of FDI inflows in Malawi and how these can improve the investment climate that will see more investors flowing into Malawi, resulting in the growth of the country's gross domestic product (GDP), were examined. FDI, just like savings and investment, plays a crucial role in any economy by filling in a resources gap especially for developing countries facing both savings and investment shortages. Having a stable macroeconomic environment, amid other factors such as a consistent policy framework, market size, economic stability and political factors, is crucial to ensure that an economy does not experience capital flight. Economic factors such as low inflation, exchange rate and interest rate stability, productive tax regimes, and outward-oriented trade policies are thus crucial determinants of FDI inflows (World Bank, 1990; Acemoglu *et al.*, 2005).

Many studies have revealed that such determinants of FDI can either hinder or promote FDI flows and may have a different impact in different economies as they depend on their stage of development. In addition, for policy makers to identify which strategies to adopt, it is important to undertake country-based economic studies. Another reason for conducting country-based studies is that many economic factors portray threshold effects. For instance, depending on the level of inflation, a low inflation rate can have positive effects on FDI flows while high inflation may exhibit negative effects on FDI inflows, hence the need for country-based analyses (Bruno and Easterly, 1998).

The choice of Malawi in this study is also based on the fact that the economy has experienced low economic growth rates since independence and has often times had variable and very low FDI

inflows. This has contributed towards high poverty rates and high unemployment, resulting in considerable social and economic adversities such as low per capita Gross National Income of US\$320, one of the lowest in the world; high levels of poverty at 69.6% of the population based on an international poverty line of US\$1.90; macroeconomic instability as evidenced by high inflation, high interest rates and weakened expectations compounded by a low business confidence index; and fiscal imbalances leading to rising national debt (IMF, 2017). In addition, the selection of Malawi in this study is based on the availability of historical time-series data on FDI inflows covering the period from 1970 to 2016.

1.2 Problem Statement

Because of numerous advantages of FDI, developing nations, emerging economies, and economies under transition have done their best to liberalise their economies so that they can attract FDI (Kurtishi-Kastrati, 2013). According to Magalasi (2009), statistically, it has been measured that a percentage point increase in FDI has a positive correlation with the GDP that brings, *ceteris paribus*, 0.8 percentage point increase in a nation's per capita income. UNCTAD (2015) indicates that FDI inflow to Malawi is very low compared to other neighbouring countries such as Zambia and Mozambique. Malawi received \$129 million, \$120 million and \$130 million in 2012, 2013 and 2014, respectively. The FDI inflows were less than Zambia and Mozambique's, with the two countries receiving \$2,433, \$1,810, and \$2,484 million, and \$5,629, \$6175, and \$4902 million, respectively.

During the year 1994 when Malawi attained its independence, many economic activities that were implemented were financed by the state, thereby resulting in two fundamental challenges: first, the crowding-out effect of state-interventions, affecting the growth of the private sector; and second, inconsistencies in the implementation of policies leading to macroeconomic instability (Chirwa and Odhiambo, 2016). These, eventually, are the fundamental reasons Malawi has not fully implemented policies and reforms, thereby affecting the flow of FDI into the economy.

It is for these reasons that this study attempted to examine the determinants of FDI in Malawi by using recent econometric tools, more especially those that investigate the factors that drive or hinder FDI inflows both in the short- and long-run. One such econometric tool that this study adopted is the Autoregressive Distributed Lag (ARDL) bounds testing approach to cointegration that was developed by Pesaran and Shin (1999) and improved by Pesaran *et al.* (2001). This approach was adopted because many economic time-series are integrated of order one and a combination of such factors may result in a cointegrated series that become stationary. In fact, many studies have taken this approach even in investigating the determinants of FDI (Tang *et al.*,

2014; Belloumi, 2014). To the best of our knowledge, no empirical study has been conducted to investigate the determinants of FDI inflows in Malawi using the ARDL approach and make recommendations on which factors the government can either promote or control in order to attract the FDI inflows that the economy desperately needs.

1.3 Research Objectives

The main aim of the study was to empirically examine the determinants of FDI in Malawi using the ARDL bounds testing approach developed by Pesaran and Shin (1999) with the following as specific research objectives:

- 1) To empirically identify the key determinants of FDI in Malawi.
- 2) To empirically investigate the impact of the key determinants of FDI in Malawi by focusing on both the sign and magnitude of the coefficients.
- 3) To provide key policy recommendations based on the empirical findings to be adopted by policy makers in Malawi both in the short and long run to attract FDI.

1.4 Statement of Hypotheses

The hypotheses to be tested in the course of this study are as follows:

- 1) The alternative hypothesis states that the short run determinants of FDI in Malawi include market size (real GDP per capita), the accumulation of physical and human capital, population growth, government consumption, real exchange rate depreciation, inflation, and broad money. Alternatively, the null hypothesis is that these variables are not the short run determinants of FDI inflows in Malawi.
- 2) The alternative hypothesis states that the long run determinants of FDI in Malawi include market size (real GDP per capita), the accumulation of physical and human capital, population growth, government consumption, real exchange rate depreciation, inflation, and broad money. Alternatively, the null hypothesis is that these variables are not the long run determinants of FDI inflows in Malawi.
- 3) The alternative hypothesis states that market size (real GDP per capita), the accumulation of physical and human capital, real exchange rate depreciation, and broad money are positively related with FDI inflows in Malawi. Alternatively, these variables are not positively related with FDI inflows in Malawi.
- 4) The alternative hypothesis states that population growth, government consumption, and

inflation are negatively associated with FDI inflows in Malawi. Alternatively, these variables are not negatively related with FDI inflows in Malawi.

1.5 Justification of the study

The justification of this study is threefold. Firstly, the study adds to the existing literature on country-specific key determinants of FDI by focusing on developments in Malawi. Despite the abundant literature on the importance of the determinants of FDI such as market size, social and economic factors, policy framework, economic stability, political factors, among others, little empirical work has been done in the country of interest. The inability to attract significant FDI impedes development in Sub-Saharan Africa which Malawi is part of (Chika, 2014). Chervin (2009) argues that limited access to private international capital markets and low domestic savings rates that prevail make the inflow of FDI a significant source of capital for Sub-Saharan Africa (SSA). Thus, to increase FDI inflows into the SSA region, several policy reforms have been initiated both at country and regional levels in order to improve the investment climate and attract more foreign investors in Africa.

Secondly, a plethora of literature indicates that FDI in Africa is usually associated with natural resources and market size. However, Kazembe and Namizinga (2007) indicated that this assumption means that many uncontrollable factors that determine FDI inflows and developing countries like Malawi are not accounted for, making the analysis incomplete and creating a likelihood of leading to a misspecification bias when investigating the determinants of FDI in a country. The study also examines the interventions that have been implemented to attract FDI and how they can be improved and, if necessary, introduce new ones that would increase Malawi's ability to attract more FDI in the future. This is in response to the findings of the National Statistical Office's (2012) report on foreign investors' perceptions of factors negatively affecting investment in Malawi.

Thirdly, because of insufficient empirical literature on FDI determinants for Malawi, this study attempted to extend the research on the determinants of FDI and policy reforms that require interventions. It sought to cover the knowledge gap in academic circles by utilising latest econometric tools such as the ARDL bounds testing approach to cointegration in order to investigate the determinants of FDI in Malawi, both in the short and long run. The ARDL bounds testing approach has several advantages over earlier cointegration techniques such as residual-based tests (Engle and Granger, 1987), and maximum likelihood tests (Johansen and Juselius, 1990) which are discussed in the empirical analysis section.

1.6 Organization of the study

Chapter 2 provides an overview of FDI trends at global, regional and country levels. In addition, the chapter provides an analysis of factors that influence the FDI decision, FDI policies currently in place, Malawi's sectoral review of FDI inflow, potential sectors for investments, and factors hindering FDI in the likely sectors. The FDI trends include the global and regional patterns as well as Malawi's FDI trends and sectoral distribution of FDI. The literature review presented in Chapter 3 discusses the potential FDI determinants both at regional and country levels. Chapter 4 presents the research methodology, describing the data collection methods used, the selection of variables, and estimation procedure. Chapter 5 offers the presentation, analysis, and discussion of the empirical results. Finally, Chapter 6 provides the conclusion with policy implications, and recommendations.

CHAPTER 2: OVERVIEW OF FOREIGN DIRECT INVESTMENT

2.1 Introduction

This chapter explains the global, regional and country trends of FDI inflows, factors influencing investors' decisions, and Malawi FDI supporting policies that are in place. In addition, this chapter discusses Malawi's global and sectoral review of the FDI inflows and their patterns, potential sectors for investments that government needs more interventions in and factors hindering FDI inflows in the potential sectors. Therefore, this chapter brings out the importance and relevance of various drivers of FDI in Malawi.

2.2 Global FDI Trends

As UNCTAD (1995) posits, in the 1980s, a more significant share of global FDI was accounted for by developed countries. There was a decline in global FDI inflows in 1992 from US\$115 billion to US\$111 billion. However, developed and developing countries' inflows resulted in an increase in FDI inflows and in 1993, privatisation was the main reason for the increased inflows of FDI in Africa, especially in Sub-Saharan Africa. A decade later, increases were recorded between 2005 and 2006 because of the increased involvement of companies in cross-border mergers and acquisitions and a significant rise in inflows to developing countries and regions in 2004 (UNCTAD 2005; 2006).

UNCTAD (2010) postulates that the 2009 global financial crisis led to a decline in FDI inflows. This was after a prior five-year period of accelerated growth. Regionally, developing and transitional economies realised an increase in FDI in 2008 despite the financial crisis that profoundly affected advanced economies. However, 2009 experienced a massive decline in all the regions, resulting in a decrease in FDI inflows. Specific to Africa, FDI inflows declined to \$42.7 billion owing to the fall in North Africa notably Egypt and Libya (being the most recipients of FDI) because of political instability. The fall in North Africa was contrary to Southern Africa that had an increase of 27% in FDI inflows from 2010-2011 (UNCTAD, 2011) owing to the rise in commodity prices and a positive economic outlook.

UNCTAD (2013) echoes that the global FDI inflows rose to 16% in 2012 after the 2009 financial crisis. The increase was attributed to higher profits of transnational corporations and high economic growth in developing countries. Global FDI inflows experienced a robust recovery in 2015 with an increase of 38% to US\$1.76 trillion. The increase was a result of a surge in cross-border mergers and acquisitions from \$432 billion in 2014 to US\$721 billion and also owing to discounted corporate configurations with a reasonable 15% increase (UNCTAD, 2016). The global trends were

contrary to regional trends, especially Africa, which experienced a decrease to \$54 billion in 2015, signifying a 7% decline from the previous year. The fall was attributed to the decrease in FDI inflows to Sub-Saharan Africa, especially in West and Central Africa. The low commodity prices in naturally based economies contributed profoundly to the fall in the FDI inflows (UNCTAD, 2016).

Figure 1 illustrates the global trends in FDI inflows and disaggregated by developed and developing countries as well as allocations in Asia and Africa for the period 2010-2015.

Figure 1: FDI Inflows by Region, 2010-2015

Source: World Investment Report 2013 and 2016

According to UNCTAD (2013), the trends show that the world registered uneven growth with varying patterns in FDI inflows from region to region. For instance, in 2012, FDI inflows to developed economies decreased to \$561 billion from \$820 billion in 2011, which represents 41.5 percent of the global inflows. The developing economies also experienced a decline to \$703 billion in 2012 and continued to fall in the following years to 2016. At a regional level, Asia recorded a significant change in 2011, with an increase to \$436 billion and continued to receive the highest levels of FDI among all the regions in the world up to 2016. Even though Africa's FDI inflows rose from \$44 billion in 2010 to \$48 billion in 2011, the 8 percent increase is not significant. In addition, the continent failed to maintain the levels as evidenced in the decline to \$50 billion in 2010 (UNCTAD 2013, 2016).

Figure 2 below, on the other hand, summarises the FDI inflows in sub-Saharan Africa from 2000 to 2016.

Figure 2: FDI Inflows to Sub-Saharan Africa, 2000-2016

Source: UNCTAD Statistics 2016

UNCTAD (2001) observes that FDI inflows to Sub-Saharan Africa decreased from \$8 billion in 1999 to US\$1.27 billion in 2000. The decline was a result of a fall in FDI inflows in the two major FDI recipient countries, namely, South Africa where there was a reduction in mergers and acquisition activities, and Angola whose petroleum industry was at a halt because of its previous year's dynamic development. A considerable increase of 82% was experienced in 2001 (UNCTAD, 2005; 2007) from the previous year because of big deals in intra-country trading. However, this did not last long as the FDI inflows dropped by a significant margin of 62% in 2002 and stabilised until 2005 where it rose sharply again to US\$7.45 billion. Even though Africa had a substantial increase in 2006, the region experienced a negative inflow of US\$1.33 billion because of the sale of a

significant mining company to a local firm in South Africa and a considerable takeover of an oil company from a foreign investor in Angola.

UNCTAD (2010) indicates that in 2008, Sub-Saharan Africa experienced high FDI inflows at US\$10.6 billion owing to favourable commodity prices despite the global financial crisis. UNCTAD (2014) postulates that there was a small increase in the following years until 2013 when Sub-Saharan Africa FDI inflows almost doubled from US\$6.7 billion in 2012 to US\$9.8 billion, in 2013.

2.3 FDI Trends in Malawi

Table 3 illustrates FDI inflows to Malawi during the period 1970 – 2016.

Figure 3: FDI Trends in Malawi, 1970-2016

Source: World Bank (2018)

Compared to the FDI inflows to Sub-Saharan Africa, the inflows to Malawi, as a percentage of GDP, were volatile and very low given the economic status of the country. As illustrated in Figure 3, the FDI inflows during the 1970s averaged 2% of GDP per annum (p.a.) and were relatively lower in the 1980s, averaging 1% of GDP p.a. The trend continued in the 1990s where FDI inflows averaged 1% of GDP p.a. and slightly improved in the 2000s, averaging 2% of GDP p.a. It is only from 2010 to 2016 when FDI inflows in Malawi started to increase averaging 6% of GDP p.a. (World Bank, 2018). The low levels of FDI inflows are attributed to several economic challenges that Malawi faced during the period 1970-2016, which comprised the quality of traditional exports by smallholder farmers, declining terms of trade that led to balance of payment challenges and current account deficits, high population growth, low performing state-owned enterprises, high government budget deficits, low human capital development, and macroeconomic instability led by high inflation, exchange rate and interest rate misalignments (Chirwa and Odhiambo, 2015, 2016).

2.4 Factors influencing FDI inflows and outflows

Factors that influence FDI decisions can be from both the investors' and host country's perspective.

2.4.1 Government Policies and Regulations

Governments are supposed to be competitive in their policy formulation to attract foreign investors easily, and at the same time promote local investment. Porcano (1993) concurs with the notion that countries provide the most attractive feasible packages for investors in competing for foreign investment and they ensure that the packages are fiscally responsible. Governments can then use policies and regulations to increase chances of attracting foreign investors. However, policies

should be both short-and long-term for the investors to be assured that their operations will not be hugely affected by the frequent change in foreign investment policies. Pham (2004) underscores the point that host governments need to develop long-term strategies for FDI utilisation which will provide foreign investors with a clear indication of government priorities on FDI in a given period. Where there are not many risks attached to the policies and regulations, investors can be attracted to a particular country.

The amount of FDI that a country receives can be determined by favourable policies that a government puts in place for both local and foreign investors. Kazembe and Nami inga (2007) propose that governments need to focus on tackling domestic regulatory reforms and on the marketing of investment opportunities to efficiently contribute to the promotion of FDI in their countries. For Malawi, the authors propose a more targeted promotional investment strategy. For example, the investment policy for Malawi should have relaxed rules regarding market entry and foreign ownership, and should have improved treatment standards of international firms. The 2017 investment climate analysis shows that Malawi has adequate legal instruments for investors' protection and treatment. The introduction of Malawi Investment Trade Centre as a One Stop Centre has improved information flow to both prospective and existing investors regarding regulations and procedures on investment in Malawi.

2.4.2 Market size

Gare (1995) notes that just as geographical and other factors such as the level of development, market growth and GDP per capita influence investors' decisions on which country to invest in, the market size of a host country is a very significant factor. The size of the market can be measured by GDP growth rate or GDP per capita. FDI inflows are expected if the FDI target is seeking market activities. However, this can be difficult for countries with small market size like Malawi whose GDP per capita in 2011 was 467 US Dollars, 4.3% less compared to other countries in the same region such as Zambia and Zimbabwe and owing to the low purchasing power of the local currency (National Statistical Office, 2012). Kazembe and Namizinga (2007) posit that a small market size does not attract investors since they have a local market focus and a few seek to develop the export capacity to markets outside their country. A more significant market size is preferred by investors as it enables them to recoup their fixed costs. This is echoed by Dupasquire and Osakwe (2005) who also established that African countries fail to attract FDI because of their small market sizes compared to those in other regions of the world, which makes it difficult for foreign firms to exploit economies of scale.

2.4.3 Political stability

A stable political environment attracts foreign investors as it provides confidence in the security of their business operations. Malawi's political environment has been steady since independence in 1964. Political stability gives investors' confidence of possible returns to their investment. Asiedu (2006) observes that political instability has been one of the significant inhibitors of FDI inflows in Africa even though some countries have been working towards peace. On the other hand, Pigato (2001) holds a different view that investors, especially MNCs, can still prefer a high political risk country provided it has abundant resources to counterbalance the risks associated with high-risk countries' investments.

2.4.4 Economic and fiscal stability

The Reserve Bank of Malawi (2016) considers financial stability to be a condition represented by a sound monetary system capable of withstanding shocks to the economy, and its ability to allocate savings into investments, facilitate the settlement of payments efficiently and satisfactorily manage risks. This can influence investors' decisions as it gives them the assurance that their investments will be profitable and not exposed to many dangers as the financial and economic environment is conducive. However, financial stability alone is not enough to attract investors. There is also need for a well-managed economy with realistic exchange and interest rates, low inflation and manageable external debt as noted by Lall (1997). The macroeconomic variables that are important to attract FDI inflows usually include stable inflation and exchange rates, and manageable government budget deficits. Sometimes, investors are influenced by economic incentives or privileges that are offered in a host country (Barthel *et al.*, 2008).

2.4.5 Perception of potential investors

Investors' perception of host countries normally depends on their interests and the size of the investment they intend to make. The Organization for Economic Cooperation and Development (OECD, 2002) considers investors' perception as one of the factors negatively affecting FDI inflows and most notably, the perceived sustainability of national economic policies, poor quality of public services and closed trade regimes. It further explains that the absence of policy consistency greatly impacts on investors' risk perception and may spark concerns among foreign enterprises about possible damage to their reputation. Aise and Srinivasan (2008) give an example of India where after a decade of liberation, investors were still hesitant to invest because of the perception that the country had done less than other emerging markets to reduce fundamental obstacles to investment.

The National Statistics Office (2012) highlights the importance of investors' perception survey in attracting FDI as it provides direction and insight to policy makers and implementers on areas that

require intervention to reinforce business operations. According to the study, among significant factors that influenced investors' decisions were domestic political stability, economic situation, and market size, with 41 investors out of 50 being influenced by local political stability as per Figure 4.

Figure 4: Effects of Initial Investors' Perception Index, 2011

Source: National Statistics Office (2011)

This implied that the internal state of the economy was an important basis for most investors' commitments to investing their resources. However, the regional economic situation, regional political stability, and market size were also critical in directing investors' initial decision to invest in a country. Other factors were considered but did not have much influence on investors' decisions such as investment incentives, investment and trade policies, natural resources, and regulatory framework. For example, only 12 were influenced by a flexible foreign exchange and 13 by regulatory frameworks.

2.5 Policies that Attract FDI inflows in Malawi

As UNCTAD (1996) postulates, FDI policies consist of rules and regulations governing the entry and operations of foreign investors. The policies also include the standards of treatment accorded to them and the functioning of the markets within which they operate. OECD (2002) established that most governments' efforts in attracting FDI are because of the association and linkage between the governments' development objectives and FDI characteristics. In that regard, a country's FDI strategy is determined by the development objectives, together with the ability to choose the degree of policy intervention and factor endowments. Once the plan has been established, there exists an array of possible policies across the entire policy spectrum to influence FDI.

Kazembe and Namizinga (2007) argue that FDI policy formulation is not the responsibility of governments alone but that the private sector as the primary driver of the economy can also contribute to the process. Farrel (2000) suggested that governments should create for foreign investors an advantage over the local competition to justify higher operational costs. This would create a favourable investment climate for foreign investors. Mateev (2009) also suggested that the policy factors that would attract FDI inflows included openness, product-market regulation, labour market arrangements, corporate tax rates, direct FDI restrictions, trade barriers, and infrastructure. He further postulated that other non-policy factors included the market size of the host country (often measured by the GDP), distance/transport costs, factor proportions (or factor endowments) and political and economic stability.

Because of the challenges in complying with, and in the implementation of, the FDI policies in Malawi, the National Statistics Office (2012) recommended that Malawi implement a robust national investment policy that includes strategies aimed at safeguarding domestic and foreign investment. The recommendation also included the need to improve legal and institutional frameworks that would encourage investment. There is need for policy makers to pay attention to minimising risks that can negatively affect FDI inflows as explained by UNCTAD (2015) because if not done correctly, the process results in a country's poor economic performance, thereby low FDI inflows.

In the case of Malawi, a change in policy increased FDI inflows in 2013 when the Reserve Bank devalued the Kwacha in 2012 and had a floating currency. The change resulted in the availability of foreign currency on the market and eased investors' hustle to remit foreign investment funds. This improved the investment climate for investors in the following year, that is, 2013 as noted by the 2014 World Bank Investment Climate Survey that reported that import cover grew and remained above two months even during the lean periods.

Some of the related macroeconomic policies that seek to attract FDI inflows in Malawi are discussed in sections 2.5.1 to 2.5.4.

2.5.1 Macroeconomic policies

According to the Malawi Investment Trade Centre (MITC, 2009) publication, the Malawi Government, in support of private investment, implemented a number of fundamental and economic reforms such as the enactment of the Anti-Money Laundering Act of 2006 and the Debt and Aid Management Strategy, that are geared towards efficient government debt management, sustained government expenditure, and ensuring quality expenditure. These reforms are aimed at improving the country's financial stability, thereby attracting foreign investment. MITC indicates that macroeconomic policies can be pursued by exercising fiscal and monetary discipline and maintaining a realistic exchange rate of the Malawi Kwacha (MK) against foreign currencies.

Malawi Government's economic and fiscal policy stipulates that government is making efforts to continue creating a conducive investment climate, coming up with specific measures to deregulate the private sector and creating new investment opportunities. According to the Malawi Government (2010), some of the policies enacted are the removal of price controls, the termination of import restrictions, the divestiture of state-owned companies, and strategies to rectify the external transport situation.

2.5.2 Investment Protection policy

Through its constitution, laws and regulations, the Government of Malawi recognises that the

security of assets is important to investors. However, the United States Department of State Report (USDS, 2015) on Malawi investment climate argues that unless Malawi recognises the importance of intellectual property and enforcement, the country cannot protect investors' assets as required. In addition, the Malawian Government is actively involved in pursuing the process of concluding bilateral investment treaties with other governments both in Africa and overseas with an assurance that these treaties will offer special protection to FDI inflows. Moreover, Malawi is also a member of the Multilateral Investment Guarantee Agency (MIGA) and is an eligible country under some other investment insurance programmes.

2.5.3 Investment Incentives and Taxation Policy

The Government of Malawi offers both tax and non-tax incentives and these apply equally to domestic and foreign investors in different sectors. Kazembe and Namizinga (2007) argue that a policy that allows for the facilitation of business is a reliable tool for attracting investment. The authors further argue that investment can be promoted if the development of investments and the provision of incentives are considered in the policies formulated. Nsiku (2012) concurs, noting that in the absence of proper infrastructure and an educated workforce among other factors that attract investors, investment incentives policy tool is usually viewed as one of the few tools at disposal to draw investment in a highly competitive global market.

Malawi offers different types of tax incentives to both local and foreign investors, even though it has been observed that it takes long for the investors to access these incentives. For instance, World Bank (2017) notes that it takes an average of 45 weeks for a Value Added Tax (VAT) refund to be processed. In addition, taxes are considered to be very high for investors, thereby making it a barrier to FDI (Kazembe and Namizinga, 2007). The government can shorten the period it takes to process VAT refunds so that it gives investors a good business position when they are paying tax to the authorities. If this is not improved, it can result in investors lobbying for some tax exemptions when importing items and cost the Malawian Government some revenue.

2.5.4 Trade Policy

USDS (2014) pointed out that Malawi's industrial and trade reform programme, including the rationalisation of the tax system, the liberalisation of the foreign exchange regime, and the elimination of trade has produced written guidelines intended to increase government use of transparent and efficient policies to foster competition. These were included in the National Trade and Industrial Policies launched in 2016 to provide guidance in dealing with factors that determine the growth of the economy such as land, taxes, productive labour force, energy supply, raw materials, transport costs and education standards. However, procedural delays and red tape

continue to impede business and the investment approval process.

Mapemba (2009) also argues that non-existence of a policy institute in Malawi poses a challenge for the government in ensuring that research informs the trade and industry policy-making process. Usually, the study is limited to stakeholder consultations that result in government policies lacking backup support regarding establishing their impact and effectiveness. He further explains that the tax holidays and duty drawbacks are not sufficient incentives for Malawi to attract foreign investors because of high transaction costs because the country is landlocked.

2.6 FDI inflows by Sector in Malawi

There is inadequate data on FDI inflows by sector in Malawi. The available data only covers a few years. However, there is much information about the Sub-Saharan Africa region. Ezeoha and Cattaneo (2011) found that most of the FDI inflows in Sub-Saharan Africa are in natural resources, with very few in the manufacturing sector that usually provides technology, skills, and market access. This is further supported by Darley (2012) statistics that revealed that Sub-Saharan Africa only contributes to global manufacturing with less than one percent share in the world's manufacturing export. The trend changed in 2005 as described by Kazembe and Namizinga (2007) when the manufacturing sector was the primary sector that attracted investment, with 19 manufacturing companies out of 36. In 2010, there was a switch to wholesale and retail trade (National Statistical Office, 2012). These sectors were the highest recipient of FDI inflows, registering US\$72.0 million, although most of it was financed through debt. The information and telecommunication sector also recorded large investment inflows, with the stock of FDI increasing by 63% mainly owing to reinvested earnings.

2.6.1 Patterns of sectors FDI inflows

Data on sectoral FDI inflows in Malawi is in the form of pledges made by prospective investors upon registering their investments. The actual FDI inflows are only recorded as a whole and not segregated into sectors. Table 1 shows how much the investors pledged in their sectors of interest and opportunities as per country portfolio and priorities set.

Table 1: Sectoral FDI Pledges, 2005-2015 in US Million Dollars

Sector	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Agriculture	25	267	10	48	26	12	2	0.4	175	113	192	872
Manufacturing	19	155	4	18	44	19		23	182	20	154	637
Tourism	4	8	0.4	18	1	6	207	1	2	0.3	57	304
Energy	-	4	-	-	0.1	-	500	379	303	1,453	275	2,914
Mining	-	131	1	-	21	1	223	0.3	-	104	167	647
Transportation	2	9		0.4	1	0.1	-	-	169	-	-	182

Real estate	23	-	-	20	-	3	-	-	-	77	-	124
Information and communication	-	0.3	0.4	5	-	5	1	1	-	99	-	111
Construction	2	3	3	3	3	1	37	725	119	5	34	935
Wholesale & Retail	8	1	-	-	-	-	-	-	-	-	-	8
Financial services	0.4	2	0.3	21	0.3	-	0.1	-	-	5	5	34
Other	1	26	1	2	0.3	8	33	26	1	2	2	101
Total	84	605	20	134	97	56	1,003	1,156	950	1,878	885	6,868

Source: MITC (2016)

As illustrated in Table 1, agriculture has been a dominating sector of opportunities with more pledges from 2005 to 2010, comprising 39% of the whole collection as it contributes a high percentage of the country's GDP. In the mentioned years, the country had been experiencing good rains that resulted in more yield; hence, more returns to the investors. Manufacturing is second at 26% as it usually corresponds to the agricultural trend because more agricultural produce results in more items needed for processing, for example, the processing of legumes into products like peanut butter and soya meat. Mining had 15% of the pledges because of the US\$130 million Kayelekera Mine investment in 2006 and it was the first mining company in Malawi to be given a license to explore. Finally, yet importantly, among the priority areas of investment has been energy because during the period in question the country was not experiencing many power blackouts. Also, there was only one company providing electricity in the form of hydroelectricity until 2011 when the government opened opportunities to the private sector to invest in other forms of energy such as bioenergy.

FDI pledges from 2011 to 2015 saw investment focus moving from a dominant agriculture sector to energy. Agriculture recorded only 13% of the pledges while energy accounted for 42%. This was mainly owing to extreme weather shocks such as erratic rains, drought and floods that hugely affected agricultural produce. More importantly, challenges faced in the distribution of electricity led to frequent blackouts across the country, resulting in the government opening up opportunities in the energy sector for investors interested to invest in other forms of electricity such as bio-gas and solar.

Pledges in the mining sector improved in amounts only (US\$153 million to US\$647 million) while in percentages it plunged from 15% to 9%. Most investors shunned the sector because of red tape involved in issuing licenses and weak and unclear regulatory frameworks. However, even though it is not a priority sector, the construction sector had more pledges such as the 2012 pledge for the construction of a new railway line. These commitments are a clear indication that the country's investment climate on the priority areas is conducive to investors, although more still needs to be

done to smoothen the registration processes and iron out some policy issues so that potential investors are retained to increase FDI inflows.

2.6.2 Potential sectors for investment

Investment opportunities are available in all industries in Malawi. However, MITC (2012) observes that in 2011 the government prioritised industries based on their contribution to sustainable economic growth and infrastructure development, increasing Malawi's export earnings and poverty reduction. The first five sectors were agriculture, tourism, mining, manufacturing, and energy. The priority investment areas have not changed with time as the 2014 projects investment compendium still indicates agriculture, energy, mining, tourism, and manufacturing as the top five priority areas for investment.

2.6.2.1 Agriculture

The Malawi economy is dominated by agriculture which accounts for about 34% of the GDP and over 80% of export earnings. National Statistics Office (2012) observes that the high dependency on agriculture makes the country extremely vulnerable to weather changes and trade shocks, which negatively affects the country's economic growth. Many studies have recommended that the government improve the agricultural sector so that the GDP per capital grows, which may eventually result in the economic stability of the country.

Tobacco farming has been the backbone of Malawi's economy for many years and has contributed a lot to FDI inflows. However, owing to the anti-smoking lobby by the World Health Organisation (WHO), the industry is declining. Alternative productive and profitable crops, which, if prioritised, could bring more foreign exchange to Malawi include soya-bean, sugarcane, cotton, horticultural crops, cassava and mushroom production. Other potential sectors in agriculture are aquaculture and livestock production such as poultry farming. According to the Malawian government, poultry attracts significant FDI inflows as well.

2.6.2.2 Tourism

There are more investment opportunities in tourism in Malawi. Such opportunities exist in form of eco-tourism, hotels, camps and lodges, wilderness safaris, travel and tours, game and forest lodges, casinos and entertainment centres (MITC, 2012). The Malawian Government (2008) indicates that it intended to establish transparent procedures, guidelines, and regulations to ensure planned and sustainable tourism expansion to promote tourism development. Further to that, private sector participation in tourism development will be encouraged by the provision and proper maintenance of tourism-related infrastructure to improve access to all tourist areas. For each development plan

to be achieved, good and sound policies usually add value as they enforce the execution of the plan. In its National Tourism Policy, the Malawian Government (2008) articulates strategies that aim to ensure organised and planned development of the Malawi tourist product.

In the tourism sector there are some investment incentives that include free import duty, import excise and no payment of value added tax. However, Nansongole (2011) notes that the Ministry of Tourism did not attempt to link tourism infrastructure development with government's Public-Sector Investment Programme (PSIP), a platform that helps the government to identify investment areas and present them to potential investors. This is evidenced by the fact that tourism, as noted by the Malawian Government (2008), was only 2% of total PSIP investment for the 2007/8 to 2011/12 period.

2.6.2.3 Mining

The mining sector has the potential to contribute highly to Malawi's GDP. Hence, it is set as a priority investment area. Increases in contribution to GDP is evidence of the potential the sector possesses. In 2001, the mining sector contributed only 1% to GDP. This went up to 3% in 2004 and to 10.8% by 2010 owing to the opening of the Kayelekera Uranium Mine (Tilitonse, 2013). This growth can be maintained or increased if the mining exploration is sustainably done with strong policies and regulations on mining. The RBM (2015) projected growth in the mining sector at 5.7% by 2015 from 4.6% in 2014

MITC (2016) indicates that existing mining deposits in Malawi include coal, quarry, limestone and gemstone. Aquamarine, amethyst, red and rhodolite garnets, quartz, tangerine, and feldspar dominate gemstone exports. More importantly, the government is creating a suitable investment climate in the mining sector by instituting both legal and administrative reforms aimed at attracting potential investors. In addition, in 2014, the Malawi Government, under the Mining Governance and Growth Support Project (MGGSP), completed the first phases of the Airborne Geophysical Survey. The objective of the survey was to acquire critical mineral occurrence data for upgrading the current geophysical and geological database and assist in identifying prospective areas with mineral potential for detailed exploration. The MGGSP aims at improving the efficiency, transparency and sustainability of the management of the mining sector. While committing to protecting the environment and endangered species existing in Lake Malawi, the government opened up opportunities for oil exploration in the lake, which attracted many potential investors.

2.6.2.4 Manufacturing

The manufacturing sector contributes 11% to the country's GDP and has the potential to increase its

contribution. The industry also contributes highly to job creation. The National Statistics Office (2012) report indicates that this sector was second from agriculture mainly because of the workforce it employed. MITC (2016) explains that because the country depends on agriculture and that the country's dominant population is rural-based, attention is given to rural industrialisation and agro-processing. Opportunities in the sector include the production of farm implements and inputs, textile and garment manufacturing, bicycle assembly, furniture manufacturing, and the manufacturing of building materials.

Mapemba (2009) indicates that food processing, the production of beverages and textiles and clothing dominate the manufacturing sector in Malawi, even though potential growth has only been realised from the textiles and clothing industry. The introduction of the Export Processing Zone Act which allows registered firms tax holidays and duty waivers on imported raw materials and capital goods led to the increase in foreign investment in the 1990s. The National Statistical Office (2012) noted that in 2010, the manufacturing sector was second in having the largest FDI stock, with 22% of the total stock. There were expectations that manufacturing investment could have a positive impact on employment and productivity, as well as high feasibility measured by demand, supply, and enabling market and profitability factors. In 2010, garment producers in Malawi were uniquely positioned to benefit from the preferential access granted by African Growth and Opportunity Act (AGOA). A requirement for locally or regionally sourced raw materials came into effect in 2012, forcing garment producers to source such materials regionally without a fully developed local textile-manufacturing sector (Nakagawa *et al.*, 2009).

This enabled Malawi to compete with the world's largest garment suppliers on equal ground. Given the lack of textile manufacturing facilities in the country, a significant opportunity exists to invest in textile manufacturing facilities. Nakagawa *et al.* (2009) observe that this represents a unique opportunity to invest in the industry at a time when Malawi still enjoys preferential access to international markets. However, according to Sangala (2015), Malawi has not fully benefited from AGOA because of higher costs of transport logistics, foreign exchange shortages and high price volatility that result in unfavourable terms of trade, among other reasons. Investors' incentives in this sector include tax breaks, including loss carry forward for six years and 100% capital allowance and investment on new and unused plant and machinery and industrial buildings, and 40% of used plant and machinery and industrial structure.

2.6.2.5 Energy

The energy sector has inadequate generation supply and this obstacle limits socio-economic development and increases in the FDI inflows. However, the industry has the potential for

investment and can contribute to the sustainable development of the country. This is because it is cross-cutting as it supports other industries and sectors in infrastructural development. For example, when the country's power supply operates efficiently, there is production efficiency in the manufacturing industry, good networks in the telecommunications industry and consistent water supply. All these are factors that attract investors to a host country.

The energy sector has not been performing well because it was a monopolised industry when it was being operated and managed by one company, the Electricity Supply Corporation of Malawi (ESCOM). In September 2016, the government unbundled the company into two, namely, ESCOM and the Electricity Generation Company (EGENCO). In this arrangement, ESCOM is responsible for the transmission and distribution of electricity while EGENCO generates power and sells it to ESCOM.

The Millennium Challenge Account (2010) notes that there is high demand of energy considering the rapid increase in Malawi's population and expansion in the country's industries. This is evidenced by the fact that, while the country's GDP has grown steadily by an average of 7% per annum over the last five years, electricity generation and supply remained stagnant. Electricity shortages are estimated to cost the country around 2-3% of GDP. Taalo *et al.* (2015) also explained that Malawi has an enormous potential for renewable energy exploitation in some areas, especially solar energy, biomass, and hydropower with potential for geothermal and wind power.

2.7 Factors hindering FDI inflows in potential sectors

The likely industries described in Section 2.6 cannot sufficiently attract investors if the solutions to factors that inhibit FDI inflows are not addressed accordingly. The National Statistical Office (2012) reports that investors were encouraged to disinvest in Malawi owing to the unavailability of foreign exchange (90%), informal trade (90%) and exchange controls (80%), among other factors. High corruption levels, bureaucracy, poor regulatory framework, and state intervention posed a challenge to good governance, which negatively affected the business climate in the country. Sections 2.7.1 to 2.7.4 discuss some of the factors that hinder FDI inflows in potential sectors in Malawi.

2.7.1 Poor infrastructure

The accumulation of physical capital in any economy is crucial for development. A country with inadequate access to good roads, reliable power generation and telecommunication does not attract investors because these lead to an increase in production costs. Poor infrastructure results in investors making provisions to have these requirements, thereby increasing the cost of doing business and less return on investment. Infrastructure in Malawi is relatively weak; there is

unreliable power generation, inconsistent water supply, poor road networks, and poor telephone and internet penetration. In 2015, Malawi improved the provision of electricity in terms of reducing the amount of time it takes for one to get power connection. However, there is still more to be done as the power outages and intermittent water supply negatively impact investors' efficiency in manufacturing and production. Nakagawa *et al.* (2009) found that Malawi's power supply is relatively weak, registering an average of 50 days of power disruption in 2004, compared to 48 days in Tanzania and 15 days in Zambia. This hugely affects power-intensive processes, especially in the mining and manufacturing sectors.

Kazembe and Namizinga (2007) note that inadequate roads, telecommunication infrastructure and energy supply make travel difficult for visitors, whether on business or vacation and this reduces FDI inflows in the tourism sector. Poor road networks result in high transportation costs. For example, in the agricultural industry, transportation costs account for 30–35% of the final expenses, especially freight from the processing company to the ports. Malawian companies take longer to load a container than the country's neighbours do. For example, Nakagawa *et al.* (2009) note that it takes up to 12 days for export to India while a South African exporter takes only 48 hours. Thus, improving the level of physical capital in the country is also crucial to attract FDI inflows in Malawi.

2.7.2 Poor Governance

Strong policies and institutional frameworks can increase FDI inflows if there is compliance enforcement by all relevant and responsible institutions. Several studies have shown that a country with good governance attracts more FDI. In its survey on investors' perceptions, the National Statistics Office (2012) reported that 85% percent of investors indicated that there were poor governance practices in Malawi because of high levels of corruption and bureaucracy that negatively affected the investment climate.

Figure 5 illustrates some of the governance issues that were identified by investors.

Figure 5: Governance Factors, Investors' Perceptions, 2011

Source: NSO (2011)

As indicated in Figure 5, 90% of the population responded negatively on corruption and 80% negatively on bureaucracy, signalling that investors' initial investment processes were stalled and affected because of these factors. Regulations are the most significant aspect when it comes to investment because they eventually lead to policies. The political environment scored highly and positively as Malawi has been politically stable for several years. The survey shows that political

stability alone cannot positively influence the decisions of the investors, but a combination of other factors such as good governance that includes clear and enforceable policies, low levels of corruption, and fiscal discipline. The introduction of zero tolerance policy on corruption was a good initiative towards good governance. However, over the years, Malawi has been ranked poorly on the Corruption Index. The recent index put Malawi on position 120/176 with 31 points which is below the global average of 43 points. (National Statistics Office, 2012). Corruption results in high costs of doing business as investors are forced to spend to get quick services, starting from the registration of a company to operational activities.

Figure 6 illustrates how corruption perceptions have evolved during the period 2005-2015.

Figure 6: Corruption Index Rankings, 2005-2015

Source: <http://cpi.transparency.org>

Corruption levels have been above 25 points since 2005 as shown in Figure 6. The highest scores of 37 in 2012 and 2013 were because of a financial scandal in the accounting system. Billions of Malawi Kwachas were stolen from government coffers by civil servants. Malawi has good corruption policies and reforms but these are often ignored when it comes to practice, especially in the public sector. The government needs to strengthen the Anti-Corruption Bureau (ACB) so that all culprits are held accountable to eventually create the right investment climate.

2.7.3 Macroeconomic instability

Malawi has been struggling to stabilise its economy for the past five years. The country has experienced high-interest and inflation rates and fluctuations of its currency, the Malawi Kwacha. These factors rendered the investment climate unattractive. As Kazembe and Namizinga (2007) put it, most of the fiscal and monetary policies that have been put in place have generated unsustainable budget deficits and inflationary pressure, thereby raising local production costs, creating exchange rate instability and making the country a risky location for long-term investment.

In manufacturing, notably the textile industry, Nakagawa *et al.* (2009) observe that high borrowing interest rate at 24% hindered industrial participants from making capital investments to replace or maintain existing machinery, affecting production quality, efficiency, and capacity. The situation is the same with the agricultural industry where smallholder farmers have limited access to finance, resulting in low productivity of farm produce and, in the long run, little exports. In other occasions, where funding is available, the cost of the funding tends to be high owing to high-interest rates. Farmers cannot afford the high cost.

The tourism industry is poorly funded in the national budget such that it fails to market itself to

attract investors that can increase FDI inflows. Malawi's market size is small with unequal distribution of wealth, opportunities and a low GDP per capita, which leads to little economic growth making, the investment climate not attractive to investors.

Malawi's landlockedness contributes to high transportation and transaction costs that result in the low rate of return on investment because the cost of doing business tends to be high. This has hugely affected the number of countries investing in Malawi owing to its geographical disadvantage. Figure 7 depicts results of a survey conducted by the National Statistics Office in 2012. The findings show how investments were negatively and positively affected by economic factors in Malawi.

Figure 7: Effects of Economic and Financial Factors cited by Investors, 2011

Source: NSO (2011)

As illustrated in Figure 7, some of the factors that negatively affect business decisions are exchange controls and tax burdens.

2.7.4 Human Capital

An increase in skilled and qualified personnel can attract foreign investors as it reduces training costs in their initial investments. This can only be achieved if the government enforces its policies aimed at ensuring quality education from basic to tertiary levels so that the people responsible in their areas of work are well-equipped to understand and translate the necessary information in a given portfolio (International Labour Office, 2010). Malawi has not been able to entirely enforce the delivery of quality education at all levels. This is why the country does not have enough skilled labour (Chirwa and Odhiambo, 2015).

Human capital is the most significant determinant of FDI inflows and requires more attention and good policies in place to ensure that there is enough capacity in both skilled and unskilled labour to attract investors. Velde (2001) describes human capital formation in the workforce as employment quality and quantity that can be affected by FDI policies. Human capital can also be in the form of good health that increases efficiency and productivity.

FDI usually creates employment, thereby reducing poverty in a country. Kamuchira (2016) notes that although literacy rate in Malawi is at 62.7%, there is inadequate skilled labour on the market, posing a challenge to the inflow of FDI as investors would not spend more money on skills training. The low level skilled labour force is a result of Malawi's poor education standards. For example, Nakagawa *et al.* (2009) indicated that in the tourism industry, the Malawi Institute of Tourism trained workers for the hospitality industry. However, the Institute had insufficient

capacity as only 300 students could be accommodated per year. As a result, a significant number of the personnel in the hospitality industry remain untrained.

2.8 Conclusion

The overview of foreign direct investment in this chapter highlights significant factors that may affect FDI inflows into Malawi. It has transpired that not only do the investment climate and government policies determine FDI inflows, but investors' perception on factors that attract them to invest in a particular host country are also critical. Furthermore, the overview has revealed that factors affecting FDI are not stand-alone but cross cutting. For example, when revising tax policies, the host country should consider tax incentives as well to attract investors.

The sector review shows that there is FDI potential in mining, agriculture, tourism, and energy. The review has also demonstrated that what is required is for the Malawi Government to improve the investment climate with sound enforcement of policies which can attract foreign investors. This sector review is very significant to FDI literature and government interventions for Malawi. Mentioning factors hindering FDI inflows helps in highlighting existing problems that result in the decrease in FDI inflows and how they can be addressed. Unavailability of foreign exchange rate, informal trade, infrastructure (physical capital), human capital development, fiscal discipline, monetary discipline, and exchange controls are some of the factors that may scare away potential investors.

CHAPTER 3: LITERATURE REVIEW

3.1 Introduction

Foreign Direct Investment (FDI) has been defined by scholars as a situation where a foreign investor or a firm from one country either forms or takes over the production of service facility of another firm in another country with some degree of effective control (Ragazzi, 1973). For such an investment to qualify as an FDI regardless of whether it is a greenfield FDI or not, a foreign investor is expected to control at least 10% of the firm's assets in terms of contribution, distribution and other activities of the second country firm (Andreosso and Jacobson, 2005). As Singh (2008) adds, this form of FDI is not based on the nationality or citizenship of the investor, but on the residence of their physical assets. FDI is also often distinguished from foreign portfolio investment as the latter is usually done by individual investors whilst FDI is usually through corporations (Ragazzi, 1973).

Different authors have applied many FDI theories based on specific theories of the firm on industrial organisation (perfect markets, imperfect markets, competitive markets, factor movements) and on ideas from economic geography and pricing strategy. Some of the theories are also based on the importance of technological advancement, research and development and innovation, and others on globalization (Andreosso and Jacobson, 2005).

Therefore, this chapter reviews both FDI theories that have been applied and various empirical studies that have been carried out on the determinants of FDI in general. The chapter has been divided into three sections: Section 3.2 reviews the theories that have been applied to explain the movement of FDI into a foreign country as well as their criticisms. Section 3.3 reviews some of the empirical literature relevant to this study. Lastly, section 3.4 concludes the chapter.

3.2 FDI Theories

A summary of FDI theories has been proposed in the literature and there are three hypotheses that guide the allocation of FDI by firms. These theories include the neo-classical microeconomic theory (Macdougall, 1960), Hymer's (1976) market control theory, and Dunning (1977, 1988) eclectic paradigm.

3.2.1 Neo-Classical Macroeconomic Theory of FDI

This theory, which is based on the macroeconomic theories of the firm and which dominated before the 1960s, argues that capital movements from one country to another are determined by the differential interest rates that exist between the two nations. It is the differential interest rate that

determines the price of capital and hence its flow or demand and allocation. As such, the theory postulates that capital is expected to move freely from countries with low rates of return to those with relatively higher rates of return assuming there exist perfectly competitive markets to facilitate such movements (Iverson, 1953; Macdougall, 1960). Moosa (2002) makes a similar argument, contending that differential rates of return are expected to attract FDI inflows in perfect markets where risk and uncertainty are neutral.

However, the theory has met some criticism. For example, Hymer (1976) observed that the differential rate of return hypothesis was not consistent with several noted characteristics of international investment. For instance, the neo-classical microeconomic theory did not articulate how Transnational Corporations (or TNCs) operate and only focused on explaining how capital can be sourced. Neither did the theory account for TNCs whose objectives lie in promoting managerial control or obtaining market power through use of superior production capabilities. Thus, Hymer (1976) regarded the neo-classical microeconomic hypothesis to be suitable for explaining foreign portfolio investment (or Foreign Indirect Investment) rather than FDI (Abdulai, 2007). Another criticism came from Dreyhaupt (2006) who identified a gap in the neo-classical microeconomic theory in that it did not fully explain why investors would prefer FDI to portfolio investment which is less risky if both of them generate the same rate of return.

3.2.2 Hymer's (1976) Market Control Theory

Contrary to the neo-classical microeconomic theory based on the differential rate of return, Hymer (1976) revealed how barriers to entry such as product differentiation and economies of scale could be used by firms to enjoy monopolistic advantages in overseas markets. He argued that the only focus by these multinational companies (MNCs) in moving to overseas markets would be rather to exercise control and market power with an emphasis on exploiting advantages the MNC might have on domestic firms either through technology or innovation as well as pricing. However, Yamin (2000) has argued that rather than creating an advantage over the domestic firms, such control can even lead to unpleasant scenarios if the MNC, rather than helping to create a competitive market in the foreign country, ends up creating a monopoly and hence generate supernormal profits that hurt the host country. Furthermore, Dunning (1977, 1988) argued that Hymer's theory did not consider the importance of transaction costs.

3.2.3 Dunning (1977, 1988) Eclectic Paradigm

Dunning (1977, 1988) came up with an *eclectic framework* to explain the industrialisation of a firm based on the existence of its intangible assets that could be in form of technology (innovation, research and development) or advertising. His argument on FDI was based on a transaction cost

analysis where an MNC will emerge in a foreign country when the net production and transaction costs are considered lower in the host nation. The Dunning OLI paradigm explains the reason for the expansion of an MNC through FDI. According to Dunning (1977), the *electric paradigm* asserts that FDI is determined by the following three advantages:

- 1) *Ownership* advantages through the acquisition of at least 10 percent of assets abroad and possession of firm-specific advantages such as technology, patents, exclusive access to raw materials and markets, marketing, economies of scale, etc.;
- 2) *Location* through the choice of host country which is dependent on the host country conditions such as endowments of natural resources, access to inputs, production and transport costs, cultural differences, government policies, trade barriers, technical specifications, etc.; and
- 3) *Internalization* through the decision on which the enterprise will carry out its activities across the borders: this includes setting up a subsidiary rather than licensing a local firm to produce the good.

It has been argued that the importance of the Dunning eclectic or OLI paradigm is the basis on which an overall analytical framework can be used for conducting empirical investigations where it draws analysts to key areas that are expected to be considered empirically (Cantwell, 2000). Since it is guided by the principle of transaction cost theory propounded by Coase (1937, 1992), internalisation (forming a subsidiary in a host country) is thus based on where the transaction costs will be minimised compared to just contracting a local firm to produce the MNC's products under an agreement or a license.

Dunning (2000) observed that, although a plethora of literature indicates the understanding of geographical dynamics of MNE activity, it does not offer alternatives but rather just complementary explanations. Much as he agrees that there are differences in emphasis or methodology among scholars, Dunning still believes that they are not substantive enough to preclude their incorporation into any revised paradigm of international production. On the other hand, in Table 2, Dunning (1998) discovered specific motives behind geographical choice for MNEs to invest in foreign production based on resource, market, efficiency, and strategic asset seeking.

Table 2: Factors that influence the Location of FDI

Resource Seeking	<ol style="list-style-type: none"> 1. Availability of quality natural resources. 2. Infrastructure to enable resources to be exploited and subsequent exportation. 3. Government restrictions on FDI, capital, and dividends remittances.
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	<ol style="list-style-type: none"> 4. Investment incentives e.g. tax holidays. 5. Availability of host partners to jointly promote knowledge.
Market-seeking	<ol style="list-style-type: none"> 1. Mainly domestic and regional markets. 2. Large and growing domestic markets. 3. Real Wage Costs. 4. Regulations, tariffs, and non-tariff trade barriers. 5. Presence and competitiveness of related firms.
Efficiency Seeking	<ol style="list-style-type: none"> 1. Major production related costs such as labour and materials. 2. No restrictions towards trade in intermediate and final products. 3. Presence of agglomerative economies such as export processing zones and free trade. 4. Investment incentives such as grants and subsidised land. 5. Improved role of governments in better educational and training areas to help restructure economic activity.
Strategic Asset Seeking	<ol style="list-style-type: none"> 1. Availability of knowledge related assets that favour ownership-specific advantages of investing forms. 2. Opportunities offered for the exchange of localized tacit knowledge and interactive learning. 3. The price and availability of “synergistic” assets to foreign investors.

Source: Dunning (1998, p. 53)

3.2.3.1 Resource Seeking

According to Dunning (1993), resource seeking is when the MNE needs to acquire resources, for example, raw materials and minerals that are not available in its home country or resources available at a lower cost in a host country compared to the home country, an example being unskilled labour. However, UNCTAD (1998) argues that the presence of natural resources is, in itself, not sufficient for FDI to take place. The report asserts that comparative advantage in natural resources gives rise to trade rather than to FDI because investment takes place when resource-abundant countries either do not have enough capital for resource-extraction or do not have the technical skills needed to extract or sell raw materials to the rest of the world. Seyoum (2011) agrees that FDI inflows cannot only be determined by the availability of natural resources, skilled workforce, and quality physical infrastructure, but also informal and formal institutions that play key determinant roles.

3.2.3.2 Market seeking

The main reasons for MNEs' involvement in market seeking is to lower transportation costs and government regulations as their investments are aimed at supplying the local market or markets in adjacent territories (Dunning, 1993). Market-seeking investors are attracted by the market size, income per capita and the market growth of the host country. In terms of market size, large markets are preferred because they accommodate both domestic and foreign firms and can help firms producing tradable products to achieve scale and scope economies. UNCTAD (1998) observes that the high market growth rate in a host country tends to stimulate investment by both domestic and foreign producers.

Moosa (2002) elaborates the market size hypothesis in that the larger the market, the more efficient the investors' utilisation of resources will be, thereby attracting foreign firms because its results have the potential to lower production costs through the exploitation of economies of scale in foreign firms. However, critics of the theory such as Nansongole (2011) argue that the market size will largely only attract FDI from firms that are interested in producing for the domestic market and not for export. There is also the likelihood that a country with vast mineral resources may have a huge GDP while its people's levels of income remain very low.

3.2.3.3 Efficiency Seeking

Efficiency seeking usually occurs where the MNEs take advantage of differences in the availability and costs of traditional factor endowments, economies of scale, consumer preferences and supply capabilities in different countries. Dunning (1993) observes that investors are motivated to rationalise the structure of established resource based or market-seeking investment in such a way that they can gain from the common governance of geographically dispersed activities. The efficiency seeking hypothesis requires a good investment climate where favourable investment policies and infrastructure are available.

UNCTAD (1998) finds that a combination of factors necessary to attract efficiency-seeking FDI is complex as it requires good infrastructure, a workforce with skill levels that allow for a timely and cost-efficient production and delivery of goods to overseas markets, supported by liberal trade policies and easy access to markets of industrialised countries. This is evidenced by the fact that only Mauritius and some North African countries where a relatively favourable policy environment has prevailed over a longer period have been able to attract this FDI.

3.2.3.4 Strategic Asset Seeking

Dunning (1991) describes strategic asset seeking as where MNEs create or gain access to resources in a foreign country and capabilities that complement their existing core competencies. Wadhwa

and Sudhakara (2011) further assert that MNEs' main purpose is to develop global or regional strategies into foreign networks of created assets like technology and organisational ability. However, Dunning (1993) observes that this type of investment usually weakens the competitive position of the MNEs competitors unlike strengthening its position like other investments. In the same vein, Rui and Yip (2008, p213-226) agree by describing strategic asset seeking as where the MNEs invest '*to achieve a specific goal, such as acquiring strategic capabilities to offset their competitive weakness and leveraging their unique ownership advantages while making use of institutional incentives and minimizing institutional constraints*'. We believe this can only work in more developed countries with a strong infrastructure and stable markets, not in Malawi where infrastructure is poor with unreliable electricity and water supply.

3.2.3.5 Criticisms of the Eclectic Paradigm

The last electric or OLI paradigm asserts, as noted by Dunning (2000), that firms must find it significant to engage in FDI and utilize existing advantages rather than buy or sell them. This advantage has been criticized by many scholars as observed by Dunning (2000):

- (a). It ignores other functions that a firm may perform, other than those which are transaction related.
- (b). It is a static theory and gives little guidance as to how best a firm may organise its activities to create future assets, rather than optimize the use of its existing ones.
- (c). The growth of a range of inter-firm coalitions may result from *defacto* internalisation but without equity ownership.

McCulloch (1993) notes that OLI advantages are factors that enable a firm to overcome challenges of investing in a foreign country, which include language and culture, legal systems, tax regimes, and access to inputs. The advantages can also be firm-specific such as superior technology and marketing skills, which help a multi-national company differentiate its products successfully. This competitive advantage is usually created through significant investments in advertising and in research and development. Dunning (2000) further explains that the greater the competitive advantages of the investing firms, especially those residing in a host country, the greater the possibility of increasing their foreign production.

Dunning (1998) recognises that geographical advantage is the most important determinant of, and motive for, foreign production for multinational enterprises. Quoting Marshall (1920), Dunning (2000) cautions that firms do not only consider the presence and cost of traditional factor endowments, transport costs, current demand levels and patterns but also distance-related transaction costs. Specifically, Ancharaz (2003) explains that geographical advantages can be

derived from low cost of production and the availability of cheap labour in a host country that increases the firms' competitive advantage.

3.3 Review of Empirical Research

A survey on the literature investigating the determinants of FDI has shown that studies have mainly been focused on determining cross-country FDI patterns. At the heart of these studies has been the application of a variety of econometric specifications using the gravity equation to predict patterns of bilateral FDI flows based on the economic sizes of the two countries, their distance as well as various types of social, economic and political factors (Blonigen and Piger, 2014).

There have been a few studies on to the determinants of FDI in Malawi but these are mainly found in unpublished sources. If available, the studies have been documented in isolation, and this study intends to fill that knowledge gap by explaining that not one determinant alone can affect FDI inflow but a couple of them that can be cross-cutting. In addition, policy interventions in sectoral investments can affect FDI inflows. UNCTAD (2015) postulates that Malawi's status on attracting foreign investors has not been stable for the years 2003 to 2013 owing to different indicators and determinants that have seen the FDI inflows fluctuating. In this section, the determinants of FDI inflows are examined based on recent studies. A plethora of existing literature, including Blonigen (2005), indicates that most FDI decisions are based on the host country's characteristics such as GDP per capita, exchange rate, market size, openness to trade, political stability, human capital, tax incentives, inflation rate, interest rate, and external debt.

In this study, the work of Eaton and Tamura (1994) who investigated the factors affecting bilateral and regional trade and FDI patterns between Japan and the United States using a modified gravity model is investigated first. The data used was based on a panel covering the period 1985-1990. The country-specific variables that were considered included population, income, land-labour ratio, average level of education, and regional factors. The study found that factors such as per capita GDP, population, population density, and education levels were statistically significant determinants of FDI inflows.

Wei (2000) investigated the effects of corruption on FDI based on the gravity model using panel data covering bilateral investment in twelve parent countries and 45 host countries. The determinants used in the gravity model included GDP in both countries, and population, wages, common language, taxes, the presence of a tax credit system, political stability, and corruption in the host country. The study found that all factors were statistically significant determinants of FDI inflows except the tax credit system in the parent country.

Carr *et al.* (2001) used a knowledge – capital model to investigate factors that determine FDI in

multinational enterprises using panel data. Based on the gravity model, the determinants included were distance, sum of GDP of both countries, differences in GDP between the countries, skills differences, an interaction term between skilled and unskilled labour, an interaction term between skill differences and GDP differences, trade costs, a square of the interaction between trade costs and skill differences, and FDI costs. All determinants were found to be statistically significant except for distance between the two nations.

Chakrabarti (2001) investigated the determinants of FDI using a cross-country regression. The determinants that were investigated included per capita GDP of the parent country, bilateral trade flows and exchange rates, per capita GDP, GDP growth, wages, trade costs, trade openness, taxes, inflation and political stability in the host country. The study found that only the host GDP and per capita GDP of the parent country were statistically significant.

Using panel data, Di Giovanni (2005) investigated the determinants of cross-border merger and acquisition deals covering the period 1990-1999. The variables the author used included GDP from both the parent and host countries, distance, GDP per capita differences, common language, bilateral transport costs, regional trade agreements, customs union, common service sector agreements, taxes in the parent country, tax treaties, telephone traffic as a proxy for infrastructure, host market capitalisation, host domestic credit, bilateral exchange rates, and volatility of exchange rates. All variables were found to be statistically significantly associated with FDI inflows, except for regional trade agreements, customs union, and bilateral exchange rates.

Ali and Guo (2005) conducted a similar research on the determinants of FDI in China. The researchers analysed responses from 22 firms operating in China on significant factors that enticed them to undertake FDI. The findings revealed that China's enormous market size potential is the most significant factor for FDI inflow, which agrees with earlier theoretical and empirical studies. Apart from government incentive policies, China's large population, cheap labour, innovativeness, and fast-rising economy are an unconquerable blend for attracting FDI. The latest findings show that global integration is one of the key factors for some foreign firms investing in China. This indicates that China is a very important market and investing in China is part of firms' global strategy. Therefore, foreign firms are investing in China because of the many conflicting and competing agendas and not just to take advantage of location factor.

Another study by Asiedu (2006) investigated the role of natural resources, market size, government policy, and political instability in FDI inflows in sub-Saharan African countries. The researcher used fixed-effects panel estimation and employed an unbalanced panel data for 22 states over the period 1984 to 2000. Asiedu (2006) employed the following variables: FDI inflows as a dependent

variable and a selected independent variable including inflation rate, human capital, infrastructure and openness to trade. The findings indicated that large local markets, natural resource endowments, good infrastructure, low inflation, an efficient legal system, and a good investment framework promote FDI. However, the dishonesty variable can be subjective as it depends on the type of people that a researcher is dealing with and the answers provided. For example, the privileged and educated society can provide answers because they have access to information unlike the uneducated who can use hearsays.

Using bilateral FDI data, Stein and Daude (2007) investigated the effect of time zones and location on FDI inflows. The variables considered in the gravity model included distance, sum of GDP between the host and parent countries, differences in per capita GDP, contiguous border, time zone differences, relative skilled-unskilled labour endowments, common language, colonial links, regional trade agreements, tax and investment treaties, telephone traffic, and host country's legal institutions. Of all these variables, the factors that were found to be statistically insignificant included the contiguous border, common language, regional trade agreements, and investment treaties.

Also using panel data, Bergstrand and Egger (2007) investigated the role of knowledge and physical capital in determining FDI inflows. The gravity factors used included GDP in both parent and host countries, distance, GDP similarities, sum of GDP, rest-of-world GDP, relative skilled-unskilled labour endowments, relative capital-labour endowments, common language, bilateral transport costs, regional trade agreements, and host country's FDI costs. The study found all variables to be statistically significantly associated with FDI, except host GDP and bilateral transport costs.

Head and Ries (2008) investigated the determinants of mergers and acquisition deals using cross-sectional data. The study included variables such as distance, per capita GDP from both host and parent countries, population from both countries, common language, and colonial links in the gravity model. All factors included were found to be statistically and significantly associated with FDI inflows.

A study on determinants of FDI in Ethiopia by Woldemeskel (2008) revealed that least developed African countries' performance in attracting FDI is highly related to their natural resource's endowments. Specifically, regardless of their political and economic environment, countries that are natural resource-rich such as oil rich countries attracted sizeable FDI. For the middle-income African countries, the most important determinants of FDI are economic development, political and business atmosphere. The researcher further contends that for a host country to receive a diversified

FDI, it depends on the level of development. Therefore, the implication for Ethiopia as a resource-poor and least-developed country is that a certain minimum level of development is a necessary condition to attract FDI. The study could have been extended to other natural resources such as mining to get a broader picture of the natural resources effect on FDI inflows, unlike concentrating only on oil.

Mottaleb and Kalirajan (2010) jointly carried out a survey that attempted to find out the major determinants of FDI and why, among developing countries, just a few, such as China, India, Angola, Nigeria, and Sudan, were the major beneficiaries of FDI. The researchers employed a panel data from 68 low-income and lower-middle income developing countries (37 African, 8 Latin America and 25 Asian nations). Basing on a comparative discussion focusing on why some countries are successful in attracting FDI, the survey results agreed with results obtained earlier which confirmed that countries with larger GDPs, greater GDP growth rates, a higher proportion of international trade, and a more business-friendly environment are more successful in attracting FDI.

Arbatli (2011) conducted a study with a sample of 46 countries from 1990 to 2009. The study investigated the determinants of FDI inflows to emergent market economies. The researcher used a partial adjustment model for his analysis. A set of explanatory variables was used to explain cross-country and over-time variations in FDI inflow. The variables were divided into two categories, namely, global push factors and country-specific pull factors. Country-specific pull factors under review were categorized into three, namely, structural factors such as the presence of minerals, geographical position and the mean level of education. As noted by Ghoshal and Ghosh (2017), political factors like conflict, labour strikes and frequent protests also play a role. In addition, macroeconomic factors such as inflation rate, the balance between exports and imports, and the real exchange rate are some of the pull factors. Economic policy variables like corporate tax rates, tariff rates, exchange rate policy, and whether there are capital account restrictions were considered as well. In Malawi, FDI is mostly influenced by pull factors such as GDP, market size, interest and inflation rates, infrastructure, and trade policies because it is where it has more control on being a small country with a weak economy unlike the push factors that are mostly controlled regionally or globally. For example, Malawi has been free of heavy political violence since its independence in 1964. Much as some divisions still exist just like it is in neighbouring countries, Malawi has been experiencing peace in most aspects except during the 1994 and 2004 general elections.

Lastly, the study emphasised the relevance of the role of inclusive policies to promote growth to

avoid abrupt breaks of FDI inflows. Malawi's industrial and trade reform programme is an example, according to the USDS (2014). The programme includes the rationalisation of the tax system, the liberalisation of the foreign exchange regime and the elimination of trade and industrial licenses for several items and businesses.

3.4 Conclusion

This chapter has demonstrated that determinants of FDI cannot be analysed in isolation but with reference to those that are cross-cutting. The determinants based on different methodologies and approaches differ but all have one common platform in that they affect FDI inflows either negatively or positively. For instance, big market size, more natural resources, good infrastructure, and economic policies increase FDI inflows. The review for Malawi has shown that FDI determinants can be linked to the potential sectors that can attract investors.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Introduction

This chapter outlines the methodology used in the study. A summary of the determinants of FDI discussed in Chapter 3 reveals that they can be grouped into three: (i) factors related to the host country's policies or within the category of ownership factors; (ii) factors related to economic determinants within the host country or location factors; and (iii) factors related to business incentives or internalization (Dunning, 1993; Petrovic-Randelovic et al., 2013). Thus, this chapter discusses the theoretical and empirical model specification as well as estimation techniques used in this study to examine the determinants of FDI in Malawi. The rest of the chapter is, therefore, divided as follows: Section 4.2 discusses the theoretical assumptions of the econometric model used. Section 4.3 describes the determinants selected and their relationship to FDI inflows. Section 4.4 discusses the empirical model adopted including the theoretical and empirical bases of the ARDL model adopted in the study. Section 4.5 discusses the post-diagnostic tests employed to justify the ARDL model used. Section 4.6 reviews the data used, their definitions and sources. Lastly, Section 4.7 concludes the chapter.

4.2 Theoretical Foundations of the Empirical Model

The theoretical foundations of the model used in this study are based on the gravity model that has been used by various researchers including those outlined in the literature review chapter. In its simplest definition, the gravity model has been used to estimate the pattern of capital flows between and among countries in the world. The most used study that introduced the gravity model in international economics is related to Tinbergen (1962) who formulated a gravity model of this form:

In Tinbergen's model, the variable represents international flows from country of origin to host country as a function of a constant a group of factors related to the economic size of the two economies (related to GDP, population, labour, capital, etc.), and the distance between the two countries. The use of the gravity model has evolved in its application where more determinants examined (Petri, 2010; Kahouli and Maktouf, 2015). Country-specific studies have also evolved based on the same gravity model and include those that have used the ARDL model approach (Pradhan et al., 2013; Ibrahiem, 2015; Sunde, 2017). The ARDL model, compared to static panel data models, is dynamic and has been used in investigating the determinants of FDI based on the rationale that an investor that invests in one country in one year is likely to continue in other years

to come, holding another factors constant. As such, the volume of FDI invested in a country in the previous year provides a basis for further FDI inflows in the following year (Kahouli and Maktouf, 2015). From the discussion above on the determinants of FDI, a number of variables can be used to test their relationship with FDI at the country level using a dynamic rather than a static panel data model. Using the same approach by Tinbergen (1962), and which has been extended by various authors to include more regressors (Hahm et al, 2012; Bilgili et al., 2012), the country-specific gravity model is assumed to take the following approach:

In equation (4.2), it follows that FDI inflows into Malawi are a function of country-specific factors such as market size (GDP per capita, RGDP), the level of infrastructure in the economy (proxied by investment stock or gross fixed capital formation, INV), human capital stock (HC), the level of money supply (broad money, BM), population growth (PG), fiscal policy represented by the level of government consumption as a fraction of GDP (GC), real exchange rate (RER), and the level of inflation (INFL). The variables included in the numerator are thus assumed to be positively associated with FDI inflows, while variables included in the denominator are assumed to be negatively associated with FDI inflows into the host country. The significance of the gravity model is that it allows for a linear transformation where the coefficients of each economic factor used becomes the elasticity of FDI inflows with respect to the various economic determinants included. The linear transformation of equation (4.2) can be represented as follows:

The linear transformation in equation (4.3) refers to a log-log model where all variables including the dependent are transformed into natural logarithms and assumes the following hypothesis on the relationship between FDI and the selected determinants as described in the statement of hypothesis in Chapter 1:

- 1) Market size (real GDP per capita), the accumulation of physical and human capital, real exchange rate depreciation, and broad money are positively related with FDI inflows in Malawi.
- 2) Population growth, government consumption, and inflation are negatively associated with FDI inflows in Malawi.

The term is the error term and is assumed to be independently and identically distributed. To test the hypotheses above, a time series data covering the period from 1970-2016 is used in this study in order to examine the impact of the selected determinants on FDI inflows into Malawi by using a dynamic ARDL models. It tests whether FDI inflows into Malawi are affected by policies that

influence the market size of an economy, the level of infrastructure, availability of human capital stock, population growth, political economy (government consumption expenditure ratio to GDP), real exchange and inflation rates, and money supply exchange rates and money supply.

4.3 Description of variables

4.3.1 Market Size and FDI Inflows

In the model, the size of the economy is captured by real GDP per capita. The real GDP per capita is a measure of the level of demand and the extent of economic opportunities available in the host country (Cuyvers et al., 2011). Real GDP per capita has been found to influence the FDI inflows positively. Thus, the higher the real GDP per capita in a host country, the higher the level of FDI inflows into the country (Cuyvers et al., 2011). Conversely, economies that have a low real GDP per capita are likely to deter the inflow of FDI as MNEs are unlikely to benefit from ownership, location and internalization advantages as well as economies of scale. As such, FDI inflows are considered a function of the market size of the host country and thus an increase in a host country's GDP per capita is expected to attract FDI inflows from abroad, hence a positive association is assumed (Grosse and Trevino, 1996; Wei and Liu, 2001). In the same vein, Chakrabarti (2001) concurs that the business climate for FDI should consequently be positively influenced by the real GDP growth rate of the economy. This is also important for the relationship between FDI and market size in the short-run. Therefore, the growth of real GDP per capita in the short run is expected to be positively related to the growth of FDI inflows. As the market size of an economy grows, it is expected that inward FDI will also increase as more goods and services can be produced, making investors eager to invest in a growing economy to benefit from economies of scale (Rusike, 2007).

4.3.2 Infrastructure and FDI Inflows

The level of infrastructure in an economy has been found to play a vital role in attracting FDI inflows in a host country and an important determinant affecting the location of FDI under the OLI paradigm (Kahouli and Matkouf, 2015; Kishor and Singh, 2015). A country that has good quality infrastructure attracts more FDI inflows as good quality infrastructure reduces transaction costs and travel time (Asiedu, 2006; Kahouli and Matkouf, 2015). However, different studies have found conflicting results depending on the type of infrastructure proxy used. Some authors have used government expenditure on transportation and communications and others telephone mainlines per 1000 as a proxy for infrastructure (Billington, 1999; Asiedu, 2002). In this study, an aggregate macroeconomic infrastructure variable represented by gross fixed capital formation to capture all available infrastructure in a country as a standard measure is used. This variable is important as it

captures all the related physical capital available in a host country unlike other studies that have used infrastructure proxies related to a single sector (Di Giovanni, 2005). Based on this variable, an increase in infrastructure in Malawi is assumed to attract FDI inflows.

4.3.3 Human Capital and FDI Inflows

The level of human capital development is also an important determinant of FDI inflows as it has been found to provide the necessary skills required for a host country to absorb any technology from abroad (Hakro and Ghumro, 2011). It is argued that trade and capital movements across borders are affected by the level of technology as well as the extent of human capital stock in the host country and are key variables that attract FDI through MNCs (Borensztein et al., 1998). The theoretical relationship between human capital development and FDI is also well expounded in Zhang and Markusen (1995) who have argued that MNCs will locate their production based on factor differences: firms with highly skilled labour-intensive requirements are bound to locate their production in countries with an abundance of skilled labour and manufacture products with less capital intensity or less skilled labour in countries of a similar nature. In this study, human capital stock in Malawi is expected to be positively associated with FDI inflows.

4.3.4 Exchange Rates and FDI Inflows

The relationship between a host country's exchange rate and FDI inflows has often been used as a measure of the cost of production inputs. However, the relationship is mixed. Some studies on economies that are not affected by exchange rate misalignment (overvalued or undervalued exchange rate) show that a real exchange rate appreciation of the host's currency attracts more FDI to flow into the country since it becomes cheaper to hire a given amount of labour in the host country (Clegg and Scott-Green, 1999); while other studies on economies affected by exchange rate misalignments have found that a real exchange rate depreciation is positively associated with FDI inflows (Cuyvers et al., 2011). In this study, the assumption is that an increase in the real exchange rate in Malawi is expected to attract FDI inflows based on the assumption that overtime exchange rate misalignments are corrected by policy makers. The real exchange rate is hypothesised to have a positive influence on FDI. National Statistics of Malawi (2012) notes that the impact of the exchange rate on FDI could result in lower costs of production by MNCs, thereby affecting the competitiveness of the produced goods which yield profit for foreign firms. Lim (2001) underscores the fact that the devaluation of a currency results in foreign firms purchasing cheap assets and technology in the host country, thereby increasing FDI.

4.3.5 Broad Money and FDI Inflows

The Money Supply (MONEY) represents the measure of financial development as a share of GDP,

the demand deposits and a measure of money supply in circulation (Hassan et al., 1993). Money Supply has also been found to capture the existence of economies of scale and the size of the financial and non-financial deposit-taking financial sectors (Beck et al., 2000). Studies have shown that an increase in the money supply indicates liquidity and enhances the national economic position of the host country by minimising the cost of financing, thereby attracting FDI inflows (Resende, 2008; Boateng et al., 2015). Similarly, the level of money supply in Malawi is expected to have a positive effect on FDI inflows as some FDIIs would invest indirectly in the financial market.

4.3.6 Fiscal Policy and FDI Inflows

The role of fiscal policy and FDI inflows are linked based on how effective economic institutions stimulate economic growth and in turn promoting greater direct investment flows into the host country (La Porta et al., 1998). Several indicators have been used to showcase the role of effective economic institutions and include trade openness that measures the degree to which trade restrictions in an economy affect FDI inflows as well as the level of government consumption. Studies have shown that the level of government consumption has threshold effects in that in some cases it negatively affects FDI inflows through distortion taxation and crowding out of private sector investment (Akinlo, 2004). It is, therefore, assumed that the relationship between government consumption and FDI inflows to Malawi are negatively associated.

4.3.7 Population Growth and FDI Inflows

A number of studies that have investigated the relationship between population and FDI have included population growth as a variable because as a host country's GDP grows over time, its population also grows; this therefore makes more workers available and creates a more concentrated consumer market (Billington, 1999). Much as population size has been used to reflect the effects of the size of a domestic market, the relationship between population growth and FDI has not been investigated in the FDI literature. Population growth and economic growth have been found in many studies to have a negative relationship as an increase in population growth that is more than the growth of real GDP per capita will decrease the host country's wealth needed to attract FDI (Chirwa and Odhiambo, 2017). As such, controlling for population growth is also crucial in countries that are aimed at attracting FDI. In Malawi, we assume that the relationship between population growth and FDI is negative.

4.3.8 Inflation and FDI Inflows

Inflation is one of the variables used to capture the macroeconomic instability of an economy and has been found to be a tax on investment. The expected signs of the parameters are such that

inflation is expected to have a negative influence on attracting FDI. Fischer et al. (2002) established that higher inflation rates indicate economic instability and mostly associated with a poor macroeconomic performance that culminates in loss of the investors' interests in the prospective country. Inflation affects profitability owing to the high cost of capital. Therefore, the relationship between inflation and FDI in Malawi is assumed to be negative.

4.4 Empirical Model Estimation

4.4.1 ARDL Bounds Testing Approach

The Autoregressive Distributed Lag (ARDL) bounds testing approach to co-integration was used in this study to estimate the short- and long-run effects between FDI and the assumed independent variables. The ARDL approach is a dynamic model that allows for lagged effects to be included to consider the persistence of economic variables. There are a number of advantages with the ARDL model, some of which are: the model can be estimated using Ordinary Least Squares (OLS) to test the existence of a long-run relationship between the dependent variable and the selected regressors; the model is dynamic as it includes both lags of the dependent and independent variables used; it is a powerful tool to investigate short- and long-run relationships between the dependent and independent variables selected; it has superior advantages to earlier cointegration tests as it can be used irrespective of whether the variables used are integrated of order one or zero; and the model offers good small sample properties for studies affected by lack of data (Chirwa and Odhiambo, 2018).

4.4.2 Unit Root Tests

One of the key assumptions of the ARDL dynamic model is that the variables used are expected to be integrated of order one or zero. This implies that variables that are integrated of an order that is more than one cannot be used. Therefore, it is important to investigate whether the model variables used in this study do not suffer from such a constraint (Chirwa and Odhiambo, 2018). The proposed unit root tests used in this study include the Augmented Dickey-Fuller (1979) and the Phillips-Perron (1988) unit root tests that both account for the presence of serial correlation in the time series data.

4.4.2.1 Augmented Dickey-Fuller (ADF) Unit Root Test

In this study, the Augmented Dickey-Fuller (ADF) unit root test as indicated by Dickey and Fuller (1979) and Said and Dickey (1981) is used. This would produce the following test:

In equation (4.4), $\ln Y_t$ represents the natural logarithm of the time series used in the study; $\ln Y_{t-1}$ represents

the time interval; Δ is the first difference operator; k is the optimum number of lags in the dependent variable; and ε_t is the random error term. The difference between the DF and ADF is that whereas ADF accounts for autocorrelation in the observed series, DF assumes that there is no autocorrelation. Therefore, in the DF, the lagged values of the dependent variable are reduced to zero. The study uses a one-sided test for determining the presence of a unit root in the time series using the following null and alternative hypotheses:

(meaning that the series is not stationary) against

(Meaning that the time series is stationary)

4.4.2.2 The Phillips-Perron (PP) Unit Root Test

Phillips and Perron (1988) suggested a nonparametric method to control for serial correlation when testing for a unit root. The PP method modifies the non-augmented Dickey-Fuller unit root test by modifying the ratio of the test statistic to ensure that its asymptotic distribution is not affected by serial correlation. The asymptotic distribution of the Phillips-Perron modified ratio is the same as that of the ADF statistic.

4.4.2.3 Autoregressive Distributed Lag Bounds Test for Co-integration

Once all variables are found to be integrated of order one or zero, the ARDL dynamic model can then be employed as suggested by Pesaran and Shin (1999) and Pesaran et al. (2001). Based on the proposed model in this study, the ARDL framework assumes a three-step procedure:

Step 1: this involves estimating an unrestricted ARDL model as follows:

The parameters in equation (4.5), α_i represent the short-run elasticities while β_i are the long-run elasticities of the selected variables. The term m represents the maximum lag used in the ARDL model. The residual term is assumed to be white noise or independent and identically distributed.

Step 2: Equation (4.5) is used to test for long-run level relationships based on the following joint null and alternative hypotheses between the dependent variable, FDI, and the explanatory variables to be investigated. To carry out the cointegration test, equation (4.5) is estimated using standard OLS estimation method and then tested for no level relationships. Pesaran et al. (2001) argued that the ARDL bounds test is similar to the Wald test and involves testing the following joint null and alternative hypothesis:

(meaning that there are no level relationships) against

(Meaning that there are level relationships)

Since it depends on the statistic, the Pesaran et al. (2001) bounds testing procedure has an upper critical bound and lower critical bound: if the statistic is above the upper critical bound then the results confirm a long run level relationship between FDI and the explanatory variables. The null hypothesis of no level relationships is, therefore, rejected. On the other hand, if the computed statistic is below the lower critical bound then there is not enough statistical evidence to reject the null hypothesis. It is, therefore, concluded that no level relationships exist between FDI and the explanatory variables. Furthermore, Pesaran et al. (2001) state that if the statistic is found to be between the upper and lower critical bounds then the results are inconclusive and, therefore, it would be important to consider other similar cointegration tests to test the null and alternative hypotheses.

Step 3: Once long-run level relationships are confirmed in step 2 based on equation (4.5), a short-run Vector Error Correction Model (or VECM) is estimated to investigate the short-run relationships between FDI and the selected regressors. The VECM based on equation (4.5) is as follows:

The VECM in equation (4.6) is a measure of the short run speed of adjustment towards the long run equilibrium path in the estimated ARDL model. It is expected to be negative and statistically significant and the value of its coefficient should be less than one. This will allow the FDI in the equation to converge back to its equilibrium path due to any shock from the assumed regressors (Chirwa and Odhiambo, 2017).

Step 4: Once equation (4.6) is estimated, step four of the ARDL approach involves transforming the short-run coefficients into long-run coefficients to determine the long-run response of FDI to a change in the selected variables. In this case, the long-run parameters represented by equation (4.3) are estimated.

4.4.3 Post-Diagnostic Tests

The ARDL Model used in this study is estimated using the OLS method. This means that it can suffer from the usual challenges faced with OLS regression such as serial correlation, heteroskedasticity, and functional form. As such, it is important to conduct post-diagnostic tests for the ARDL regression since the residuals of ARDL model are assumed to be normally distributed with a zero mean and a constant covariance. Once a serial correlation or heteroskedasticity is present, the ARDL model suffers from misspecification (Pesaran and Shin, 1999). This results in estimating coefficients that are no longer the best linear unbiased estimator (BLUE) with invalid

standard errors and even test statistics (Gujarati, 2004). No serial correlation implies that the errors associated with one observation are not correlated with the errors of any other observation. On the other hand, homogeneity of a variance of the residuals is one of the main assumptions for the ordinary least squares' regression. Furthermore, heteroscedasticity implies that estimates are still unbiased but not efficient. This means that there is less confidence in the estimates and the standard ratios may no longer be correct. If the model is well fitted, there should be no pattern to the residuals plotted against the fitted values.

This study, therefore, conducted the following post-diagnostic tests that are relevant for the ARDL model: (i) misspecification test using the Regression Specification Error Test (RESET) introduced by Ramsey (1969); (ii) the cumulative sum of recursive residuals (CUSUM) and cumulative sum of squares of recursive residuals (CUSUMSQ) used to measure parameter and variance stability of the ARDL residuals introduced by Brown et al. (1975); (iii) the Breusch-Godfrey serial correlation (LM) test introduced by Breusch (1978) and Godfrey (1978); (iv) Breusch-Pagan-Godfrey test for heteroskedasticity introduced by Godfrey (1978) and later extended by Breusch and Pagan (1979);

4.5 Data Sources and their Definitions

Time series data on FDI inflows and its determinants were extracted from the World Development Report database using the latest issue produced by the World Bank in May 2018 (World Bank, 2018). The total observations are based on annual data covering the period 1970-2016. The study, therefore, used 47 annual observations which are beyond the central limit theory threshold. The data was also checked for any errors by tabulating frequencies, minimum and maximum values, their mean and median values, standard deviation, skewness, and kurtosis. The results are reported in Chapter 5 of this study. Secondary data was chosen because of the time factor and that it is readily available and inexpensive to obtain whereas primary data needed more time to collect and analyse. The definitions of the variables used are explained in Table 3:

Table 3: Variables used and their Definitions

VARIABLE	Definition
FOREIGN DIRECT INVESTMENT (FDI)	The net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, and other long and short-term capital as shown in the balance of payments. This series shows net inflows (new investment inflows less disinvestment) in the reporting economy from foreign investors, and is divided by GDP.

REAL GDP PER CAPITA (RGDP)	Real gross domestic product (real GDP) expressed in 2010 constant USD prices divided by population.
INVESTMENT (INV)	Gross fixed capital formation: includes land improvements (fences, ditches, drains, and so on); plant, machinery, and equipment purchases; and the construction of roads, railways, and the like, including schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings. According to the 1993 SNA, net acquisitions of valuables are also considered capital formation.
HUMAN CAPITAL (HC)	Total enrolment covering primary and secondary education students.
BROAD MONEY (BM)	The sum of currency outside banks; demand deposits other than those of the central government; the time, savings, and foreign currency deposits of resident sectors other than the central government; bank and traveller's checks; and other securities such as certificates of deposit and commercial paper.
REAL EXCHANGE RATE (RER)	The ratio of nominal exchange rate (LCU per US\$, period average) and PPP conversion factor, GDP (LCU per international \$).
POPULATION GROWTH (PG)	The annual rate of change of total population.
GOVERNMENT CONSUMPTION (GC)	General government final consumption expenditure: includes all government current expenditures for purchases of goods and services (including compensation of employees).
INFLATION RATE (INF)	The annual growth rate of the Consumer price index (2010 = 100)

4.6 Conclusion

In this chapter, the theoretical foundations, empirical model specification, and estimation techniques used in examining the determinants of FDI in Malawi have been discussed. In addition, the post-diagnostic tests used based on the ARDL model have been outlined. These include goodness of fit measures and stability tests to ensure that the model is well specified and that the estimated results are robust to reduce any errors when drawing policy implications.

CHAPTER 5: DISCUSSION OF THE EMPIRICAL ANALYSIS

5.1 Introduction

In this chapter, results of the empirical analysis to investigate the determinants of FDI in Malawi are presented. The econometric software used for the empirical analysis is EViews 9.5. The rest of the chapter is organized as follows: Section 5.2 discusses the descriptive statistics of the variables used in the model. In section 5.3, the unit root test for each variable is discussed. Section 5.4 presents the ARDL co-integration test for the selected FDI model. In section 5.5, the empirical analysis of the ARDL-based error correction model for Malawi is presented. Section 5.6 reviews the post-estimation diagnostic test for the FDI equation. Finally, section 5.7 concludes the chapter.

5.2 Descriptive statistics

Table 4 shows the descriptive statistics of the variables. Real GDP per capita and Human Capital stock are expressed in whole numbers while the rest of the variables are expressed as percentages.

	FDI	RGDPC	INV	HC	BM	RER	PG	GC	INFL
Mean	0.021	385.212	0.169	2259239	0.199	1.944	0.029	0.152	0.176
Median	0.012	379.000	0.152	1811698	0.197	1.718	0.029	0.145	0.135
Maximum	0.102	484.000	0.308	5156057	0.259	3.871	0.062	0.315	0.833
Minimum	-0.013	300.000	0.093	374032	0.104	1.110	0.002	0.093	0.002
Std. Dev.	0.026	46.404	0.053	1520223	0.041	0.718	0.011	0.035	0.137
Skewness	1.717	0.674	0.574	0.313	-0.649	0.614	0.718	1.945	2.523
Kurtosis	5.508	2.816	2.408	1.656	2.785	2.482	5.541	10.41	12.14
Jarque-Bera	35.423	3.626	3.273	4.305	3.393	3.479	16.699	137.430	213.76
Probability	0.000	0.163	0.194	0.116	0.183	0.175	0.000	0.000	0.000
Observations	47	47	47	47	47	47	47	47	47

Table 4: Descriptive statistics of the data

As illustrated in Table 4, all variables have a total number of observations of 47, implying that the study used a balanced sample. The mean, median, maximum and minimum values are all within range and do not provide a significant alarm to detect any outliers in the variables used. In terms of skewness, the descriptive statistics show that all variables are positively skewed, meaning that they have a cumulative distribution function with a long right tail, except for broad money which is

negatively skewed and with a long-left tail. The kurtosis of the variables is mixed: some are leptokurtic or peaked (FDI, PG, GC, and INFL) while others are platykurtic or flat (RGDPC, INV, HC, BM, and RER). Under the null hypothesis of a normal distribution, this is rejected for four variables (FDI, PG, GC, and INFL) while the others are drawn from a normal distribution function.

5.3 Unit Root Test

As discussed in Chapter 4, before estimating the ARDL model, it is important to ensure that all variables used in the equation are either integrated of order one or zero. This is investigated using the Augmented Dickey-Fuller (1979) and the Phillips-Perron (1988) unit root tests. Non-stationarity can lead to spurious regression results based on OLS estimation. Therefore, before inferences are drawn based on macroeconomic time series, there is need to determine whether or not they are stationary. A variable's order of integration indicates the number of times that the variable must be differenced in order to become stationary. Tables 5 and 6 denote the results of the unit root test of all the series used in this study based on the ADF and PP unit root tests. The variables are expressed in their logarithmic values. A logarithmic transformation is very commonly used in time series models; particularly, with series that reflect stocks, flows, or prices (rather than rates). The variables were transformed to get a log-log model. This was done to get a clear picture of the elasticity of foreign direct investment with respect to each of the explanatory variables.

The variables used in Tables 5 and 6 are the following: Log of Foreign Direct Investment (LFDI), log of real GDP (LRGDP), log of investment (LINV), log of human capital (LHC), log of broad money (LBM), log of population growth (LPG), log of government consumption (LGC), and the log of inflation (LINF). The ADF unit root test results in Table 5 reveal that the variables used are either integrated of order one (LRGDP, LHC, LBM, and LRER) or order zero (LFDI, LINV, LPG, LGC, and LINF). Similar results are displayed when the PP unit root test is conducted in Table 6 with LPG being integrated of order one as the only exception. The results, therefore, confirm that the ARDL model can be used since no variable is integrated of order two.

Table 5: ADF Unit Root Test Results

Variable	Level		1 st Difference		Order of Integration
	With intercept	Intercept & Trend	With intercept	Intercept & Trend	

	t-statistic	p-value	t-statistic	p-value	t-statistic	p-value	t-statistic	p-value	
LFDI	-3.60***	0.0094	-4.06***	0.0130	-	-	-	-	I(0)
LRGDP	-1.56	0.4945	-1.86	0.6579	-7.56***	0.0000	-7.50***	0.0000	I(1)
LINV	-3.06**	0.0363	-3.32*	0.0751	-	-	-	-	I(0)
LHC	-2.26	0.1889	-0.40	0.9846	-4.38***	0.0000	-4.93***	0.0000	I(1)
LBM	-2.22	0.2012	-2.18	0.4839	-7.09***	0.0000	-7.02***	0.0000	I(1)
LRER	-0.76	0.8193	-4.32***	0.0067	-6.35***	0.0000	-6.32***	0.0000	I(1)
LPG	-4.54***	0.0006	-4.49***	0.0042	-	-	-	-	I(0)
LGC	-3.55**	0.0107	-3.67**	0.0340	-	-	-	-	I(0)
LINF	-4.30***	0.0013	-4.66***	0.0026	-	-	-	-	I(0)

Note: for all MacKinnon (1996) one sided p-values: *** 1% significance level; ** 5% significance level; * 10% significance level.

Table 6: PP Unit Root Test Results

Variable	Level				1 st Difference				Order of Integration
	With intercept		Intercept & Trend		With intercept		Intercept & Trend		
	t-statistic	p-value	t-statistic	p-value	t-statistic	p-value	t-statistic	p-value	
LFDI	-3.52**	0.0116	-3.97***	0.0167	-	-	-	-	I(0)
LRGDP	-1.71	0.4197	-2.07	0.5446	-7.57***	0.0000	-7.44***	0.0000	I(1)
LINV	-3.08**	0.0347	-3.39*	0.0639	-	-	-	-	I(0)
LHC	-2.04	0.2657	-0.76	0.9612	-4.56***	0.0000	-5.08***	0.0008	I(1)
LBM	-2.26	0.1863	-2.24	0.4534	-7.17***	0.0000	-7.06***	0.0000	I(1)
LRER	0.40	0.8991	-3.60**	0.0407	-11.16***	0.0000	-6.55***	0.0000	I(1)
LPG	-2.62*	0.0955	-1.95	0.6120	-3.40**	0.0160	-3.36*	0.0695	I(1)
LGC	-3.55**	0.0107	-3.67**	0.0341	-	-	-	-	I(0)
LINF	-4.25***	0.0015	-4.65***	0.0027	-	-	-	-	I(0)

Note: for all MacKinnon (1996) one sided p-values: *** 1% significance level; ** 5% significance level; * 10% significance level.

5.4 RDL Bounds Cointegration Test

Given that all variables are integrated of order one or zero, the ARDL bounds test for cointegration was used in this study, unlike the Johansen and Juselius (1990) method that assumes that all variables are integrated of order one. In order to determine the optimal lag-length of the ARDL model, the study adopted the Akaike Information Criterion (AIC) and the Schwarz-Bayesian

Criterion (SBC) with a maximum lag-length of two. This limit is usually used for annual data considering the small sample size of the data covering the period 1970-2016 (47 observations). Based on the approach suggested by Pesaran et al. (2001), an ARDL model with an unrestricted constant and no trend is estimated using the following function:

Based on the proposed approach and using the AIC and SBC, the optimal ARDL model that was selected for the FDI equation in Malawi was. From Pesaran et al. (2001), the bounds test and critical values for the unrestricted ARDL model estimated (equation 5.1) with an unrestricted intercept and no trend is referred to as Case III. Table 7 reports the estimated results for the bounds test.

Table 7: ARDL Bounds Test Results

Null Hypothesis:	No Levels Relationship			
Regressors (k):	8			
F-statistic	Cointegration Status	Level of Significance		
4.87*** (Both AIC and SBC)	Cointegrated	10%	1.95	3.06
		5%	2.22	3.39
		2.5%	2.48	3.7
		1%	2.79	4.1

*Note: for all p-values: *** 1% significance level; ** 5% significance level; * 10% significance level.*

As illustrated in Table 7, the computed F-statistic for the FDI equation in Malawi is 4.87 for both the AIC and SBC and, based on the Pesaran et al. (2001) bounds test result, is statistically significant at the 1% significant level. This is because the computed F-statistic is above the upper critical bounds at the 1% significance level as illustrated in Table 7. This confirms that there is a long-run relationship between FDI and the selected regressors in Malawi and a vector error correction model (VECM) based on the ARDL approach can then be applied to investigate the short- and long-run determinants of FDI in Malawi.

5.5 Discussion of ARDL Empirical Results

Table 8 presents the estimated short- and long-run results of the estimated ARDL model for FDI.

Table 8: Estimated Short- and Long-Run ARDL Results

Section 1: Long Run Coefficients [Dependent Variable: LFDI]				
Variable	Coefficient	Standard Error	t-statistic	p-value
LNRGDP	3.1805	3.0223	1.0523	0.3005
LNINV	2.5079**	1.0922	2.2962	0.0284
LNHC	0.6603	0.8165	0.8086	0.4247
LNBM	3.0628*	1.5226	2.0115	0.0528
LNRER	0.0613	1.7152	0.0357	0.9717
LNPG	-0.7325	0.4401	-1.6644	0.1058
LNGC	-5.3253***	1.9215	-2.7713	0.0092
LNINFL	0.2535	0.3135	0.8086	0.4247
Section 2: Short Run Coefficients [Dependent Variable: DLFDI]				
Variable	Coefficient	Standard Error	t-statistic	p-value
C	-30.085	4.0690	-7.3936	0.0000
D(LNPG)	0.7249	0.4528	1.6008	0.1192
D(LNGC)	-3.7767***	0.8416	-4.4874	0.0001
D(LNGC(-1))	-2.2830***	0.7175	-3.1817	0.0032
ECM(-1)*	-0.8429***	0.1139	-7.4003	0.0000
R-squared	0.6238	Mean dependent variable	0.0181	
Adjusted R-squared	0.5862	S.D. dependent variable	1.4537	
S.E. of regression	0.9350	Akaike info criterion	2.8080	
Sum squared residual	34.975	Schwarz criterion	3.0088	
Log likelihood	-58.182	Hannan-Quinn criterion	2.8829	
F-statistic	16.585	Durbin-Watson stat	2.2447	

Probability (F-statistic) 0.0000

Note: for all p-values: *** 1% significance level; ** 5% significance level; * 10% significance level.

The short run results in Table 8, Section 2, show that the ARDL FDI regression is a good fit with an R-squared of 0.62 and an adjusted R-squared of 0.59. The estimated model also shows an error correction term that is negative and statistically significant at the 1% significance level with an estimated value of -0.84 as predicted. This value is of significant importance as it illustrates the speed of convergence or the speed at which the Malawian economy adjusts towards its long run equilibrium path after a shock. The result shows that 84% of the shock dies out each year. Put differently, the Malawian economy has a less than *one-year half-life* as only 16% of the estimated shock remains in the first year and immediately clears in the following year, with only 2.56% of the shock remaining in year two.

Given that the only lags available in the ARDL model are for population growth and government consumption since all other lags are zero, the short-run results reveal that only the growth of government consumption is significantly related to the growth of FDI inflows. Specifically, the results show that a 1% increase in the growth of government consumption leads to a 3.8% decrease in the growth of FDI inflows in the current period and a 2.3% decrease in the previous period. Both results are statistically significant at the 1% significance level. These results are similar to other research findings that showed a negative relationship between government spending and FDI inflows (Akinlo, 2004; Williams, 2015).

On the other hand, the long-run results displayed in Section 1 of Table 8 show that investment, broad money, and government consumption are significantly associated with FDI inflows. The results show that investment and broad money are positively associated with FDI inflows in the long run and are statistically significant at the 5% and 10% significance levels. Specifically, a 1% increase in gross fixed capital formation (physical capital or infrastructure) results in a 2.51% increase in FDI inflows into Malawi. These results are consistent with empirical findings by such researchers as Asiedu (2006), Kahouli and Matkouf (2015), and Kishor and Singh (2015).

Conversely, a 1% increase in broad money results in a 3.06% increase in FDI inflows in the long run: these results concur with the empirical findings by Levine and Beck (2000), Resende (2008), Boateng et al. (2015) who concluded that improved liquidity in the economy is a favourable condition for attracting FDI inflows. The study results also show that the effect of government consumption is similar both in the short- and long-run where in both cases the relationship is negative and statistically significant. The results show that a 1% increase in government consumption leads to a 5.32% decrease in FDI inflows into Malawi, and the results are statistically

significant at the 1% significance level. This confirms the need to promote FDI-friendly government policies such as liberalization, fiscal incentives and subsidies (Sumner, 2005).

The study, however, did not find any significant relationship between market size (real GDP per capita), human capital, real exchange rate, population growth (though with a negative sign and just slightly insignificant at the 10% significance level), inflation and FDI inflows in Malawi, both in the short and long run.

5.6 Post Diagnostic Test Results

In this section, the post-diagnostic test results are presented. The first to be presented are the recursive stability test results suggested by Brown et al. (1975): CUSUM and CUSUMSQ.

Figure 8: Cumulative Sum of Recursive Residuals Plot for FDI Equation

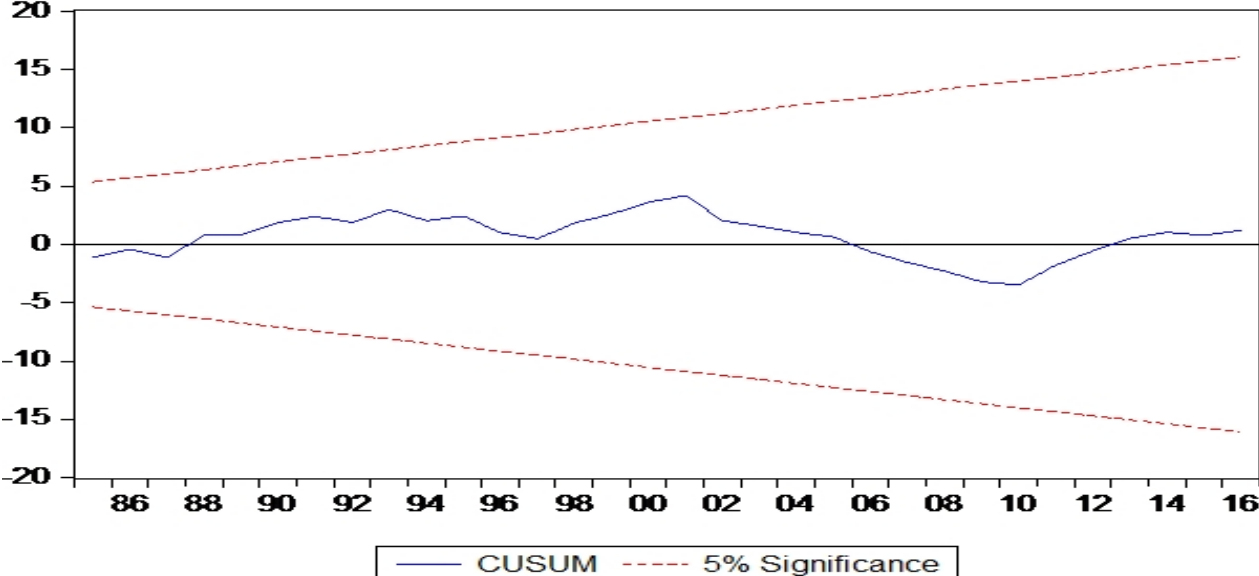
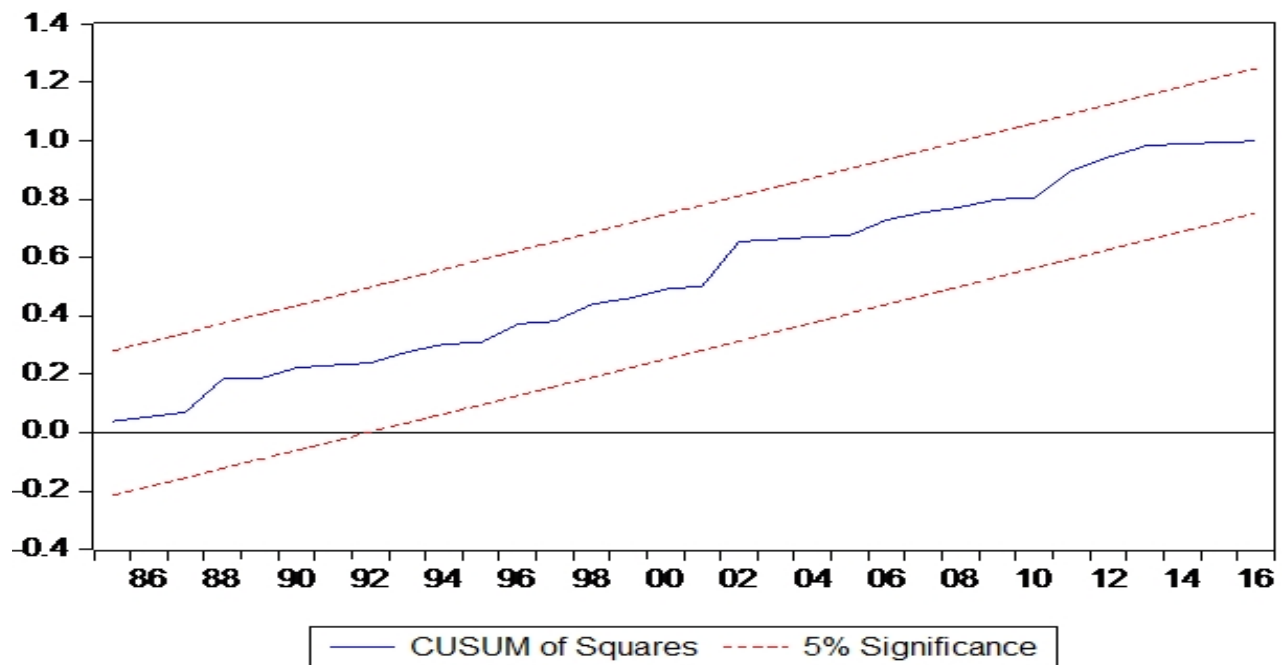


Figure 9: Cumulative Sum of Squared Recursive Residuals Plot



As illustrated in both Figures 8 and 9, the recursive tests are within the 5% significance threshold, confirming that the FDI ARDL model that was estimated for Malawi has both parameter and variance stability.

Additional stability and residual tests are displayed in Table 9 base on the following: misspecification test using the Regression Specification Error Test (RESET) introduced by Ramsey (1969); the Breusch-Godfrey serial correlation (LM) test introduced by Breusch (1978) and Godfrey (1978); and Breusch-Pagan-Godfrey test for heteroskedasticity introduced by Godfrey (1978) and later extended by Breusch and Pagan (1979).

Table 9: Stability and Residual Test

Null Hypothesis	Test Type	F-statistic [p-value]
Ramsey RESET Test (Functional Form)	Stability	1.8406 [0.1762]
Breusch-Godfrey LM Test (No Serial Correlation)	Residual	1.4491 [0.2507]
Breusch-Pagan-Godfrey Test (No Heteroskedasticity)	Residual	1.3031 [0.2644]

As illustrated in Table 9, the results show that the null hypothesis of the selected stability and residual tests cannot be rejected at the 5% significance level. Inclusive of the CUSUM and CUSUMSQ, the results confirm that the ARDL FDI model that was estimated for Malawi is a valid model and the estimated results are unbiased. These results are significant to the study since the ARDL model assumes a normal distribution with zero mean and constant variance. Given that serial correlation and heteroscedasticity have been ruled out, this confirms that the ARDL model does not suffer from any misspecification and the estimated coefficients are best linear unbiased

estimators and the standard ratios are valid (Pesaran and Shin, 1999; Gujarati, 2004).

5.7 Conclusion

In this chapter, the determinants of Foreign Direct Investment in Malawi have been empirically investigated using the Autoregressive Distributed Lag (ARDL) bounds testing approach to co-integration to estimate both short and long run elasticities. The estimation period covered the years from 1970 to 2016, representing 47 of annual observations used. The key determinants used in the investigation included proxies for market size, infrastructure, human capital stock, broad money, the real exchange rate, population growth, government consumption, and inflation. The study results have shown that only government consumption was negatively associated with FDI inflows, both in the short and long run. Conversely, investment and broad money are positively associated with FDI inflows only in the long run. The study did not find any statistically significant evidence of the other variables although they had the right sign, except for inflation in the long run. The chapter thus concludes that there exist some FDI determinants that positively or negatively influence the flow of FDI into Malawi and that the determinants are dynamic and have a long run relationship with FDI.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

In this chapter, the study that sought to investigate the determinants of Foreign Direct Investment (FDI) in Malawi is concluded by providing a summary, discussing the policy implications of the study findings and drawing some recommendations based on the findings from all the chapters. The chapter concludes with additional areas of research that can be isolated from the study. The rest of the chapter is divided as follows: Section 6.2 summarises the process adopted in this study. Section 6.3 summarises the main findings of the study. In section 6.4, the main conclusions and policy implications based on the study results are drawn. Lastly, section 6.5 discusses some limitations of the study as well as areas that can benefit from further research.

6.2 Study Summary

The study sought to investigate the theoretical and empirical bases for attracting foreign direct investment (FDI). Specifically, the importance of country-specific determinants in attracting FDI in Malawi were investigated. To achieve this goal, three important objectives were pursued: (i) to empirically identify the key determinants of FDI in Malawi; (ii) to empirically investigate the impact of the key determinants of FDI in Malawi; and (iii) to empirically examine the key policy recommendations drawn from the study results and which policy makers in Malawi can adopt, both in the short and long run, to attract FDI. The justification for selecting Malawi was that little empirical work on the topic has been done in Malawi, especially as the country faces challenges in attracting FDI for it to promote economic growth and reduce poverty among its people. Secondly, the study contributes to the existing empirical literature by demonstrating that the factors that influence FDI inflows into Sub-Saharan Africa are not only related to the existence of natural resources and market size, but also that FDI is attracted by other equally important factors such as government policies adopted.

To facilitate the investigation whose determinants are important in attracting FDI inflows into Malawi, the study benefited from a number of econometric tools. Firstly, the use of the gravity model was extended to country-specific analysis, especially revealing how country-specific factors can be explored. Secondly, the Autoregressive Distributed Lag (ARDL) dynamic model was used to empirically investigate the determinants that either drove or impeded FDI inflows into Malawi during the period 1970-2016. The ARDL was suitable for Malawi as it was used to test whether there exists a long run relationship between FDI inflows and the included determinants. This approach is important so that estimating a spurious regression is avoided. Additional econometric

tools used are related to unit root tests that were used to ensure that the variables included in the ARDL equation were either integrated of order one or zero. To ensure such requirements, the Augmented Dickey Fuller unit root test was used. The determinants that were investigated to see which factors influence or deter FDI inflows into Malawi include market size measured by real GDP per capita, the level of infrastructure in the economy proxied by investment stock or gross fixed capital formation, human capital stock based on total enrolment, the level of money supply measured by broad money, population growth, fiscal policy represented by the level of government consumption as a fraction of GDP, the real exchange rate (RER), and the level of inflation.

6.3 Main Study Findings

The main empirical findings of the study show that: (i) there exists a long run relationship between FDI and the determinants adopted in this study which include market size, infrastructure, human capital, broad money, real exchange rate, population growth, government consumption, and inflation; (ii) the determinants that were significantly associated with attracting FDI inflows in Malawi include the level of infrastructure, the level of broad money, and government consumption; (iii) the determinants that were insignificantly associated with attracting FDI inflows in Malawi include market size, human capital, real exchange rate, population growth, and inflation; (iv) government consumption is negatively and significantly associated with FDI inflows both in the short and long run; (v) the level of infrastructure is positively and significantly associated with attracting FDI inflows in the long run; and (vi) the level of broad money is positively and significantly associated with attracting FDI inflows in the long run.

6.4 Conclusions and Policy Recommendations

Based on the empirical findings of the study, a number of conclusions and policy recommendations are drawn. Firstly, the study found that the relationship between investment and FDI inflows in Malawi is positive and significant in the long run. Thus, it is recommended that Malawian authorities focus on developing economic policies and strategies that create incentives that can attract more infrastructure investments into the country. These incentives should also include policies that reduce impediments that may lead to disinvestment and divestment (or capital flight), especially government policies such as distortionary taxation, price controls, deregulation, among others.

Secondly, the study found a positive and significant relationship between broad money and FDI inflows in the long run. This is particularly important as liquidity and financial development have been found to be important factors that attract FDI inflows into a host country. Thus, the study recommends that monetary policies that Malawi adopts focus on financial development. Such

policies include fiscal incentives and subsidies, and liberalisation of the banking sector focusing on policies that would attract FDI inflows.

Thirdly, the study found that the relationship between government consumption was negatively and significantly associated with FDI inflows, both in the short and long run. It is, therefore, recommended that the authorities in Malawi ensure that distortionary fiscal policies are minimised, especially distortionary taxation, and focus more on FDI-friendly government policies, and effective regulation.

6.5 Study Limitations and Areas for Further Research

Much as every effort was made to ensure that the study results are empirically defensible, a few challenges were noted. Firstly, although a more powerful tool was used to investigate the determinants of FDI inflows in Malawi using the ARDL approach to cointegration, the study found only three out of eight factors that were significantly associated with attracting FDI inflows in Malawi. However, this does not mean that a similar situation would be found if the causality between FDI inflows and the selected determinants were investigated. Since this was beyond the scope of this study, it is, therefore, room for further research. Secondly, although it minimises statistical challenges, converting all variables into natural logarithms deterred the study to include variables that had observations with more negative values since the natural logarithm of a negative value does not exist. As such, the inclusion of real interest rates, which are an important determinant of FDI inflows into a country could not be investigated as the transformation created a number of missing observations in the data. Lastly, much as the ARDL dynamic model that used annual time series data has good small sample properties, it has limits to the number of regressors that can be included to investigate the determinants of FDI inflows in Malawi. The study could only use up to eight determinants to ensure that the degrees of freedom were enough to provide meaningful analysis. An immediate solution would be to use panel data, again creating room for further research.

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