

Profiling sectoral risks of foreign direct investment in Africa

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Abstract

Attracting foreign direct investment (FDI) is of utmost importance for African countries in order to create employment opportunities, reduce poverty and to ensure sustainable economic growth. Despite Africa's exceptional FDI performance during the past decade, the majority of FDI inflows have been directed to a few selected countries. As investors face many risks when investing in developing countries it is argued that risk perception plays a vital role in the FDI inflows into Africa. This thesis focuses on the relationship between risk and FDI. A structural equation model is used to analyse this relationship with a dataset of ten risk categories and FDI data from 42 African countries. The importance of SEM for this study lies in the capability of modelling data from multiple groups. Hence, the four sectors used comprise metals, automotive, communications and the real estate sector. Overall results indicate that government effectiveness and legal and regulatory risks produce the biggest concern for investors. The conclusion is that there are different risk patterns regarding FDI in Africa. The empirical results further imply that if African countries wish to attract the levels of FDI required to stimulate economic growth, policies are needed to reduce risks in order to create a favourable investment climate for investors.

Key words: Foreign direct investment, Africa, Risk, Structural Equation Modelling.

JEL classification: F21, F23

Opsomming

Dit is van kardinale belang vir Afrika-lande om direkte buitelandse investering (DBI) te lok. Die doel hiervan sal wees om werksgeleenthede te skep, armoede te verminder en volgehoue ekonomiese groei te verseker. Ten spyte van Afrika se buitengewone vertoning ten opsigte van DBI gemeet aan die laaste dekade, is hierdie DBI-instroming in die meeste gevalle egter slegs beperk tot etlike, spesifieke lande. Aangesien beleggers baie risiko's in die gesig staar wanneer dit investering in ontwikkelende lande raak, kan daar argumenteer word dat persepsies van risiko's 'n kardinale rol speel in die invloed van DBI na Afrika. Hierdie skripsie fokus op die verhouding tussen risiko en DBI. 'n Strukturele vergelykingsmodel word gebruik om hierdie verhouding met 'n informasiebasis van tien risikokategorieë en DBI-data van 42 Afrika-lande te analiseer. Die relevansie van strukturele vergelykingsmodellering ten opsigte van hierdie studie setel in die modellering van data vanuit verskeie groepe. Dus bestaan die vier sektore wat gebruik word uit die metaal-, die motor-, kommunikasie- en eiendomsektor. Die finale resultate dui daarop dat die effektiwiteit van die regering, asook regsmatige- en reguleringsrisiko's aanleiding gee tot die grootste rede tot kommer onder beleggers. Die bevindinge dui dat daar verskeie risikopatrone met betrekking tot DBI in Afrika bestaan. Die empiriese resultate impliseer verder dat indien Afrika-lande vlakke van DBI (wat nodig is om ekonomiese groei te stimuleer) wil lok, beleide in plek gestel gaan moet word om risiko's te verminder met die doel om 'n gunstige investeringsklimaat vir beleggers daar te stel.

Sleutelwoorde: Direkte Buitelandse Investering, Afrika, Risiko, Strukturele vergelykingsmodellering.

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List of abbreviations

ASEAN.....	Association of Southeast Asian Nations
CSA.....	Country Specific advantages
CEEC.....	Central and East European countries
CEO.....	Chief Executive Officer
CFI.....	Comparative Fit index
DRC.....	Democratic Republic of Congo
EIU.....	Economist Intelligence Unit
EU.....	European Union
FDI.....	Foreign direct investment
FSA.....	Firm Specific Advantages
GDP.....	Gross Domestic Product
GFI.....	Goodness of Fit index
IFI.....	Incremental Fit index
IKCO.....	Iran Khodro Industrial Group
IMF.....	International Monetary Fund
KK.....	Knowledge-Capital
M&A.....	Mergers and Acquisitions
MDG.....	Millennium Development Goal
MIGA.....	Multilateral Investment Guarantee Agency's
MNC.....	Multinational Corporation
NEPAD.....	New Partnership for Africa's Development
NFI.....	Normed Fit index
OECD.....	Organisation for Economic Cooperation and Development
OED.....	Oxford English Dictionary
ONDD.....	Office Nationale Delcrederedienst

PWC.....	PricewaterhouseCoopers
RMSEA.....	Root Mean Squared Error of Approximation
SEA.....	South East Asian
SEM.....	Structural Equation Modelling
TNC.....	Transnational corporations
UAE.....	United Arab Emirates
UK.....	United Kingdom
UNCTAD.....	United Nations Conference On Trade And Development
USA.....	United States of America
WEF.....	World Economic Forum

Chapter 1: Introduction, problem statement and method of investigation

1.1 Introduction

In recent years Foreign direct investment (FDI) has become an integral part of fostering economic growth and development, not only for developed countries, but in an increasing manner, developing countries as well. Foreign Direct Investment (FDI) in general refers to international capital movement, which includes the transfer of resources, expertise, technology, and in most cases also involves the acquisition of control (Krugman and Obstfeld, 2009). According to the African Economic Outlook (2010), FDI can be seen as a major source of growth as it raises productivity for the whole economy by spreading its effects to other firms and sectors through technology-spillovers and increased competition. Since FDI plays a vital role in the promotion of economic development for developing countries, it is extremely important to evaluate how various types of risk influences on the investment decision.

The past decade has seen a remarkable increase in FDI to developing countries as the region attracted US\$785 billion during 2000-2008. At the forefront of the investment trend is the South East Asian (SEA) region, which received 60 percent of FDI inflows in 2009. Even with improved performance, Africa received a mere 11 percent (UNCTAD, 2010) of FDI inflows during 2009. Despite an annual growth rate of 4, 9 percent between 2000 and 2008 (McKinsey Global Institute, 2010) and several efforts of African countries to increase FDI inflows, it is clear that Africa is only just managing to keep up with developments seen in other developing regions. Africa's progress has been inconsistent and lags behind other areas of growth across the world.

According to the African Economic Outlook (2010), FDI can be seen as a major source of growth as it raises productivity for the whole economy by spreading its effects to other firms and sectors through technology-spillovers and increased competition. Since FDI plays a vital role in the promotion of economic development for developing countries, it is extremely important to evaluate how various types of risk influences on the investment decision.

Chinese investment in Africa is widespread, with 45 of the 53 African nations receiving FDI from China between 2003 and 2008 (UNCTAD, 2007). While traditional investors focused on investment in North Africa, Chinese FDI to Africa was mostly concentrated in Southern and East Africa. It is also interesting to note that the approach of Chinese firms to doing business in Africa differs substantially from the dominant Western approach. The most significant part being that Chinese firms are less risk averse and also undertake the building of infrastructure in return for access to various natural resources, such as oil and other minerals (Sautman and Yan, 2009).

The much debated presence of emerging countries – like China - in Africa has caused a stir with traditional investors in many countries rethinking their approach of FDI to Africa. According to Asiedu (2006) traditional determinants, such as good policies and institutions, is known to be the foundation of attracting FDI to Africa, however, a different approach is needed if Western countries want to keep up with China.

A major aspect of the Western approach to FDI in Africa is their reliance on various risk rating agencies to calculate the country risks according to financial indicators, balance of payments sheet and other macro-economic indicators. According to Brink (2004), such ratings are often used as a reflection of the overall investment climate of a certain country and not that of a credit rating - the purpose it was designed to fulfil. Country ratings are then mistakenly used for purposes other than those for which they were actually intended. This study aims to review the approach to the determinants and associated risks for FDI, specifically in Africa.

There are certain determinants which influences the decision of the firm to engage in FDI. Narrowing it further, certain key determinants prevail in Africa. Previous literature indicates that the most significant determinants to Africa are openness to trade, inflation, foreign reserves, natural resource endowments, political freedom and original literacy (Asiedu, 2002; Onyeiwu and Shretsha, 2004; Naude and Krugell, 2007). As the study is focused on the sectoral risks associated with FDI, an evaluation of the determinants of different sectors will need to be conducted to establish the associated risks.

The importance of sectoral determinants and risks regarding the FDI decision is highlighted by Hauser (2005). When confronted with the FDI decision, a firm will either enter the market via a *Greenfield* investment or by merging with an existing firm. The level of uncertainty or risk and technological advances of the firm offers an explanation as to why one mode is preferred above the other. Hauser (2005) then argues that different types of investments are made in different sectors and emphasises this with a study conducted on German and Austrian FDI. He draws the conclusion that investors engaged in the power supply and mining sectors are likely to enter the market by an acquisition (merger) of an existing firm. Firms investing in the manufacturing or services sectors will enter the market via a *Greenfield* investment due to the mentioned differences. Although literature on FDI to developing countries is vast, studies conducted on Africa are limited. Literature on sectoral level exists for other developing countries and will be investigated in order to establish a theoretical framework for investment in Africa.

Since developing countries have been attracting a substantial amount of FDI inflows which is beneficial for their economic growth and development, it is vital to understand how risks of various types act as constraints to flows of such investment.

According to White and Fan (2006) different levels of risks exists for different countries, sectors and industries. A firm will engage in FDI if the given level of risk is acceptable. The most relevant risks are global risk, country risk, industry risk and enterprise risk. It is important to take into account that there is a considerable level of overlap between the levels and different types of risk in order to quantify these risks in an empirical evaluation.

It is clear that the way in which risk is perceived is a significant determinant of FDI. It is thus important for investors to identify, estimate and assess the relevant risk in order to make an appropriate decision regarding FDI. Risks can be classified in numerous ways, each reflecting a particular focus of interest. In this study, risk will be classified to fit the research question, which is how FDI is influenced by sectoral risks.

1.2. Motivation

Foreign Direct Investment has contributed to the growth and development of many developing regions since the 1990's and even though Africa wasn't on the receiving

end for many years, tides are beginning to change. With the levels of interest in Africa rising, many Western companies are questioning their advances regarding the 'dark continent'. Despite many African countries continuing to enjoy strong economic growth, there remain lingering negative perceptions of the continent. It is, however, becoming clear that new approaches to risks associated with FDI in Africa are needed. Although the literature on FDI in developing countries is vast, research regarding FDI in Africa is limited. Up to this point, relatively few studies have focused on the risks pertaining to FDI into particular sectors in Africa. This study aims to shed light on this interesting yet important part of FDI.

1.3. General objective

The general objective of this study is to use a systematic approach to investigate the main determinants and associated risks for Foreign Direct Investment in Africa based on the country of origin's perception of risk.

The study will attempt to achieve the following goals:

- Determine the significance of the relationship between risk and FDI inflows in Africa.
- Provide a better understanding and overview of sectoral determinants for FDI in Africa.
- Provide insight for governments, investors and policymakers on how to approach risk.
- Recommendations for future work.

1.4. Research Method

The research problem and objectives stated above will be addressed through a review of the literature on FDI and the importance thereof for developing countries. The literature review will focus on determinants and the sectoral/types of investment where after the focus will shift to the more specific risks associated with specific sectors in FDI flows.

To establish preliminary relationships between FDI and sectoral risks, a qualitative review of data will be carried out. Structural Equation Modelling using the AMOS software will then be used to:

- Test theoretical specifications.
- Analyse subgroups of data, like different sectors, to test whether they are similar or not.
- Establish which determinants and risks play the most significant roles in specific sectors.

The aim of the study is to establish a paring of risks and sectors, as influenced by the relevant determinants.

The main limitation of this study is the lack of data which will restrain all-inclusiveness. The availability of the FDI markets database from FDI Intelligence (a Financial Times Division), along with The Economist Intelligence Unit Risk, categories will be used as primary data. The FDI Markets database contains all *Greenfields* investments in Africa from 2003 onward. Data from Bureau van Dijk's Zephyr database on mergers and acquisitions along with risk ratings from the Office Nationale Delcrederedienst (ONDD) will be investigated in the qualitative review.

1.5. Study delimitation

The approach used in this study is based on the investment promotion idea addressing the most relevant issues to attract specific investments and not on econometric techniques to establish direct coefficients. The underlying assumption is that in each specific investment instance the basic risk factors will be the same, yet their coefficient might differ significantly. Hence, the focus is on the paring of different factors rather than establishing coefficients.

As investments are not necessarily made in each sector of every country that received investments from abroad, this will affect the ability to investigate investor perception. Even where investment took place, this does not necessarily include investments of all major investors. Thus, investor perception will be investigated where possible.

In summary, the focus of the study is pairing risk factors to investment flows to specific sectors rather than estimating determinant coefficients or the relevance of new determinants.

1.6. Outline

This study is presented in six chapters, which are structured as follows: Chapter 2 provides an overview of the main theories on FDI. The most recent literature concerning the determinants of FDI is also discussed in this chapter. This chapter also surveys sectoral determinants to developing countries in particular.

Chapter 3 reviews the literature on FDI risk and demonstrates the manner in which risk impacts on the investment decision. This chapter highlights the importance for a new approach to FDI risk.

Chapter 4 presents an overview of global FDI flows between 2005 and 2011, exposing the trends for developing regions and more specifically for Africa during this period. The aim of this chapter is to provide a qualitative review of the relevant risks in Africa in order to set the background for analysing the relationship between risk and FDI inflows.

Chapter 5 provides the empirical study to match the most relevant risks with relevant sectoral inflows.

Chapter 6 summarises the study's key findings and concludes with recommendations for future work.

Chapter 2: The Literature of Foreign Direct Investment

2.1. Introduction

The focus of this chapter is to provide an overview of the literature on FDI in order to establish a theoretical foundation for profiling the sectoral risks of FDI in Africa. The discussion starts with the different types, theories and determinants surrounding FDI to establish the importance thereof for host countries of FDI. The literature review focuses, specifically, on determinants and the sectoral and/or types of investment. The focus subsequently shifts to the more relevant and specific risks associated with FDI inflows into particular sectors.

The literature on FDI in developing countries has grown significantly over the last two decades. Studies conducted in Africa are, however, limited. Literature on sectoral level exists for many other developing countries and is investigated in order to establish a possible theoretical framework for investment in Africa. Since the dissertation focuses on FDI specifically into Africa, a thorough theoretical background lays the foundation in which the main determinants and associated risks for FDI in Africa are analysed.

The structure of the rest of this chapter is as follows: Section 2.2 consists of a brief discussion on the general definitions of FDI. Section 2.3 provides the main types of FDI which is then followed by the theories of FDI in Section 2.4. Section 2.5 discusses the effects of FDI. Section 2.6 provides a literature overview of the determinants of FDI followed by specific determinants for Africa in Section 2.7. A literature overview on the sectoral determinants for FDI in developing countries is given in Section 2.8. Section 2.9 concludes the chapter.

2.2. Definitions and concepts

In general, Foreign Direct Investment (FDI) refers to international capital movement, which includes the transfer of resources, expertise and technology, and in most cases, also involves the acquisition of control (Krugman and Obstfeld, 2009).

According to OECD (1999) the benchmark definition for FDI reads as follows:

“Foreign direct investment reflects the objective of obtaining a lasting interest by a resident entity in one economy (“direct investor”) in an entity resident in an economy

other than that of the investor (“direct investment enterprise”). The lasting interest implies the existence of a long-term relationship between the direct investor and the enterprise and a significant degree of influence on the management of the enterprise.”

‘Lasting interest’ as defined by the United Nations (2008), is ownership of greater than or equal to 10% of ordinary shares or access to voting rights in an incorporated firm. Thus, FDI is made with the aim of acquiring a certain degree of influence in the management of the firm (OECD, 1999).

Firms making a direct investment in foreign economies are referred to as either multinational corporations (MNC) or transnational corporations (TNC). Typically, the multinationals have operated in developing countries, where they provide technology, finance capital, and marketing skills in return for a profitable market (Cohen, 2007).

In this study, the host country will refer to the country that is the host to the foreign direct investment corporation. The home country is home to the investor who makes the investment (OECD, 2002). A foreign firm seeking to invest abroad can do so through different types of FDI. The next section will summarise the different types of FDI.

2.3. Types of foreign direct investment

There are various reasons as to why firms decide to engage in foreign direct investment. These motivations are concerned with whether the parent company seeks resources or a new market; whether a new company is established or simply taken over. A few of the main types of FDI are briefly discussed.

Basile (2002) states that a *Greenfield* investment is a form of foreign direct investment where a parent company starts a new venture in a foreign country by constructing new operational facilities within the borders of the host country. In addition to building new facilities, most parent companies also create new long-term jobs in the foreign country by hiring new employees. In contrast to this, according to the IMF (2010), when a MNC already controls existing facilities in a host country, it is known as a brownfields investment. This prominent distinction between *greenfield* and brownfields investment obviously has different impacts on the host

country. Brownfields FDI results in a smaller inflow of physical capital, as the change in ownership doesn't necessarily have the effect of an inflow of new capital.

Brakmen and Garretsen (2008) are of the opinion that the most important FDI entry mode for a MNC is that of a brownfields investment in the form of a merger or acquisition. The phrase merger and acquisition refers to the consolidation of companies (Hizjen, Gorg and Manchin, 2008). A merger occurs when existing companies (host country company and foreign company) join and form a new company, while an acquisition is the purchase of an existing company by a foreign firm and no new company is formed.

Onyeiwu and Shrestha (2004) further explain that multinational corporations usually start *greenfield* investments in developing countries due to incentives these countries offer. Incentives include tax-breaks and subsidies for prospective companies. Governments usually see the loss of tax revenue as a small price to pay for job creation and knowledge transfer through foreign direct investment.

In addition to a *greenfield* or brownfields investment, a further distinction can be made between inward and outward FDI. Inward FDI is the investment flow that a host country receives (Bezuidenhout, 2007). The factors attributed to the growth of inward FDI consist of tax-breaks, relaxation of existent regulations and specific grants. As with *greenfield* investment, the idea behind inward FDI is that the long term gains from such funding far outweighs the disadvantage of the income loss incurred in the short term.

Outward FDI is the FDI that flows from the home country and is also referred to as "direct investment abroad" (Sachwald, 2005). In this case, it is the local capital from the home country, which is being invested in some foreign resource (host country).

Furthermore, an investment can also be categorized as either vertical or horizontal FDI. Horizontal FDI occurs when an investor's production processes are duplicated in the host country (Bezuidenhout, 2007). An example of this is when FDI is embarked on to explore or access new markets, which is also known as market-seeking FDI. By investing locally (in the host country) companies can save operational costs such as transportation and also benefit from less government regulations. This type of FDI is commonly described as offshoring where a firm

invests in foreign markets to ensure optimal availability of opportunities and economies of scale – thus taking advantage of a lower cost structure (Kah, 2006).

Resource seeking FDI is investment that is aimed at the extracting or refining of natural resources like timber or petroleum. The main objective is to obtain these factors of production at more operational efficiency than in the home country of the investor (Kah, 2006.) This is also referred to as Vertical FDI, where the investor's aim is to use the resources obtained to increase production.

In conclusion, it is obvious that there are various ways and reasons for a firm to get involved in foreign investment. The next section will provide a literature overview of the theories surrounding FDI so as to provide a clear explanation of the advantages of investing abroad.

2.4. Theories

Examining theories that are relevant to FDI is important in order to establish why firms invest and produce abroad and how this affects the host country. The growing interest in FDI has led to the development of a number of theories that provide an explanation as to why certain countries are more successful than others in obtaining FDI. The most prominent theoretical viewpoints regarding FDI are the Multinational theory, the Eclectic theory, the Dependency theory and the Modernisation theory. The following section provides an overview of the main FDI theories.

2.4.1. Theory of Multinational companies

The theory of Multinational Corporations can be divided into two important factors, location and internalisation.

Firstly, the decision about where to produce is influenced by various factors, but Krugman and Obstfeld (2009) state that a key determinant is the availability of resources. Barriers to trade and transportation costs may also affect the choice. It is often the case that skill-intensive production is located in a developed country whereas labour-intensive production is located in developing countries.

Another important factor is that of internalisation. Buckley and Casson (1976) suggests that a firm overcomes market imperfections by creating its own market – internalisation. By internalising across national borders, the firm then becomes a multinational.

Hence, internalisation is the operation of a multinational company in different countries. These operations include the share of technology, coordination of management and it is often the case that the output of one firm is the input into production for another (Krugman and Obstfeld, 2009).

The theory of multinational companies thus states that in order for firms to maximise profits, a decision will be made to invest abroad. Location and internalisation affects a firm's decision about where and what type of FDI will be made.

2.4.2. Eclectic theory

John Dunning (1988) introduced the eclectic paradigm as a way to explain why foreign divisions are established. Through the eclectic theory he attempts to integrate macroeconomics theory and trade with microeconomics or industrial economics.

The OLI paradigm (Brakman and Garretsen, 2008) is thus a mix of three various theories of foreign direct investment:

O- Ownership advantage

L - Location advantage

I -Internationalisation advantage

The ownership advantages or FSA (firm specific advantages) states that firms have specific knowledge capital which can be in the form of managers, technologies, brand or patents (Dudas, 2008). As a MNC is faced with additional costs (legal, language, failure of knowledge of the new market) when operating in a foreign country, it becomes essential to have some kind of advantage – eg. Market share; – which would make the venture profitable.

Dunning (1988) further argues that the CSA (Country specific advantages) or location advantages are key in determining which countries will play host to a MNC. These advantages can be separated into economic advantages (size of the market, telecommunications and transportation costs), political advantages (includes policies that influences the flow of FDI) and socio-cultural advantages (language barrier, attitude towards foreigners etc.). A MNC will also benefit from location advantages if it is more profitable to produce in the host country than it is to export to that specific country (Brakman and Garretsen, 2008).The last component of the eclectic theory is

that of internalisation. As previously stated, internalisation is beneficial for a MNC because even though information and specific capital is being transferred out of the mother company; the firm is still 'protected' by its subsidiary.

These theories shape our understanding as to why a firm decides to invest abroad, but key issues such as the choice between horizontal and vertical FDI are not explained by the model (Neary, 2009). Furthermore, the increasingly important decision between *greenfield* and merger and acquisition (M&A) modes of entry are also not addressed. Helpman and Krugman (1985) developed a model which expands the Eclectic Paradigm and which explains the motivations for vertical FDI. As stated in section 2.3, vertical FDI takes place when a firm has facilities in multiple countries, with each producing a different stage of the firm's production process. Vertical FDI dominates when countries differ in factor endowments. This model is very relevant today, as it mostly applies to investments into developing economies (Markusen, 2002).

To further elaborate on FDI theories, Markusen (2002) explained that with horizontal FDI, MNC's produce more or less the same product in different locations, thus replacing international production with trade. Horizontal FDI tends to dominate when countries are relatively the same size, have similar factor endowments and when trade costs are high.

Recently, several studies have attempted to endogenise MNC's into general-equilibrium trade models. This would suggest a model where firms have the option of building multiple plants or separating their headquarters according to geographical locations. In essence this means a model that integrates vertical and horizontal FDI. This approach is known as the knowledge-capital (KK) model (Markusen, 2002). It assumes that knowledge is not restricted geographically and that it is used as a joint input to multiple production facilities. Results from this model indicate that the KK-model along with the horizontal FDI give a better description of the reality of MNC activities than the Vertical FDI model.

These theories provide an explanation as to why a firm decides to invest abroad, but it doesn't explain why a firm chooses a certain country. The following section provides some clarity on this matter.

2.4.3. Dependency theory

Dependency Theory and Modernisation Theory are two other important theories explaining the role of FDI in a host country's economy. A comparison of these theories will give a better picture of past FDI trends as well as what we may expect in the future. It should be noted that although being quite different, both theories focus on the gap between developed and developing countries (Scott, 1995). The dependency theory will be discussed in this section followed by the modernisation theory in section 2.4.4.

According to Pigato (2000) the relationship between developed and developing nations are unequal and dependant. He further states that the relationship becomes dependant when some countries develop through self-impulsion, while others only develop as a reaction to the development of the dominant countries.

Hunt (1989) also argues that the dependency theory is based on the fact that wealthy nations develop at the expense of the poor ones. Thus, developing nations shouldn't be so dependent on foreign funds and should rather become self-sufficient.

Taking the above into account, one can understand many African leaders' scepticism towards FDI. Many African leaders believe that FDI has a negative effect on economic growth because certain sectors in the economy become dependent on foreign funds (Pigato, 2000). During the 1980's this was the motivation for policymakers to adopt an import substitution approach.

2.4.4. Modernisation theory

The modernisation theory is based on the thinking that capital investment is needed for economic growth. This can be concluded from the neoclassical and endogenous growth theories (Adams, 2009).

According to the neoclassical theory, FDI can be beneficial for a host country as it provides the extra capital needed to increase output. However, this is only beneficial for the country in the short run as capital is subject to the law of diminishing returns (Todaro and Smith, 2003). Within this framework, the main drawback is the focus on the short run.

Unlike the neoclassical theory, the endogenous theory aims to address this drawback by making provisions for increasing returns to capital to occur. According

to Herzer, Klasen and Nowak-Lehmann (2008) when FDI takes the form of physical or human capital, positive externalities result, which in turn leads to increasing returns of capital. In developing countries where there is a lack of human capital infrastructure, FDI bridges the gap. Thus, an important aspect of FDI is that it provides the platform for the necessary spillovers like labour training or the adoption of new technologies by domestic firms to take place (Lee and Chan, 2009). These positive externalities are important for a country as it stimulates long term growth and it offsets the effect of diminishing returns to capital. Increased investment in human capital is thus the main focus of the endogenous theory.

It is worth mentioning that China's growth model differs considerably when compared to the Western way and does not meet any of the basic assumptions of either the Dependency or the Modernisation theories. However, an extensive discussion on China's growth and development falls outside the scope of this study. Against the background of these theories, which highlight the advantages of FDI, certain prevailing determinants influence whether a firm engages in FDI.

2.5. Determinants of Foreign direct investment

There are certain important factors that can affect the FDI-decision of a MNC. Naudé and Krugell (2003) and Lim (2001) suggest that while the most apparent reason for investing is the maximisation of profit, there are other circumstances or market/country specific determinants that also play a role. The determinants not only influence the decision about where to invest, but also which type of FDI would be appropriate (Lim 2001). The determinants can be divided in two groups: macro- and micro-determinants (Naudé and Krugell, 2003). The macro-determinants focus on economy-wide factors, while the micro-determinants have a direct impact on the profitability of the MNC.

2.5.1. Micro-determinants

Market size and growth is a key determinant for many MNC's. A rapidly growing market produces more goods and services and attracts the attention of investors. An investor will invest in a large market where economies of scales can be reached (Naude and Krugell, 2003). Bezuidenhout (2007) argues that market size is a significant determinant as it is associated with lower transaction costs. It is

commonly accepted that market-seeking investors penetrate markets based on their size and growth.

Lim (2001) states that high transport costs in the home country can motivate the market-seeking investor to move production to a foreign market. On the other hand, a foreign market's high transport costs will be seen as a restriction for resource-seeking FDI as this will lead to a rise in production cost (Bezuidenhout, 2007).

Since taxes can act either as an incentive or restriction, it has a direct impact on the MNC's FDI decision (Lim, 2001). Higher taxes will be seen as a restriction and lower taxes an incentive. It should also be noted that a MNC is saddled with taxes in his home country as well as taxes in the host country. According to Blonigen (2005) any earnings earned by a foreign affiliate will be subject to home country taxes. To overcome this, most home countries have policies to reduce or eliminate double taxation for MNC's. Woodward and Rolfe (1993), found, contrary to existing arguments, that a high-tax host country may sometimes lead to an incentive to invest. This can be attributed to the fact a MNC will invest in a high-tax country because of economies of scale (Blonigen, 2005).

Another important determinant is the cost of labour in the foreign market. In general, a MNC will invest in a country with the most productive labour force for the lowest costs (Naudé and Krugell, 2003). Investors are attracted to the most efficient, skilled labourers at minimum cost; therefore, the demand for high wages discourages FDI. It is a common perception that MNC's get cheap production at very low wages, but it should also be stated that it is more profitable for a firm to employ skilled workers in order to increase efficiency (Naudé and Krugell, 2003). A study done by Aitken and Harrison (1996) indicates that higher levels of foreign investment are associated with higher wages. The study concluded that firms will employ more skilled labourers in order to increase their efficiency and productivity. In the end human capital formation outweighed labour costs.

It is well-known that a MNC will invest in a market where the firm's requirements can be met, but Lim (2001) states that the so-called agglomeration effect plays a part in the investment decision. Countries have different levels of resources and services and the MNC will decide on a host country where his needs can be adequately met. This implies that a market with relevant infrastructure, easy market access and

suppliers of inputs are expected to attract investment. Existing FDI stock will also attract a MNC as investors flock to countries with high FDI inflows.

Host government policies are policies implemented by the host country which affect the MNC at industry level. Policies are usually put into practice to either restrict or promote investment and can take the form of incentives or performance requirements. The aim of incentives is to increase investments in certain sectors or industries (Naudé and Krugell, 2003). Most of these policies consist of tax breaks and trade incentives. According to the OECD (2005), incentives have become a measure of competitiveness for developing countries in order to attract more FDI. Performance requirements can be seen as a restriction on FDI. These requirements are used to ensure that the host country can also reap the benefits of FDI. Measures can include requirements to develop the skills of the local staff and to build production facilities.

Another determinant that has an on FDI, is tariff and trade barriers. Tariff and trade barriers discourage FDI as it is difficult for the importer to enter the country. When the MNC avoids the tariff or trade barriers, it is called “tariff hopping”. Some empirical studies have indicated that FDI will result from higher import restrictions, like trade barriers and tariffs. In this case, the MNC can keep costs to a minimum by producing and selling in the host country rather than exporting goods from the home country (Bezuidenhout, 2007).

2.5.2. Macro-determinants

There are various theories surrounding openness, exports and FDI. Naudé and Bezuidenhout (2007) pointed out that higher inflows of FDI can be achieved through greater openness to trade and a general rise in trade. Jun and Singh (1996) also argue that an outward-oriented country, for example countries in South-East Asia, is more likely to attract FDI than a country with trade restrictions. An advantage of an outward-oriented economy is that it creates an export platform for the MNC; the MNC is thus not restricted to the host country's domestic market. Trade openness in general leads to a better business climate and an increased market-size, both of which are favourable factors for FDI (Lim 2001).

As the national account reveals the current economical state of a country, it also becomes a significant determinant. An important section of the account is the current

account. Draper and Freytag (2008) states that when comparing countries, investors tend to look at the current account balance as a percentage of GDP to measure a country's investment potential. A current account deficit of more than three percent of GDP is seen as 'dangerous' by investors and the country will have difficulty attracting interest. The deficit thus poses a major threat as Africa has in recent years been the major focus of global investors from different countries (Draper and Freytag, 2008).

The investment and infrastructure of a country is a clear indication of a country's production capacity. With adequate infrastructure, production costs are lowered and productivity can increase, creating a positive investment climate. If the host country has a highly developed network of roads, airports, sea ports, supply of water and electricity, internet networks and telephones, this will guarantee the attention of foreign investors. Investment increases productive capacity, which in turn ensures a more productive environment for investors. Lim (2001) also states that high productivity together with low production costs are favourable factors for FDI.

Political stability is of utmost importance for a MNC as this is an indication of the host country's government's ability to create a stable economic environment in which a MNC may operate. Instability includes production disruptions, damage to property, terrorism, coups or shifts in the regulatory environment. Fedderke and Romm (2004) state that political instability has a deterrent effect on the inflow of FDI since it creates uncertainty about the future earnings of the MNC.

According to Asiedu (2001) an efficient legal system and less corruption is essential for promoting FDI. In this case, it is important to note that ineffective institutions and weak enforcement of contracts has an adverse effect on the legal aspects of the MNC. Thus the quality of institutions is also a key determinant for FDI. The United Nations (2007) further emphasises the quality of institutions as a determinant of FDI. Host countries need to improve the cost of doing business in the host country in order to improve the investment climate for MNC's. According to Bezuidenhout (2007), the quality of institutions affects infrastructure development as well, which in turn affects the costs of production and transport for the foreign investor.

The exchange rate as a determinant of FDI depends on the type of activity the MNC performs in the host country (Naude and Krugell, 2007). If the MNC mainly exports

its products, a depreciation of the host country's currency is positive as this makes export prices more competitive. On the other hand, if imported inputs are used by the firm for the production of goods, a depreciation of the host currency will have a negative influence on the price of imports.

Another key macro-determinant is the availability of natural resources. As explained earlier, when investment is directed on the extraction of natural resources, this is called resource seeking investment. Some countries have abundant sources of natural resources which attracts FDI inflows. According to Rusike (2007), there is a positive relationship between FDI flows and the amount of natural resources that the host country has.

The United Nations (2007) argues that regional integration is beneficial for FDI. Empirical evidence points out that the ASEAN regional-bloc attracts more investment and competition as a bloc than its individual countries. Similarly, African countries can benefit from more formal institutionalised regional integration.

Table 2.1 provides a summary of the various determinants that influence the investment decision and the size of the effect it has on FDI.

Table 2.1 Summary of Determinants

Determinant	Estimated relationship with FDI inflows (positive or negative)
<u>Micro Determinants</u>	
Market size	Positive
Transport Costs	Negative
Taxes	Low taxation/tax breaks - Positive High taxation - Negative
Labour Costs	High labour cost – Negative Low labour cost - Positive
Agglomeration effects	Positive
Host government policies	Positive
Tariff and trade barriers	Negative
<u>Macro Determinants</u>	
Investment and infrastructure	Positive

Country conditions	Positive
Availability of natural resources	Positive
Openness	Positive
Liquidity	Positive
Regional integration	Positive
Institutions	Positive

Adapted from Amaya & Rowland (2003)

The literature overview shows that there are various determinants that influence the choice of a host country for the MNC. In addition, empirical evidence indicates that FDI enhances growth in the host country, if the host country has the necessary capacities. The next section will examine FDI in Africa and present better insight on Africa specific determinants of FDI.

2.6. Africa-specific determinants

The past decade has seen an incredible increase in FDI in developing countries and while Africa did not initially benefit from the boom, the picture is starting to change. McKinsey (2010) highlights the continent's achievement in their paper; *'Lions on the move: the progress and potential of African economies'*. In 2008 Africa had a collective GDP of \$1.6 trillion, there were 316 million new mobile users since 2000, 52 cities with more than one million people each and the continent is home to 60 percent of the world's uncultivated arable land. Although the region has rebounded well from the global economic and financial crisis, the path to recovery is hampered by the image of uncertainty and instability in the political arena (Goldstein, 2004). The political turmoil of North Africa, most notably that of Libya and the Ivory Coast, is an illustration of how economies are brought to a halt if political instability reigns in a country. Goldstein (2004) supports this view by stating that Africa's perceived risk is a factor that negatively influences FDI to the region.

Asiedu (2001) is of the opinion that another reason for the futile FDI flows into Africa, is because of the continent's approach to attracting FDI. She goes on to argue that policies implemented in other developing regions, have not been successful in Africa. This suggests that Africa has a different set of factors that determine FDI

inflows. While a high return on capital and sufficient infrastructure in developing countries are necessary to attract FDI, these determinants are not significant for Africa. Openness to trade seems to be important for both developing countries as well as the African region.

Ngowi (2001) found that FDI to African countries are influenced by a number of significant determinants. The determinants include human capital, openness to trade, competitiveness, macroeconomic indicators, political stability, transparent financial markets and natural resources.

In his article, Foreign Direct Investment in Africa: Policies also matter, Morisset (2000) finds that a striking investment environment attracts more FDI in African countries than a large market or natural resource endowments. Liberal investment policies along with strong growth now become important determinants for African countries.

Like Goldstein (2004), Jenkins and Thomas (2002) also state that low FDI into Africa is attributable to an “African perception”. The authors conclude that sound economic policies and political stability will improve FDI to the region.

According to Naudé and Krugell (2003), FDI inflows to Africa generally depend on inflation, good governance, investment, government consumption and original literacy.

In another study conducted by Asiedu (2006) it was established that policies to improve economic stability, the availability of natural resources and the size of the domestic market are important factors for attracting FDI.

In their paper, Onyeiwa and Shrestha (2004) indicate that the inflation rate, economic growth, foreign reserves, openness and natural resources play a significant role in African countries’ ability in promoting FDI. Contrary to other studies, the authors conclude that political rights and infrastructure do not have an impact on FDI inflows.

In summary, the literature identifies the key FDI determinants to Africa as openness to trade, inflation, natural resource endowments, political freedom, original literacy and the implementation of economic policies.

Table 2.2 Comparison between Developing and African countries

	Developing countries	African countries
Openness to trade	X	X
Low inflation		X
Natural Resources	X	X
Economic growth		X
Political freedom		X
Polices	X	X
Literacy		X
Infrastructure	X	

Source: Author's own summary

Table 2.2 is a summary of the determinants which have a significant impact on the different regions.

From the preceding discussions it can be concluded that although traditional FDI determinants are present in Africa, the effect is less significant than in developing countries. A lack of significance is contributed to various factors like slow economic reform, closed trade policies and most importantly, the perceived image of Africa which is a result of an unstable political arena.

As this study focuses on sectoral risks, the following section will elaborate on the determinants of FDI for various sectors.

2.7. Sectoral determinants for FDI in developing countries

Though the literature on FDI in general is rich, research regarding the determinants on sectoral level is limited. Previous studies on the sectoral level exist for developing countries and will be investigated to establish a framework for Africa.

Blackman and Wu (2002) conducted a study on the determinants of FDI in the Chinese power sector. They found that government policies, the approval process for FDI projects, regulatory environment and the risk of default on power purchase contracts are the most important institutional barriers.

According to Tsen (2005) good education, an established infrastructure, a large market and a healthy current account balance are vital determinants for attracting FDI to Malaysia's manufacturing sector. Similarly, Dhanini and Hasnain (2002) found that in the Indonesian manufacturing sector, low labour costs, good education, adequate infrastructure and policies promoting FDI are key factors for attracting FDI.

Kolstad and Villanger (2008) established the determinants of FDI for the services industry by using industry level FDI data from 57 countries. The authors found institutional quality and democracy to be more important determinants than investment risk and political stability. Democracy is a significant determinant in developing countries while institutional quality is important for high-income countries. They also concluded that service FDI is market-seeking and is not affected by trade openness.

Riedl (2009) conducted a study based on FDI data for 8 new EU member states (transition economies). He also found that FDI into the services-sector is market-seeking while FDI in the manufacturing sector is driven by international competitiveness measured by labour costs.

Resmini (2000) conducted a study for the Central and East European countries (CEEC) to determine the FDI patterns in several sectors. Her findings show that FDI inflows for the science-based and capital intensive sectors are influenced by the host country's progress towards a market economy. Trade openness seems to be only significant in traditional sectors and the proximity to Western Europe particularly influences FDI inflows for the science-based and capital intensive sectors.

As stated earlier, literature regarding the determinants for sectoral level is not only limited, but it differs in terms of methods used, sample size, periods covered and variables used. In general, literature suggests that there seems to be different determinants for various sectors.

2.8. Summary

This chapter provided the theoretical basis and literature overview on which FDI can be analysed. It proceeded by describing the various terms and concepts associated with FDI. FDI occurs when an investment is made by entity outside of his home country. Such an investment is usually made to acquire a certain measure of control in such an enterprise.

Various types of FDI exist and can be categorised into mergers and acquisitions, *greenfield* and *brownfields* investment, inward and outward FDI and market-, rent- and resource-seeking FDI.

An overview of the most prominent theories concerning FDI was also provided. The most common theoretical viewpoints regarding FDI are the Multinational theory, the Eclectic theory, the Knowledge-Capital theory, the Dependency theory and the Modernisation theory. The theory of multinational companies states that in order for firms to maximise profits, a decision will be made to invest abroad. Location and internalisation effects a firms' decision about where and what type of FDI will be made.

The eclectic theory predicts three important components of FDI: ownership, location and internalisation. The firm has certain firm-specific assets that will determine whether or not it will be beneficial for them to invest. Also, the firm will only invest in another location if it is more cost efficient and thus more profitable to invest abroad. Internalisation states that it should be more advantageous for the firm to use its assets internally than contracting with other firms in the host country.

The Knowledge-Capital theory integrates the vertical and horizontal model. Results from this model mirror the reality of a MNC's investment decision.

Even though it is not of much use today, the Dependency theory described the cynical attitude with which many African-leaders approached FDI. Developing nations should not be over-reliant on foreign funds, but like China has proven, a more open economy can contribute to long-term economic growth.

Modernisation theory argues that FDI in developing countries should be human and physical capital incentive. Long term economic growth can be achieved through investments in human capital and technology, if these investments cause positive spillovers.

The determinants of FDI can be divided into macroeconomic and microeconomic determinants. Macroeconomic has an economy-wide impact and microeconomic directly impacts the firm's profitability. Microeconomic determinants comprise market size and growth, transport costs, taxes, labour costs, agglomeration effects, tariff and trade barriers and the host country's policies. Macroeconomic determinants include

openness of trade and exports, current account deficits, infrastructure, political stability, institutions and the availability of natural resources.

In order to establish the relevance of traditional determinants, an overview of African specific determinants were given. Although the literature for Africa and developing countries in general, is limited, a conclusion can be made that the African region tends to require a different set of determinants for FDI. Africa's perceived image plays a large role in FDI inflows for the continent.

The results of studies pertaining to FDI on a sectoral level indicate that there is an immense gap in the literature and data that is available. The available literature gives an indication that FDI determinants vary for sectors. Determinants include education, infrastructure, labour costs and democracy. The aim of this study is to contribute to the literature about FDI on the sectoral level, with a main focus on Africa.

Based on the above summary, it is clear that FDI has many different aspects and the determinants differ not only from developed to developing countries, but also on a deeper sectoral level.

The next chapter will focus on a literature overview on FDI risks. According to White and Fan (2006), it is stated that different levels of risk exists for different countries, sectors and industries. A firm will engage in FDI if the given level of risk is acceptable. It is clear that the way in which risk is perceived is a significant determinant of FDI. It is thus important for investors to identify, estimate and assess the relevant risk in order to make an appropriate decision regarding FDI.

Chapter 3: Aspects of Risk Theory focused on the FDI Decision

3.1. Introduction

Despite challenges like the global financial crisis in 2008/2009 and, more recently, the political upheaval in North Africa, the African continent was a growth hotspot in 2011 with a 24 percent increase in FDI projects (FDI Report, 2012). Despite obstacles such as inadequate infrastructure, corruption and conflict, investors remain hopeful of an African rebirth (Creamer, 2012). Foreign investors are confronted with a certain 'African-image' of instability and uncertainty. Goldstein (2004) finds that Africa's perceived risk negatively influences FDI inflows. This follows Ernst and Young's (2012) opinion that the perception gap hampers investment from those who are not yet doing business in Africa.

Despite the gap between its actual and perceived risk, Africa also presents opportunities for those willing to invest, with the continent being home to six of the ten fastest-growing economies over the last decade (Creamer, 2012).

This forces us to re-evaluate the way we perceive risk and to carefully evaluate the manner in which risk influences the investment decision. Subsequently, investment in Africa and its associated risks will need to be viewed through a completely different lens.

It is important at this stage to point out that although the literature is vast on subjects such as political risk, country risk and even market risk, studies linking FDI to these risks are limited. For the purpose of this literature study, White and Fan (2006) will be the main source of information. Additional sources will be used where possible.

This chapter expands on the literature on FDI risk. First, basic definitions and concepts are discussed in section 3.2 and different approaches to risk receive attention in section 3.3. Section 3.4 discusses the decision making process regarding risk, followed by an overview of the types of risk in section 3.5. Section 3.6 concludes the chapter.

3.2. Definitions and concepts

As a result of globalisation, the sources and the speed with which risks are spread have multiplied. Although globalisation has brought with it immense benefits and

opportunities, it has confronted MNCs with increased risks. These risks can range from vulnerabilities of shared infrastructure (transport, energy, and internet) to new and greater threats from systematic shocks. According to Hauser (2005), the level of uncertainty or risk is a major decision-factor for firms when investing abroad. He goes on to argue that uncertainty has a negative impact on firms and that it greatly influences a firm's mode of entry, which will either then be via a *greenfield* investment or as an M&A, depending on the risk level for a specific sector. Uncertainties arise from country specific risks, which include economic risk, commercial risk and political risk.

The Oxford English Dictionary (OED, 2011) defines risk as:

“(Exposure to) the possibility of loss, injury, or other adverse or unwelcome circumstance; a chance or situation involving such a possibility”

As mentioned before, businesses are faced with risk in various forms, all stemming from systemic, systematic and non-systematic operational risks.

Systemic risk doesn't have an exact definition but it generally refers to any event that might trigger a collapse in a certain industry or economy. It is sometimes referred to as a domino effect. According to Schwarcz (2008) the trigger event causes consequences that could include financial, institutional and/or market failures. Systemic risk is referred to as an event at firm-level that is severe enough to cause instability in the financial system.

Systematic risk is also known as overall market risk that is non-diversifiable. Interest rates, recessions and wars are forms of systematic risk as they cannot be avoided and affect the entire market (Schwarcz, 2008).

In contrast to systematic risk, unsystematic risk (residual risk) is unique to a certain industry or firm. Examples would be a strike of employees, weather conditions or nationalisation of assets. This kind of risk can be eliminated through diversification.

When faced with an uncertainty/risk the MNC can generally react in the following ways:

Table 3.1 Risk responses

Response	Description
Risk Avoidance	The risk avoidance response is completed by eliminating the source of the risk. Removing the source makes it impossible for the risk to occur.
Risk Mitigation	The purpose of mitigation is to reduce the probability or the 'size' of the risk to the point below the maximum risk tolerance level.
Risk Transference	This strategy is aimed at moving the impact of the risk and passing ownership to a third party.
Risk Deferral	This response involves deferring phases of the project to a future date when the risk is less likely to take place.
Risk Acceptance	This response refers to the decision that has been made to accept the risk and deal with the consequences should the risk occur. The MNC will not alter their plan and deal with the risk via contingency planning.

Source: Author's own summary

Table 3.1 is a summary of the various types of reactions an MNC is likely to experience when confronted with risk.

Keeping the aforementioned definitions and concepts in mind, the next section will provide an overview of the different approaches to risk.

3.3 Approaches to Risk

The aim of this section is to review the theory of risk in order to build a foundation for the suitable treatment of risk and FDI. It is appropriate to consider the 'hard' risk

approach of the financial literature and to illustrate the limitations of this approach in the FDI-context (White and Fan, 2006).

The conventional 'hard' risk approach of financial literature refers more to a firm's cash flow and less to the firm's business operations. The analysis is focused on the debt or financial liability of a business - higher levels of debt will increase the firm's financial risk. According to White and Fan (2006), 'hard' risk concentrates on the financial performance of the firm – thus, financial risk arises from the operation of financial markets and the volatility of prices within those markets. Risk theory in the 'hard' literature fails to make a distinction between risk and uncertainty and therefore between financial and business risk. Conventional literature also fails to attach relevance to the source of risk.

For the purpose of this study, the source of the risk is important, as this allows a firm to manage or mitigate the risk. Business risk is independent of the amount of debt owed by a firm and focuses on the core activities of a firm – it is risk that describes the overall situation of the enterprise.

White and Fan (2006) conclude that there are serious doubts concerning the relevance of the 'hard' risk approach of portfolio investment for foreign direct investment. Firstly, financial risk can be managed by diversification of assets, provided there are enough assets in a portfolio. For an MNC with a global 'portfolio' of assets and whose business activities are interdependent, the returns and risks attached to different assets may be highly correlated (White and Fan, 2006). Risk for an MNC is therefore never completely unsystematic. This makes it extremely hard to diversify away risk simply by having a large portfolio. The second reservation explains the different time perspectives for financial and physical investment (FDI). Portfolio analysis is concerned with past events and uses detailed historical information to forecast future events. FDI on the other hand is forward looking and requires analysis of anticipated events which are not based on historical events.

The conclusion hence is that risk analysis for FDI needs a different approach than the 'hard' risk approach of portfolio investments. The study aims to shed some light on a new approach for FDI investment.

White and Fan (2006) further emphasise the importance of the definition of risk and the ability to accurately define the term. As mentioned earlier, a clear distinction

between uncertainty and risk is needed as the use of these terms often leads to confusion when defining risk. Graaff (1963) describes uncertainty as a degree of knowledge or the lack of knowledge about a specific situation. Uncertainty arises when there is incomplete information on which to act. Risk, on the other hand, is explained as an event whose frequent occurrence enables a statistical probability (Meldrum, 2000). Meldrum (2000) further explains that country risk analysis often describes events that are uncertainties - for example, the probability of dying as a result of a nuclear meltdown - rather than statistically proven risks. The failure to distinguish between the terms can lead to risk being defined as a theoretical judgement (i.e. uncertainty) rather than a probabilistic occurrence. Miller (1992) clarifies the confusion by stating that "risk arises because of the existence of uncertainties". He argues that risk is merely the general lack of predictability of a firm's performance outcomes, whereas uncertainty is referred to as the unpredictability of the impact that organisational or environmental variables have on a performance outcome.

From the discussion regarding risk and uncertainties and the confusion surrounding the two terms, it is appropriate to use White and Fan's (2006) provisional definition of risk:

"Risk is the possibility of an unanticipated event, or change of behaviour, which has a negative impact on a key performance indicator or on the achievement of some strategic objective, one sufficiently significant to justify a response by relevant decision makers."

The subsequent reaction when faced with a risk will be one of the mentioned responses at the beginning of this chapter and includes: avoidance, mitigation, transference, deferral and acceptance (See Table 3.1).

The next section will provide a discussion on the different aspects of investment appraisals and the process of decision making.

3.4. Process and decision making

White and Fan (2006) state that there is a need for a deeper understanding of an investment decision which may be achieved by analysing three different perspectives. This section will provide a brief overview of how an investment decision will affect the different levels of an enterprise.

3.4.1. Financial Perspective

A good investment decision emphasises the importance of avoiding two crucial mistakes, namely making a poor decision and ignoring a good one (White and Fan, 2006). The process of deciding which capital investment opportunities to undertake is referred to as capital budgeting (Moosa, 2002) and incorporates the correct/suitable decision rule as well as an estimation of relevant input variables.

In its simplest form, the decision rule states that an investment project is undertaken if the net present value is positive. Present value is derived from the future cash stream of the proposed investment project. Any appraisal is only as good and accurate as the figures used to represent the future cash stream (White and Fan, 2006).

There are several challenges for estimating the values of the inputs that are needed to calculate net present value and this mainly stems from the international nature of an investment project. The difficulties include complications in the collection of specific and accurate information. When involved in cross-border projects, communication-lines become much longer and this creates more chances for distortion of the information that is gathered. The second challenge involves the interdependencies of different variables that are used. This has major implications for the estimation as the value of one variable is conditional on the value of other variables. The last challenge for the estimation of the values of inputs relates to the focus of the cash flows generated by the project. As the specific cash stream for a project is interlinked with other parts of the MNC, the issue refers to whether the attention is on the host country subsidiary or on the parent company (Buckley, 1996). Financial aspects such as tax rates, exchange rate fluctuations, exchange controls and remittance policies of the home and host country should be considered. According to White and Fan (2006) the investment appraisal should thus be based on the project itself, where after the perspective of the parent company can be taken into account.

White and Fan (2006) further explain that an investment decision comprises various determinants that operate within a relevant project. As these determinants are highly specific to the circumstances of a project, it is extremely difficult to get accurate information for investment appraisal. The result is that uncertainties may arise due to

inadequate information or the inability to forecast accurately. There is a need for the financial perspective to allow the existence of uncertainty when evaluating an investment project. Moosa (2002) confirms this by stating that uncertainty can be built into the measurements of the net present value by modifying the discount rate, fine-tuning the cash flows and estimating the sensitivity of the input variables.

3.4.2. Strategic Perspective

This section gives attention to the strategic perspective of an investment decision making process where the investment appraisal will be viewed from an overall enterprise strategy, including its impact on past, present and future projects (White and Fan, 2006).

Strategic risk involves the strategies of other players, which the MNC must take into account in order to remain competitive. The competitive arena will influence all decisions within an MNC, including those of investment projects. Innovation and risk-control is of great importance in order to retain a competitive edge. The responses and reactions of competitors can greatly influence market demand, the level of prices and a firm's economies of scale (White and Fan, 2006). This will increase the level of risk a firm faces, since market reaction is uncertain.

When incorporating a business strategy, various opportunities and risks will be identified. The strategy is then expressed through the strategic evaluation and the appraisal of different investment projects (White and Fan, 2006). An investment project will be dismissed if it does not fit the strategic orientation of the MNC. An MNC's portfolio of projects will have various projects at different stages of a product's life-cycle, different processes or even industries.

The next part of the investment strategy involves the control of risk. According to White and Fan (2006), each individual firm has particular knowledge which enables it to control risk in a way that others can't. Risk levels can be decreased by reducing the impact of a risk-generating events and implementing proper risk-control.

The three important risk strategy areas are: the information relating to risk, risk assessment and an appropriate risk response strategy (White and Fan, 2006). The better the risk-control management, the greater are the returns on a project.

3.4.3. Organisational Perspective

The organisational perspective focuses on the structure of an enterprise. It demonstrates the impact of an investment decision on the relations between various stakeholder groups.

According to White and Fan (2006), when an enterprise invests in an international project, a more extensive group of stakeholders needs to be considered. The split of operations between different countries may produce conflicting interests for the various stakeholders involved.

Key characteristics of stakeholders include: different competitive advantages when controlling risk (Lessard, 1996); different risk perspectives (Miller and Bromiley, 1990) and different risk distributions.

Table 3.2 below depicts the various stakeholders the MNC needs to consider for an international project. It should be noted that for an international project, a wider range of stakeholders need to be taken into account. With any international project, stakeholders can be divided into two separate groupings; home country and host country stakeholders (White and Fan, 2006)

Table 3.2 International stakeholder groups

Home country stakeholders	Host country stakeholders
Senior managers and strategists responsible for foreign activities	Local manager responsible for implementation and control of the project
Home owners	Local workers and unions representing them
Suppliers of equipment or components	Government at various level
	Local owners (if there are such)
	Local suppliers of credit (if there are such)
	Local suppliers of equipment and

Home country stakeholders	Host country stakeholders
	components
	The local community and its representatives
	The suppliers of complementary goods and services
	Local customers

Source: White and Fan (2006)

The following section will provide a discussion on the various types and levels of risk an MNC will be confronted with when embarking on an international investment-journey.

3.5. Types of Risk

According to Deloitte's '*Into Africa*' publication (2011), experience has shown that the African continent is the world's biggest opportunity for corporate expansion. However, the lack of proper risk analysis is hampering many firms' performance and profits in the region.

The next section will provide an in-depth discussion of various risks pertaining to different levels of an organisation. By combining White and Fan's (2006) Typology of Investment Risk, Deloitte's Africa Risk Map (2011) and PWC's Risk Indicators (2010), risk may be categorised into four main categories, i.e. Global, Country, Industry and Enterprise.

3.5.1. Global Risk

Global Risk is a term used for any large unprecedented, unexpected events whose influence can affect all industries in every country (White and Fan, 2006). The associated events are frequently referred to as shocks, crises, disasters or catastrophes. Global Risk is a form of systematic risk and has the potential to impact everyone through contagion or spill-over effects. It is often the case that the mere perception of the threat rather than the actual impact is what causes the adverse

effects. An event is classified as a global risk by three elements; the location of the initial risk, the extent of the exposure and the magnitude of the impact on a performance indicator.

In some cases the locational-range for a risk-generating event is not limited to a single country but rather to a certain region, for example a geological fault line. Similarly, terrorism can occur anywhere but is more likely in specific regions than others (White and Fan, 2006).

The extent of the exposure of a particular shock often radiates outside the national jurisdiction of the source of a risk-generating event. According to White and Fan (2006) a threat can be universal, like war or economic depression and thus threatens many different regions.

A shock is categorised as a global risk when the impact has an adverse effect on a high-level performance indicator. This could be anything from the overall level of profit for a region or a negative effect on the GDP of affected countries.

Sub-components of global risk include major economic events such as the Asian Economic Crisis of 1997 or, more recently, the Global Financial Turmoil of 2008/2009; man-made hazards/terrorism (Deloitte, 2011) or acts of war whose influence spreads over international borders; natural disasters –some which have far-reaching effects such as earthquakes, volcanic eruptions, hurricanes, tsunamis and even drought; health epidemics (AIDS, influenza) or computer viruses.

Another perspective of Global Risk comes from the World Economic Forum (WEF). The WEF (2012) has been compiling a global risk report for the past seven years and 2012's report features the most refined classification of global risk yet. The data analysis uses survey results from 469 experts and leaders from the industry and covers over 50 global risks across five categories. The main sub-categories are; economic, environmental, geopolitical, societal and technological. This report differs from Deloitte (2011) and White and Fan's (2006) risk mapping in the sense that all risk is classified as global risk as opposed to a prominent break-down for global, country, industry and enterprise.

The focus of this study is on the sectoral classification of risk for FDI. Keeping this in mind, risk spanning across all levels (macro and micro economic levels) will be used and not a singular classification as is the case of the WEF's report.

It is important at this stage to note that global risk is difficult to avoid and the risk cannot be mitigated. Some investors choose not to invest in certain parts of the world in order to avoid high risk areas (White and Fan, 2006). The perception that an investor has of global risk plays an integral part in the risk appetite and sensitivity to other types of risk and can thus greatly influence an investment decision.

3.5.2. Country Risk

By far the most important risk in the context of FDI is country risk which pertains to all organisations operating within the jurisdiction of a specific country. According to Grath (2008), country risk can be defined as: “the risk of a separate commercial transaction not being realised in a contractual way due to measures emanating from the government or authority of the buyer’s own or any other foreign country”.

Any unexpected change in laws, policies or strategies will give rise to country risk (White and Fan, 2006). The investor is often unfamiliar with the political, economic, financial and cultural interaction between an organisation and the particular government, and a sudden change in events can have a negative impact on an investment project. Thus, country risk brings in the government as a significant game player to consider.

The first component of country risk is political risk. Political risk covers political instability, government policy risk and social instability. PWC (2010) classifies political instability as any social unrest, international tension (sanctions or embargoes), change of regime –either through elections, coup d’états or revolutions; or opposition stances. PWC (2010) further includes security threats as political risk. Security threats include armed conflict, terrorism, xenophobia, kidnapping, organised crime or violent demonstrations. Deloitte (2011) goes on to explain that external factors such as the suspension of country concessions, excessive trade embargoes and confiscation of foreign property forms part of what they call geopolitical risks.

Further, White and Fan (2006) state that host country ideology could also be a major concern for an MNC. The risk of sudden changes in tax or monetary reforms, trade restrictions, and economic policy such as nationalisation can all be seen as government policy risk.

Social stability of a country is a vital decision-making factor for an investor. Unruly protests, uprisings or demonstrations can easily turn into violence or acts of terrorism (Grath, 2008) that can cripple the economy of host country.

The next important sub-component of country risk is economic risk. Economic stability is essential for overall confidence in a country or economy. The slow-down in growth rate, depreciation of the exchange rate, high inflation rates, substantial increase in interest rates and currency fluctuation are examples of critical factors that can affect the economic stability of country in a very short period of time (Deloitte, 2011).

Another key element of economic risk is the state of host country infrastructure. The importance of infrastructure is highlighted by Deloitte (2011), White and Fan (2006) and PWC (2010), who argue that the lack of adequate port and airport facilities, road network, power network, communication network, rail network and even water shortages have negative implications for investment productivity. The prevailing impact of these factors can be seen in many struggling developing countries (Grath, 2008).

Financial risk forms part of country risk and is associated with unanticipated changes in the creditworthiness of a host country. The inability to access capital or credit is an indication of a decrease in creditworthiness. Credit ratings are also of significance as it shows a government's capacity and willingness to repay debts (Howell, 2001).

The last component of country risk is the cultural differences that the MNC faces when investing in a foreign country. The two key elements of culture risk are transaction cost and negotiation risks (White and Fan, 2006). Nepotism, corruption and bureaucracy are seen as transaction cost risks, whereas language, ethnicity, religion and different negotiation styles are grouped as negotiations risks. A thorough understanding of a host country's culture is needed in order to mitigate cultural risks.

3.5.3. Industry risk

Industry Risk can be described as a more comprehensive classification of market risk (White and Fan, 2006). This type of risk can also be seen as systematic in that all organisations within a particular sector will be affected by the same kind of risk. It is referred to as an unexpected change in the circumstances of a specific industry/sector.

Product nature is the first component and relates to the way in which a product is produced, transported and consumed (White and Fan, 2006). The health and safety risk for both producers as well as transporters becomes a significant element to consider. Some products are hazardous and dangerous, not only for the personnel working with it, but also the environment. The nuclear explosion at Chernobyl is an example of a product having adverse long-term effects for the environment, local community as well as the workers exposed to the specific product.

Taken from Deloitte's Africa Risk Map (2011), industry risks comprise any structural changes to a specific industry or competitive risks such as inadequate competitive analysis, rivalry or new entrants and changes to the entry or exit modes of an MNC. The inability to innovate and increase market share or to generate new products both stem from technological risk which also poses a threat to the operations of an organisation.

Government regulations pertaining to a specific sector of the economy is also seen as industry risk. This includes sudden changes in industry standards or the emergence of a monopoly which will significantly decrease profitability of an MNC.

Unanticipated changes in the availability, quality and price of inputs are categorised as input risk – another sub-component of industry risk. Deloitte (2011) describe such risks as operational or supply chain risks. Factors include planning; production, sourcing and delivery risks and difficulties which may arise from any disruptions that will affect the supply or demand conditions of a particular input.

Any unexpected changes in the demand of a product are referred to as product market risk. Deviations in consumer taste and changes in the availability of substitute or complimentary products all give rise to product market risk.

The final level of the risk analysis will provide an overview of the risks that are classified as enterprise risk.

3.5.4. Enterprise Risk

The last type of risk is a deeper level of industry risk and specifically pertains to all the operations of an MNC. In order to make an informed investment decision, the investor needs to be confronted with all the risks relating to a specific

enterprise/project. It is important to keep in mind that each firm is unique in terms of the risks with which they are faced (White and Fan, 2006).

The next section focuses on the sub-component of enterprise risk; operational, finance and behavioural risks.

Labour relations are the first element of operational risk. This refers to problems encountered when dealing with the labour force of the enterprise. Threats include strikes, high labour turnover or absenteeism. Ineffective engagements with labour or trade unions, changes in legislation relating to working conditions and changes to business strategy can contribute to poor worker-morale and in effect have a negative impact on productivity.

Input supply risk also forms part of the operational risks an MNC is confronted with. This includes any risk regarding the poor delivery of a product due to a failure of the organisation's suppliers. Raw material shortages, quality changes and spare part restrictions are all examples of input supply risk.

The third operational risk item can be defined by any changes, uncertainties or problems occurring as a result of a firm's introduction to new technologies. This is commonly referred to as the teething problems of new technology.

The last two components of enterprise risk are finance risk and behavioural risk. As mentioned earlier, finance risk arises from difficulties the specific organisation face in terms of liquidity. Limitations to the supply/borrowing of liquid assets or the inability to immediately convert assets to cash can pose a threat to the cash flow and profits of an enterprise.

Behavioural risk involves the actions of the managers of the enterprise and their lack of experience which could be damaging to the reputation of the firm. The risk arises because it is impossible to predict how a person will react in a conflict situation.

3.5.5. Other Risks

The WEF (2012) describes environmental risks as threats such as extreme volatility in energy and agricultural prices, rising greenhouse emissions, diffusion of nuclear weapons, unsustainable population growth, failure to adapt to climate change and persistent extreme weather conditions. The report also includes unprecedented geophysical destruction such as earthquakes and volcanic eruptions as part of the

environmental risks. If realized, these threats have the capability to destabilise economies, trigger war and even destroy the Earth's vital resources.

Perception risk is a major decision-making factor for FDI, especially to Africa. Ernst and Young (2011) describe perception risk as the difference between how a region is viewed by investors and the actual investment trends within the particular region. For many years the African continent has had the image of poverty, instability and civil wars. The perceptions that investors have of Africa is hampering FDI to the region. This means that although the region boasts 6 of the world's 10 fastest economies 2001-2010 (Ernst and Young, 2012); it attracts less than 5 percent of global FDI projects. The Multilateral Investment Guarantee Agency's (MIGA) survey results of the World Investment and Political Risk Report 2011 indicate that there is an increase in perceived risk over the short term – issues including macroeconomic stability and ease of getting finance – but over the medium-term, optimism is growing.

Table 3.3. below summarises the risks, along with a few examples, that were discussed in this section. This is by no means an exhaustive list and there are many more examples. White and Fan (2006), Deloitte (2011) and PWC (2010) can be consulted for an in-depth description of the risks.

Table 3.3 Summary of risk-categories

Risk	Sub-components	Example
Global Risk	Economic Events	Recessions
	Man-made hazards	Terrorism
	Technical events	Computer Virus
	Natural Events	Earthquakes, floods, drought
Country Risk	Political risks	Instability, war, social unrest, xenophobia

Risk	Sub-components	Example
	Government policy risks	Government regulations, tax reforms, nationalisation, trade restrictions
	Economic risks	High inflation rate, slowdown in growth-rate, adequate infrastructure
	Social instability risks	Riots, xenophobia, civil unrest
	Financial risks	Credit-ratings
	Cultural risks	Corruption, language, negotiation risks
Industry Risk	Product nature risks	Health and safety risks, pollution
	Structural industry changes	Competitive risks, inability to innovate
	Regulatory risks	Specific industry changes
	Product market risk	Consumer taste changes, availability of substitute or complementary goods
	Input risks	Changes in the availability quality and price of inputs
Enterprise Risk	Operational risk	Labour unrest; strikes, input supply risks; raw material changes, production risks; new technology teething problems
	Finance risks	Liquidity problems, credit problems
	Behavioural risks	Lack of experience, damage reputation
Other risks	Environmental risk	Volatile energy and agriculture prices,

Risk	Sub-components	Example
		rising greenhouse emissions, extreme weather conditions, earthquakes, volcanic eruptions
	Perception risk	Perceived image of a region/country

Source: Adaptation of White and Fan's "typology of investment risk" (2006)

The next section will provide an overview of the available literature on sectoral risks on developed and where possible, developing countries.

3.6. Literature review of studies pertaining to sectoral risks

White and Fan (2006) are of the opinion that risk differs significantly by country, sector and industry. Since FDI inflows to the African region have increased substantially, it is important to understand how various risks constrain investments.

Furthermore, an MNC will only invest if the level of risk is acceptable. Drawing from this, it is clear that risk perception plays a major part in investment decisions. According to CEO Barakat Balmelli (2010), the biggest challenge her business faces is the perception that their clients have of Africa. She goes on to explain that Africa has the largest gap between perceived and actual investment risk when compared to other emerging countries (Ernst and Young, 2011). In order to minimise this gap, a thorough understanding of both perception and reality of investment in Africa is needed.

However, literature on the African continent is limited. In the next section, studies conducted on other developing countries will be investigated in order to create a theoretical framework for Africa.

Using cross-country data for the period 1981-1999, Alfaro (2003) studied the benefits of FDI for primary, manufacturing and the services sectors and analysed the growth-impact for the host-country. The author found that economic growth and other benefits for the host country depends on the sector into which FDI flows.

Resmini (2000) conducted a study on the sectoral determinants of FDI in Central and Eastern Europe. The study uses data from 12 host countries over the period 1990-1995 and focuses on the manufacturing sector. The author goes on to explain that

the observations have been divided into homogenous sectors, i.e. scale intensive, high-tech and traditional in order to establish the differences and similarities between industrial sectors. Although data is limited, Resmini (2000) concludes that the results indicate that sector-specific risks can affect FDI distribution of European firms in the manufacturing sector.

Kolstad and Villanger (2008) used panel data to examine the determinants of FDI flows in the services sector. The study was conducted using data from 57 countries including developed, transition and developing countries, for the period 1989-2000. The authors conclude that institutional quality, democracy, and market size are significant determinants. Services, being non-tradable, are unaffected by a host country's trade openness.

Kinoshita's (2011) results indicate that market size, infrastructure, trade integration and a skilled labour force contributes to more FDI in the tradable sectors. The author used data from 15 Central Eastern and South -Eastern European countries over the period 2000-2007 to determine if FDI inflows to non-tradable sectors contributed to external balances.

Walsh and Yu (2010) analysed various determinants for emerging and developed economies using a dataset that distinguishes amongst primary, secondary and tertiary sector FDI flows. The authors found that second and tertiary sectors are influenced in different ways by country income levels, exchange rate valuation, financial depth, school enrolment, judicial independence and labour market conditions. The primary sector showed little dependence on the above mentioned determinants.

In a study conducted on the perception risk of renewable energy in North Africa, the authors found that the barriers to FDI in this sector are regulatory, political and force majeure (which includes terrorism). Various stakeholders were interviewed to assess how perceived risk influences investment in renewable energy projects in North Africa (Komendantova, et al, 2012). The authors concluded that in order for the region to attract more FDI, more attention should be given to a stable enforceable regulatory environment.

Table 3.4. below represents the aforementioned studies on sectoral risks, the variables and the methods used in the analysis and the author/s who conducted the study.

Table 3.4 Summary of studies

Study	Variables	Method
Alfaro (2003)	Output levels and growth, FDI, government spending, inflation, institutional quality, openness, private credit, schooling	Cross-section regression model
Resmini (2000)	Market size, labour costs, transition process, proximity, degree of openness, manufacturing size	Three-way fixed effect model
Villanger and Kolstad (2008)	Institutional quality, democracy, market size	Panel Data
Kinoshita (2011)	Market size, infrastructure, trade integration, skilled labour, fiscal balance, proximity	Panel Data
Walsh and Yu (2010)	Country income level, exchange rate valuation, financial depth, school enrollment, labour market flexibility, judicial independence	GMM Dynamic Approach
Komendantova, Patt, Barras and Battaglini (2012)	Complexity and corruption of bureaucratic procedures, instability of regulations, political stability, terrorism	Interviews

Source: Author's own summary

3.7. Summary

The purpose of this chapter was to provide a theoretical basis and literature overview of risk in a FDI context.

The theoretical basis exposed the limitations of the 'hard' risk approach of portfolio investments and the need for a new approach for FDI risk. The importance of accurate definitions of uncertainties and risk were also highlighted.

Different perspectives on investment appraisal were discussed to indicate how an investment decision impacts various levels of an enterprise. The three perspectives discussed were financial, strategic and organisational. The conclusion drawn from this section is that an investment project is complex and various stakeholders need to be considered before an investment decision can be made.

From the literature that was summarised, it is clear that there are different levels of risks for different countries, sectors, industries and projects. Risks are sorted from high level risk (global) to lower level (enterprise risk) and a considerable amount of overlapping takes place between the levels and different types of risk. Since developing countries have been attracting a substantial amount of FDI inflows which are beneficial for their economic growth and development, it is vital to understand how risks of various types are a constraint to flows of such investment.

This chapter further demonstrated that although there has been a substantial amount of studies conducted on FDI risks in developed countries, research regarding FDI in developing regions, especially Africa, is limited. Up to this point, relatively few studies have focused on the risks pertaining to FDI into particular sectors in Africa.

The aim of the literature overview was to enable us to re-evaluate the way we perceive risk and to carefully evaluate the manner in which risk impacts on the investment decision. Subsequently, investment in Africa and its associated risks will need to be viewed through a completely different lens.

In the next chapter a detailed discussion will be given on the global picture of FDI as well as the FDI trends in Africa.

Chapter 4: Foreign Direct Investment in Africa

4.1. Introduction

Since the beginning of the 1990's global FDI has increased significantly as world economies started to liberalise their markets and globalisation became more apparent (UNCTAD, 2009). The global market for FDI is particularly competitive as the benefits of this investment helps to accelerate and sustain growth. For this reason, it is important to observe the trends in FDI globally and specifically in Africa to grant investors a better understanding of risk and reward factors of such beneficial opportunities.

UNCTAD (2012) cites that developing countries are currently dominating the scene when it comes to attracting FDI. Together with transition economies, developing countries drew more than half of the world's FDI inflow (6 percent and 45 percent) in 2011. Although Africa has shown impressive growth, it is still lagging when it comes to FDI inflows. Currently Africa is attracting rising interest as an investment destination due to an increase in positive economic prospects such as development of strategic resources and a growing consumer base (Ernst and Young, 2011).

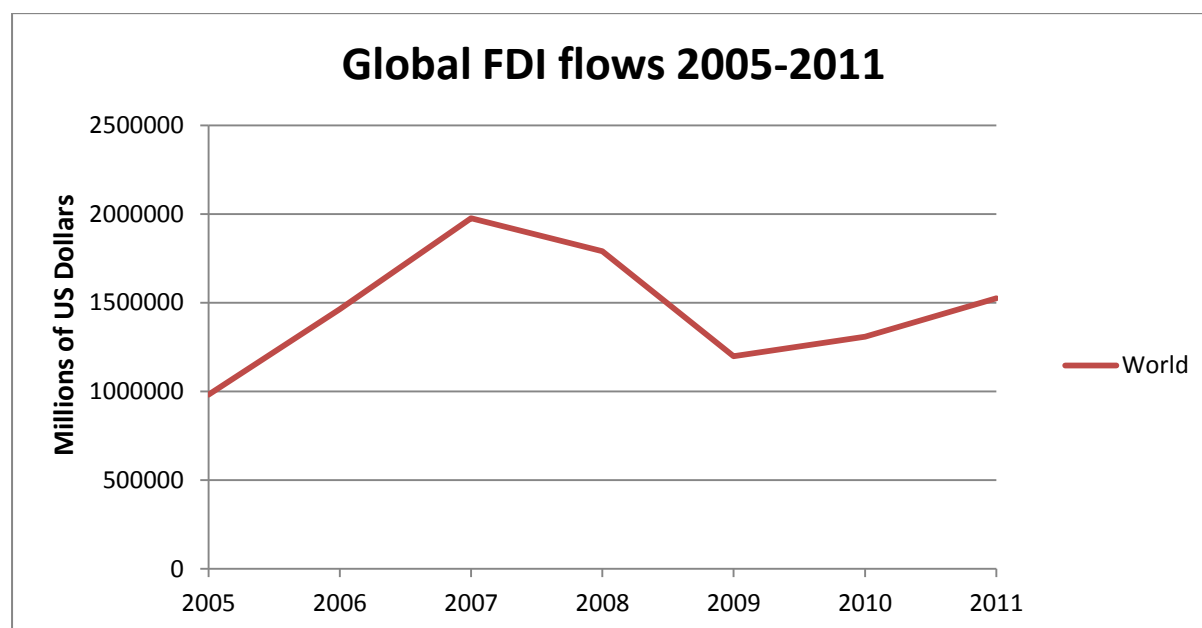
In this chapter recent global trends in foreign direct investment will be highlighted with specific reference to inflows into Africa. Section 4.2 discusses recent global and regional trends of FDI while in section 4.3 the focus will be on FDI inflows specifically to Africa. Section 4.4 reflects on risk rating agencies and finally a conclusion is drawn in section 4.5.

4.2. FDI trends between 2005 and 2011: Global and regional FDI flows

During the 2000's world economies adopted trade policies to attract more investment and the world became more globalised. According to UNCTAD (2009) FDI peaked globally during 2000, but declined after the September 11, 2001 attacks on the World Trade Centre in New York, USA. However, economic activity for developed nations picked up speed again during 2005. Figure 4.1 show that after peaking in 2007, the financial crisis that hit the world at the end of 2007 had a deterrent effect on the flows of FDI worldwide. According to UNCTAD (2009), inflows fell from \$1, 7 billion in 2008 to below \$1, 2 billion in 2009. FDI flows moderately recovered in 2010 rising to \$1, 122 billion up 1 percent from 2009. During this time, *Greenfield* investments

decreased in quantity and worth, while M&A's increased by 37 percent (UNCTAD, 2011). Due to the high economic growth in developing countries, FDI inflows increased by 16 percent in 2011, exceeding the pre-crisis levels of 2005-2007. According to FDI Markets (2012) a total of 13 718 FDI projects were recorded in 2011. The number of FDI projects increased by 5, 6 percent in 2011.

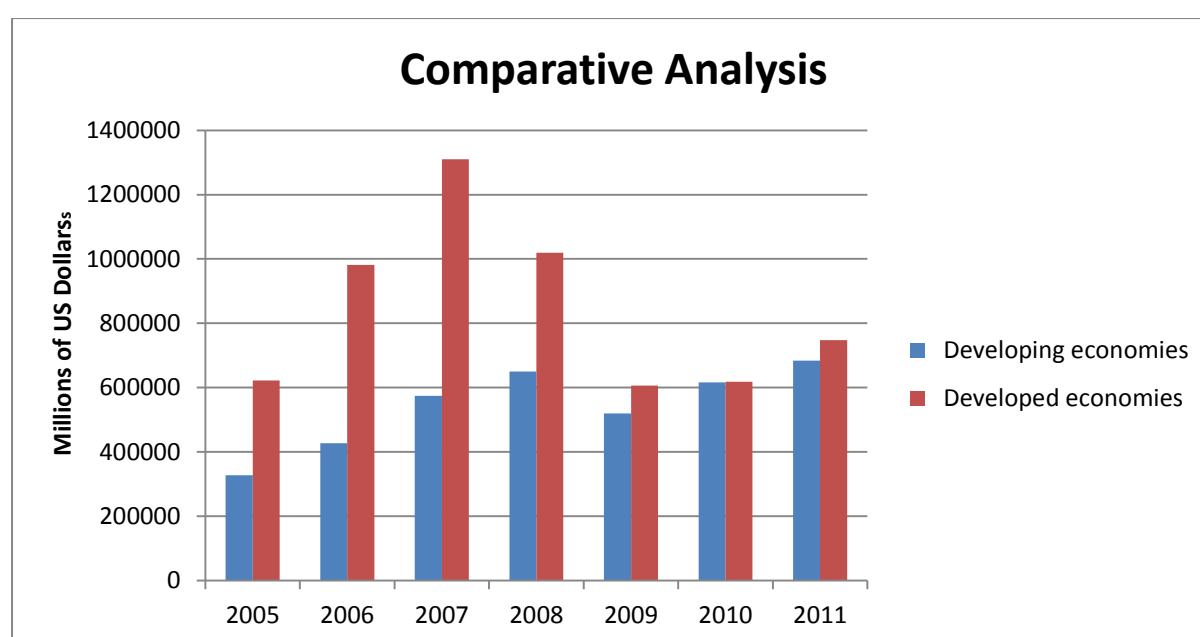
Figure 4.1. Global FDI Flows



Source: UNCTAD FDI Statistics (2012)

The global financial and economic crisis of 2008 to 2009 triggered a change in the composition of FDI, while there was a large decline in FDI inflows to developed countries (29 percent), a remarkable surge in investments to developing countries was observed (UNCTAD, 2011). It is interesting to note that the trend in developed countries closely follows that of the global FDI flows in figure 4.1, dipping and peaking at the same time.

Figure 4.2. Comparison between Developed and Developing countries



Source: UNCTAD FDI Statistics (2012)

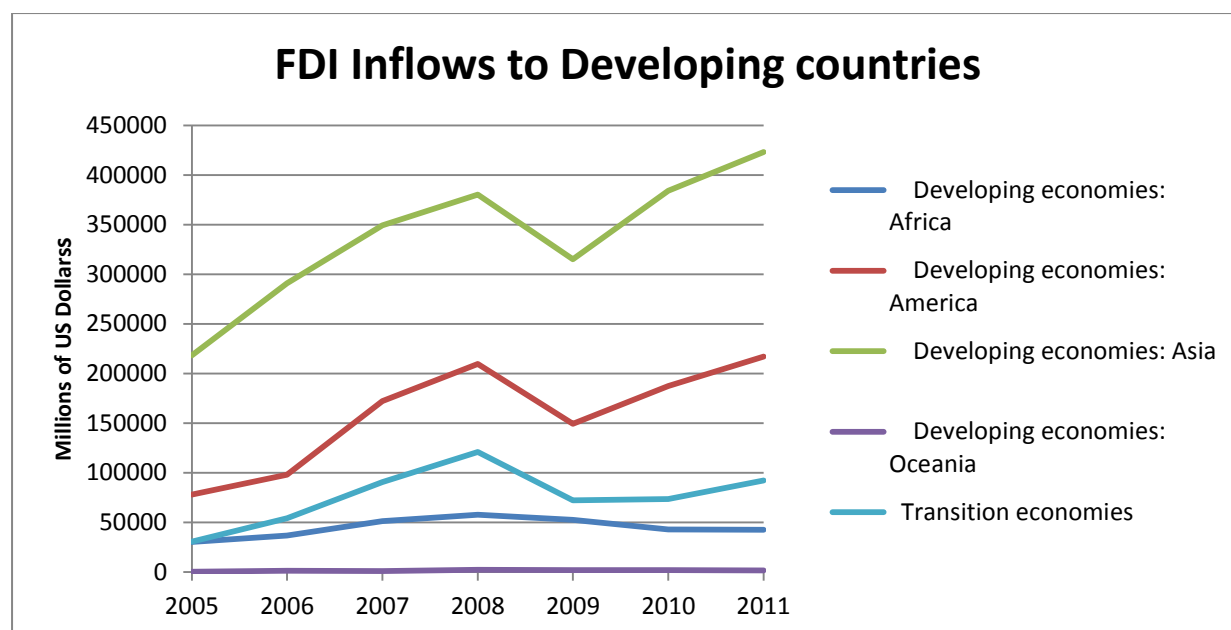
Figure 4.2 above shows that there is a prominent difference in the amounts of FDI inflows between developing and developed nations. Even though the amount is less than that of developed economies, FDI inflows to developing countries are shown to be on a steady increase. In 2008 FDI inflows to developing countries increased by 13 percent (UNCTAD 2009), where developed economies experienced a sharp decline. While most developed economies struggled during 2008, developing economies attracted 43 percent of global FDI inflows during this time and their FDI outflows accounted for 19 percent of global FDI outflows (UNCTAD 2009). According to UNCTAD (2009) developing countries also handled the financial crisis better as their financial systems are less inter-connected with the banking systems of leading economies like the United States and the European Union.

The graph indicates that there was an increase in FDI flows for both developed as well as developing countries. FDI flows to developed countries grew steadily in 2011, reaching \$748 billion. In 2011 the FDI of developing countries rose by 11 percent to reach a record-level of \$684 billion.

4.2.1. Inward FDI flows for Developing countries

The graph below gives an indication of FDI trends from 2005 to 2011 for developing regions.

Figure 4.3. FDI inflows to Developing countries



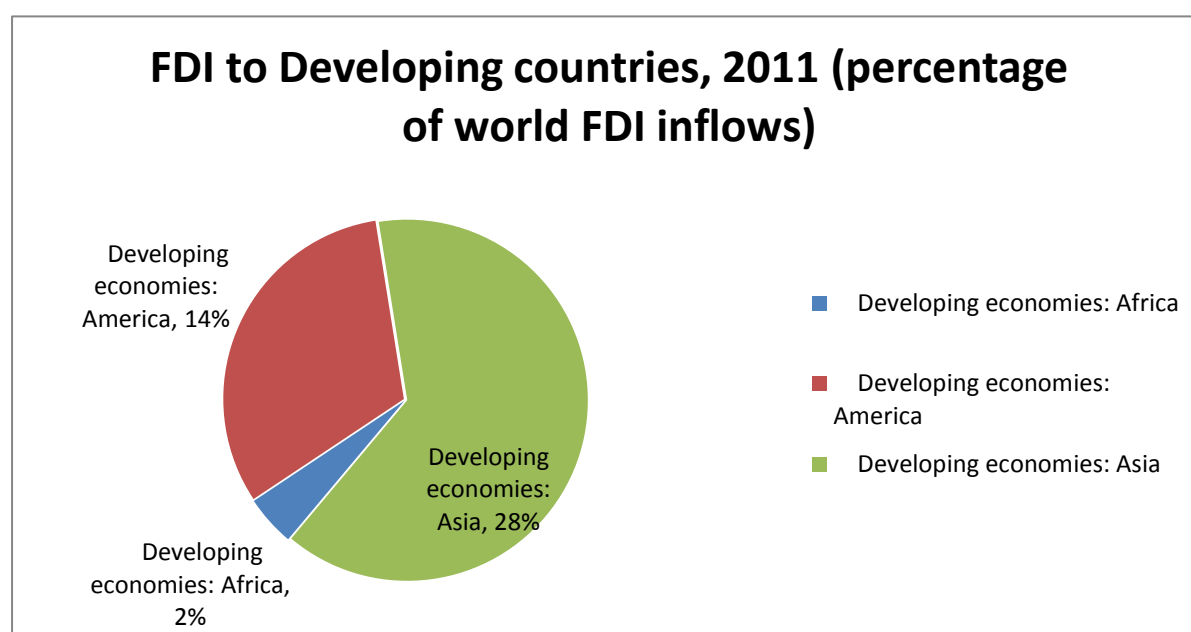
Source: UNCTAD FDI Statistics (2012)

Figure 4.3 illustrates the fact that FDI has increased for all developing regions. It is also evident that Africa is lagging behind the other developing regions when it comes to attracting FDI inflows. According to UNCTAD (2011), the rise in FDI to developing countries is due to a 10 percent increase in Asia and 16 percent increase in the America's. Transition economies experienced an increase in FDI inflows of 25 percent to \$92 billion in 2011 (UNCTAD, 2011). Flows to Africa, however, continued to drop for the third consecutive year, but the fall was minimal.

Figure 4.4 shows the proportion of FDI that the developing regions received during 2011 as a percentage of Global FDI inflows.

It is clear that Asia is still, by quite a margin, the main destination of FDI inflows for developing countries. Developing Asia showed an increase of 10 percent in 2011 (UNCTAD, 2012).

Figure 4.4 Developing Countries as a percentage of World FDI inflows



Source: UNCTAD FDI Statistics (2012)

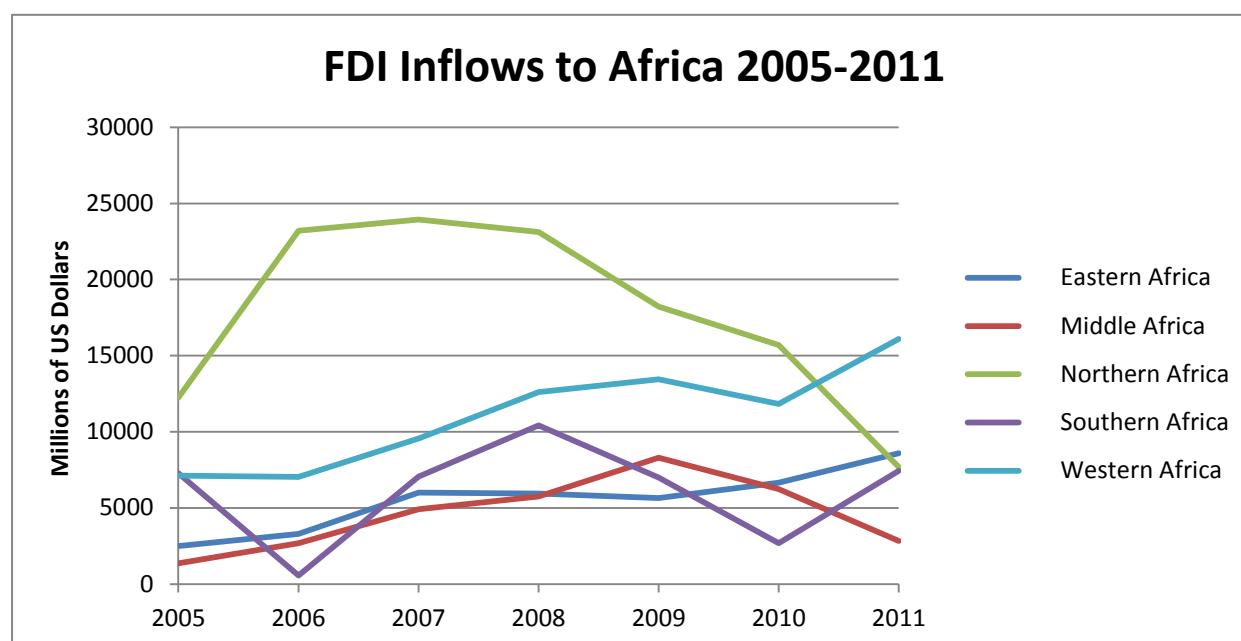
The above figure (Figure 4.4) shows the developing regions as a percentage of global FDI flows for 2011. Developing Asia attracted 28 percent of global FDI inflows, which is a one percent decrease from 2010. Developing America remained stable and was responsible for 14 percent of inflows. Flows to Africa increased significantly from 2000 up until 2008; where after the recovery from the global financial and economic crisis has been very slow in comparison to other developing regions. FDI flows to the region continued to drop in 2011, with Africa only receiving 2 percent of world inflows. Since the percentage of global of FDI inflows received by Oceania is so small, this region is not included in the aforementioned pie-chart.

4.3. Trends in Africa

For the past decade FDI to Africa has increased significantly. This fact is illustrated by the following: In 2000, the region attracted \$9 billion in FDI inflows; fast-forward 10 years and a total of \$43 billion have been received. Between 2000 and 2008, Africa experienced an average growth of 21 percent per annum in FDI flows. According to UNCTAD (2009) many investments from 2004 and onward were aimed at resource rich countries as there was a considerable increase in the prices of commodities. Asiedu (2003) also states that African countries implemented investor-friendly policies which also contributed to the growth in FDI. The rise in FDI performance can also be attributed to emerging economies' interest in Africa and in

particular China which has a great demand for raw materials which the resource-rich continent can provide (African Development Bank, 2011).

Figure 4.5 FDI inflows to Africa



Source: UNCTAD FDI Statistics (2012)

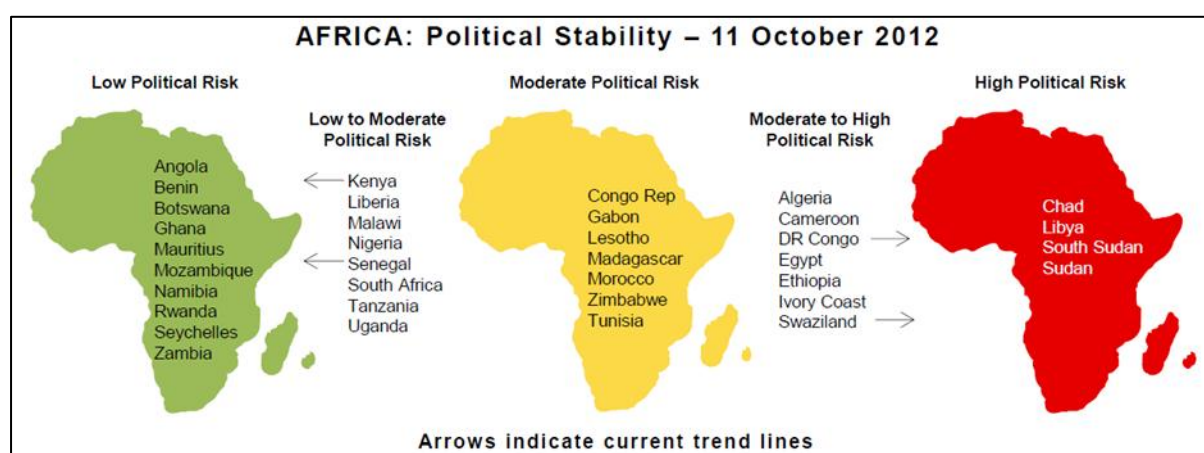
Figure 4.5 shows the composition of FDI inflows for the various African regions. Previously, the North African region enjoyed significant levels of FDI inflows, but precedent levels were not touched upon since 2007. This is firstly due to the global financial crisis and secondly due to the political instability experienced in the past two years. Similarly Middle African countries have not managed to achieve pre-crisis FDI levels and are experiencing a downward trend.

West African countries continued their upward trend mainly due to the booming oil industry. Ghana and Nigeria both received FDI inflows of more than \$3 billion in 2011 (UNCTAD, 2012). According to the Economist Intelligence Unit (2012), in terms of political stability, Ghana ranks 10th of all African countries. Further when comparing Ghana to the other Sahelian countries, agriculture and natural resources are in abundance, making the country more attractive for investors. Another important determinant for Ghana is that their labour costs are much lower than that of other developing countries. The labour force is cheap and underutilized making the engagement in labour-intensive manufacturing a huge opportunity (UNDP, 2007).

After a sharp decline in FDI inflows during 2008 to 2010, the southern African region started to pick up speed again with flows reaching a high of \$7 billion in 2011. Recipient countries include South Africa, Mozambique, Botswana and Namibia.

Inflows to East African countries have historically been the lowest in the sub-Saharan Africa, however the recent discovery of gas fields is likely to change this pattern significantly. It is interesting to note that the trend of Eastern Africa FDI inflows does not follow the other African regions and flows have been increasing since 2009. The major sectors of investment in this region are agriculture and natural resources. Zambia's economy is driven largely by its natural resources with the country's main exports being fuel and mining. According to UNCTAD (2012) Zambia received \$2 to \$2.9 billion in FDI inflows in 2011

Figure 4.6 Political Stability (Africa)



Source: www.nkc.co.za

The snapshot above obtained from NKC Independent Economists' Africa Weekly Risk report. It shows the risk profile for African countries and the current trend for 2012. Countries with a high political risk include Chad, Libya, Sudan, Congo (DRC), Algeria, and Egypt. Given the political turmoil in North Africa, this region is expected to have a high level of political risk.

The table below illustrates the FDI inflows among African economies in 2011. As discussed, Nigeria and Ghana are leading the way for investment in West Africa in the oil industry. Guinea also made head-way due to a large investment project from state-owned China Power Investment Corporation who will invest in bauxite and alumina projects in the next few years (UNCTAD, 2012). Uganda's productive-sector

activities in 2011 have continued to be dominated by developments in the power and oil industries, both of which are critical to Uganda's development prospects (African Economic Outlook, 2012). The Middle African countries like Congo (DRC), Chad and Gabon attracted investment in the primary sector (coffee, timber, diamonds and cotton). The bulk of Central African FDI goes to three commodity-rich countries; Equatorial Guinea, Congo and Congo (DRC).

Table 4.1 FDI inflows – Africa 2011 (US Dollars)

Range	Inflows	Outflows
Above \$3.0 billion	Nigeria, South Africa and Ghana	—
\$2.0 to \$2.9 billion	Congo, Algeria, Morocco, Mozambique, Zambia	—
\$1.0 to \$1.9 billion	Sudan, Chad, DRC, Guinea, Tunisia, Tanzania, Niger	Angola, Zambia
\$0.5 to \$0.9 billion	Madagascar, Namibia, Uganda, Equatorial Guinea, Gabon, Botswana, Algeria	Egypt, Algeria
\$0.1 to \$0.4 billion	Zimbabwe, Cameroon, Côte d'Ivoire, Kenya, Senegal, Mauritius, Ethiopia, Mali, Seychelles, Benin, Central African Republic, Rwanda, Somalia	Liberia, Morocco, Libya

Range	Inflows	Outflows
Below \$0.1 billion	Swaziland, Cape Verde, Djibouti, Malawi, Togo, Lesotho, Sierra Leone, Mauritania, Gambia, Guinea-Bissau, Eritrea, São Tomé and Príncipe, Burkina Faso, Comoros, Burundi, Egypt, Angola	DRC, Mauritius, Gabon, Sudan, Senegal, Niger, Tunisia, Togo, Zimbabwe, Kenya, Côte d'Ivoire, Seychelles, Ghana, Guinea, Swaziland, Mauritania, Burkina Faso, Botswana, Benin, Mali, Guinea-Bissau, São Tomé and Príncipe, Cape Verde, Namibia, Mozambique, Cameroon, South Africa, Nigeria

Source: UNCTAD World Investment Report 2012

As is evident from the above discussion, even though Africa is not yet attracting the same amounts of FDI in comparison to other developing regions, much headway has been made and several countries are receiving substantial amounts of FDI inflows.

4.3.1. Sectoral trends in Africa

The next section will provide a brief discussion on the sectoral trends in Africa for *greenfield* as well as M&A investments.

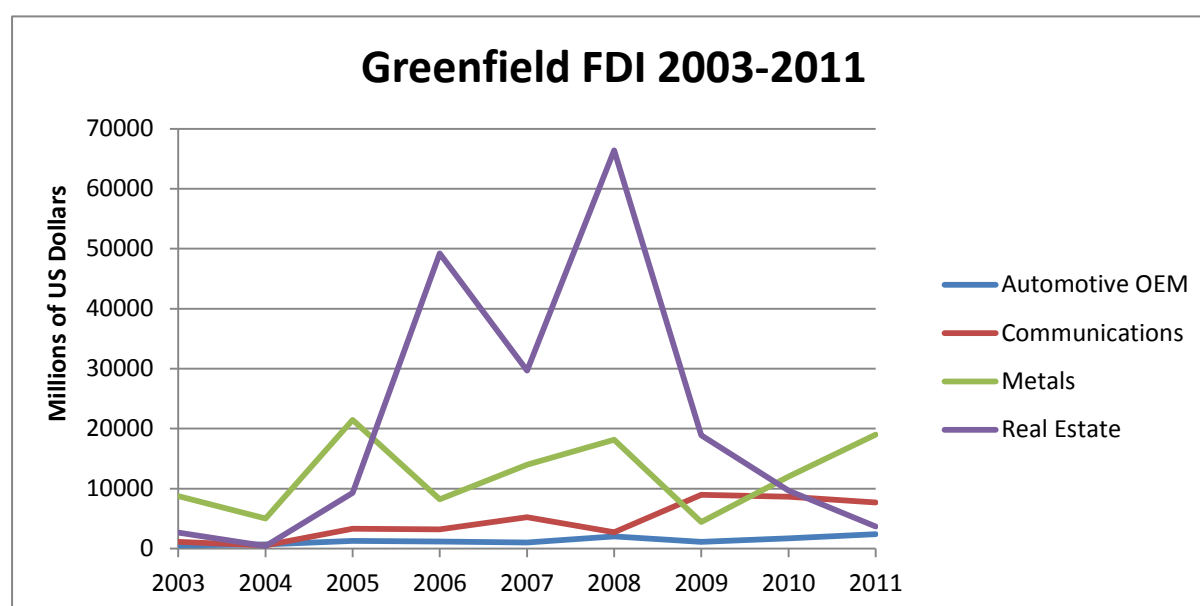
Metal was chosen to represent the primary sector, the automotive industry will represent the manufacturing sector and communications will represent the services sector. Large scale projects were undertaken in the real estate sector and this will be a representation of the primary, manufacturing and services combined.

Ernst and Young's Africa Attractiveness Survey (2011) on FDI projects in Africa indicate that the region is high on the agenda of global investors, with 43 percent of respondents already investing in Africa. When confronted with the FDI decision, a firm will either enter the market via a *greenfield* investment or by merging with an existing firm. The level of uncertainty or risk and technological advances of the firm offers an explanation as to why one mode is preferred above the other (Hauser, 2005).

UNCTAD (2012) cited that cross-border M&A's increase by 53 percent in 2011 to \$526 billion, driven by a rise in the number of projects. While higher levels of FDI inflows to developing and transition economies can be attributed to *greenfield* investments, the growth in developed regions is spurred on by large M&A projects. *Greenfield* investment projects were responsible for \$904 billion in 2011 and continue to retain a significantly higher level than M&A's, as has been the case since the financial crisis (UNCTAD, 2012).

From the *greenfield* graph in Figure 4.7 below it is evident that the amount of real estate projects surpasses the amount of any of the other projects in the sectors that were studied, because the deals tend to be quite significant. Real estate projects are also more volatile, closely following the trend of global FDI flows, peaking and dropping at corresponding times. Communications experienced very low levels since 2003; nonetheless inflows into this sector peaked at \$8 billion in 2009. The boom in communications can be attributed to the increased FDI inflows experienced by Africa as a continent due to higher growth rates. *Greenfield* investment projects for metals have fluctuated around an average of \$2billion maximum and \$1 billion minimum for the past 8 years. According to Ernst and Young (2012), the volatility and uncertainty regarding the global economy will continue through 2012, but the metal industry has an appetite for growth and there will be an increase in projects. The Automotive sector has not had the same levels of investment as the other three sectors, but a steady increase can be noted from 2009.

Figure 4.7. Greenfield FDI (Africa)



Source: fDi Markets Database (2012)

Upon closer investigation of the fDi Markets database, the following can be concluded regarding Africa's real estate sector. The North African region accounts for the top half of the countries attracting investment. Djibouti, Sudan and the Congo (DRC) also receive a number of projects. Source countries are mainly located in the Middle East (UAE, Bahrain, Qatar), but China is also making headway. Switzerland surprised, with a number of projects across North Africa.

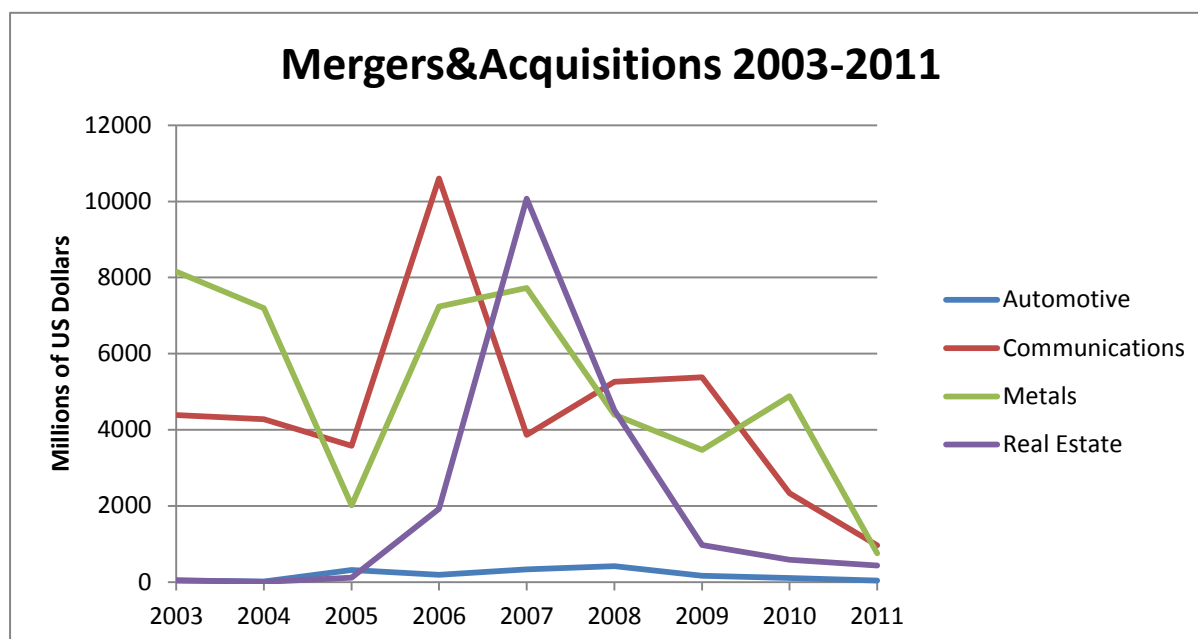
Leading the way in the communications sector during 2003-2011 were United Arab Emirates (UAE), France, UK, South Africa, China and Finland with investment projects in Nigeria, South Africa, Uganda, Zimbabwe, Mauritius and Ethiopia (fDi Markets, 2012). The main companies include the MTN Group, SEACOM, Zain and Vodafone. The Finnish company, Nokia, has several projects in Africa with projects based in Egypt, Uganda, Nigeria and Ghana.

Greenfield Metal investment projects during 2003 to 2011 were aimed at South Africa, Ghana, Congo (DRC), Namibia and Niger. Source countries comprise Canada, Australia, USA, UK, China, UAE. Luxembourg and Israel stood out with ArcelorMittal and EngellInvest the respective companies undertaking investment projects (fDi Markets, 2012)

In the automotive industry, South Africa, Ethiopia, Sudan, Senegal and several North African countries served as destination countries. An interesting surprise was source country Iran, with several projects in Algeria, Egypt, Senegal and Sudan. Top

companies investing included Nissan, China Motor Corporation, BMW, Iran Khodro Industrial Group (IKCO) and Tata.

Figure 4.8. M&A's (Africa)



Source: Zephyr Database (2012)

The above graph (Figure 4.8) shows a sectoral distribution of M&A's in Africa during 2003 to 2011. It is striking that the real estate and communication sectors have had similar trends up until 2008. Much like *greenfield* investment, M&A investment for the metal sector has fluctuated heavily, with a recent downward trend noted which is in stark contrast to the upward trend for *greenfield* projects. Similarly, the automotive sector has attracted significantly lower levels than that of the other sector for both *greenfield* and M&A's.

Using Bureau van Dijk's (2012) Zephyr database, M&A projects were analysed. Yet again, the North African region plays a prominent role as investment destination for real estate. An astonishing find was that Zimbabwe is an important destination as well as a source country. The Zimbabwean owned Pearl Properties has one of the largest M&A projects in Africa with a project value of \$ 4329.43 US dollars. The project offers the management of real estate on a fee or contract basis and is based in South Africa. Other source countries include Switzerland, South Africa, Virgin Islands and Ecuador.

M&A's investment projects in the communication sector displays similar destination countries as *greenfield* investments, but unexpectedly includes Sudan, Mali and

Burkina Faso. The Netherlands, Nigeria, Egypt, UK and France are the top source countries. The top investing companies comprise the French company Vivendi, Vodafone Group Plc (UK) and Tecom Investments which is based in UAE.

Investment projects into the metal sectors were also aimed at South Africa, Ghana, DRC, Namibia and Egypt similar to the *greenfield* projects. Brazil made a sizeable investment in Guinea in 2010, Korea undertook a mining investment in the mining of other non-ferrous metal ores in 2006 in Madagascar; and Bermuda has various mining projects across the African continent.

Drawing on previous literature and comparing it to the data discussed, it is evident that FDI to Africa is on the increase with mostly developed countries as the main source of investment. Having said this, it is noteworthy to mention that there are several developing countries that have started to play a part, including the likes of China, South Africa, India, Nigeria and Brazil.

4.4. Risk rating and FDI inflows

In the subsequent section the analysis will be focused on the different databases that were used in the study. A brief description of each database follows.

4.4.1 Description of Data

The Financial Times designed the fDi Markets database to map out real investments carried out across the world covering all sectors. It is the only online database tracking cross-border *greenfield* investments across all sectors and countries. Real-time monitoring of investment projects and job creation are used to create a profile for companies investing abroad (Ernst and Young, 2012).

Bureau van Dijk created the Zephyr database that tracks comprehensive M&A deals and rumours with integrated company financials. The deal reports on Zephyr include financial summaries and links to original articles published by investing companies.

To provide a scope of the different risks pertaining to international transactions, data from the Economist Intelligence Unit (EIU) and the Office Nationale Delcrederedienst (ONDD) were analysed.

In the analysis of the EIU, ten different risks were used; financial; foreign trade and payments; government effectiveness, infrastructure; labour market; legal and regulatory; macroeconomic; and political stability risk.

The ONDD is a Belgian public credit insure. The company provides insurance against various risks pertaining to international commercial transactions. Categories of risk used for the purpose of the study include; political medium term; war; risk of expropriation and government action; and transfer risk.

The above mentioned risk categories for the EIU and the ONDD databases are explained in Appendix A.

The next section will discuss the results that were obtained when the aforementioned databases were compared. Countries are ranked from lowest to highest risks, with the top position being the lowest risk. Several countries were highlighted in order to compare their performances/positions across the various databases.

4.4.2. EIU and fDI Markets (*greenfield*) – Figure 4.9

South Africa, being a top destination, performed as expected, but has high macroeconomic as well as security risk levels. Security risk can be ascribed to the magnitude of crime levels in the country.

Mauritius scores low on all ten risk categories, which indicates a stable, sound investment destination. However, the country only performs as a real estate investment destination. A major factor for trivial investments for the country is the size of the population – 1.2 million people in 2011 (African Economic Outlook, 2012) – one of the smallest populations in Africa. An interesting notion is exposed regarding the *greenfield* FDI flows of the communication sector which clearly indicates that this is a market-seeking sector. As one of the most developed African countries the expectation would be investment into the services sector. Yet the top countries receiving investment all have sizeable populations (Nigeria, South Africa, Ghana, and Uganda).

Zambia, Mozambique and Botswana behaved as anticipated scoring low in each risk category and receiving investment into the different sectors.

The two leading Western African countries also scored as expected. It is evident that Ghana is on the rise with substantial investments in all four sectors and a low score for each risk category. An interesting observation is that the very high risk for labour market risk, which includes trade unions, labour strikes and labour laws risk. Nigeria received over \$3 billion in investment flows in 2011, which is an indication that investors pursued a high-risk-high-return policy.

Algeria, Morocco and Tunisia all performed well in the receiving end of FDI investment for the various sectors, but their risk ratings fluctuate. Algeria rates high for all ten risk categories, except macroeconomic risk. All three North African countries have high security and political stability risk ratings.

4.4.3. ONDD and fDi Markets (*greenfield*) – Figure 4.10

Upon closer inspection, the ONDD database it appears to be skewed towards the more developed and larger African countries. When compared to the EIU ratings, the ONDD risk ratings give the impression that certain countries are more favourable than others. The EIU comes across as more comprehensive and risk ratings were not allocated according to factors that cause risk. Based on this fact, the EIU's ratings will be used in the empirical study.

In contrast to the EIU, the ONDD assigned low risk ratings to Algeria, Morocco, Egypt and Tunisia in three of the four categories. The risk for expropriation and government actions is quite high in Egypt and Algeria, which is as anticipated.

A similar picture can be sketched for Ghana. Ghana has relatively low risk-ratings in all four ONDD categories, but ratings fluctuate in the EIU database. Either way, from the data gathered from the different agencies, it is clear that Ghana is on the move. Ghana's projected growth rate for 2012 is at 7.7 percent (African Economic Outlook, 2012).

Unexpectedly, Ethiopia has a quite a few FDI projects in the communications, real estate as well as the automotive industry ranking 8th, 12th and 7th respectively. According to the African Economic Outlook (2012), Ethiopia has been growing at 10.7 percent during 2011.

4.4.4 EIU and Bureau van Dijk (M&A) Figure 4.11

As is apparent from the literature overview provided in Chapter 2, market size is a significant determinant for FDI flows. Cape Verde illustrates this fact. The country is a small West African island-country with a population size of just over 500 000 and even though it has very low risk ratings; there are no substantial M&A or *greenfield* investment projects. Not only is this an indication of the four sectors being market-seeking, but it also shows that investors are not so risk sensitive when investing or that they incorporate a large risk appetite in their investment strategy.

Zimbabwe can be used as another example with several M&A deals during 2003 to 2011, but comprising high risk ratings for every category except financial and infrastructure risk.

An interesting find is that of Burkina Faso. The country had a number of M&A projects in the automotive, metal and communications sectors with an average risk rating for the different risk categories. Growth prospects for 2012 is at 5.5 percent (African Economic Outlook, 2012).

4.4.5 ONDD and Bureau van Dijk (M&A) – Figure 4.12

South Africa prevails as top performer for attracting FDI investments (M&A) as well as having an overall low risk rating which complies with current affairs. This corresponds to Ernst and Young's (2011) finding that South Africa is seen as the most attractive country in which to do business, given that the country has the most developed economy.

Mauritius takes a stand with M&A investment projects in metals, real estate as well as communications in contrast to *greenfield* investment projects. The performance is as expected as the country is low-risk and politically stable, but the achievement is in disagreement with the earlier comment about the country's population size.

As discussed earlier, the ONDD allocated low risk scores for Algeria, Morocco, and Tunisia, especially given the recent political turmoil. Algeria particularly received a low rating when compared to the EIU ratings (low score for macroeconomic risk).

4.4.6. Bureau van Dijk (M&A) and fDi Markets (*greenfield*) – Figure 4.13

The first notable feature of the Zephyr database (as seen from figure 4.8) is that the value of the project deals are not as significant as the *greenfield* investment projects. There is also a difference in the number of deals for the various sectors, with real estate and automotive not even reaching twenty deals over the 2003-2011 period. It could be that the information on M&A is not disclosed or publically available.

A prominent difference between the modes of entry (*greenfield* and M&A) is evident in the case of Zimbabwe. Zimbabwe has had substantial M&A projects particularly in real estate but also in the automotive and metal sectors. This differs from *greenfield* investments with projects in metals and surprisingly communications.

Another example is Cote D'Ivoire which had no recordings of *greenfield* projects, but several M&A projects in automotive, metals and communications during 2003-2011.

Mozambique performed miserably in drawing M&A investment projects, but attracted various projects in the metals, real estate and communications sectors for *greenfield* investments. Mozambique is expected to be the focus of more FDI inflows as the country's GDP growth rate is currently projected to reach 7.5 percent for 2012 (African Economic Outlook, 2012).

Figure 4.9. EIU risk ratings comparison with fDi Markets (greenfield)

Economist Intelligence Unit										FDI Markets (Greenfield)			
1	2	3	4	5	6	7	8	9	10	FDI Automotive	FDI Metals	FDI Real Estate	FDI Communications
South Africa	Botswana	Mauritius	Mauritius	Botswana	Mauritius	Gabon	Cape Verde	Mauritius	Mauritius	South Africa	South Africa	Egypt	Nigeria
Mauritius	Mauritius	Cape Verde	Seychelles	Mauritius	Cape Verde	Senegal	Mauritius	Botswana	Lesotho	Morocco	Ghana	Tunisia	South Africa
Namibia	Namibia	Botswana	Botswana	Egypt	Botswana	Burkina Faso	Seychelles	Mozambique	Botswana	Egypt	Congo (DRC)	Libya	Uganda
Cape Verde	Egypt	Seychelles	Namibia	Cape Verde	South Africa	Cote d'Ivoire	Botswana	Seychelles	Burkina Faso	Algeria	Algeria	Algeria	Egypt
Morocco	Burkina Faso	Namibia	South Africa	Seychelles	Namibia	Equatorial Guinea	South Africa	Namibia	Cape Verde	Kenya	Liberia	Morocco	Ghana
Botswana	South Africa	South Africa	Lesotho	Uganda	Egypt	Algeria	Namibia	Gabon	Ghana	Angola	Zambia	Angola	Kenya
Burkina Faso	Mozambique	Lesotho	Tunisia	Angola	Seychelles	Congo	Benin	Angola	Tunisia	Ethiopia	Zimbabwe	Djibouti	Tanzania
Egypt	Senegal	Ghana	Egypt	Libya	Morocco	Cameroon	Mozambique	Gambia	South Africa	Senegal	Cameroon	Nigeria	Ethiopia
Gabon	Benin	Tunisia	Cape Verde	Namibia	Swaziland	Cape Verde	Tanzania	Cape Verde	Seychelles	Nigeria	Madagascar	Mauritius	Morocco
Ghana	Togo	Rwanda	Cote d'Ivoire	Tunisia	Tunisia	Benin	Ghana	Benin	Namibia	Zambia	Guinea	Sudan	Algeria
Mozambique	Zambia	Senegal	Morocco	Zambia	Ghana	Mauritius	Zambia	Sao Tome and Principe	Angola	Ghana	Namibia	South Africa	Mozambique
Senegal	Cote d'Ivoire	Zambia	Zambia	Rwanda	Lesotho	Mozambique	Gabon	Malawi	Tanzania	Sudan	Tanzania	Ethiopia	Tunisia
Swaziland	Uganda	Sao Tome and Principe	Zimbabwe	Burundi	Uganda	Tanzania	Cote d'Ivoire	Ghana	Swaziland	Tunisia	Senegal	Congo (DRC)	Gabon
Tunisia	Lesotho	Madagascar	Swaziland	South Africa	Zambia	Togo	Lesotho	Zambia	Morocco	Gambia	Botswana	Senegal	Zimbabwe
Angola	Gabon	Egypt	Madagascar	Lesotho	Malawi	Chad	Togo	Lesotho	Libya	Botswana	Burkina Faso	Namibia	Angola
Kenya	Tanzania	Burkina Faso	Mozambique	Cote d'Ivoire	Burkina Faso	Rwanda	Rwanda	Rwanda	Sudan	Benin	Mozambique	Ghana	Botswana
Nigeria	Sao Tome and Principe	Uganda	Ethiopia	Cameroon	Rwanda	Morocco	Angola	Uganda	Gabon	Tanzania	Sierra Leone	Zambia	Gambia
Zambia	Ghana	Tanzania	Cameroon	Tanzania	Madagascar	Lesotho	Uganda	Ethiopia	Gambia	Uganda	Niger	Botswana	Somali
Zimbabwe	Tunisia	Swaziland	Gambia	Malawi	Gambia	Angola	Senegal	Madagascar	Sao Tome and Principe	South Sudan	Egypt	Tanzania	Rwanda
Benin	Rwanda	Mozambique	Ghana	Mozambique	Gabon	Seychelles	Equatorial Guinea	Tanzania	Malawi	Rwanda	Eritrea	Mozambique	Zambia

1=Financial Risk

2=Foreign trade and payments risk

3= Government effectiveness risk

5=Labour Market risk

6=Legal and Regulatory risk

7=Macroeconomic risk

9=Security Risk

10=Tax policy risk

Figure 4.10.ONDD risk ratings comparison with fDi Markets (greenfield)

ONDD				FDI Markets (Greenfield)			
1	2	3	4	FDI Automotive	FDI Metals	FDI Real Estate	FDI Communications
Botswana	Botswana	Botswana	Algeria	South Africa	South Africa	Egypt	Nigeria
Mauritius	Mauritius	Mauritius	Botswana	Morocco	Ghana	Tunisia	South Africa
Namibia	Namibia	South Africa	Mauritius	Egypt	Congo (DRC)	Libya	Uganda
South Africa	South Africa	Ghana	South Africa	Algeria	Algeria	Algeria	Egypt
Algeria	Ghana	Morocco	Morocco	Kenya	Liberia	Morocco	Ghana
Morocco	Cape Verde	Namibia	Namibia	Angola	Zambia	Angola	Kenya
Tunisia	Zambia	Zambia	Tunisia	Ethiopia	Zimbabwe	Djibouti	Tanzania
Western Sahara	Mozambique	Mozambique	Western Sahara	Senegal	Cameroon	Nigeria	Ethiopia
Ghana	Seychelles	Tunisia	Ghana	Nigeria	Madagascar	Mauritius	Morocco
Cape Verde	Algeria	Tanzania	Zambia	Zambia	Guinea	Sudan	Algeria
Gabon	Morocco	Benin	Tanzania	Ghana	Namibia	South Africa	Mozambique
Egypt	Tunisia	Sao Tome and Principe	Gabon	Sudan	Tanzania	Ethiopia	Tunisia
Lesotho	Tanzania	Gabon	Cameroon	Tunisia	Senegal	Congo (DRC)	Gabon
Nigeria	Benin	Cameroon	Senegal	Gambia	Botswana	Senegal	Zimbabwe
Zambia	Sierra Leone	Senegal	Swaziland	Botswana	Burkina Faso	Namibia	Angola
Mozambique	Sao Tome and Principe	Angola	Egypt	Benin	Mozambique	Ghana	Botswana
Tanzania	Malawi	Equatorial Guinea	Kenya	Tanzania	Sierra Leone	Zambia	Gambia
Benin	Gabon	Gambia	Mali	Uganda	Niger	Botswana	Somaliland
Cameroon	Egypt	Togo	Nigeria	South Sudan	Egypt	Tanzania	Rwanda
Senegal	Lesotho	Swaziland	Cape Verde	Rwanda	Eritrea	Mozambique	Zambia

1=Political Midterm risk

2=War Risk

3= Risk of expropriation and government action

4=Transfer Risk

Figure 4.11. EIU risk ratings comparison with Bureau van Dijk (M&A)

Economist Intelligence Unit										Bureau van Dijk (M&A)			
1	2	3	4	5	6	7	8	9	10	FDI Automotive	FDI Metals	FDI Real Estate	FDI Communications
South Africa	Botswana	Mauritius	Mauritius	Botswana	Mauritius	Gabon	Cape Verde	Mauritius	Mauritius	South Africa	South Africa	South Africa	South Africa
Mauritius	Mauritius	Cape Verde	Seychelles	Mauritius	Cape Verde	Senegal	Mauritius	Botswana	Lesotho	Egypt	Ghana	Egypt	Egypt
Namibia	Namibia	Botswana	Botswana	Egypt	Botswana	Burkina Faso	Seychelles	Mozambique	Botswana	Tunisia	Guinea	Zimbabwe	Morocco
Cape Verde	Egypt	Seychelles	Namibia	Cape Verde	South Africa	Cote d'Ivoire	Botswana	Seychelles	Burkina Faso	Morocco	Egypt	Morocco	Nigeria
Morocco	Burkina Faso	Namibia	South Africa	Seychelles	Namibia	Equatorial Guinea	South Africa	Namibia	Cape Verde	Nigeria	Madagascar	Tunisia	Tunisia
Botswana	South Africa	South Africa	Lesotho	Uganda	Egypt	Algeria	Namibia	Gabon	Ghana	Cote D'Ivoire	Nigeria	Botswana	Kenya
Burkina Faso	Mozambique	Lesotho	Tunisia	Angola	Seychelles	Congo	Benin	Angola	Tunisia	Algeria	Zambia	Algeria	Sudan
Egypt	Senegal	Ghana	Egypt	Libya	Morocco	Cameroon	Mozambique	Gambia	South Africa	Malawi	Mauritius	Mauritius	Ghana
Gabon	Benin	Tunisia	Cape Verde	Namibia	Swaziland	Cape Verde	Tanzania	Cape Verde	Seychelles	Senegal	Congo (DRC)	Zambia	Zambia
Ghana	Togo	Rwanda	Cote d'Ivoire	Tunisia	Tunisia	Benin	Ghana	Benin	Namibia	Zimbabwe	Tanzania	Kenya	Mali
Mozambique	Zambia	Senegal	Morocco	Zambia	Ghana	Mauritius	Zambia	Sao Tome and Principe	Angola	Kenya	Namibia	Libya	Mauritius
Senegal	Cote d'Ivoire	Zambia	Zambia	Rwanda	Lesotho	Mozambique	Gabon	Malawi	Tanzania	Burkina Faso	Gabon	Gambia	Uganda
Swaziland	Uganda	Sao Tome and Principe	Zimbabwe	Burundi	Uganda	Tanzania	Cote d'Ivoire	Ghana	Swaziland	—	Botswana	Mozambique	Burkina Faso
Tunisia	Lesotho	Madagascar	Swaziland	South Africa	Zambia	Togo	Lesotho	Zambia	Morocco	—	Zimbabwe	Mauritania	Botswana
Angola	Gabon	Egypt	Madagascar	Lesotho	Malawi	Chad	Togo	Lesotho	Libya	—	Cote D'Ivoire	—	Namibia
Kenya	Tanzania	Burkina Faso	Mozambique	Cote d'Ivoire	Burkina Faso	Rwanda	Rwanda	Rwanda	Sudan	—	Mali	—	Algeria
Nigeria	Sao Tome and Principe	Uganda	Ethiopia	Cameroon	Rwanda	Morocco	Angola	Uganda	Gabon	—	Liberia	—	Cote D'Ivoire
Zambia	Ghana	Tanzania	Cameroon	Tanzania	Madagascar	Lesotho	Uganda	Ethiopia	Gambia	—	Morocco	—	Congo (DRC)
Zimbabwe	Tunisia	Swaziland	Gambia	Malawi	Gambia	Angola	Senegal	Madagascar	Sao Tome and Principe	—	Mauritania	—	Madagascar
Benin	Rwanda	Mozambique	Ghana	Mozambique	Gabon	Seychelles	Equatorial Guinea	Tanzania	Malawi	—	Sierra Leone	—	Central African Republic

1=Financial Risk

2=Foreign trade and payments risk

3= Government effectiveness risk

4=Infrastructure risk

5=Labour Market risk

6=Legal and Regulatory risk

7=Macroeconomic risk

8=Political stability risk

9=Security Risk

10=Tax policy risk

Figure 4.12 ONDD risk rating comparison with Bureau van Dijk (M&A)

ONDD				Bureau van Dijk (M&A)			
1	2	3	4	FDI Automotive	FDI Metals	FDI Real Estate	FDI Communications
Botswana	Botswana	Botswana	Algeria	South Africa	South Africa	South Africa	South Africa
Mauritius	Mauritius	Mauritius	Botswana	Egypt	Ghana	Egypt	Egypt
Namibia	Namibia	South Africa	Mauritius	Tunisia	Guinea	Zimbabwe	Morocco
South Africa	South Africa	Ghana	South Africa	Morocco	Egypt	Morocco	Nigeria
Algeria	Ghana	Morocco	Morocco	Nigeria	Madagascar	Tunisia	Tunisia
Morocco	Cape Verde	Namibia	Namibia	Cote D' Ivoire	Nigeria	Botswana	Kenya
Tunisia	Zambia	Zambia	Tunisia	Algeria	Zambia	Algeria	Sudan
Western Sahara	Mozambique	Mozambique	Western Sahara	Malawi	Mauritius	Mauritius	Ghana
Ghana	Seychelles	Tunisia	Ghana	Senegal	Congo (DRC)	Zambia	Zambia
Cape Verde	Algeria	Tanzania	Zambia	Zimbabwe	Tanzania	Kenya	Mali
Gabon	Morocco	Benin	Tanzania	Kenya	Namibia	Libya	Mauritius
Egypt	Tunisia	Sao Tome and Principe	Gabon	Burkina Faso	Gabon	Gambia	Uganda
Lesotho	Tanzania	Gabon	Cameroon	—	Botswana	Mozambique	Burkina Faso
Nigeria	Benin	Cameroon	Senegal	—	Zimbabwe	Mauritania	Botswana
Zambia	Sierra Leone	Senegal	Swaziland	—	Cote D' Ivoire	—	Namibia
Mozambique	Sao Tome and Principe	Angola	Egypt	—	Mali	—	Algeria
Tanzania	Malawi	Equatorial Guinea	Kenya	—	Liberia	—	Cote D' Ivoire
Benin	Gabon	Gambia	Mali	—	Morocco	—	Congo (DRC)
Cameroon	Egypt	Togo	Nigeria	—	Mauritania	—	Madagascar
Senegal	Lesotho	Swaziland	Cape Verde	—	Sierra Leone	—	Central African Republic

1=Political Midterm risk

2=War Risk

3= Risk of expropriation and government action

4=Transfer Risk

Figure 4.13 Bureau van Dijk (M&A) comparison with fDi Markets (greenfield)

Bureau van Dijk (M&A)				FDI Markets (Greenfield)			
FDI Automotive	FDI Metals	FDI Real Estate	FDI Communications	FDI Automotive	FDI Metals	FDI Real Estate	FDI Communications
South Africa	South Africa	South Africa	South Africa	South Africa	South Africa	Egypt	Nigeria
Egypt	Ghana	Egypt	Egypt	Morocco	Ghana	Tunisia	South Africa
Tunisia	Guinea	Zimbabwe	Morocco	Egypt	Congo (DRC)	Libya	Uganda
Morocco	Egypt	Morocco	Nigeria	Algeria	Algeria	Algeria	Egypt
Nigeria	Madagascar	Tunisia	Tunisia	Kenya	Liberia	Morocco	Ghana
Cote D' Ivoire	Nigeria	Botswana	Kenya	Angola	Zambia	Angola	Kenya
Algeria	Zambia	Algeria	Sudan	Ethiopia	Zimbabwe	Djibouti	Tanzania
Malawi	Mauritius	Mauritius	Ghana	Senegal	Cameroon	Nigeria	Ethiopia
Senegal	Congo (DRC)	Zambia	Zambia	Nigeria	Madagascar	Mauritius	Morocco
Zimbabwe	Tanzania	Kenya	Mali	Zambia	Guinea	Sudan	Algeria
Kenya	Namibia	Libya	Mauritius	Ghana	Namibia	South Africa	Mozambique
Burkina Faso	Gabon	Gambia	Uganda	Sudan	Tanzania	Ethiopia	Tunisia
–	Botswana	Mozambique	Burkina Faso	Tunisia	Senegal	Congo (DRC)	Gabon
–	Zimbabwe	Mauritania	Botswana	Gambia	Botswana	Senegal	Zimbabwe
–	Cote D' Ivoire	–	Namibia	Botswana	Burkina Faso	Namibia	Angola
–	Mali	–	Algeria	Benin	Mozambique	Ghana	Botswana
–	Liberia	–	Cote D' Ivoire	Tanzania	Sierra Leone	Zambia	Gambia
–	Morocco	–	Congo (DRC)	Uganda	Niger	Botswana	Somaliland
–	Mauritania	–	Madagascar	South Sudan	Egypt	Tanzania	Rwanda
–	Sierra Leone	–	Central African Republic	Rwanda	Eritrea	Mozambique	Zambia

4.5. Summary

This chapter started off with a discussion on what the global trends for FDI looked like for the past few years. Global FDI has suffered several setbacks in the last few years, but is steadily on the increase after recovering from the global economic and financial crisis of 2007-2009.

Developed countries are still the frontrunners in receiving FDI; however developing countries have seen a steady increase. On average developed countries contributed to about an average of 68 percent of global FDI inflows during 2000-2008. Recently developing countries as a whole have managed to increase their share of FDI by receiving 45 percent in 2011. FDI flows to developing countries, however, vary significantly. In this regard, developing Asia has been the dominant party in receiving FDI and also accounted for more than half of the developing world's FDI outflows. Even though Africa's position has improved, the last three years have seen a decrease in flows to the region; nevertheless the prospects are looking up as Africa is host to five of the top 10 fastest-growing economies in the world (Ernst and Young, 2012). FDI trends for Africa show that West African countries in particular are acquiring more investment than other African regions, while North Africa has seen a major decline in investments due to the political turmoil, sub-Saharan and Eastern Africa are increasing modestly.

The four sectors that were chosen for this study give an impression of what FDI flows for *greenfield* and M&A investments into Africa look like. As the gateway to Africa, South Africa has been on the receiving end of investments for several sectors, but with a growth rate predicted of only 2, 8 percent, it will be interesting to see how the country will compete with high-growth African countries in the next couple of years. It is noticeable that the majority of FDI inflows in the various sectors are from developed countries, but developing countries such as India and China are also starting to play an important role.

Different databases were compared to better understand the flows of investment and observe whether risk patterns can be identified. Macroeconomic, labour market and security risk appear to be the least important risk category for investors as investors are not sensitive to the ratings. A conclusion can be made that investors tend to

have a larger risk appetite when investing in Africa. It is also evident that M&A investments have a tendency to follow risk ratings, much more so than *greenfield* investment projects.

In the following section an empirical analysis will be done to expand upon the central hypothesis exploring the relationship between foreign direct investment and risk factors to establish whether there is a link between the inflow of foreign direct investment into a country and the risk ratings it obtains.

Chapter 5: An Empirical Analysis of the Relationship between Risk and Foreign Direct Investment in Africa

5.1 Introduction

Foreign Direct Investment has contributed to the growth and development of many developing regions since the 1990's and even though Africa wasn't on the receiving end for many years, tides are beginning to change. Several developed countries, along with developing countries, are starting to shift their focus and are questioning their advances regarding the "dark continent". However, there is a notion that the traditional approaches to risks associated with FDI in Africa are dated and that a new approach is now needed.

As is mentioned earlier, literature regarding FDI determinants and risks in Africa are limited to a number of case studies. Taking the data limitations into account, this chapter aims to fill this gap.

This empirical study will therefore involve the analysis of data gathered and establish the relationship between FDI inflows into a country and the particular risk-ratings associated with the specific host country. This is done with a focus on 42 African countries over the period 2003 to 2012.

The chapter begins with the explanation of Structural Equation Modelling (SEM) and the reason why it is used in this study. In section 5.3 a description of the data and variables as well as their source is provided. In section 5.4 an overview of the general specification is provided and section 5.5 – 5.9 discusses the results of the empirical model for each sector. Finally in section 5.10 a conclusion is drawn.

5.2. Method – Structural Equation Modelling

Structural Equation Modelling (SEM) is a general statistical modelling technique used to establish relationships among variables. SEM is widely used in social sciences and this results in many different opinions and criteria for acceptability. It is regarded as a confirmatory technique in that it tests models that are conceptually derived beforehand. Hence, SEM allows for testing of theoretical specification and is therefore theory driven and not data driven like normal regression. Essentially SEM is a combination of factor analysis and a series of multiple regressions. In this sense, SEM allows simultaneously testing both the measurement model as well as the

structural relationships in the model. The measurement model specifies the relationships between variables and factors.

The reason why SEM is used as opposed to other multiple regression lies in the fact that factors/variables can be correlated (as theory states they are) which cannot be done in ordinary regression. Another advantage is that SEM allows for multiple dependent variables, whereas regression is restricted to the use of only a single dependent variable. SEM also accounts for measurement errors, in contrast to regression, that assumes that all measures are perfect.

Covariance is the strength of the association between the variables and their variabilities and this is thought to be the basic statistic of SEM. Covariance allows the understanding of patterns of correlations among a set of variables and also explains as much of the variance as possible with the model specified.

In terms of the different types of SEM, the confirmatory factor analysis (CFA) method will be used in this study as CFA is deductive rather than inductive. Inductive analysis is a bottom-up strategy where conclusions are derived empirically, while a deductive approach is a top-down strategy where a conclusion is developed based on theory.

There are two types of variables described by the SEM model specification. The first is the exogenous variables which are variables whose causes are unknown and are considered independent variables. The exogenous variables are used to explain other variables in the model. Exogenous variables (presented as the risk indices in our study) can be used as factors for unobserved variable risk that can then be regressed against FDI in the specific sector.

An important consideration when using SEM is the sample size. SEM is known to be a large-sample technique. The data quality and sample size play significant roles in the interpretation of SEM and in this study data is generally limited. The actual statistics are reported but a convergence approach is taken. This implies that due to data issues, the models are trimmed as best possible and the statistics reported. Some models may be insignificant but the view is that due to model trimming the general result is still indicative of data behaviour. Where models are insignificant, it cannot be used for higher order hypothesis testing. This does not influence this study as the focus is on finding the best possible model for each sector and then

comparing the factors between sectors and the regression weight with the FDI for the sectors.

SEM is capable of modelling data from subgroups of data, like different sectors, to test whether they are similar or not.

5.3. Data specifications

The Data used for the empirical analysis was obtained from fDI Markets database. The fDI Markets database provides data on *greenfield* investment projects between 2003-2012 and is split into deal per sector. Bureau van Dijks' Zephyr database for M&A's either uses only vendor information or the project deals have no value. Thus for this study we will not proceed with this data.

Although the fDI Markets database presents aggregated data, in this study only per deal information was used as the aggregated data will have a lot of missing values due to some countries not having investment projects in every sector every year.

The EIU's Operational Risk Model is used to incorporate the different risk categories. Risk ratings were obtained for 42 African countries, where a lower ranking would be an indication of lower risk. Country-data is sourced from 2006 and some countries, from 2002 and onwards. Thus, where possible the fDI markets data from 2003 to 2005 is also used.

Due to the limited availability of suitable data, countries excluded from the empirical study include Congo (DRC), Liberia, Sierra Leone, Djibouti, Comoros, Guinea Bissau, Somalia, Mauritania, Mali, Central African Republic and Niger.

The following table gives a description of each of the ten different risk categories that are used in the study obtained from the EIU database

Table 5.1 Risk Category Description

EIU Risk Categories		
Government effectiveness	Legal & regulatory	Labour market
Policy formulation	Fairness of judicial process	Trade unions
Quality of bureaucracy	Enforceability of contracts	Labour strikes
Excessive bureaucracy/red-tape	Speediness of judicial process	Labour laws
Vested interests/cronyism	Discrimination against foreign companies	Skilled labour
Corruption	Confiscation/expropriation	Specialised labour
Accountability of public officials	Unfair competitive practices	Meritocratic remuneration

Human rights	Protection of intellectual property rights	Freedom of association
	Protection of private property	
Foreign trade & payments	Integrity of accounting practices	Macroeconomic
Trade embargo risk	Price controls	Exchange rate volatility
Financial crisis		Recession risk
Discriminatory tariffs	Infrastructure	Price instability
Excessive protection	Port facilities	Crowding out
Capital account	Air transport facilities	Interest rate volatility
Current account convertibility	Retail and distribution network	
Capital controls risk	Telephone network	
	Road network	Security
Tax policy	Power network	Armed conflict
Stable regime	Rail network	Terrorism
Discriminatory taxes	IT infrastructure	Violent demonstrations
Level of corporate taxation		Hostility to foreigners/private property
Retroactive taxation	Financial	Violent crime
	Devaluation risk	Organised crime
Political stability	Depth of financing	Kidnapping/extortion
Social unrest	Access to local markets	
Orderly transfers	Marketable debt	
Opposition stance	Banking sector health	
Excessive executive authority	Stock market liquidity	
International tensions		

Source: Adapted from EIU database (2012)

5.4. General Specification

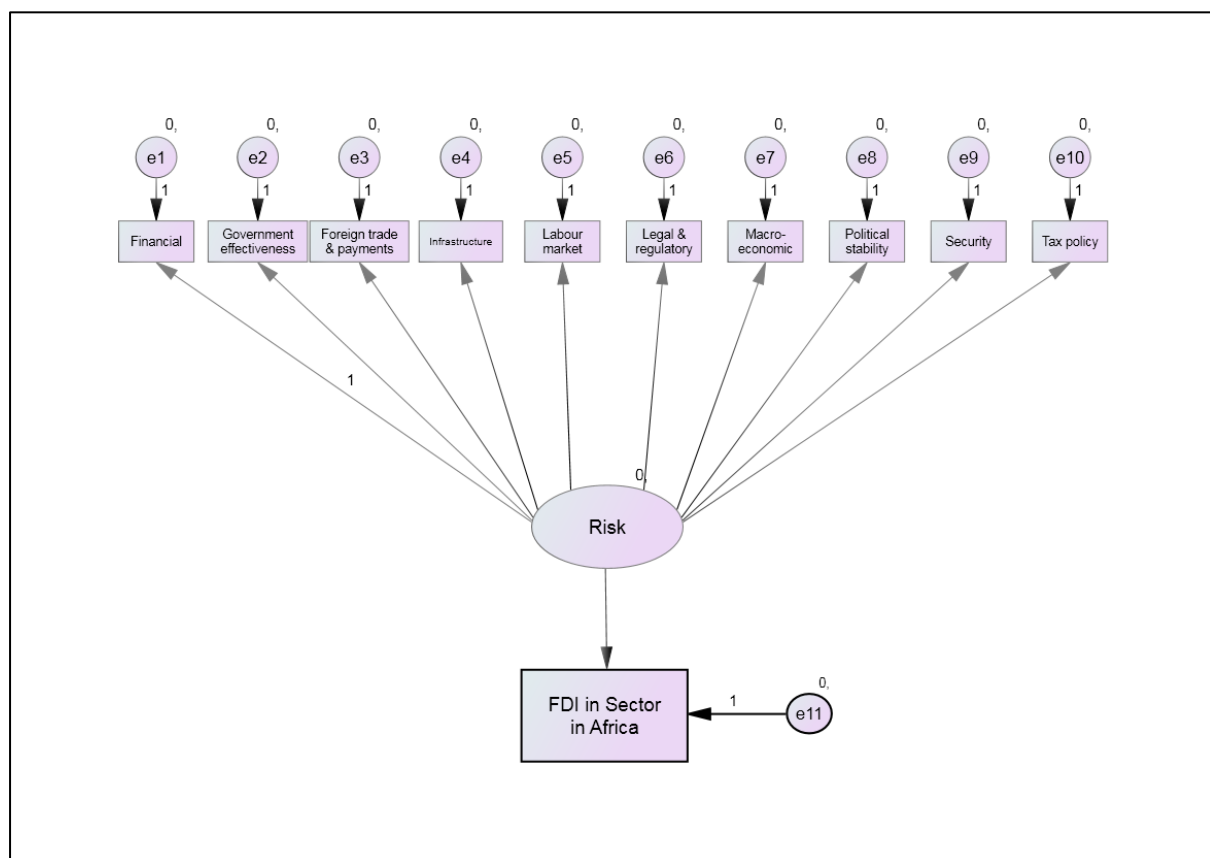
It is of extreme importance to measure the degree of fit of the models that are used. The two main classes of model fit indices are the Absolute Fit and the Relevant Fit indices. Within these two classes there are several indices which are used in SEM literature. A brief discussion of the main types will follow.

The Absolute Fit indices describe the ability of the model to reproduce the covariance matrices. It is critical to examine the model fit indices as they are useful to test certain hypothesis, especially those involved in the comparison of different models evaluated with the same data.

The types of indices associated with the Absolute Fit comprise model chi-square, root mean squared error of approximation (RMSEA) and goodness of fit (GFI). The model chi-square tests the hypothesis that the observed and implied covariance

matrices are equal. A non-significant chi-square value ($p > 0.5$) will indicate a good fitting model. It suggests that there are few discrepancies between the observed and implied covariance matrices. The RMSEA looks at the average size of residuals; therefore smaller values indicate a better fitting model. Values that are less than 0, 10 indicate an acceptable fit whereas values less than 0.05 indicate a good fitting model. Finally, with GFI, values that are greater than 0.099 are considered to be good fitting models.

The second classes of model fit indices are that of relative fit indices. These indices compare a theoretical model with a baseline model. The baseline model specifically considers a model with no relationships among variables. Therefore, these fit indices determine if the model specified is better than a model where there are no relationships between variables. The most commonly reported relative indices are that of Normed Fit index (NFI), Incremental Fit Index (IFI) and the comparative Fit index (CFI). For all three of these fit indices, their values will range from 0-1 and generally those values that are greater than 0.99 would suggest a good-fitting model.



Source: Own Specification based on theoretical basis

In the model specified above, the different risk categories are factors which constitutes to the unobserved risk variable (latent variable) that is regressed against FDI. A combination of Factor Analysis and regression is used to test the model.

Sector Comparison

Model	DF	CMIN	P	NFI Delta- 1	IFI Delta- 2	RFI rho- 1	TLI rho2
Measurement weights	30	243.6	.0	.0	.0	.0	.0
Measurement intercepts	63	635.7	.0	.1	.1	.0	.0
Structural covariances	66	638.6	.0	.1	.1	.0	.0
Measurement residuals	99	2628.1	.0	.3	.4	.2	.2

Source: Own Calculations

The high CMIN values and low NFI and IFI values indicate that the various sectors are significantly different and that it is better to fit a separate model for each sector rather than using a general model under which each sector can have a nested model.

5.5. The Metals sector

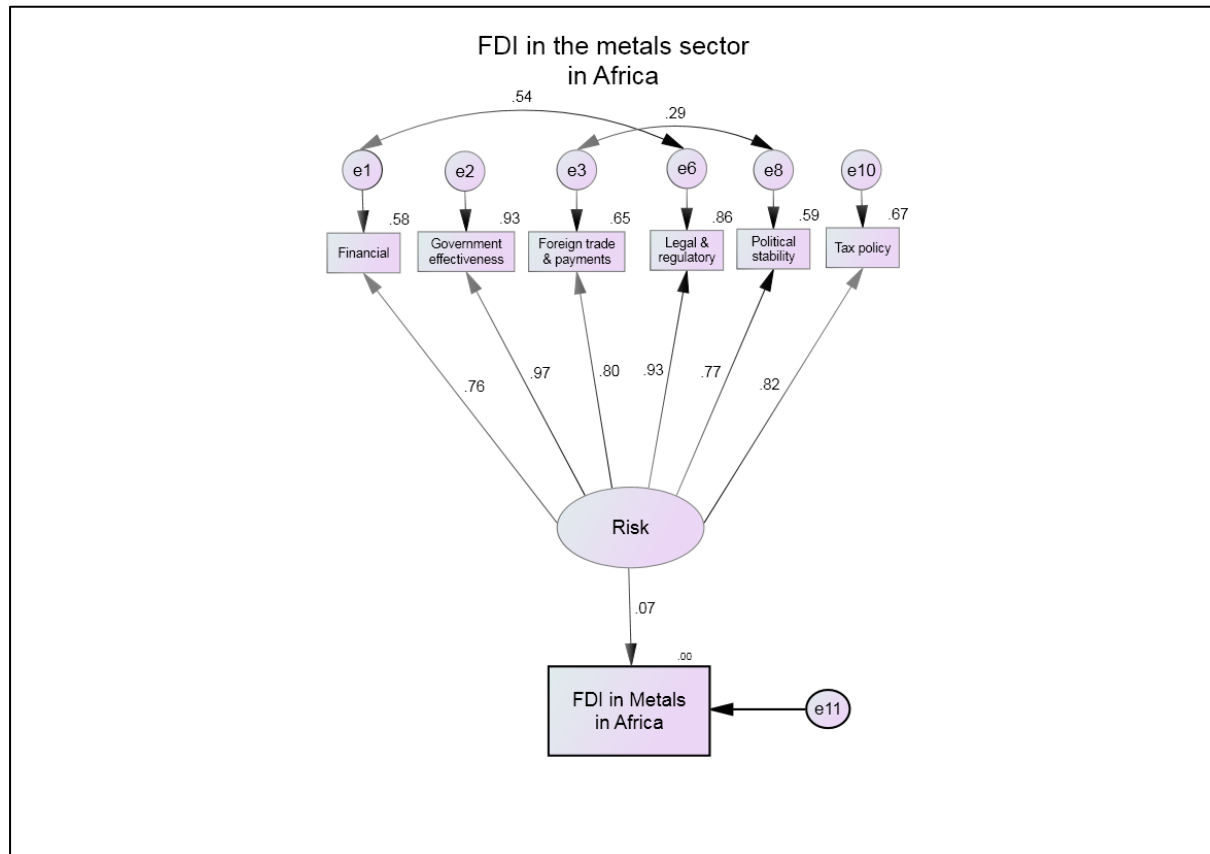
Before proceeding to the measurement models, a clarification is needed on the standardised and unstandardised results.

Standardised results indicate how many standard deviations variable B increase, if variable A increases with one standard deviation. With standardised results, all variables have been converted to standard-deviation units, so the coefficients can be compared in magnitude.

Unstandardised results are estimates of the coefficients, thus showing the increase in variable B if variable A increases by one unit. These results are expressed in

terms of the variables' original raw units. In order for unstandardized B coefficients to be compared to each other, the results must be viewed alongside its standard error.

Standardised Results



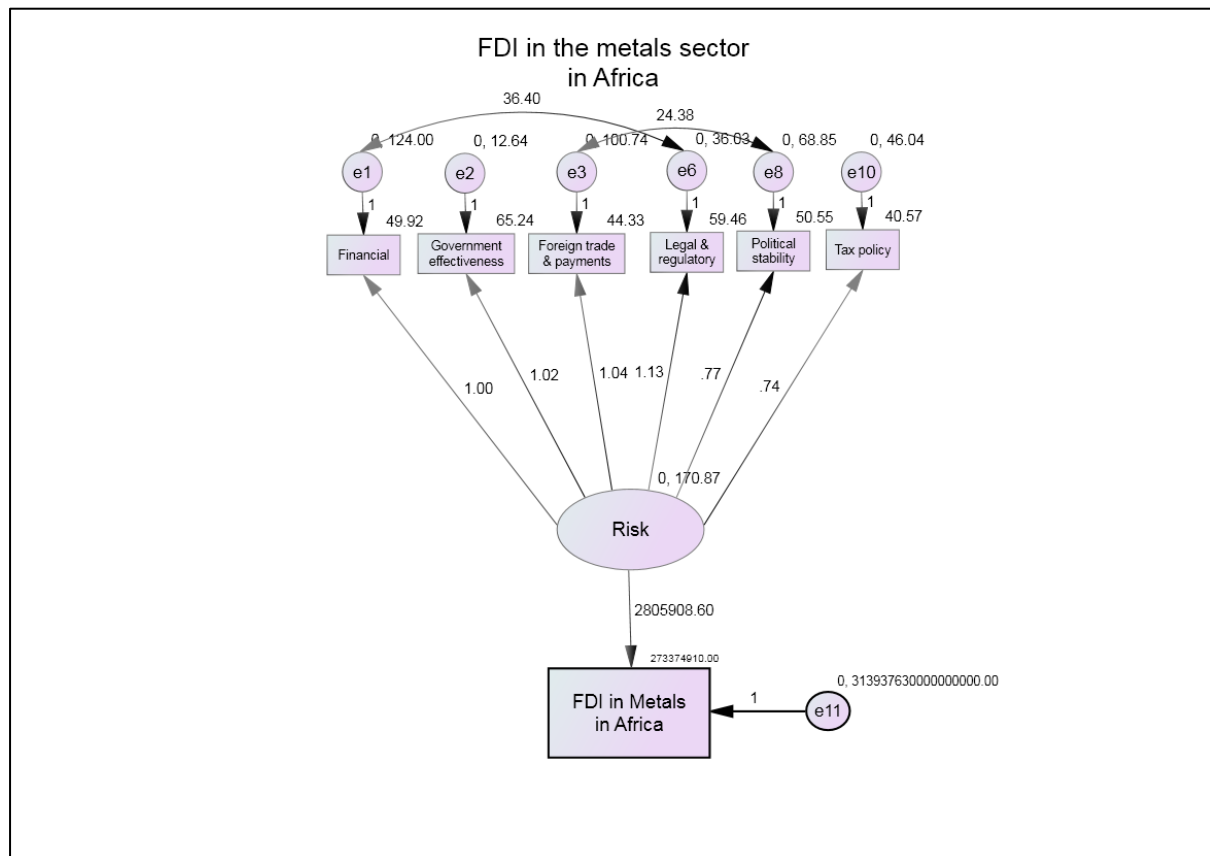
Source: Own Calculations

The above specified model is the standardised results for the metals sector. The risk factors that have weights above 0.7 were included. A low regression weight of 0.07 and R square of 0.01 is an indication of a good fitting model.

The measurement model demonstrates a strong covariance between the financial and legal & regulatory risk variables (0.54) as well as between foreign trade & payments and political stability risk variables (0.29).

For the metal-sector, the following risks are ranked from most important to least according to their weights; Government effectiveness, Legal and Regulatory, Tax Policy, Foreign Trade and Payments, Political stability and Financial risk. According to Ernst and Young (2012), the most important business risk for the mining and metal industries is resource nationalism. The report goes on to argue that sudden changes in government effectiveness cause investors to defer, delay or withdraw investment projects.

Unstandardised results



Source: Own Calculations

The unstandardised results show the same correlations of the various risk factors. As expected, the weights for the factors are much higher than the weights for the standardised results.

Model	CMIN/DF	NFI Delta1	IFI Delta2	CFI	RMSEA	PCLOSE
Default model	3.9	0.972	0.979	0.979	.101	.003
FMIN test	FMIN	F0	LO 90	HI 90	LO 90	HI 90
Default model	.166	.123	.062	.211	.072	.133

Source: Own Calculations

It can be concluded that the metals-sector model has mixed results. The CMIN/DF is below five but above one, which is an indication of a good, but not perfect, fit. The NFI, IFI, and CFI are close to one which shows perfect symmetry between actual

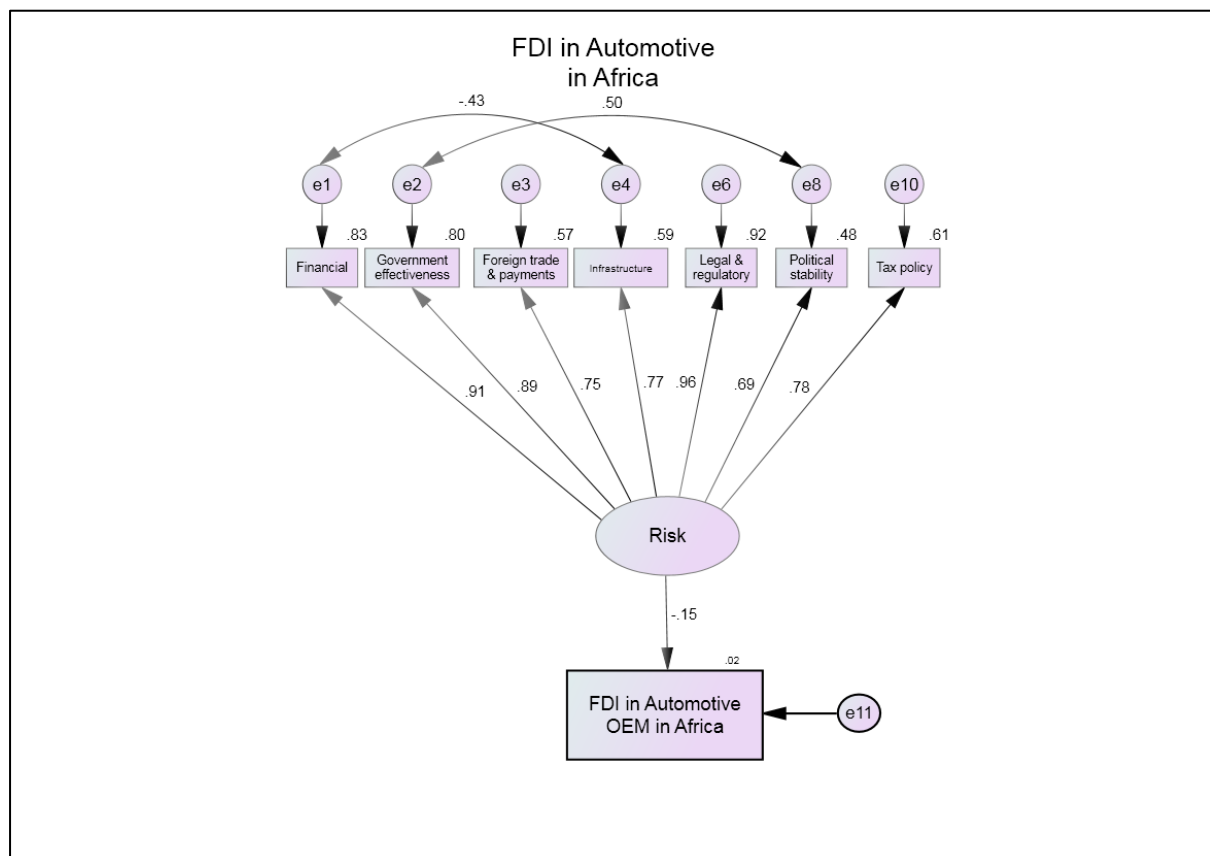
and estimated covariance. The FMIN value is acceptable and the RMSEA value is above 0.05 indicating a good fit, keeping in mind that the data has some limitations.

Interpretation

From the results obtained, a conclusion can be drawn that there are specific factors that affect the metals-sector. The most noteworthy risk factor is Government effectiveness. It can also be concluded that there is no significant relationship between Risk and FDI. Cohen (2007) argues that as the metals industry is resource-seeking, investors to this sector are less sensitive to risk.

5.6. The Automotive sector

Standardised Results



Source: Own Calculations

Factors that have weights above 0.7 are deemed acceptable. Political stability has a weight of 0.69 and the value is close enough to be included.

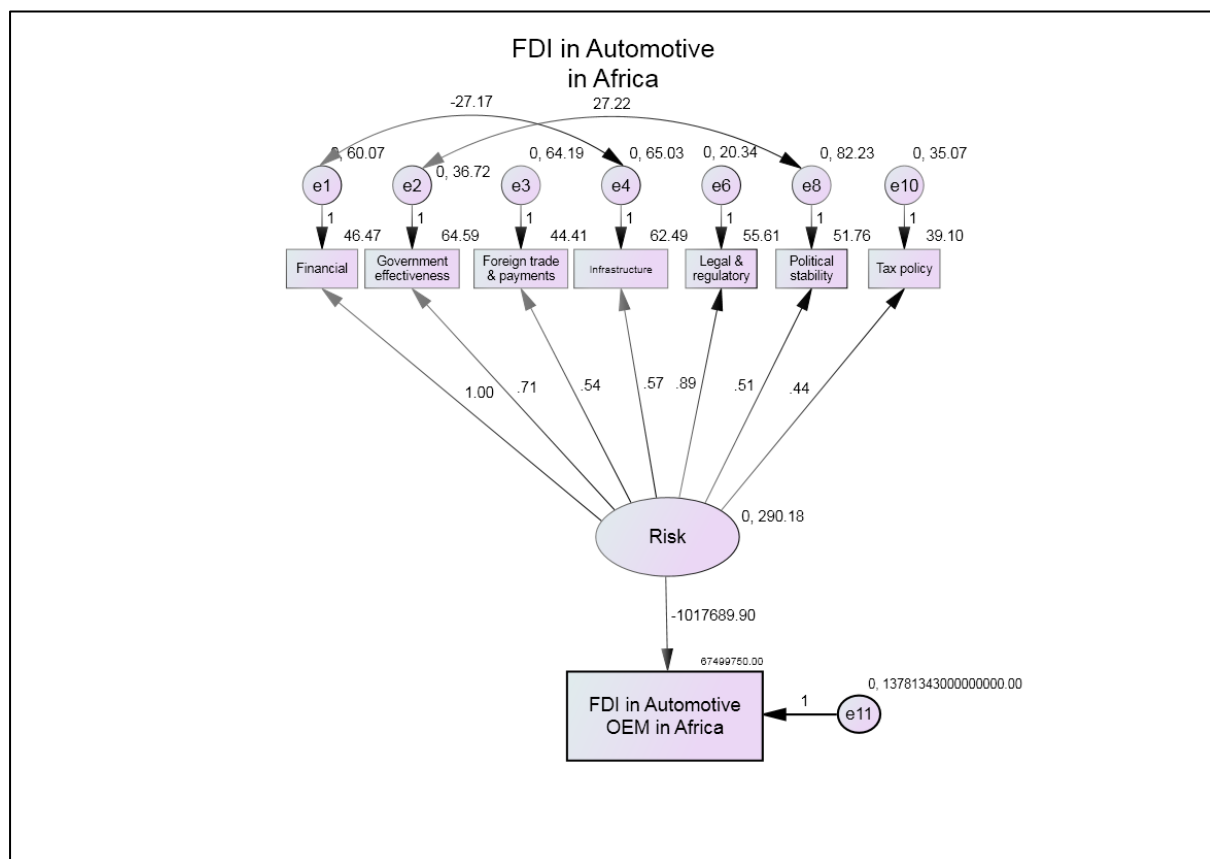
The regression weight for the measurement model on the automotive industry is more significant than the metals-sector model and has the correct relationship –

which according to theory should be negative. The R-square is also better, indicating a slightly better relationship than on metals.

This model demonstrates a strong covariance between the risk factors, financial and infrastructure (-0.43) as well as between political stability and government effectiveness (0.50). This negative correlation indicates an inverse relationship between the financial and infrastructure risk factors.

The following risk factors are ranked from most important to least for the automotive sector; legal and regulatory, financial, government effectiveness, tax policy, infrastructure, foreign trade and payment. The least important factor is political stability.

Unstandardized results



Source: Own Calculations

Model	CMIN/DF	NFI Delta1	IFI Delta2	CFI	RMSEA	PCLOSE
Default model	2.723	.958	.973	.973	.099	.009

Model	CMIN/DF	NFI Delta1	IFI Delta2	CFI	RMSEA	PCLOSE
FMIN test	FMIN	F0	LO 90	HI 90	LO 90	HI 90
Default model	.280	.177	.080	.2	.066	.133

Source: Own Calculations

Likewise, the automotive model also has mixed results. The CMIN/DF is below three but above one which is an indication of a very good, but not perfect fit. The NFI, IFI, CFI are close to one which shows perfect symmetry between actual and estimated. Again, the FMIN value is acceptable and RMSEA is above 0.05 which is a good fit for the data used.

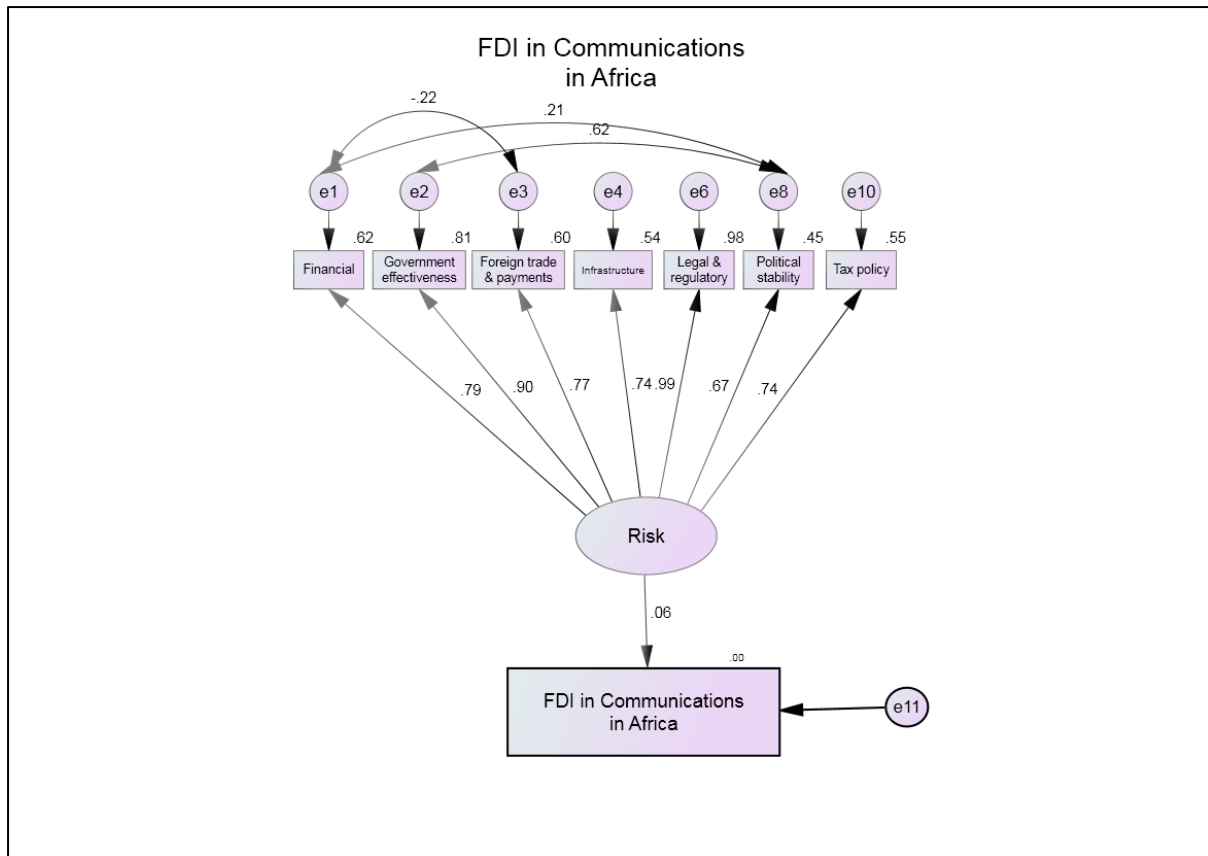
Interpretation

The measurement model demonstrates that there are specific factors that affect the automotive sector and that these factors differ from those affecting the metals sector.

The model also reveals a negative relationship between risk and FDI. Humphrey and Memedovic (2003) state that MNE's invest in the automotive sectors for the establishment of cheap production sites. Thus, as theory indicates, vertical FDI requires a stable value chain.

5.7. The Communications sector

Standardized Results



Source: Own Calculations

As mentioned earlier, factors that have weights above 0.7 are deemed acceptable. For the communications sector, the political stability factor will be included as well.

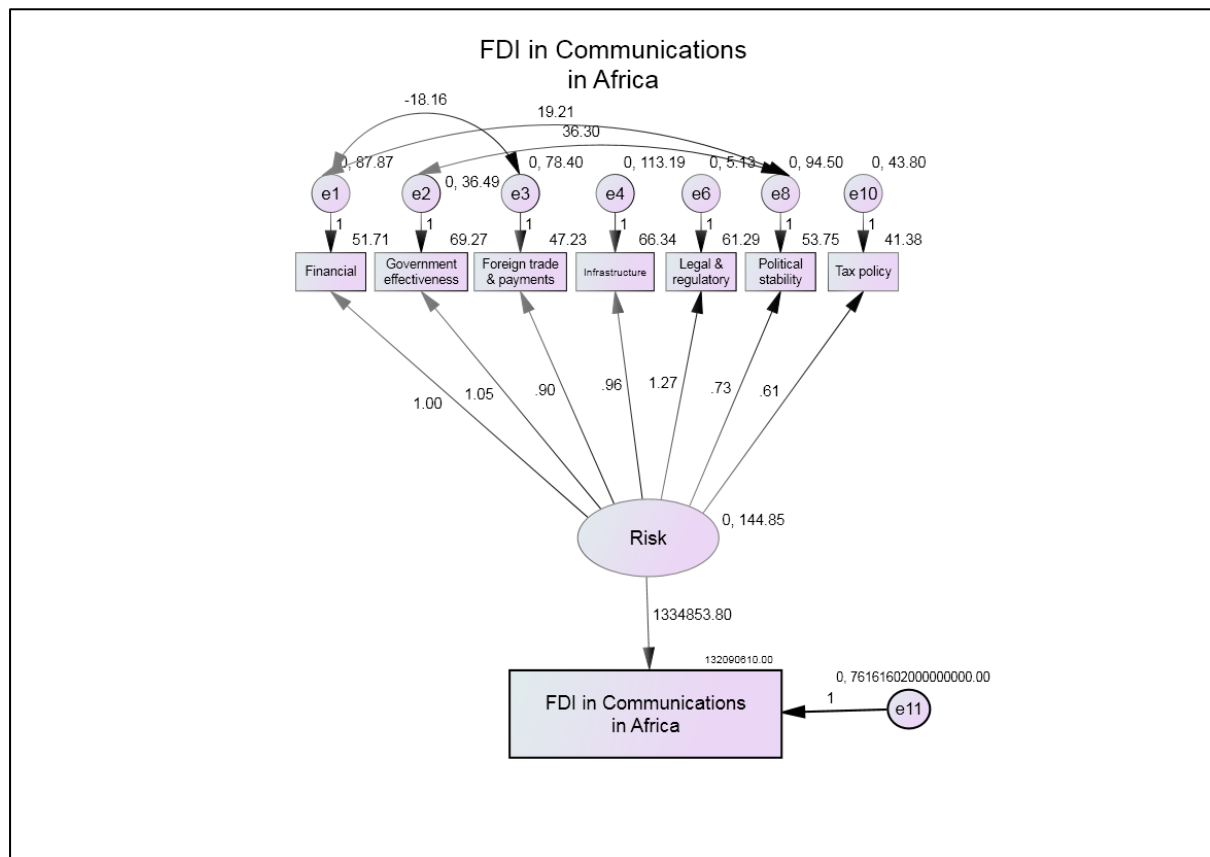
The low regression weight of 0.07 and R square of 0.01 is much the same as for the metals sector model.

A strong covariance is observed between financial and foreign trade and payments; financial and political stability; and financial and political stability.

The communications sector model reveals more covariance between risk factors than the two previous models. According to White and Fan (2006) risk interdependencies are common when a considerable amount of overlapping occurs between different types of risk.

For the communications sector, the legal and regulatory risk factor is ranked as the most important factor. This is followed by government effectiveness, financial, foreign trade and payments, infrastructure and tax policy. As for the automotive sector, the political stability factor is the least important for the communications sector.

Unstandardized results



Source: Own Calculations

Model	CMIN/DF	NFI Delta1	IFI Delta2	CFI	RMSEA	PCLOSE
Default model	3.520	.967	.976	.976	.093	.003
FMIN test	FMIN	F0	LO 90	HI 90	LO 90	HI 90
Default model	.206	.148	.079	.242	.068	.119

Source: Own Calculations

It can be concluded that similar to the metals and automotive models, the communication model also yields mixed results. The CMIN/DF is below four but above one, demonstrating a very good, but not a perfect fit. The NFI, IFI, CFI are close to one, indicating perfect symmetry between actual and estimated covariance.

The FMIN value is acceptable and RMSEA is above 0.05 which is a good fit for the data used.

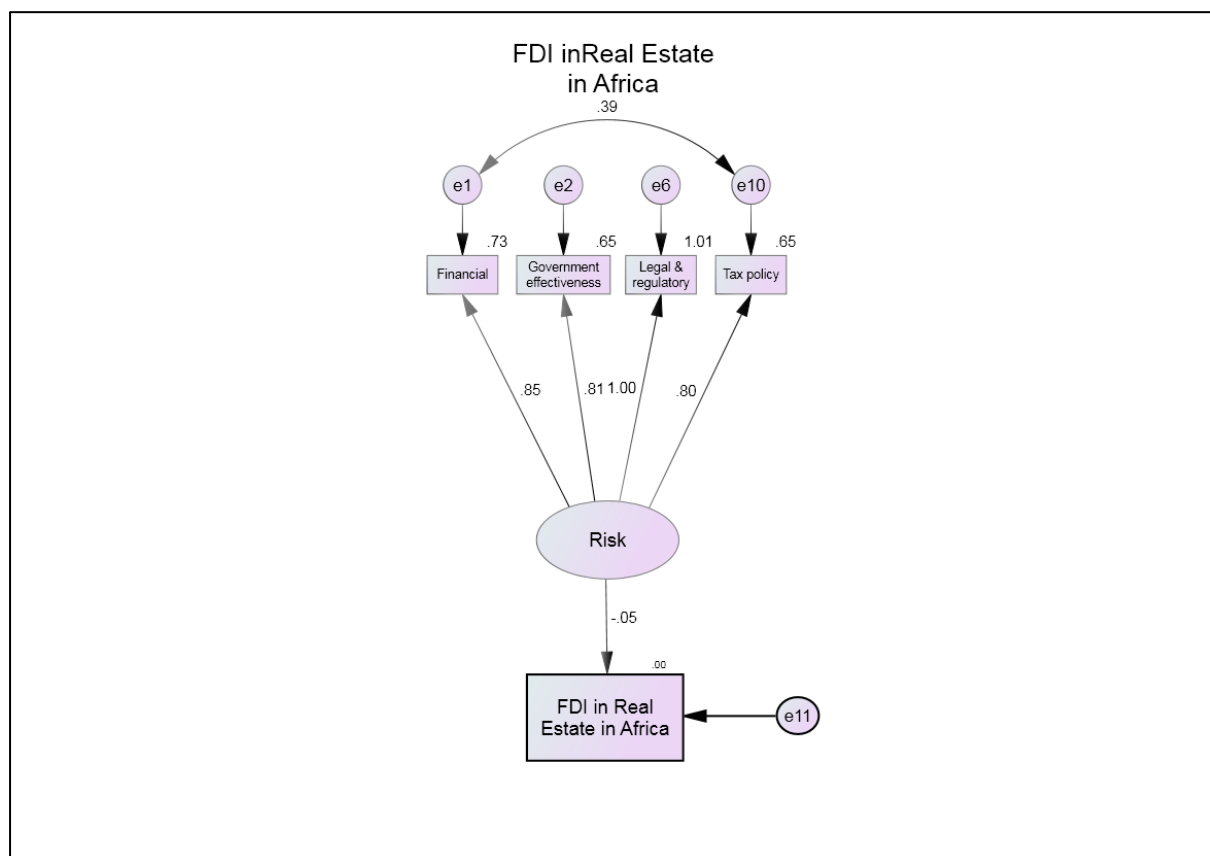
Interpretation

The specific factors that affect the communication sector are very different from the factors affecting the metals model, but more or less the same as the automotive sector.

It can be concluded that there is no significant relationship between Risk and FDI for the communications sector. Njau (2012) describes the communications sector as being market-seeking; hence MNE's are penetrating African countries with large populations (Nigeria, Kenya, Ghana and South Africa).

5.8. The Real Estate Sector

Standardized Results



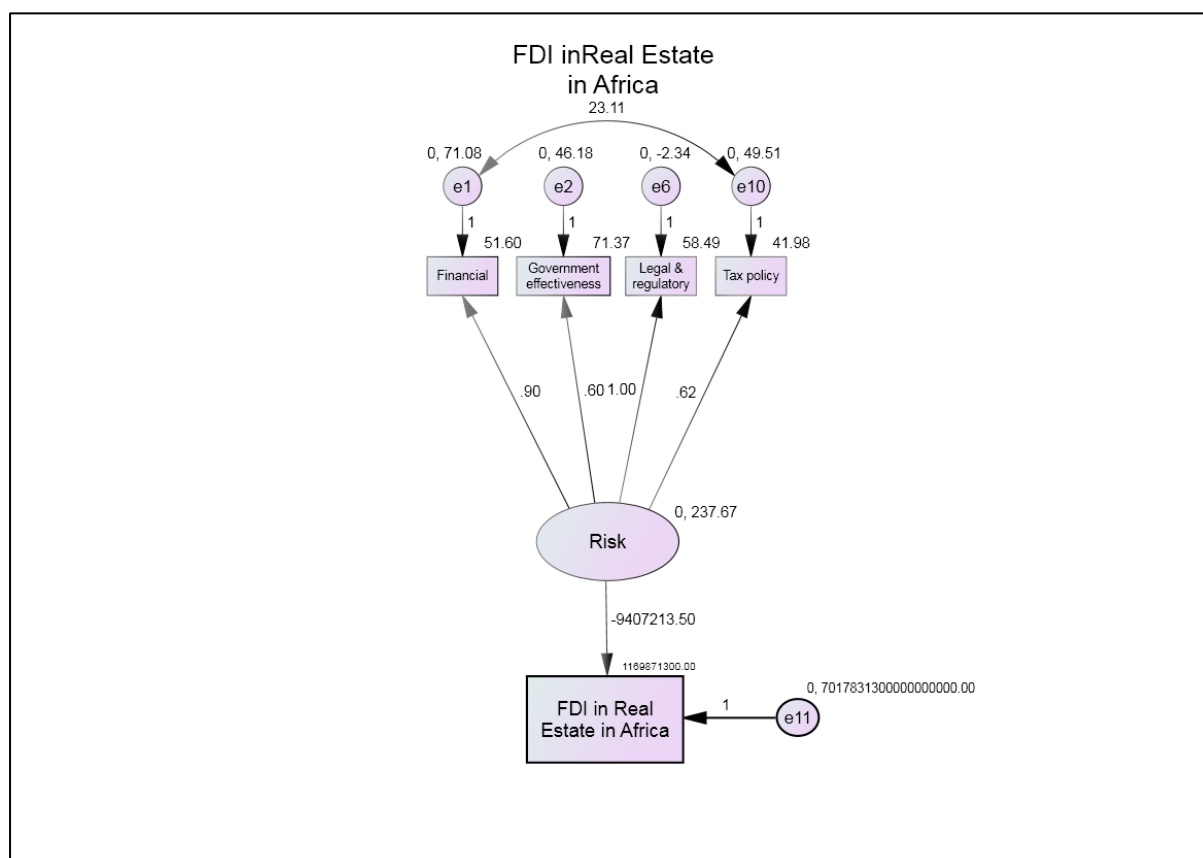
Source: Own Calculations

The factors that have weights above 0.7 are deemed acceptable. It is noteworthy to mention that the political stability risk has an insignificant effect on the Real Estate

sector. The low negative regression weight of 0.05 and R square of 0.01 reveals that risk has a small influence on real estate FDI.

There is strong covariance between the financial risk and tax policy risk factors with a correlation of 0.39. The most important risk factor is legal and regulatory followed by, financial, government effectiveness and tax policy.

Unstandardized results



Source: Own Calculations

Model	CMIN/DF	NFI Delta1	IFI Delta2	CFI	RMSEA	PCLOSE
Default model	1.646	.989	.995	.995	.064	.319
FMIN test	FMIN	F0	LO 90	HI 90	LO 90	HI 90
Default model	.042	.017	.000	.089	.000	.149

Source: Own Calculations

Although the real estate model has mixed results, it is still the only model that shows an acceptable fit under the chi-square test with a probability of 0.168. The CMIN/DF is close to one which is very good model fit. The NFI, IFI, CFI values are close to one which shows perfect symmetry between actual and estimated covariance. The FMIN value is acceptable and RMSEA is above 0.05.

Interpretation

From the real estate model it is evident that the factors that have an impact on this sector differs from the factors impacting the other sectors (metals, automotive and communications). The specific factors affecting the Real estate sectors are focused on financial regulations and taxes.

No significant relationship exists between Risk and FDI and one gets the idea that real estate FDI is asset and tax driven rather than production. According to Muiru (2012) Kenyan Real Estate is driven not only by a rise in urbanisation but also by various tax incentives. Tax policies in Ghana include tax holidays and 100 percent foreign ownership.

5.9. Sector Comparison

Three of the measurement models show an insignificant relation between Risk and FDI. This reveals an insignificant relationship between risk rating of a country and the FDI amount invested. However, the difference in the results obtained from the different sector models suggest a significant difference regarding the risk profile of investment observations.

The underlying covariance and correlation structure of the observation based FDI data allows the FDI figures to influence the Risk factors that make up the unobserved Risk Factor – which is the most significant finding of this study.

Results are as follows:

Metals	Automotive	Communication	Real Estate
Significant Risks	Significant Risks	Significant Risks	Significant Risks
Government effectiveness	Legal & Regulatory	Legal & Regulatory	Legal & Regulatory

Legal & Regulatory	Financial	Government effectiveness	Financial
Tax Policy	Government effectiveness	Financial	Government effectiveness
Foreign Trade & Payments	Tax Policy	Foreign Trade & Payments	Tax Policy
Political stability	Infrastructure	Infrastructure	
Financial	Foreign Trade & Payments		
	Political stability	Political stability	
Risk to FDI	Risk to FDI	Risk to FDI	Risk to FDI
Insignificant	Negative 0.15	Insignificant	Insignificant

Source: Own summary based on results

The study forms a foundation for the understanding of the questions regarding the relationship between risk and investments in Africa. The next section will summarise the main findings.

5.10. Summary

This chapter aimed to empirically provide insight into the relationship between FDI and Risk. In order to determine the correlation between risk and FDI, the value of investment projects into different sectors were measured against risk ratings. The study therefore investigated whether the various risk category factors have an influence on the inflows of FDI to African countries.

SEM is widely used in social sciences and this results in varied opinions and criteria for acceptability. An important aspect of SEM for this study is the capability of modelling data from multiple groups (or samples) simultaneously. The subgroup ability allows for determining the relationships between variables. Via the interpretation of the measurement models, the extent to which the theory was supported by the data, was examined.

The fDi Markets Database provided the data for the *greenfield* investment to African countries for the period 2003 to 2012. The data for the risk ratings is obtained from the EIU database and included ten different risk categories.

What this chapter examined is that the risk factors differed for the various sectors against which it was tested. Risk factors which proved to be insignificant are the political stability factor, especially for the real estate sector, and in some cases, the infrastructure risk factor. The most significant risks tend to be legal and regulatory and government effectiveness factor. It can be concluded that there are different risk patterns regarding the FDI inflows for Africa, but the only significant relationship between the risk ratings and FDI is apparent for the real estate sector.

Bearing this in mind, the results presented in this chapter lead to an interesting conclusion. The conclusion is that certain sectors are influenced by specific risk factors. For the automotive industry, the legal and regulatory, financial and government effectiveness risks are the most significant, which is an indication that the sector leans toward being efficiency-seeking. Risk to FDI is insignificant for the metals industry and the communication sector. FDI inflows for the metals sector tend to be resource-seeking, while FDI inflows for communications are market-seeking. The real estate sector is the only sector with an acceptable model fit and a strong covariance is evident between the financial and tax policy risk. This finding reveals the fact that investment into this sector could be asset and investment tax driven.

This chapter exposed some interesting findings regarding the relationship between risk and FDI in Africa. As more data becomes available, future research will hopefully be able to address the relationship in a much more in-depth manner than has been possible here.

The following chapter will summarise the study, make possible conclusions and make further recommendations for future studies regarding the nature and extent of the relationship between risk and FDI inflows in Africa.

Chapter 6: Summary, Conclusions and Recommendations

6.1. Introduction

The aim of the study was to enable a re-evaluation of the way in which risk is perceived and to carefully evaluate the manner in which risk impacts on the investment decision.

African economies have successfully weathered the global and financial crisis of 2008-2009 and the continent's FDI performance over the last decade is unprecedented. However, despite the growth and progress, the region still only receives 6 percent of global FDI. It seems that the lingering negative perceptions of the continent are hampering the efforts of attracting investors. Ernst & Young (2012) confirms this by stating that there is a large gap between the perception of investors already doing business in Africa and those that have not yet invested. For this reason, investment in Africa and its associated risks will need to be viewed through a completely different lens in order to bridge the perception gap and attract higher levels of FDI. The objective of this study was to specifically explore the risk factors that impacts on FDI inflows into numerous African countries.

The results of studies pertaining to FDI on a sectoral level indicate that there is an immense gap in the literature and data that is available. The available literature gives an indication that FDI determinants vary for the different sectors. Determinants include education, infrastructure, labour costs and democracy. Based on the available literature, it is clear that FDI has many different aspects and the determinants differ not only from developed to developing countries, but also on a deeper sectoral level. White and Fan (2006) concludes by stating that risk is already a major determinant of FDI. The authors argue that, although still unfinished, studies show that there is a clear relationship between FDI flows and the estimates of the country risk. The aim of this study was to contribute to the literature about FDI on a sectoral level and with a main focus on Africa.

This chapter summarises the main findings and is followed by conclusions and recommendations which are based on the empirical study done.

6.2. Summary

In order to provide a sound theoretical base, **Chapter 2** provided a literature survey on which FDI can be analysed, specifically in Africa. It proceeded by describing the various terms and concepts associated with FDI. FDI occurs when an investment is made by entity outside of his home country. Such an investment is usually made to acquire a certain measure of control in such an enterprise.

Various types of FDI exist and can be categorised into mergers and acquisitions, *greenfield* and *brownfields* investment, inward and outward FDI and market-, rent- and resource-seeking FDI.

An overview of the most prominent theories concerning FDI was also provided. The most common theoretical viewpoints regarding FDI are the Multinational theory, the Eclectic theory, the Knowledge-Capital theory, the Dependency theory and the Modernisation theory. The theory of multinational companies states that in order for firms to maximise profits, a decision will be made to invest abroad. Location and internalisation effects a firms' decision about where and what type of FDI will be made.

The eclectic theory predicts three important components of FDI: ownership, location and internalisation. The firm has certain firm-specific assets that will determine whether or not it will be beneficial for them to invest. Also, the firm will only invest in another location if it is more cost efficient and thus more profitable to invest abroad. Internalisation states that it should be more advantageous for the firm to use its assets internally than contracting with other firms in the host country.

The Knowledge-Capital theory integrates the vertical and horizontal model. Results from this model mirror the reality of a MNC's investment decision.

Even though it is not of much use today, the Dependency theory described the cynical attitude with which many African-leaders approached FDI. Developing nations should not be over-reliant on foreign funds, however as China has proven, a more open economy can contribute to long-term economic growth.

Modernisation theory argues that FDI in developing countries should be human and physical capital incentive. Long term economic growth can be achieved through

investments in human capital and technology, if these investments cause positive spillovers.

The determinants of FDI can be divided into macroeconomic and microeconomic determinants. Macroeconomic has an economy-wide impact and microeconomic directly impacts the firm's profitability. Microeconomic determinants comprise market size and growth, transport costs, taxes, labour costs, agglomeration effects, tariff and trade barriers and the host country's policies. Macroeconomic determinants include openness of trade and exports, current account deficits, infrastructure, political stability, institutions and the availability of natural resources.

In order to establish the relevance of traditional determinants, an overview of African specific determinants were given. Although the literature for Africa and developing countries in general, is limited, a conclusion can be made that the African region tends to require a different set of determinants for FDI. Africa's perceived image plays a large role in FDI inflows for the continent.

According to White and Fan (2006), it is stated that different levels of risk exists for different countries, sectors and industries. A firm will engage in FDI if the given level of risk is acceptable. It is clear that the way in which risk is perceived is a significant determinant of FDI. Hence, it is important for investors to identify, estimate and assess the relevant risk in order to make an appropriate decision regarding FDI.

Chapter 3 exposed the limitations of the 'hard' risk approach of portfolio investments and illustrated the need for a new approach for FDI risk. The importance of accurate definitions of uncertainties and risk were also highlighted.

Different perspectives on investment appraisal were discussed to indicate how an investment decision impacts various levels of an enterprise. The three perspectives discussed were financial, strategic and organisational. Hence, it is apparent that an investment project is complex and various stakeholders need to be considered before an investment decision can be made.

The literature overview indicated that there are different levels of risks for different countries, sectors, industries and projects. Risks are sorted from high level risk (global) to lower level (enterprise risk) and a considerable amount of overlapping takes place between the levels and different types of risk. Since developing countries have been attracting a substantial amount of FDI inflows which are beneficial for

their economic growth and development, it is vital to understand how risks of various types are a constraint to flows of such investment.

It was also demonstrated that up to this point, relatively few studies have focused on the risks pertaining to FDI into particular sectors in Africa. The literature overview enabled us to re-evaluate the way we perceive risk and to carefully evaluate the manner in which risk impacts on the investment decision. Subsequently, investment in Africa and its associated risks will need to be viewed through a completely different lens.

In order to gain a better understanding of the nature of FDI, **Chapter 4** focused on what the global trends for FDI looked like for the past few years. Global FDI has suffered several setbacks in the last few years, but is steadily on the increase after recovering from the global economic and financial crisis of 2007-2009. Developed countries are still the frontrunners in receiving FDI; however developing countries have seen a steady increase. On average developed countries contributed to about an average of 68 percent of global FDI inflows during 2000-2008. Recently developing countries as a whole have managed to increase their share of FDI by receiving 45 percent in 2011. FDI flows to developing countries, however, vary significantly. In this regard, developing Asia has been the dominant party in receiving FDI and also accounted for more than half of the developing world's FDI outflows. Even though Africa's position has improved, the last three years have seen a decrease in flows to the region; nevertheless the prospects are looking up as Africa is host to five of the top 10 fastest-growing economies in the world (Ernst & Young, 2012). FDI trends for Africa show that West African countries in particular are acquiring more investment than other African regions, while North Africa has seen a major decline in investments due to the political turmoil, sub-Saharan and Eastern Africa are increasing modestly.

The four sectors that were chosen for this study give an impression of what FDI flows for *greenfield* and M&A investments into Africa look like. As the gateway to Africa, South Africa has been on the receiving end of investments for several sectors, but with a growth rate predicted of only 2, 8 percent, it will be interesting to see how the country will compete with high-growth African countries in the next couple of years. It is noticeable that the majority of FDI inflows in the various sectors

are from developed countries, but developing countries such as India and China are also starting to play an important role.

Different databases were compared to better understand the flows of investment and observe whether risk patterns can be identified. Macroeconomic, labour market and security risk appear to be the least important risk category for investors as investors are not sensitive to the ratings. A conclusion can be made that investors tend to have a larger risk appetite when investing in Africa. It is also evident that M&A investments have a tendency to follow risk ratings, much more so than *greenfield* investment projects.

Chapter 5 aimed to empirically provide insight into the relationship between FDI and Risk. In order to determine the correlation between risk and FDI, the value of investment projects into different sectors were measured against risk ratings. The study therefore investigated if the various risk category factors have an influence on the inflows of FDI to African countries.

The use of structural equation modelling for modelling the relationship between risk and FDI inflows gives a strong indication of the significance of risk in attracting FDI. SEM is widely used in social sciences and this results into many different opinions and criteria for acceptability. An important aspect of SEM for this study is the capability of modelling data from multiple groups (or samples) simultaneously. Although it is not widely used, it is gaining popularity as a specification method. The subgroup ability allows for the determination of the relationships between variables. Through the interpretation of the measurement models, the extent to which theory was supported by the data was examined.

The fDi Markets Database provided the data for the *greenfield* investment to African countries for the period 2003 to 2012. The data for the risk ratings is obtained from the EIU database and included ten different risk categories.

What this chapter examines is how the risk factors differ for the various sectors against which it was tested. Risk factors which proved to be insignificant are the political stability factor, especially for the real estate sector, and in some cases the infrastructure risk factor. The most significant risks tend to be legal and regulatory and government effectiveness factor. It can be concluded that there are different risk

patterns regarding the FDI inflows for Africa, but the only significant relationship between the risk ratings and FDI is apparent for the Real estate sector.

Bearing this in mind, the results presented in this chapter lead to an interesting conclusion. These being that certain sectors are influenced by specific risk factors. For the automotive industry, the legal and regulatory, financial and government effectiveness risks are the most significant, which is an indication that the sector leans toward being efficiency-seeking. Risk to FDI is insignificant for the metals industry and the communication sector. FDI inflows for the Metals sector tend to be resource-seeking, while FDI inflows for communications are market-seeking. The Real Estate sector is the only sector with an acceptable model fit and a strong co-variance is evident between the financial and tax policy risk. This finding reveals that investment into this sector could be asset and investment tax driven.

Though the available data is very limited and many questions regarding risk profiling for FDI could not be satisfactorily answered, the empirical results do yield some interesting preliminary answers about the relationship between risk and FDI in Africa, which provide a basis for further analysis of this issue. As more data becomes available, future research will hopefully be able to address the relationship in a much more in-depth manner than has been possible here.

6.3. Conclusion and Recommendations

The objective of this study was to specifically explore on sectoral level the relationship between risk and FDI inflows into various African countries. The intention was to determine, with the help of literature and empirical evidence, the effect of risk rating factors on FDI inflows into various sectors of the economy and whether the effect of these factors was significant.

This study focused on the African region and posed the question if a relationship exists between risk and FDI. This study has made four contributions:

- Firstly, it has provided an empirical test of the relationship between risk and FDI inflows. The results indicate that in Africa risk factors differ for the various sectors they were tested against.
- Secondly, a contribution was made to the literature on FDI to African countries. This study also contributed to the relatively small, but growing

literature on sectoral FDI. Very few studies exist that focus on African FDI let alone sectoral FDI.

- Thirdly, it added to the speculation on the relativeness of traditional determinants of FDI to Africa. The results showed that certain sectors are influenced by certain risk factors. It can be concluded that traditional determinants provide the overall framework for an investment decision concerning Africa, but a different approach is needed when investing into specific sectors within these individual countries.
- Fourthly, the results obtained are of interest to African countries looking to attract FDI through favourable investment policies. African governments need to identify and implement sustainable policies in order to strengthen their investment climate and reduce risk. Policies could include the reform of tax incentives and innovative financing-schemes such as public private partnerships.

Recommendations for further research include an expansion on selection of the sectors presented in this study. Research could also be conducted on investment into individual African countries in order to gain an in-depth insight of how risk impact on the FDI inflows into particular sectors for specific countries. Country analyses will provide a different insight than the general overview which was used in the study.

As for any study conducted on multiple African countries, the main constraint for this dissertation was the availability of adequate data. Although the situation is changing with more and more international bodies and private entities collecting more specific data, the need still exist for African governments to produce more detailed and transparent data, especially data concerning M&A projects.

To conclude, the literature review discussed several categories of risks that impact the investment decision, in general and in developing countries in particular. These risks include financial, operational, regulatory and even cultural risks. The study focused particularly on risks connected with investment into the metals, automotive, communications and real estate sectors. The results showed that legal and regulatory and government effectiveness risks cause the biggest concern for investors. This highlights the importance of stable and predictable regulations as well as a transparent and effective government to ensure continuous FDI inflows. There is a need for African governments to identify policies and procedures that can best

reduce regulatory risk in order to stimulate investment. Additional efforts to ensure good governance will add to the favourable investment climate. Any progress on reducing these risks could bring benefits for African countries that are looking to increase levels their levels of FDI.

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Appendix A

Table A: Economist Intelligence Unit - Risk Categories

Risk	Description
Security risk	<ul style="list-style-type: none"> • Armed conflict • Terrorism • Violent demonstrations • Hostility to foreigners/private property • Violent crime • Organised crime • Kidnapping/extortion
Political stability risk	<ul style="list-style-type: none"> • Social unrest • Orderly transfers • Opposition stance • Excessive executive authority • International tensions
Government effectiveness risk	<ul style="list-style-type: none"> • Policy formulation • Quality of bureaucracy • Excessive bureaucracy/red-tape • Vested interests/cronyism • Corruption • Accountability of public officials • Human rights
Legal & regulatory risk	<ul style="list-style-type: none"> • Fairness of judicial process • Enforceability of contracts • Speediness of judicial process • Discrimination against foreign companies • Confiscation/expropriation • Unfair competitive practices • Protection of intellectual property rights • Protection of private property • Integrity of accounting practices • Price controls

Risk	Description
Macroeconomic risk	<ul style="list-style-type: none"> • Exchange rate volatility • Recession risk • Price instability • Crowding out • Interest rate volatility
Foreign trade & payments risk	<ul style="list-style-type: none"> • Trade embargo risk • Financial crisis • Discriminatory tariffs • Excessive protection • Capital account • Current account convertibility • Capital controls risk
Financial risk	<ul style="list-style-type: none"> • Devaluation risk • Depth of financing • Access to local markets • Marketable debt • Banking sector health • Stockmarket liquidity
Tax policy risk	<ul style="list-style-type: none"> • Stable regime • Discriminatory taxes • Level of corporate taxation • Retroactive taxation
Labour market risk	<ul style="list-style-type: none"> • Trade unions • Labour strikes • Labour laws • Skilled labour • Specialised labour • Meritocratic remuneration • Freedom of association

Risk	Description
<p>Infrastructure risk</p>	<ul style="list-style-type: none"> • Port facilities • Air transport facilities • Retail and distribution network • Telephone network • Road network • Power network • Rail network • IT infrastructure

Table B: ONDD - Risk Categories

Risk	Description
Political medium term risk	<p>The assessment of the financial situation of a country is based on the external debt ratios, for which critical values have been fixed based on econometric estimates. Some liquidity indicators such as the level of foreign exchange reserves are added. A country's economic situation is evaluated using three sets of indicators: indicators of economic policy performance such as fiscal and monetary policy, external balance and structural reforms, indicators reflecting the country's growth potential such as income level and savings and investment quotes and external vulnerability indicators like export diversification and aid dependency. Risks related to the political situation are also based on quantified indicators. Payment experience data used in the model are from both ONDD and other OECD credit insurers, reflecting the experience on current commitments as well as under rescheduling agreements concluded in the Paris Club.</p>
War Risk	<p>War risk means both the risks of external conflict and the risks of domestic political violence. Apart from the extreme case of civil war, domestic political violence also covers risks of terrorism, civil unrest, socio-economic conflicts and racial and ethnic tension</p>
Risk of expropriation and government action	<p>The risk of expropriation and government action not only covers the risks of expropriation and breach of contract by the government, but also risks related to the (dys)functioning of the judiciary system and the risk of a possible negative change of attitude towards foreign investor</p>
Transfer risk	<p>The quantitative assessment of transfer risk is based on the same principles as the assessment of political risks related to medium-/long-term exports transactions</p>