



Foreign Direct Investment in Oil-Exporting Countries: Long-run Determinants and Causal Relationship with Economic Growth

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Abstract

This thesis examines the long-run determinants of FDI in oil-exporting countries, and the causal relationship between FDI and economic growth in that group of countries. It focuses on the “traditional” determinants of FDI that have been examined within the literature as well as on a number of other determinants which specifically relate to oil-exporting countries, with a special focus given to political and institutional risk determinants. The thesis relies on two theories as a theoretical background; the Eclectic Paradigm and the Rentier State theory. It contributes to the existing literature of the determinants of FDI. That is to say, it is the first to investigate the long-run determinants of FDI in oil-exporting countries. It also provides a further test for the Eclectic Paradigm particularly by analysing the locational advantages (L) of that theory, taking into the account the long-run effect of these advantages upon FDI in host countries. Finally, it contributes to the literature on economic growth by empirically testing the relationship between FDI and economic growth; considering the impact of FDI on economic growth and vice versa. The data sample in the thesis comprises 44 oil-exporting countries over 30 years from 1984-2012. The thesis reports a number of findings regarding the determinants of FDI. It firstly finds that “openness to trade” and “composite risk” are the most important variables (amongst the overall determinants) for FDI inflows in oil-exporting countries in the long-run, while “law and order” is the most important variable amongst the institutional and political determinants. It also concludes that FDI does not contribute to economic growth in oil-exporting countries; the only contribution is observed within non-rentier and non-Islamic oil-exporting countries.

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List of Acronyms

AOEC	All Oil-Exporting Countries
ASEAN	Association of Southeast Asian Nations
BRICS	Brazil, Russia, India, China and South Africa
CEECs	Central and Eastern European Countries
CIA	Central Intelligence Agency
CIS	The Commonwealth of Independent States
CPI	Corruption Perception Index
DH	Dumitrescu and Hurlin
DOLS	Dynamic Ordinary Least Squares
DTF	Distance To Frontier
ECM	Error Correction Model
EIA	Energy Information Administration
EPZs	Export Processing Zones
FDI	Foreign Direct Investment
FMOLS	Fully-Modified Ordinary Least Squares
FTAs	Free Trade Agreements
GATT	General Agreement on Tariffs and Trade
GCC	Gulf Cooperation Council
GDP	Gross Domestic Production
GMM	Generalised Method of Moment
GVCs	Global Value Chains
HDI	Human Development Index
ICRG	The International Country Risk Guide
ILO	International Labor Organisation
IMF	International Monetary Fund
JV	Joint Venture
LDCs	Least Developed Countries
M&As	Mergers and Acquisitions
MENA	Middle East and North Africa

MG	Mean Group
MIGA	The Multinational Investment Guarantee Agency (MIGA)
MINT	Mexico, Indonesia, Nigeria, and Turkey
MNCs	Multinational Corporations
NROEC	Non-Rentier Oil-Exporting Countries
ODD	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
OECS	Oil-Exporting Countries
OIC	Organisation of Islamic Countries
OLI	Ownership Locational Internalisation
OLS	Ordinary Least Squares
PMG	Pooled Mean Group
PWC	PricewaterhouseCoopers
R&D	Research and Development
ROEC	Rentier Oil-Exporting Countries
SIMSDI	Survey of Implementation of Methodological Standards for Direct Investment
SOEs	State-Owned Enterprises
SSA	Sub-Saharan Africa
SUR	Seemingly Unrelated Regression
TNCs	Transnational Corporations
TRIMs	Agreement on Trade-Related Investment Measures
TSCS	Time Series Cross Sectional
UCDP	Uppsala Conflict Data Programme
UNCTAD	United Nations Conference on Trade and Development
UNCTC	The United Nations Centre on Transnational Corporations
VECM	Vector Error Correction Model
WB	World Bank
WGI	Worldwide Governance Indicator
WTO	World Trade Organisation

Chapter 1

Introduction

1.1 Introduction

Foreign Direct Investment (FDI) plays an important role in today's globalized economy, and it has played a key role in strengthening Globalisation in its third wave¹ (Soubbotina, 2004). The importance of FDI to the world economy can be inferred through two main aspects. Firstly, through its share of world capital flows, and secondly, through its positive effects on host economies. As a share of total cross-border investment, FDI flows comprised around 50% of total cross-border investment² in developing economies during the 1990s and 2000s, and around 40% in emerging economies during the same period (IMF, 2011:134). Further, FDI was the main source of external finance in most deficit countries during 2012-2014 (IMF, 2015). The above statement raises questions as to why FDI goes to a specific country? What factors drive investors to a specific destination to invest? What are the most important determinants of FDI? In fact, there are a number of theories which seek to explain the FDI process. One of the most comprehensive, dynamic, and widely applied theories is the Eclectic Paradigm (the OLI Approach) developed by Dunning (1979, 1988b, 1993). This theory suggests that FDI can be undertaken in a specific country when three conditions are satisfied: The Ownership advantages (O), the Locational advantages (L), and Internalization advantages (I). The Ownership advantages (O) mean that the investing company should first have some advantages over other investors such as easy access to

1 There are three waves of Globalisation; the first wave occurred between 1870 and 1914 and was characterised mainly by rapidly growing trade, FDI, and migration from Europe, China, and India to other countries. The second wave started in 1950s, continuing until the 1980s, and was shaped also by increasing growth in trade and FDI in addition to the establishment of the General Agreement on Tariffs and Trade (GATT). The third wave operated from 1980 until the present and is primarily driven by two main factors: new advanced technologies and more liberal trade and capital movement, especially with the role of the World Trade Organization (WTO), and other international organisations such as the World Bank (WB) and the International Monetary Fund (IMF). More details can be found in: Soubbotina, T. P. 2004. Beyond Economic Growth: An Introduction to Sustainable Development, Washington DC, World Bank Publications.

2 The IMF classifies cross-border investment into four categories: Foreign direct investment, Portfolio debt flows, Portfolio equity flows and Bank and other private flows, see IMF 2011. World Economic Outlook–Tensions from the Two-Speed Recovery: Unemployment Commodities, and Capital Flows. Washington.

funds, knowhow, and effective managerial system. The Locational advantages (L), which are the central point of the theory upon which this thesis relies, suggests that a host country's potential, such as natural resources, low tax rates, market scale and so on, play a positive role in attracting FDI. The Internalization advantages (I) suggest that after fulfilling the O and L advantages, the option of locating and operating a business in the host country will be more beneficial for the investor rather than exporting their products to that country. There is a no consensus on a specific set of determinants affecting FDI, but the relevant literature shows that a number of determinants have been widely concluded as influential factors on FDI. For example, larger market size is found to attract more FDI, as found, among others, by Javorcik et al. (2011), and Sadekin et al. (2015). Sound infrastructure also promotes attraction of FDI (Kinda, 2010). Other factors include a favourable exchange rate, as in Udomkerdmongkol et al. (2006) and Xu (2013); inexpensive labour, as in Kinoshita and Campos (2003) and Brandl et al. (2013); an acceptable inflation rate, as in Singh et al. (2013) and Zakaria et al. (2014); an abundance of natural resources, as in Asiedu (2006), Sawkut et al. (2007), and Acheampong and Osei (2014) ; sound institutions, as in Cleeve (2008) and Buracom (2014), and low political risk as in Busse and Hefeker (2007) and Hayakawa et al. (2013).

After FDI reaches its destination, it is presumed to have an impact upon the host country's economy. It is widely known that FDI is considered to be one of the most important tools for achieving economic growth and development. The traditional concept of FDI suggests that FDI can contribute to a country's economic growth via capital accumulation and job creation (Solow, 1956, Swan, 1956). The later developments in FDI movement across the world have changed that notion, adding other important tools such as transferring technology, conveying ideas/knowhow, and developing local managerial skills (Romer, 1986, Lucas, 1988). The positive impact of FDI has been proven empirically by a number of studies. For example, Tan and Tang (2016) find that FDI contributes positively to the ASEAN-5 regions in a study covering the period from 1970-2012. Iamsiraroj (2016) also finds that FDI has a positive impact on economic growth in a cross-country study covering 124 states from 1971 to 2010. Similar findings are reached by Nwaogu and Ryan (2015), Seyoum et al. (2015), and Ibrahim and Abdullah (2015). However, some studies find that there is no impact of

FDI on economic growth. For example, Elkomy et al. (2016b) find that FDI is an insignificant variable in explaining economic growth in 61 transition and developing countries from 1989 to 2013. Similar findings are concluded by Mehrara and Musai (2015) from the MENA region over the period 1970-2010.

1.2 Research Motivations

Oil-exporting countries (OECs) are viewed as being rich, and they do not suffer from capital shortage, as these countries have benefited greatly from oil revenues over the last 30 years (Askari and Jaber, 1999). Therefore, the saving-investment gap is presumed to not exist in such circumstances. Nevertheless, OECs received considerable volumes of FDI inflows relative to Global inflows; that is, 31% over the period from 1970-2014 (UNCTADstat, 2015). Despite these inflows being important per se, OECs continue to face a number of challenges in terms of the impact of these inflows on development, sustainable development, and the creation of an FDI-friendly environment. According to rentier state theory by Mahdavy (1970), Beblawi (1987), and Luciani (1987), OECs tend to have specific economic, political, and social characteristics and these pose challenges for FDI. One challenge is the impact of the Dutch disease/resource curse upon attraction of FDI, through their impact in reshaping a country's economic sector and the quality of institutions as well as political stability. In addition, OECs, rentier ones in particular, are supposed to have one leading economic sector, lower quality institutions, and less stable politics. All these features play a role in affecting FDI inflows into oil-exporting countries. Another important challenge is the religious identity of oil-exporting countries. Islam is the religion of nearly half of oil-exporting countries, and some Islamic practices may also play a role in attracting FDI to oil-exporting countries; applying Islamic or civil laws and the application of Islamic banking regulations, for instance. One notable issue here is that the performance of non-rentier oil-exporting countries was much better in this regard compared with rentier oil-exporting countries. Non-rentier oil-exporting countries received 24.3% of total world FDI inflows compared with only 7.7% for rentier oil-exporting countries (WB, 2014).

The other motive is that FDI is vital to the global economy and to OECs themselves. Attracting FDI into OECs countries, within the oil industry, is important to fulfill growing global demand for oil products in light of growing global consumption.

According to the Energy Information Administration (EIA), the world's crude oil consumption increased by 45% between 1980 and 2013; from 63,122 thousand barrels/day in 1980 to 91,194 thousand barrels/day in 2013. Meanwhile, natural gas consumption increased more; by 129% between 1980 and 2013, from 52,943 billion cubic feet/day in 1980 to 121,357 billion cubic feet/day in 2013. Further, FDI in OECs, within non-oil sectors, is important for economic diversification in these countries, given that some oil-exporting countries, rentier countries in particular, rely heavily on the oil sector. Finally, FDI could help in reducing the sudden and negative effects of oil price drops, FDI projects in such cases could help to decrease these effects, especially in recruitment and provision of infrastructure services.

1.3 Research Objectives

The objectives of this thesis are designed to reach the following aims with respect to FDI in oil-exporting countries, countries' performance in attracting FDI and the causal relationship with economic growth.

- i. Investigating the determinants of FDI in oil-exporting countries.
- ii. Testing the arguments of the Eclectic Paradigm within oil-exporting countries in the long-run.
- iii. Investigating the difference in the role played by each potential determinant over five categories of oil-exporting countries; all oil-exporting countries, rentier and non-rentier, and Islamic and non-Islamic oil-exporting countries.
- iv. Determining the impact of FDI on economic growth in oil-exporting countries, and over the same five categories mentioned above.
- v. Determining the impact of economic growth on FDI in oil-exporting countries, and over the same five categories mentioned above.
- vi. Suggesting policy implications according to research findings which can be useful for bodies involved in FDI in oil-exporting countries or other interested parties, policy makers in oil-exporting countries, investors, and international institutions in particular.

1.4 Research Questions

The above research motivations give rise to a number of research questions related to the determinants of FDI in oil-exporting countries, and the causal relationship between FDI and economic growth in that group of countries. Thus, the following questions will be addressed within this thesis:

Q1: What are the main determinants of FDI in oil-exporting countries?.

Q1-A: Does the oil-dependence level play a role in these determinants?

Q1-B: Does the religious identity play a role in these determinants?

Q2: What is the role played by different potential institutional and political risk determinants in oil-exporting countries?

Q2-A: Does the oil-dependence level have an impact on the role played by these determinants in oil-exporting countries?

Q2-B: Does the religious identity have an impact on the role played by these determinants in oil-exporting countries?

Q3: What is the causal relationship between FDI and economic growth in oil-exporting countries?

Q3-A: Does FDI cause economic growth in oil-exporting countries? do oil-dependence levels and religious identity make a difference?

Q3-B: Does economic growth cause FDI in oil-exporting countries? do oil-dependence levels and religious identity make a difference?

Q4: What policy lessons can be drawn from the thesis?

1.5 Research Contribution

The contribution of this research to the existing literature can be described in a number of aspects. Firstly, this study is the first to investigate the long-run determinants of FDI in oil-exporting countries. It provides comparative evidence of the interaction between oil factors, institutional and political risk; an area which has not received sufficient attention within the field. Secondly, it provides a further test for the Eclectic Paradigm particularly by testing the locational advantages (L) of that theory, taking into the account the long-run effect of these advantages upon FDI in host countries. Thirdly,

given that this thesis investigates the causal relationship between FDI and economic growth in oil-exporting countries, it contributes to the literature on economic growth by empirically testing the relationship between these variables in both directions, considering the impact of FDI on economic growth according to a country's oil-dependence level and religious identity. Fourthly, this thesis applies a newly developed panel causality test, the Dumitrescu and Hurlin (DH) test, and to best of the author's knowledge this is the second research project to apply the DH causality test to examine the causal relationship between FDI and economic growth³. Finally, the findings of this research can be adopted by policy-makers and specialized institutes in OECs for the formulation of strategies to attract FDI and to direct it towards certain sectors. It could also be of use to oil companies, as well as companies working in other fields, in formulating policies for ongoing operations and informing their investment decisions regarding projects in oil-exporting countries, as well assisting investors to evaluate such prospective enterprises.

1.6 Overall View of Research Methodology

This thesis applies a quantitative methodology using secondary data from different sources, mainly the World Bank (WB), the United Nations Conference on Trade and Development (UNCTAD), the U.S Energy Information Administration (EIA), and the PRS⁴ group. It includes three empirical chapters; two of them (chapters 4 and 5) apply the Pooled Mean Group (PMG) model introduced by Pesaran et al. (1999), in order to investigate the long-run determinants of FDI in oil-exporting countries. The first empirical chapter, chapter 4, applies the PMG model to examine the overall long-run determinants in oil exporting countries. It reports the estimating of FDI as a dependent variable against 8 explanatory variables: oil reserves, Dutch disease, exchange rate, inflation rate, per capita GDP, oil price, openness, composite risk. The second empirical chapter, chapter 5, also applies the PMG model, but it replaces the

3 Akbas et al. (2013) is the first who apply that approach to examine causality in the relationship between FDI and GDP in The Group of Seven (G7) over the period from 1990-2011. See: Akbas, Y. E., Senturk, M. & Sancar, C. 2013. Testing for causality between the foreign direct investment, current account deficit, GDP and Total credit: Evidence from G7. *Panoeconomicus*, 60, 791-812.

4 The PRS Group Inc. is an independent US-based company founded in 1979 and is globally known as a leading private organisation in providing an investment risk database. The PRS group offers two main risk data-sets, titled Political Risk Services (PRS) and the International Country Risk Guide (ICRG), and its database is widely utilised within research on political and institutional risk aspects. More information on the PRS group is available on its website: (<https://www.prsgroup.com/>).

variable composite risk, which is tested in the previous chapter, with its sub-components, with the objective of testing every single component of that important variable. Thus, 12 institutional and political risk variables are tested in that chapter. The variables are: government stability, internal conflict, external conflict, military in politics, religion in politics, democratic accountability, socioeconomic conditions, ethnic tensions, corruption, law & order, bureaucracy quality, and investment profile. The third empirical chapter, chapter 6, applies a different methodology. It tests for causality in the relationship between FDI (measured by FDI inflows) and economic growth (measured by GDP) in oil-exporting countries. Thus, a causality test approach is used in that chapter, applying a newly-developed panel causality test; the Dumitrescu and Hurlin (DH) causality test, introduced by Dumitrescu and Hurlin (2012).

1.7 Research Structure

This thesis is structured in Seven chapters. Chapter One is the **introduction**, which covers the background of the research in terms of its motivations, questions, objectives, contribution, methodology, key terms and structure.

Chapter two represents a **general overview** regarding FDI and oil-exporting countries, which starts by describing the global FDI trends since 1970 and the geographical and sectoral distribution of both FDI inflows and outflows. It continues to give a general view about oil-exporting countries in terms of the main economic indicators, natural resources, business environment, and the performance of OECs in attracting FDI.

Chapter Three is the **literature review** of the thesis; it presents various aspects of FDI in terms of its definitions, theories, the potential impact upon host economies, as well as empirical evidence of its determinants in the literature, and it finishes with the main features of the political economy of oil-exporting countries.

Chapters Four and Five are **empirical examinations** of the determinants of FDI in oil-exporting countries. Chapter Four tests for the overall determinants of FDI in oil-exporting countries, while chapter Five focuses on the political and institutional risk determinants in a more detailed way.

Chapter Six tests for a **causal relationship** between FDI and economic growth in oil exporting countries. This is presented as an independent chapter, utilising a different methodology to that applied in the previous two chapters.

Finally, chapter Seven provides a **conclusion** to the whole thesis based on the results obtained in the empirical chapters. It also provides policy implications which can be drawn from the thesis, and it finally diagnoses the limitations of the thesis and provides suggestions for future work in the area.

1.8 Research Key Terms

A number of terms are utilised in this thesis; below are descriptions of what each term means.

- i. **Foreign Direct Investment (FDI):** this thesis adopts the OECD's definition of FDI which states that FDI is "a category of cross-border investment made by a resident in one economy (the direct investor) with the objective of establishing a lasting interest in an enterprise (the direct investment enterprise) that is resident in an economy other than that of the direct investor" The lasting interest involves at least 10% of the voting power of the foreign direct investment enterprise. (OECD, 2009:17).
- ii. **Panel 1: All oil-exporting countries (44 countries) :** are those countries in which oil exports constitute an average of 10% or more of their total exports over the period from 1984-2013. According to that criteria, these are 44 countries, after excluding Azerbaijan, Kazakhstan, the Russian Federation and Turkmenistan due to a lack of data. Thus, AOEC: Algeria, Angola, Brunei Darussalam, Congo, Ecuador, Egypt, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Norway, Oman, Qatar, Saudi Arabia, Sudan, Syria, Trinidad and Tobago, UAE, Venezuela, Yemen, Argentina, Australia, Bahrain, Bolivia, Bulgaria, Cameroon, Canada, Colombia, Cote d'Ivoire, Greece, Indonesia, Malaysia, Mexico, Mozambique, Netherlands, Peru, Poland, Senegal, South Africa, Tunisia, United Kingdom and Vietnam.

- iii. **Panel 2: Rentier oil-exporting countries (22 countries):** are oil-exporting countries in which oil exports constitute an average of 40 % or more of their total exports over the period from 1984-2013. The countries are: Algeria, Angola, Brunei Darussalam, Congo, Ecuador, Egypt, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Norway, Oman, Qatar, Saudi Arabia, Sudan, Syria, Trinidad and Tobago, UAE, Venezuela, and Yemen.
- iv. **Panel 3: Non-rentier oil-exporting countries (22 countries):** are oil-exporting countries in which oil exports constitute an average between 10%-40% of total exports over the period from 1984-2013. The countries are: Argentina, Australia, Bahrain, Bolivia, Bulgaria, Cameroon, Canada, Colombia, Cote d'Ivoire, Greece, Indonesia, Malaysia, Mexico, Mozambique, Netherlands, Peru, Poland, Senegal, South Africa, Tunisia, United Kingdom and Vietnam.
- v. **Panel 4: Islamic oil-exporting countries (20 countries):** are oil-exporting countries where the Islamic religion is the dominant religion amongst the population. The countries are: Algeria, Brunei Darussalam, Egypt, Iran, Iraq, Kuwait, Libya, Nigeria, Oman, Qatar, Saudi Arabia, Sudan, Syria, UAE, Yemen, Bahrain, Indonesia, Malaysia, Senegal, and Tunisia.
- vi. **Panel 5: Non-Islamic oil-exporting countries (24 countries):** are all oil-exporting countries other than the Islamic ones. The countries are: Angola, Congo, Ecuador, Gabon, Norway, Trinidad and Tobago, Venezuela, Argentina, Australia, Bolivia, Bulgaria, Cameroon, Canada, Colombia, Cote d'Ivoire, Greece, Mexico, Mozambique, Netherlands, Peru, Poland, South Africa, United Kingdom, and Vietnam.
- vii. **Pooled Mean Group (PMG):** is an econometrics model by Pesaran et al. (1999), and is utilised to investigate the determinants of FDI in oil-exporting countries within chapters 4 and 5 of this thesis.
- viii. **Dumitrescu and Hurlin (DH) causality test:** is an econometric model based on Granger's (1969) causality test approach. It was developed by Dumitrescu and Hurlin (2012), and utilised in chapter 6 of this thesis to test for causality in the relationship between FDI and economic growth in oil-exporting countries.

Chapter 2

FDI and Oil-Exporting Countries: An Overview

2.1 Introduction

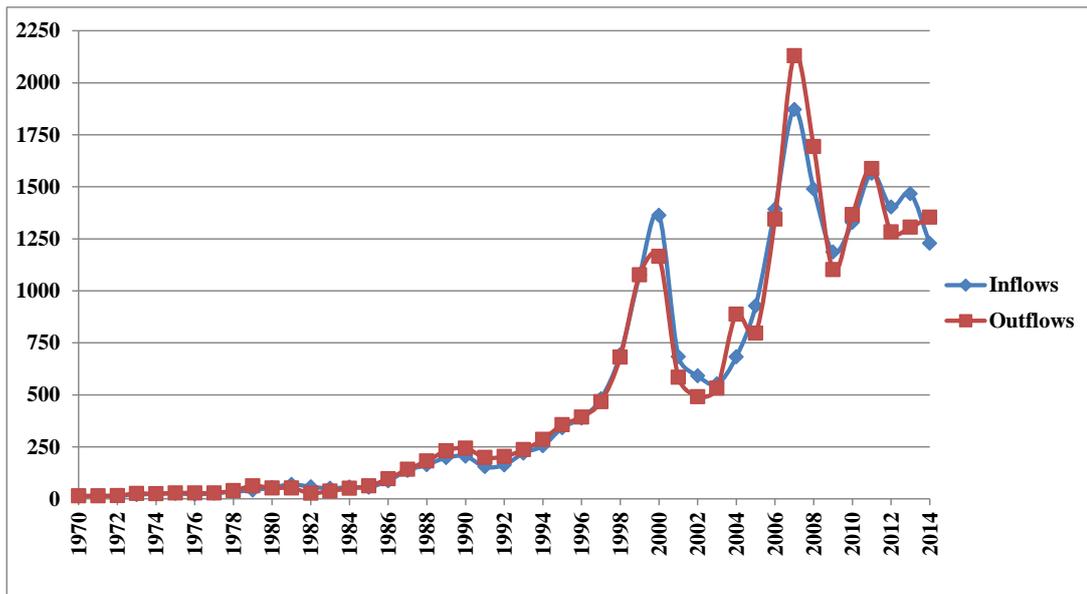
Over the last three decades, FDI has seen fundamental changes in terms of its flows, types, and trends. The role of multinational corporations (MNCs) has also developed and they are now playing the most influential role in FDI flows across the world. Countries in today's world compete each other to attract FDI in order to achieve economic growth and global integration. More liberalised policies have been adopted in many countries, and governments adopted economic and institutional reform strategies to achieve these goals. Oil-exporting countries were part of that development; some countries have achieved notable levels in terms of attracting FDI thanks to improvements in their business environment. This chapter provides a general overview of FDI and oil-exporting countries as the main axes in this thesis. It starts by describing global FDI trends and the geographical and sectoral distributions of global FDI flows. It then shows the position of OECs and their share relative to global output and other economic and geographical groups. It then shows the key indicators for OECs in terms of FDI inflows, Gross Domestic Production (GDP), population, the Human Development Index (HDI)⁵, and World Trade Organisation (WTO) membership, with a special focus on natural resource abundance in oil exporting countries; crude oil and natural gas in particular. It finishes by describing the business environment in oil-exporting countries, by focusing on three measurements: the ICRG's composite risk index of the PRS group; the Worldwide Governance Indicator (WGI) of the World Bank, and the Ease of Doing Business Indicator of the World Bank.

⁵ The HDI assesses countries' development levels and it is issued annually by the United Nations Development Programme (UNDP). This index is constructed from three sub-indices: the life expectancy index, education index, and GNI index, see UNDP 2014. Human Development Report. *Sustaining Human Progress: Reducing Vulnerabilities and Building Resilience*. Washington: United Nation.

2.2 Global FDI Trends 1970-2014

The global FDI inflows and outflows have moved in closely-aligned trends over the last 45 years or so. According to the UNCTAD's database, global FDI inflows have increased significantly over that period, by 9203%, from an estimated US\$13.2 billion in 1970 to US\$1,228 billion in 2014 (UNCTADstat, 2015). However, the period from 1970 to 1985 saw gradual growth rates not exceeding 28%, as recorded in 1981. The first large boom began in 1986, with a 55% increase from US\$55.8 billion in 1985 to approximately US\$86.6 billion in 1986 (UNCTADstat, 2015). Global FDI inflows reached their first peak in 2000, at an estimated US\$1,363 billion and dropped significantly in the following years; in 2001, with a change of -49%, with estimated flows of US\$684 billion. This decreasing continued in 2002, with estimated flows of US\$591 billion. The declines in 2001 and 2002 are attributed to the recession in industrial countries as well as the crisis in the financial markets of these countries (UNCTAD, 2003). The latest and the greatest wave of FDI inflows was recorded in 2007, at US\$1,871.7 billion, which was also the year of the Global financial and economic crisis. The Global financial and economic crisis started affecting Global FDI inflows in two ways: the volume and the direction of FDI (UNCTAD, 2009b). In 2008, global FDI inflows decreased by approximately 20%, to an estimated US\$1,489.7 billion compared with US\$1,871.7 billion in 2007. That decline continued during 2009 to an estimated US\$1,186.5 billion. The year 2008 also saw a shift in Global FDI direction, with a 30% and 20% increase in FDI inflows to developing and transition economies, respectively (UNCTADstat, 2015), see figure 2-1. In terms of Global FDI outflows, they started to gradually increase from US\$14.1 billion in 1970 to US\$1,166 billion in 2007; an estimated growth of 8,169%. Similar to FDI inflows, FDI outflows witnessed a significant decline in 2002 and 2003, by an estimated US\$431 and US\$532 billion, respectively (UNCTADstat, 2015). This decline is also attributed to recession in industrial countries and financial market's crisis in these countries which affected global FDI inflows and outflows (UNCTAD, 2003). The year 2007 saw the highest peak of global FDI outflows, of US\$2,129 billion, in the same year as the highest FDI inflows as well. From 2008 until 2014, FDI outflows fluctuated, decreasing to US\$1,101 billion in 2009 and to US\$1,354 billion in 2014 (UNCTADstat, 2015), see figure 2-1.

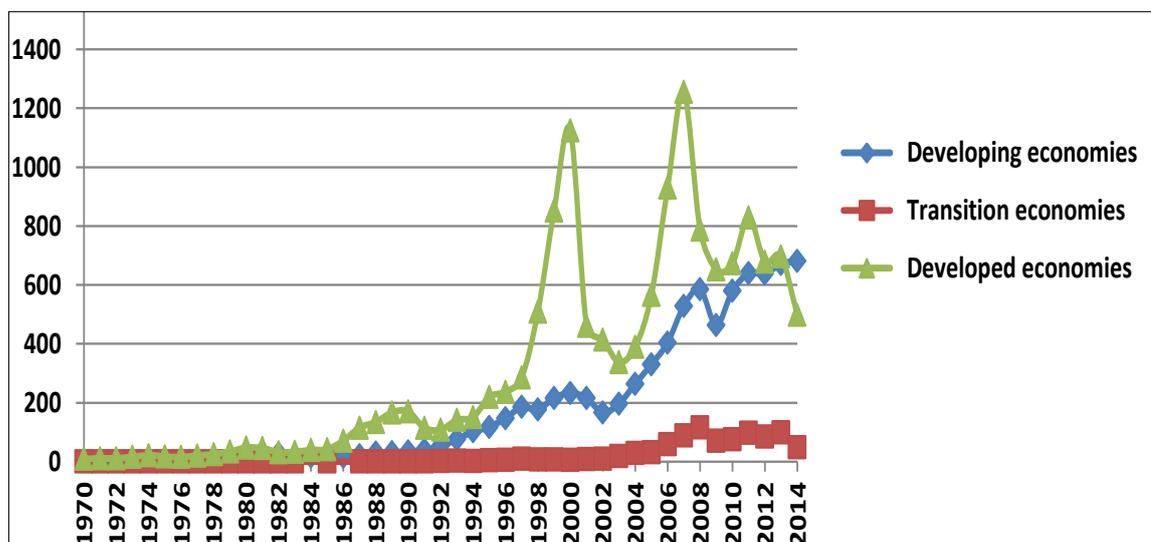
Figure 2-1: Trends in Global FDI Inflows and Outflows (Billion US\$), 1970-2014



Source: UNCTAD, UNCTADstat

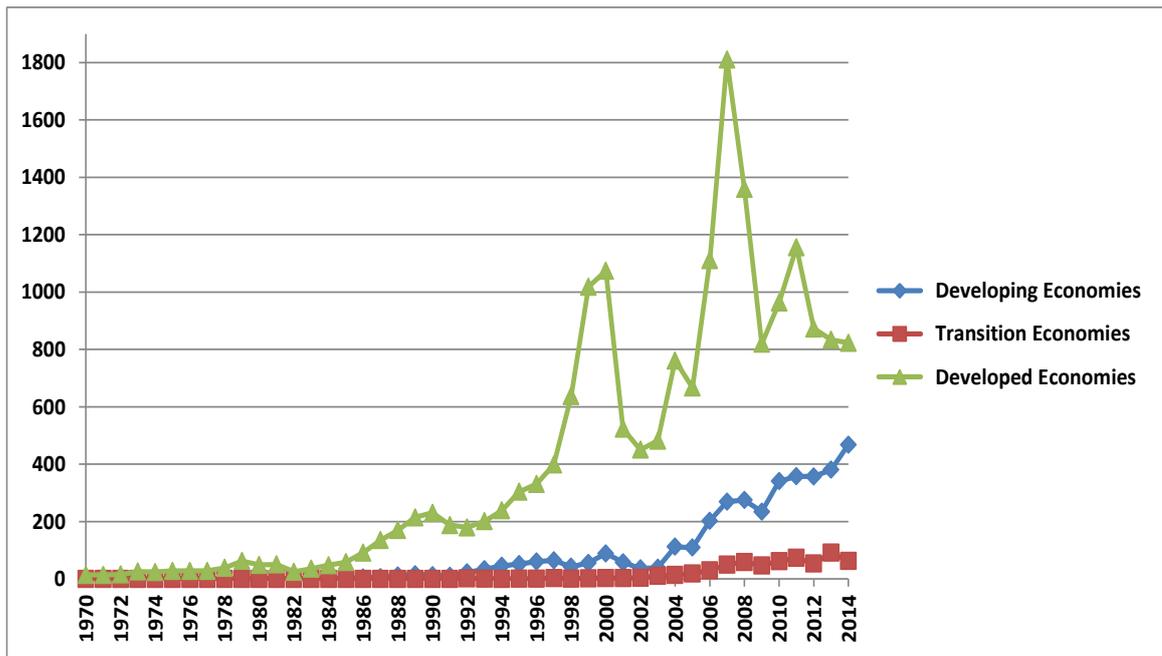
Based on development level, figure 2-2 shows that developed countries were the major recipients of Global FDI inflows and outflows, followed by developing and transition countries, respectively. From 1970 to 2014, developed countries received 60% of Global FDI inflows, followed by 35% and 5% for developing and transition countries, respectively. Similarly, developed countries have also been the main source of FDI outflows. They exported 81% of Global FDI outflows from 1970-2014, followed by 16.5% and 2.5% for both developing and transition countries, respectively (UNCTADstat, 2015), see figure 2-3.

Figure 2-2: Trends in FDI Inflows (Billion US\$) by Group of Economies, 1970-2014



Source: UNCTAD, UNCTADstat

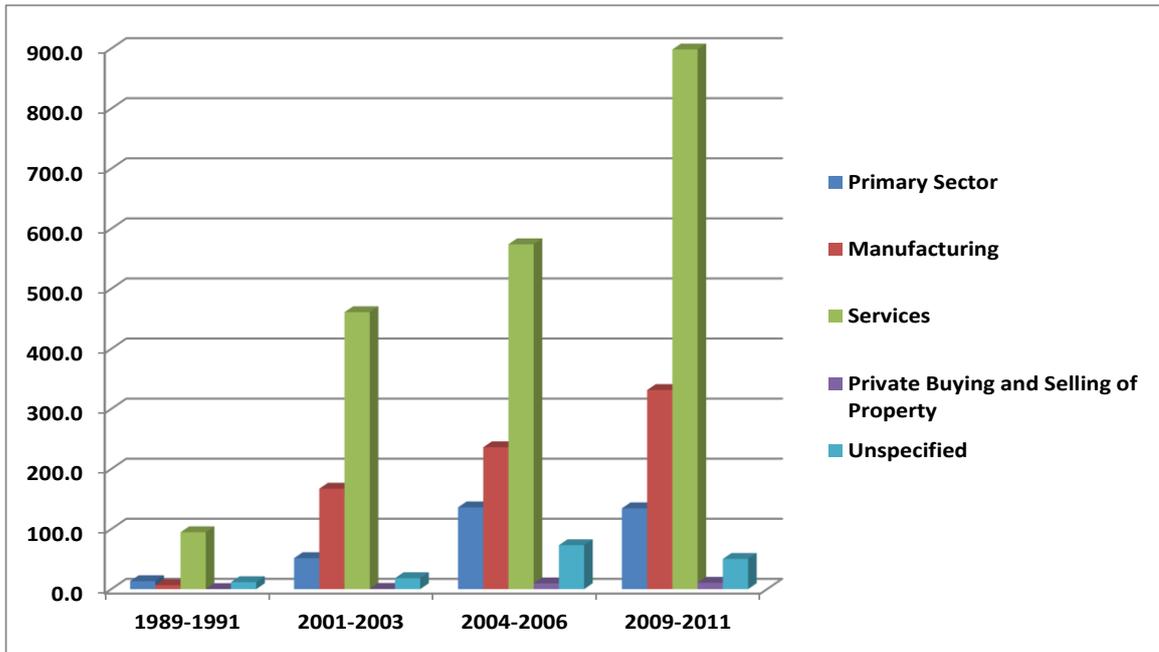
Figure 2-3: Trends in FDI Outflows (Billion US\$) by Group of Economies, 1970-2014



Source: UNCTAD, UNCTADstat

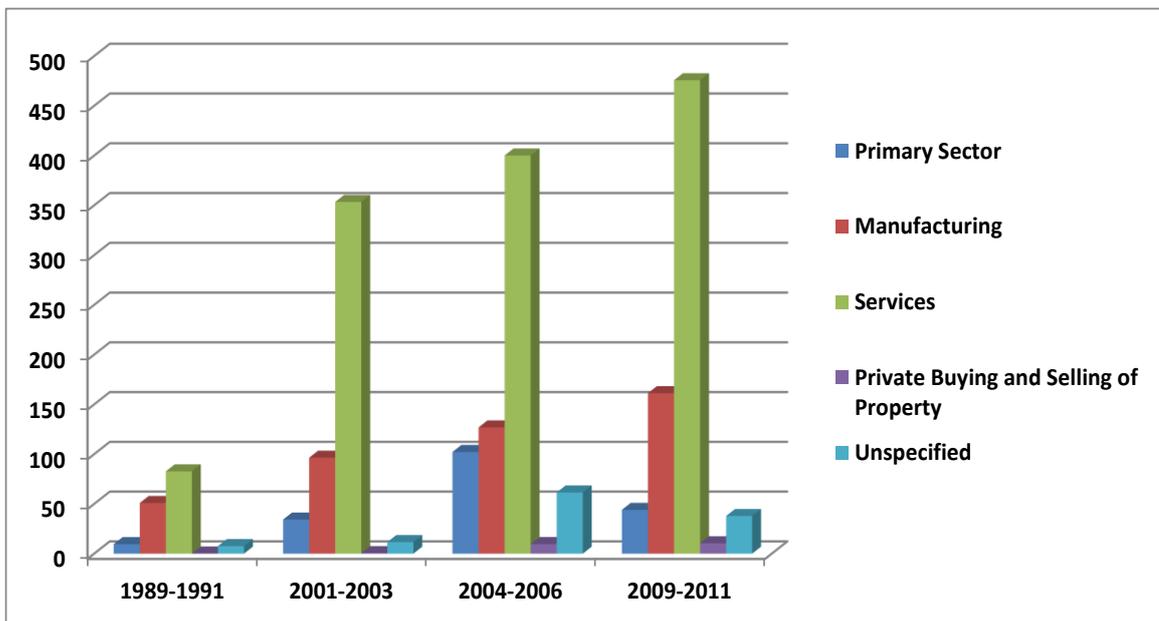
The sectoral distribution map of FDI clearly shows the dominance of the services sector in attracting FDI over the periods 1989-1991, 2001-2003, 2004-2006, and 2009-2011(UNCTADstat, 2015, WB, 2014). This applies to FDI distribution on the Global level, developed countries, and developing countries. Manufacturing and primary sectors come after the services sector in their importance, respectively, see figures 2-4, 2-5, and 2-6.

Figure 2-4: Sectoral Distribution of Global FDI (Billion US\$), Selected Periods



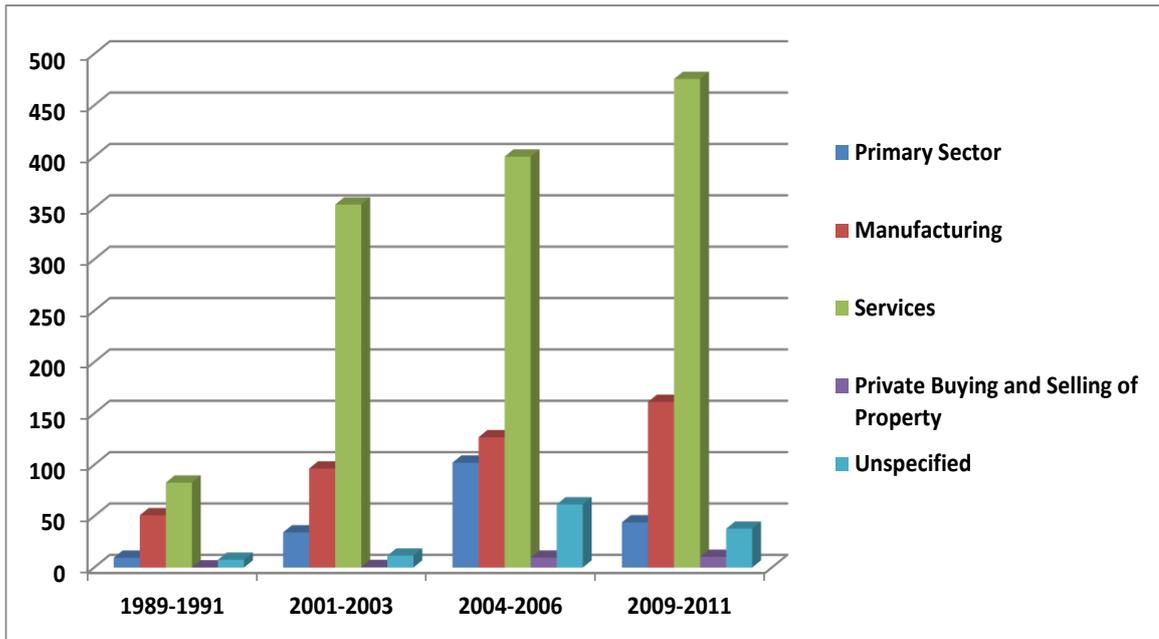
Data for the periods 1989-1991 and 2001-2003 are from the World Investment Report, WIR 2005 p262. Data for the periods 2004-2006 are from the World Investment Report, WIR 2008 p209. Data for the periods 2009-2011 is from the UNCTAD

Figure 2-5: Sectoral Distribution of FDI in Developed Countries (Billion US\$), Selected Periods



Data for the periods 1989-1991 and 2001-2003 are from the World Investment Report, WIR 2005 p262. Data for the periods 2004-2006 are from the World Investment Report, WIR 2008 p209. Data for the periods 2009-2011 is from the UNCTAD

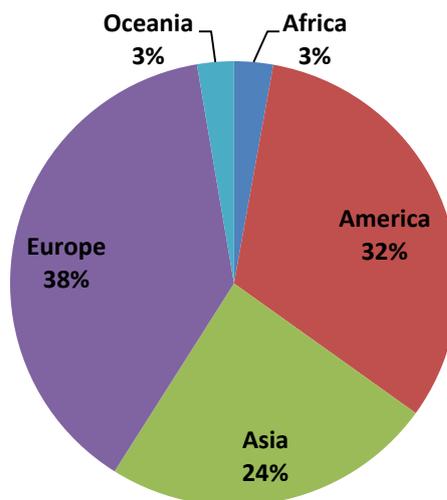
Figure 2-6: Sectoral Distribution of FDI in Developing Countries (Billion US\$), Selected Periods



Data for the periods 1989-1991 and 2001-2003 are from the World Investment Report, WIR 2005 p262. Data for the periods 2004-2006 are from the World Investment Report, WIR 2008 p209. Data for the periods 2009-2011 is from the UNCTAD.

Geographically, Europe was the main recipient of Global FDI, receiving 38% of global FDI inflows over the period from 1970-2014, followed by America, with 32%, and Asia, with 24%, over the same period. Both Africa and Oceania were the lowest FDI inflow recipients over that period, at only 3% of global FDI inflows (UNCTADstat, 2015), see figure 2-7.

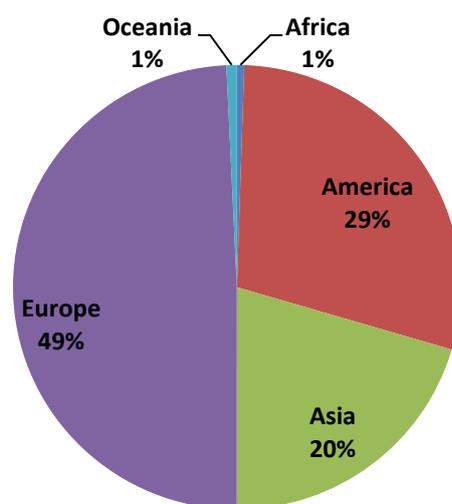
Figure 2-7: The Geographical Distribution of Global FDI Inflows, 1970-2014



Source: UNCTAD, UNCTADstat

The geographical distribution of Global FDI outflows clearly shows that the continent of Europe controlled the bulk of these flows over the period from 1970-2014. Europe was responsible for almost 49% of Global FDI outflows, followed by 29% and 20% for America and Asia, respectively. Meanwhile, both Africa and Oceania exported no more than 1% of FDI outflows each over the same period (UNCTADstat, 2015), see figure 2-8.

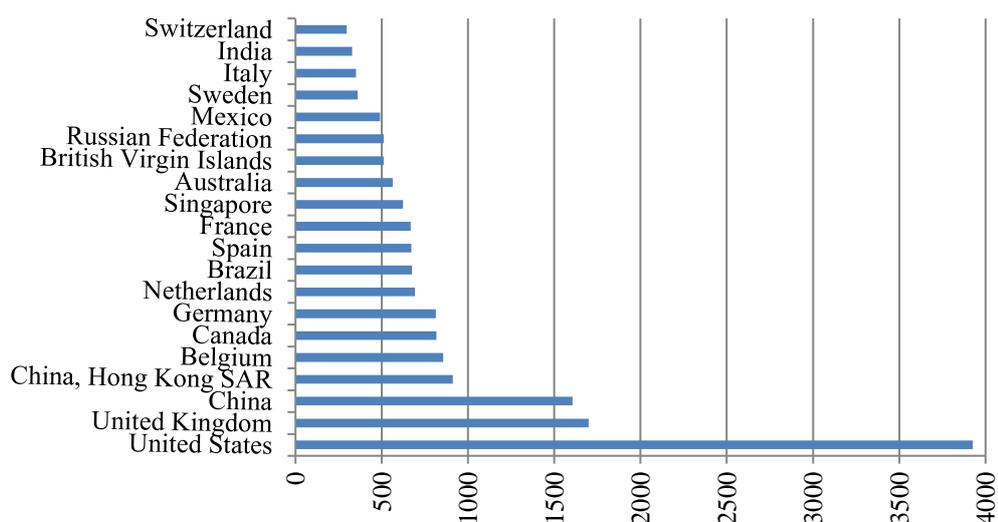
Figure 2-8: The Geographical Distribution of Global FDI Outflows (%), 1970-2014.



Source: UNCTAD, UNCTADstat

On an individual level, the top 20 FDI recipients over the period from 1970-2014 were: the United States, the United Kingdom, China, Hong Kong, Belgium, Canada, Germany, the Netherlands, Brazil, Spain, France, Singapore, Australia, the British Virgin Islands, the Russian Federation, Mexico, Sweden, Italy, India, and Switzerland. Figure 2-9 shows that the United States has attracted the largest portion of FDI inflows. From 1970-2014, the United States attracted an estimated US\$3,925 billion, followed by the United Kingdom, with an estimated US\$1,698 billion and China with US\$1,605 billion (UNCTADstat, 2015).

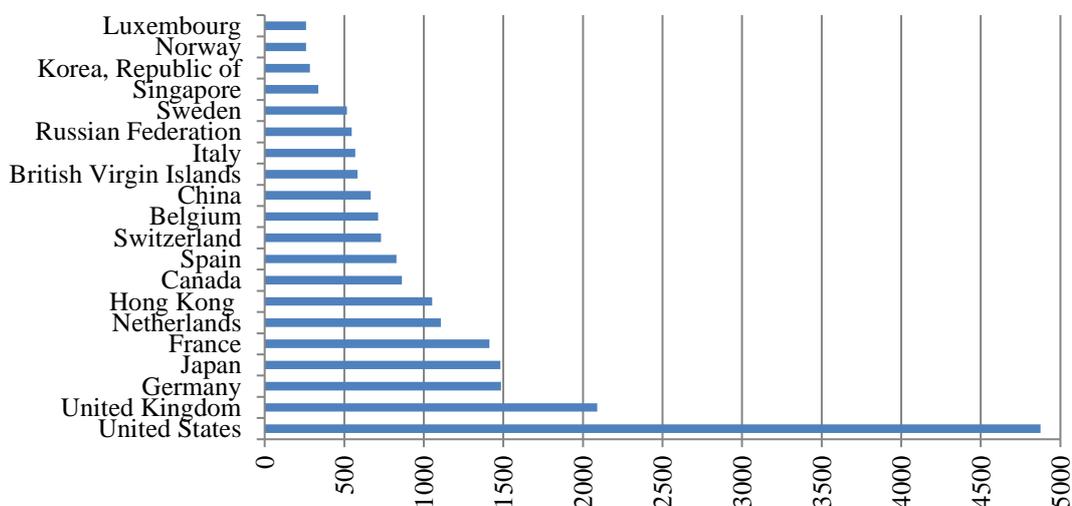
Figure 2-9: Top 20 FDI Recipient Countries (Billion US\$), 1970-2014



Source: UNCTAD, UNCTADstat

The United States and the United Kingdom were also the main sources for FDI outflows from 1970-2014. The United States exported an estimated US\$4,875 billion over the period, followed by the United Kingdom, at US\$2,089 billion and Germany with US\$1,484 billion. Figure 2-10 shows the top 20 sources of FDI outflows over the period from 1970-2014. It shows that there are some countries, particularly Japan, the Republic of Korea, Luxembourg, the Netherlands, and Norway which are found amongst the top 20 FDI outflow sources, while they were not amongst the world's top 20 FDI inflow recipients (UNCTADstat, 2015).

Figure 2-10: Top 20 FDI Outflow Sources (Billion US\$), 1970-2014

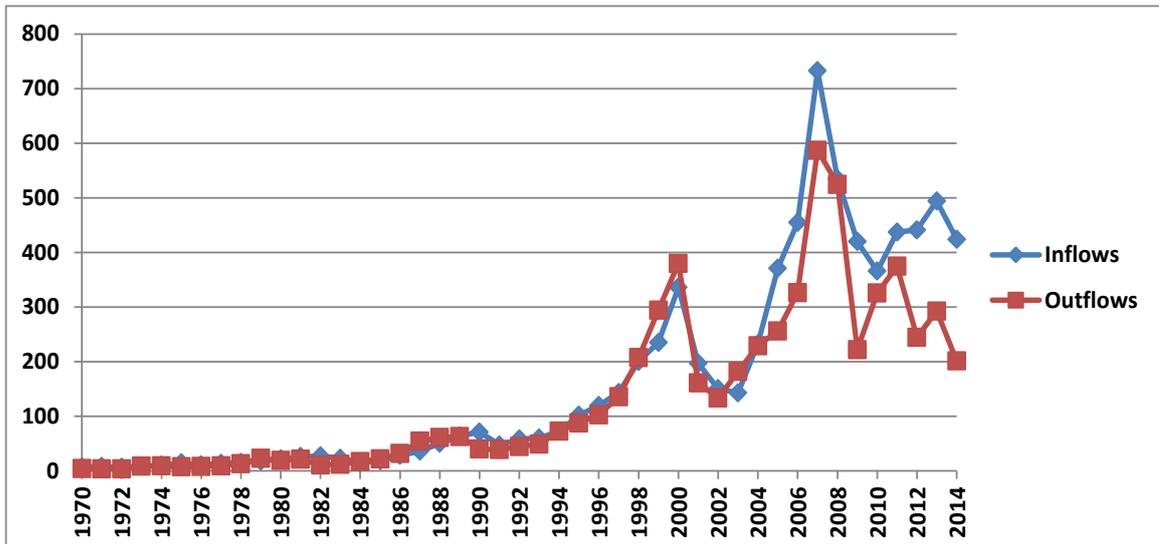


Source: UNCTAD, UNCTADstat

2.3 FDI in Oil-Exporting Countries 1970-2014

Over the period from 1970-2004, both FDI inflows and outflows have moved according to similar trends in oil-exporting countries. Starting from 2005, FDI inflows started new trends and exceeded FDI outflows. From 2005 onward, OECs started receiving FDI to a greater extent than they exported it. They received US\$371 million in inflows compared with US\$256 billion in outflows in 2005. This trend continued over the following 10 years to produce the largest gap between inflows and outflows in 2014, at US\$223 billion net FDI inflows, whereby total FDI inflows reached an estimated US\$442 billion compared with US\$201 billion in outflows in 2014 (UNCTADstat, 2015), see figure 2-11.

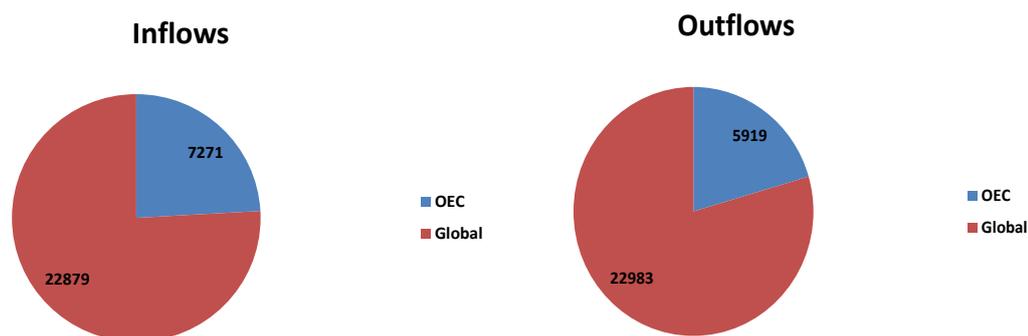
Figure 2-11: Trends in FDI Inflows and Outflows (Billion US\$) in Oil-Exporting Countries, 1970-2014



Source: UNCTAD, UNCTADstat

As a share of Global FDI, OECs received 31% of global FDI inflows over the period from 1970-2014, with an estimated US\$7,271 billion of a global total of US\$22,897 billion. In terms of FDI outflows, OECs were responsible for only 25% of the Global FDI outflows over the same period, with estimated outflows of US\$5,919 billion compared with a global total of US\$22,983 billion (UNCTADstat, 2015), see figure 2-12.

Figure 2-12: Inflow and Outflow FDI in OEC as a Share of Global figures (Billion US\$), 1970-2014



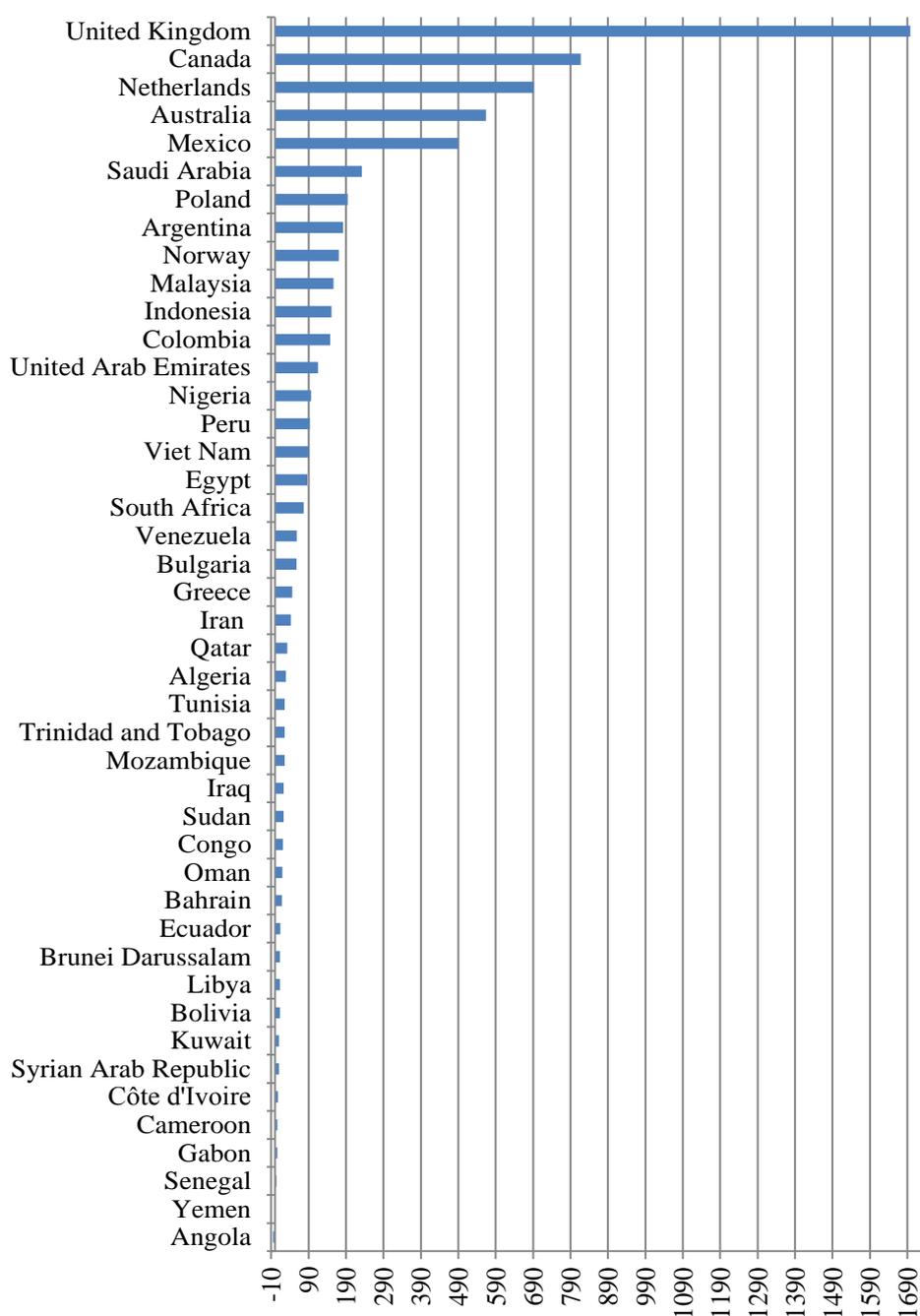
Source: UNCTAD, UNCTADstat

The performance of OECs in attracting FDI over the period from 1970-2014 shows significant differences amongst countries. FDI inflows, measured in billion US\$, into OECs show that the United Kingdom, Canada, the Netherlands, Australia, and Mexico were the preferred destinations. These countries received US\$1,698, US\$817, US\$691, US\$563, and US\$490 billion over that period, respectively. Meanwhile, Angola, Yemen, Senegal, Gabon, and Cameroon attracted the lowest FDI inflows amongst OECs over the same period, at estimated figures of US\$-4.8⁶, US\$0.1, US\$3.8, US\$6.2, and US\$6.4 billion US\$ respectively (UNCTADstat, 2015), see figure 2-13.

In terms of FDI outflows from oil-exporting countries, figure 2-14 shows that the United Kingdom, the Netherlands, Canada, Norway, and Australia were the main FDI exporters amongst OECs over the period from 1970-2014. The exported US\$2,089, US\$1,106, US\$862, US\$260, US\$160 billion, respectively. Meanwhile Sudan, Mozambique, Bolivia, Cameroon, and Côte d'Ivoire are reported as the lowest FDI outflow sources amongst OECs over that period, at an estimated US\$0.011, US\$0.012, US\$0.02, US\$0.04, and US\$0.08 billion, respectively (UNCTADstat, 2015), see figure 2-14.

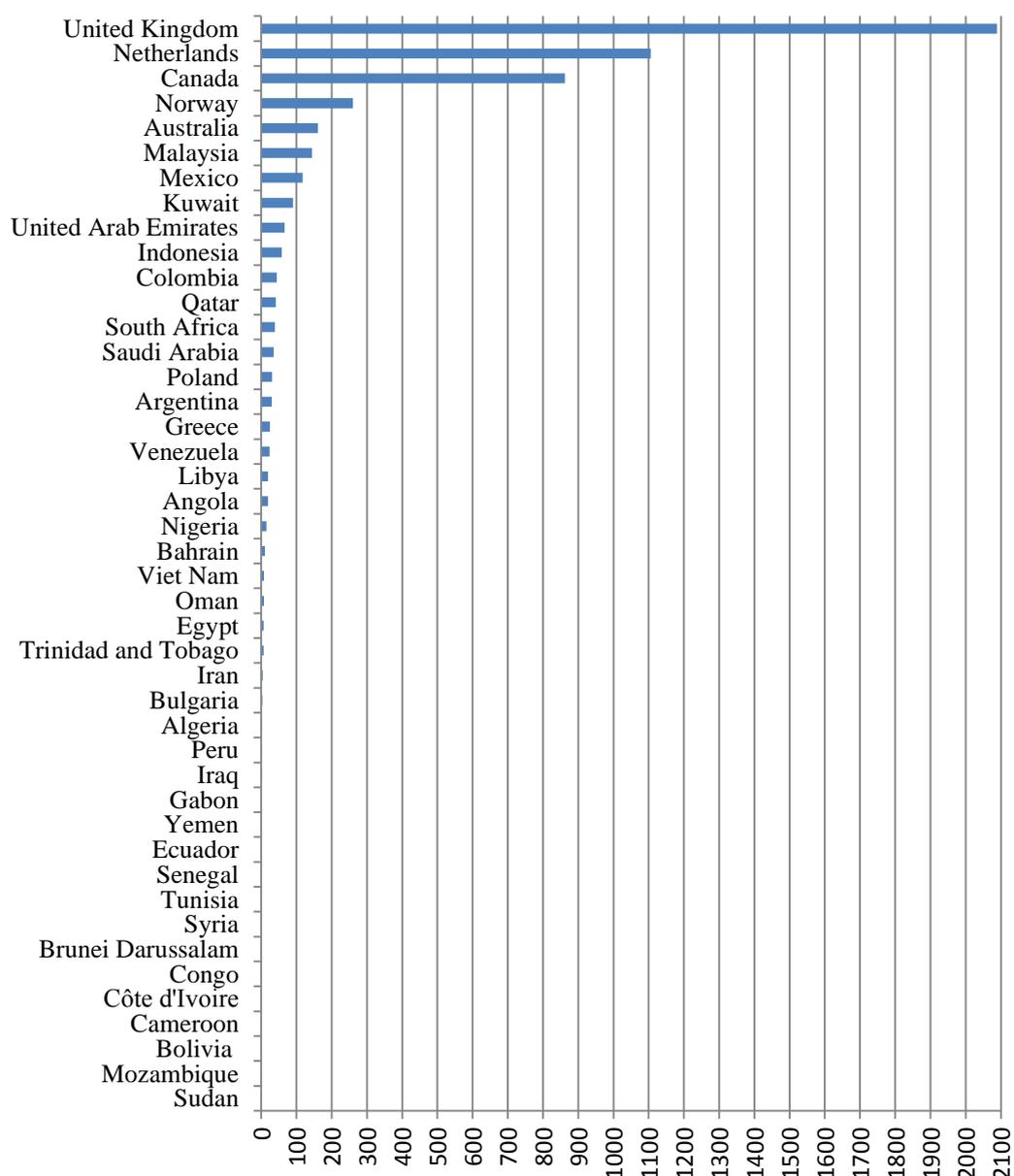
⁶ The UNCTAD's inward FDI is calculated by the sum of three components: equity capital, reinvested earning, and intracompany loans. when one or more of these components is negative, the total final will display a negative sign and this indicates either reverse investment or disinvestment.

Figure 2-13: Total FDI Inflows (Billion US\$) to Oil-Exporting Countries, 1970-2014



Source: UNCTAD, UNCTADstat

Figure 2-14: Total FDI Outflows (Billion US\$) from Oil-Exporting Countries, 1970-2014

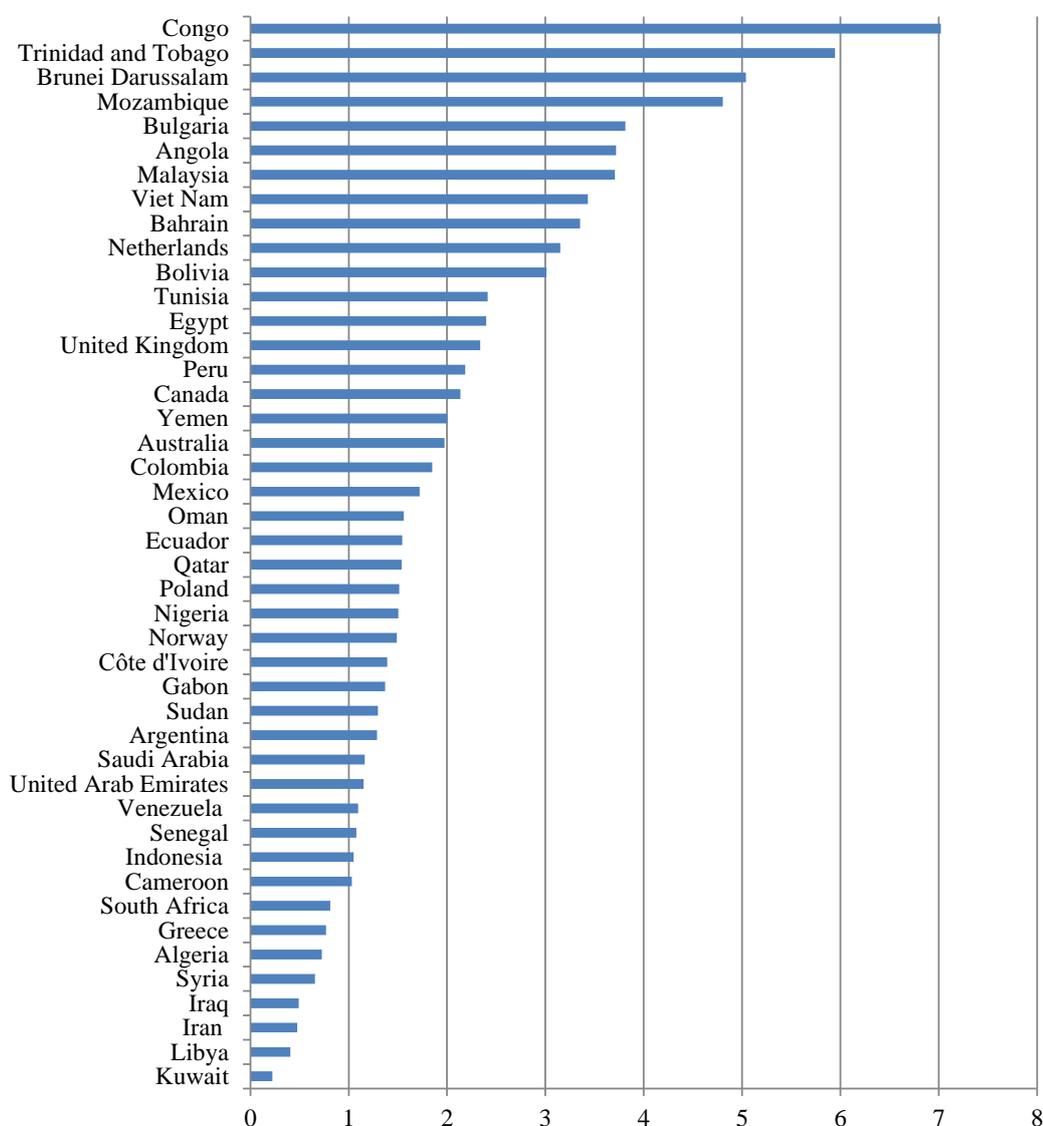


Source: UNCTAD, UNCTADstat

However, FDI inflows (measured in billion US\$) may not reflect countries' performance accurately. One of the most common measurements of FDI, which is used to reflect the performance of countries in attracting FDI, is FDI inflows as a percentage of GDP. This indicator reflects how a country performs in attracting FDI according to its economic size. Figure 2-15 shows the period's average FDI inflows as a share of GDP in OECs from 1970-2014. It displays a totally different image compared with FDI inflows in billion US\$. It shows that Congo, Trinidad and Tobago, Brunei Darussalam,

Mozambique and Bulgaria were the top 5 oil-exporting countries in attracting FDI as a percentage of their GDPs over the period from 1970-2014. These countries received (as a period average) 7%, 5.9%, 5%, 4.8% and 3.8% FDI inflows as a share of their GDPs, respectively. Most importantly, five Rentier oil-exporting countries, namely Kuwait, Libya, Iran, Iraq, and Syria are reported as having the poorest performing in attracting FDI as a share of their GDPs. These countries received (as a period average) less than 1% FDI inflows over the same period, at 0.22%, 0.4%, 0.47%, 0.49%, and 0.65%, respectively (UNCTADstat, 2015).

Figure 2-15: FDI inflows into Oil-Exporting Countries (% GDP), Average 1970-2014



Source: UNCTAD, UNCTADstat

Comparing the performance of OECs in attracting FDI with other groups of countries provides an additional descriptive dimension. Table 2-1 shows that OECs, from 1970-2014, attracted an average of US\$3.7 billion in inflows per year compared with US\$9.6, US\$3.2, US\$25.4 and US\$0.23 billion a year in the OECD, ASEAN, BRICS, and SSA. It is worth mentioning that the performance of Non-Rentier oil-exporting countries was better than Rentier oil-exporting countries since they attracted US\$5.7 billion/year in average FDI inflows compared with US\$2.06 billion/year in rentier oil-exporting countries. As a percentage of GDP, OECs received 2.1% on average over the period from 1970-2014, which is close to what was received by OECD countries over the same period, at 2.3%. Meanwhile, ASEAN countries on average received 3.4%, BRICS 1.3%, and SSA 2.6%. The performance of Rentier oil-exporting countries appears better than Non-Rentier oil-exporting countries when considering FDI as a share of GDP; rentier countries received 2.3% while non-Rentier countries received 2% (UNCTADstat, 2015).

Table 2-1: FDI inflows in Oil-Exporting Countries and other groups (billion US\$, % GDP), 1970-2014*

Period Average	OEC	ROEC	NROEC	OECD	ASEAN	BRICS	SSA
Billion US\$	3.7	2.06	5.7	9.6	3.2	25.4	0.23
Percent of GDP	2.1	2.3	2	2.3	3.4	1.3	2.6

* Researcher's calculation based on UNCTAD, UNCTADstat.

OEC: All oil-exporting countries

ROEC: Rentier oil-exporting countries

NROEC: Non-Rentier oil-exporting countries

OECD: The Organisation for Economic Co-operation and Development

ASEAN: The Association of Southeast Asian Nations

BRICS: Brazil, Russia, India, China and South Africa

SSA: Sub-Saharan Africa

2.4 Oil-Exporting Countries: Overview

2.4.1 Oil-Exporting Countries: Main Economic Indicators

In terms of FDI inflows relative to GDP, the World Bank data for 2014 shows that the top 5 recipient countries were a mixture of rentier and non-rentier countries. However, the lowest recipient countries were all rentier oil-exporting countries. Table 2-2 shows that the top 5 best performing countries in 2014 were Congo, Mozambique, Trinidad and Tobago, the Netherlands, and Gabon. These countries attracted more than 5% FDI as a percentage of their GDP. The notable issue is regarding FDI attracted in Congo; this country, along with Mozambique, attracted

38.8% and 31.4% in FDI inflows, respectively, as a share of their GDP, which are amongst the highest levels worldwide for 2014. Congo is recorded as the second largest recipient of FDI as a percentage of GDP in 2014 after Hong Kong, at 39.8%. At the bottom of the list, Angola, Yemen, Libya, Kuwait, and Qatar received the least FDI as a percentage of GDP in 2014. These countries received less than 1% in FDI inflows as a share of their GDP, which indicates poor performance in attracting FDI (WB, 2014).

Another indicator for FDI, FDI inflows measured in billion US\$, shows a different structure. The largest FDI recipients in 2014 were non-Rentier oil-exporting countries, namely: Canada at US\$57.2 billion, the Netherlands at US\$48.2 billion, Australia, at US\$46.3 billion, the United Kingdom at US\$45.5 billion, and Indonesia, at US\$26.3 billion. Meanwhile, the lowest FDI inflows were recorded in rentier countries, namely: Yemen at US\$-7.4 billion, Libya at US\$0.1 billion, and Kuwait at US\$0.5 billion (WB, 2014).

The size of an economy varies in OECs, which may affect the absorptive capacity of these countries in terms of attracting FDI. Some OECs have a large economy with a GDP of over US\$1,000 billion, such as the United Kingdom, at US\$2,989 billion, Canada, at US\$1,785 billion, and Australia at US\$1,454 billion. Meanwhile, some other OECs have a very small economy such as Congo at US\$14.2 billion, Senegal, at US\$15.7 billion, and Mozambique at US\$15.9 billion (WB, 2014).

Economic growth is considered an advantage, increasing a country's attractiveness. In 2014, some oil exporting countries achieved encouraging growth rates, especially some African oil-exporting countries such as Angola, at 10.2%, Cote d'Ivoire at 8.5%, Mozambique at 7.2%, Congo at 6.8%, and Nigeria at 6.3%. In contrast, other OECs have seen negative growth rates mainly due political instability, as in Libya, -24% and Iraq, -2.1% (WB, 2014).

GDP per capita, which reflects purchasing power and wages in oil-exporting countries, also shows wide variation amongst countries. Some countries have a high GDP per capita, such as Norway, at US\$97,307, Qatar at US\$96,732, and Australia at US\$61,925. Meanwhile, some have very low rates such as Mozambique, US\$586, Yemen, US\$709, and Senegal, US\$1,067 (WB, 2014). That variation signifies different

locational advantages amongst OECs which eventually reflects different potentials regarding attracting FDI within this group of countries.

The total population of OECs as recorded in 2014 was 1,631.2 million, which comprises 22.6 % of the World's population. A country's population is also considered as indicating potential for market-seeking FDI. Table 2-2 shows that Indonesia has the largest population amongst oil exporting countries, at 254.5 million, and Brunei has the lowest population at 0.4 million, as recorded in 2014 (WB, 2014).

Another important indicator is human development, measured by the Human Development Index (HDI). The HDI is an important factor in assessing countries' development levels, and is constructed from three sub-indices: the life expectancy index, education index, and GNI index. In general, the average HDI index for OECs is 0.719, which is categorised, according to the UNDP, between high human development and medium human development. Amongst OECs, there are countries that score very highly in terms of human development, such as Norway at 0.943, Australia at 0.934, and the Netherlands at 0.921, and also there are those that score very low on this scale, particularly within African countries such as Mozambique, at 0.416, Cote d'Ivoire at 0.416, and Senegal at 0.465 (UNDP, 2014).

Finally, according to the World Trade Organisation (WTO), 6 out of 44 OECs are not members of the WTO, and all of these countries are rentier oil-exporting countries: Algeria, Iran, Iraq, Libya, Sudan, and Syria.

Table 2-2: Oil-Exporting Countries: Overview Indicators (2014)

Country	FDI inflows % GDP	FDI inflows (constant 2005 US\$B)	GDP (constant 2005 US\$B)	GDP growth rate %	GDP per capita (constant 2005) US\$	Population (M)	HDI	WTO (Year of joining)
Algeria	0.7	1.5	213.5	3.8	5484	38.9	0.735	No
Angola	-5.1 (2013)	1.9	138.3 (2013)	10.2 (2013)	5783 (2013)	24.2	0.531	1996
Argentina	1.1	6.1	537.7	0.5	12510	43	0.835	1995
Australia	3.2	46.3	1454.7	2.5	61925	23.5	0.934	1995
Bahrain	2.8	1	33.9	4.5	24855	1.4	0.823	1995
Bolivia	0.22	0.07	14.8	5.4	1409	10.5	0.662	1995
Brunei	3.3	0.6	17.1	-2.3	40980	0.4	0.855	1995
Bulgaria	3.5	2	56.7	1.5	7851	7.2	0.781	1996
Cameroon	1.6	0.5	32.1	5.9	1407	22.8	0.511	1995
Canada	3.2	57.2	1785.4	2.4	50235	35.5	0.913	1995
Colombia	4.3	16.2	377.7	4.6	7904	47.8	0.72	1995
Congo, Rep.	38.8	5.5	14.2	6.8	3147	4.5	0.590	1997
Cote d'Ivoire	1.3	0.5	34.3	8.5	1546	22.2	0.462	1995
Ecuador	0.8	0.8	100.9	3.7	6346	15.9	0.731	1996
Egypt	1.7	4.8	286.5	2.2	3199	89.6	0.689	1995
Gabon	5.4	1	18.2	4.3	10772	1.7	0.683	1995
Greece	0.7	1.7	235.6	0.7	21498	11	0.865	1995
Indonesia	3	26.3	888.5	5	3492	254.5	0.683	1995
Iran	0.5	2.1	425.3	4.3	5443	78.1	0.765	No
Iraq	2.1	4.8	223.5	-2.1	6420	34.8	0.653	No
Kuwait	0.3	0.5	163.6	-1.6	43594	3.8	0.816	1995
Libya	0.1	0.1	41.1	-24	6573	6.3	0.724	No
Malaysia	3.1	10.6	338.1	6	11307	29.9	0.779	1995
Mexico	1.9	24.2	1294.7	2.2	10326	125.4	0.756	1995
Mozambique	31.4	5	15.9	7.2	586	27.2	0.416	1995
Netherlands	5.5	48.2	879.3	1	52172	16.9	0.921	1995
Nigeria	0.8	4.7	568.5	6.3	3203	177.5	0.514	1995
Norway	2.1	10.6	499.8	2.2	97307	5.1	0.943	1995
Oman	0.9	0.7	81.8	2.9	19310	4.2	0.793	2000
Peru	3.9	7.9	202.6	2.4	6541	31	0.734	1995
Poland	3.2	17.3	545	3.3	14343	38	0.824	1995
Qatar	0.5	1	210.1	4	96732	2.2	0.849	1996
Saudi Arabia	1.1	8	746.2	3.5	24161	30.9	0.837	2005
Senegal	2.2	0.3	15.7	4.7	1067	14.7	0.465	1995
South Africa	1.6	5.7	350.1	1.5	6483	54	0.665	1995
Sudan	1.7	0.6	87.1	3.2	1495	51.3	0.479	No
Syria	3.07 (2007)	1.4 (2010)	40.4 (2007)	5.7 (2007)	1649 (2007)	22.2	0.593	No
Trinidad Tobago	8.4	2.4	28.9	0.8	21324	1.4	0.771	1995
Tunisia	2.1	1	48.6	2.7	4421	11	0.712	1995
UAE	2.5	10.1	399.5	4.6	43963	9.1	0.835	1996
UK	1.5	45.5	2988.9	2.9	46332	64.5	0.906	1995
Venezuela	0.5 (2012)	6.9 (2013)	381 (2012)	- 4	6088	30.7	0.762	1995
Vietnam	4.9	9.2	186.2	6	2052	90.7	0.665	2007
Yemen	-0.37 (2013)	-7.4	35.9 (2013)	4.1 (2013)	709 (2013)	26.2	0.498	2014

Sources: World Bank, World Development Indicators, available online at: (<http://data.worldbank.org/data-catalog/world-development-indicators>).

Data on the Human Development Index (HDI) is from the United Nations Development Programme (UNDP), Human Development Index, available online at: (<http://hdr.undp.org/en/composite/HDI>).

Data on WTO membership is from the World Trade Organisation (WTO), available online at: (https://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm).

2.4.2 Crude Oil and Natural Gas in Oil-Exporting Countries

OECs have an abundance of natural resources; crude oil and natural gas in particular, and that abundance is presumed to provide OECs with additional advantages in attracting FDI. Table 2-3 shows that OECs dominate a very large portion of the World's total reserves, production, and exports of these resources. In terms of crude oil, OECs have more than 80% of World total proven reserves, and they produce around 70% of world total crude oil production, and providing nearly 50% of the world's crude oil exports. In terms of natural gas, OECs control around 80% of total world natural gas reserves as recorded on average for the period from 2010-2014, and they produce nearly 60% of total world natural gas production, as well as providing nearly 90% of total world natural gas exports (EIA, 2015).

Table 2-3: Crude oil and Natural Gas in OECs (% of World Total), Period Averages

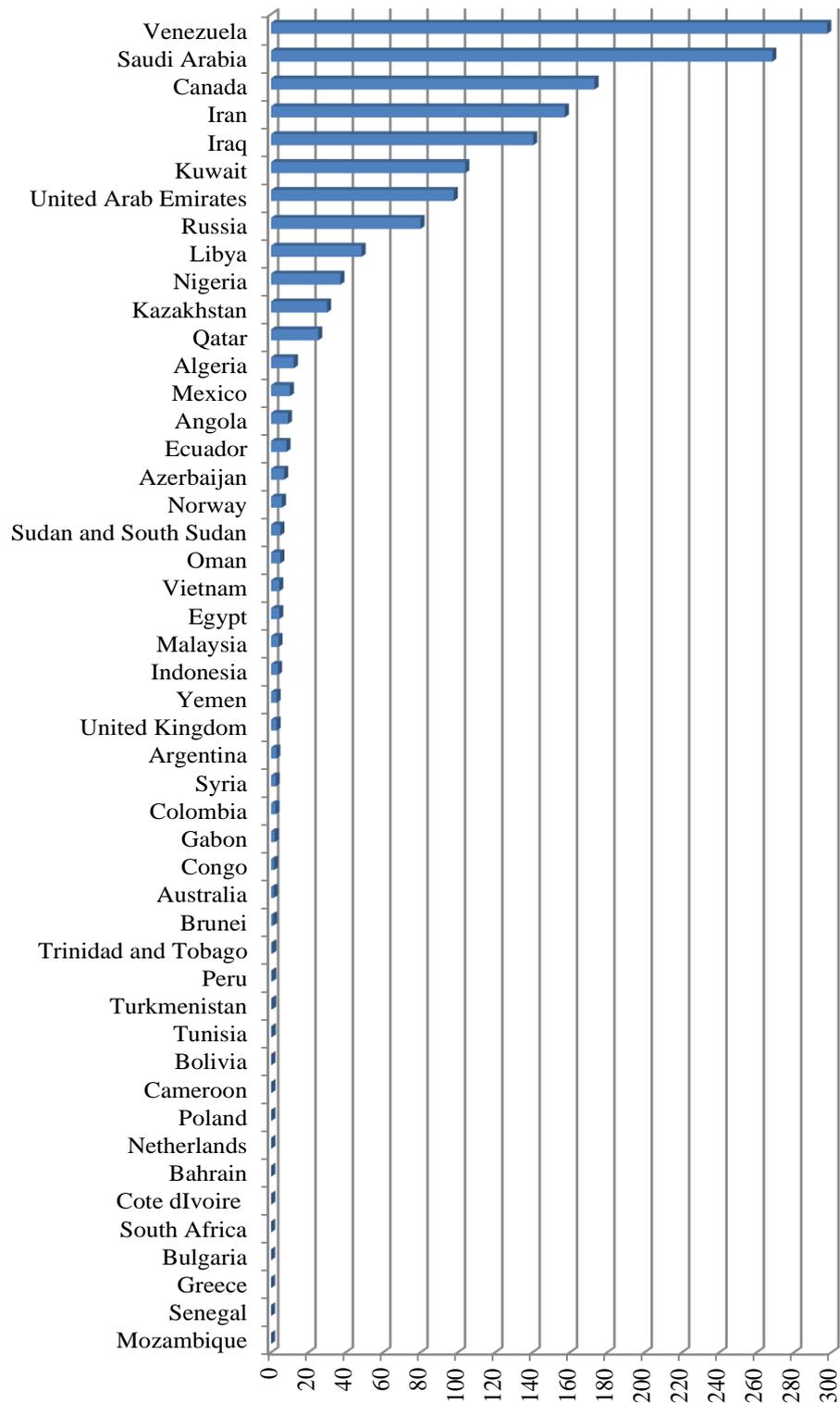
	(% world)	1990-1999	2000-2009	2010-2014
Crude Oil	Reserves	88.8	83.9	83.4
	Production	67.6	71.2	68.5
	Exports*	51.8	53.7	47.0
Natural Gas	Reserves	61.7	87.8	84.3
	Production	58.2	66.9	65.6
	Exports	91.1	91.1	87.4

Researcher's calculations based on Energy Information Administration (EIA), available online on (<http://www.eia.gov/>).

* Crude oil exports are for the periods: 1986-1995, 1996-2005, 2006-2012.

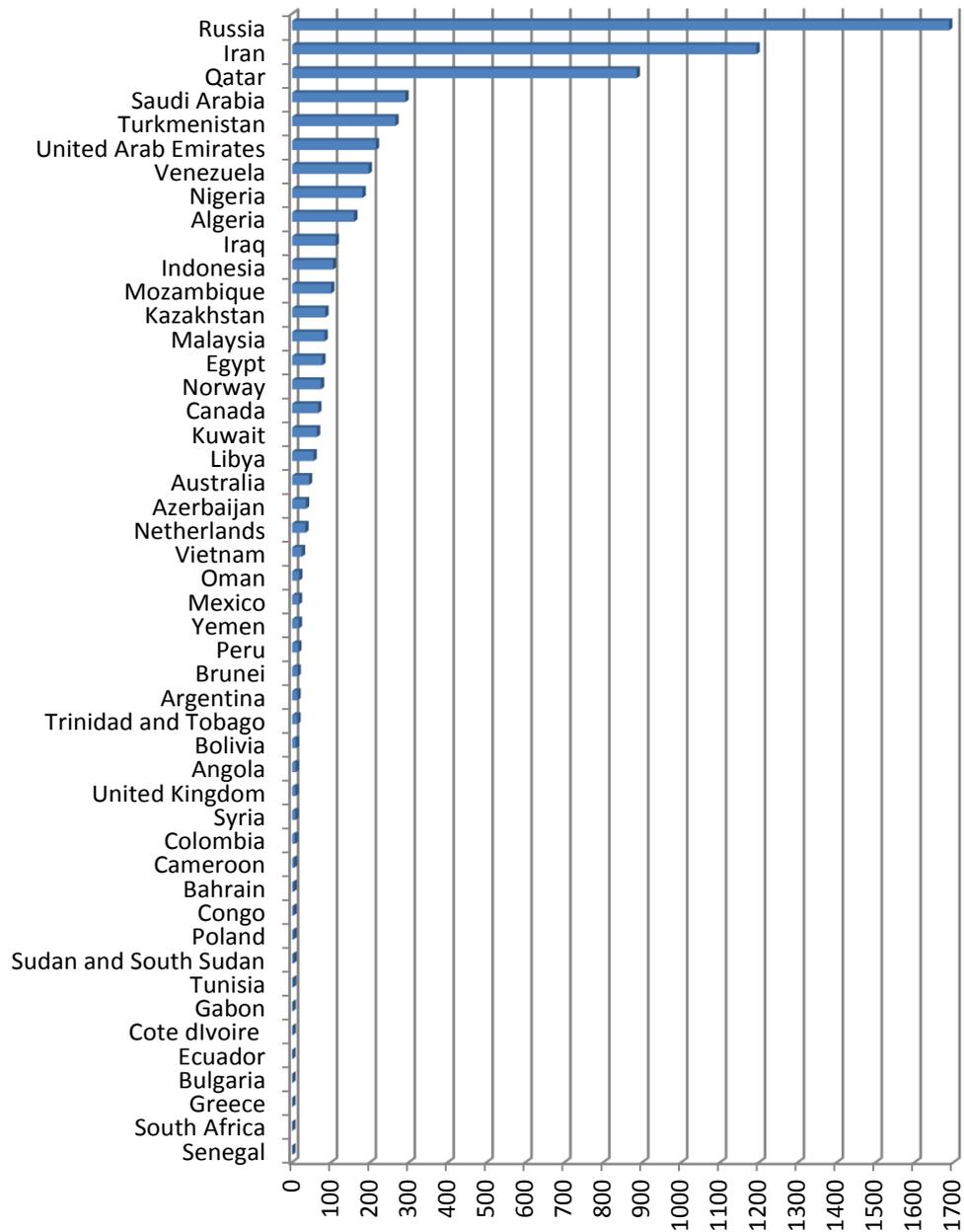
Amongst oil-exporting countries, there is wide variation in oil and gas abundance; some of them control a large portion of total world reserves, and some of them produce and export more than others, see figures 2-16 and 2-17.

Figure 2-16: Crude Oil Reserves in Oil-Exporting Countries (Billion Barrels), 2014



Source: Energy Information Administration (IEA), available online at (<http://www.eia.gov/>).

Figure 2-17: Natural Gas Reserves in Oil-Exporting Countries (Trillion cubic Feet), 2014



Source: Energy Information Administration (IEA), available online at (<http://www.eia.gov/>)

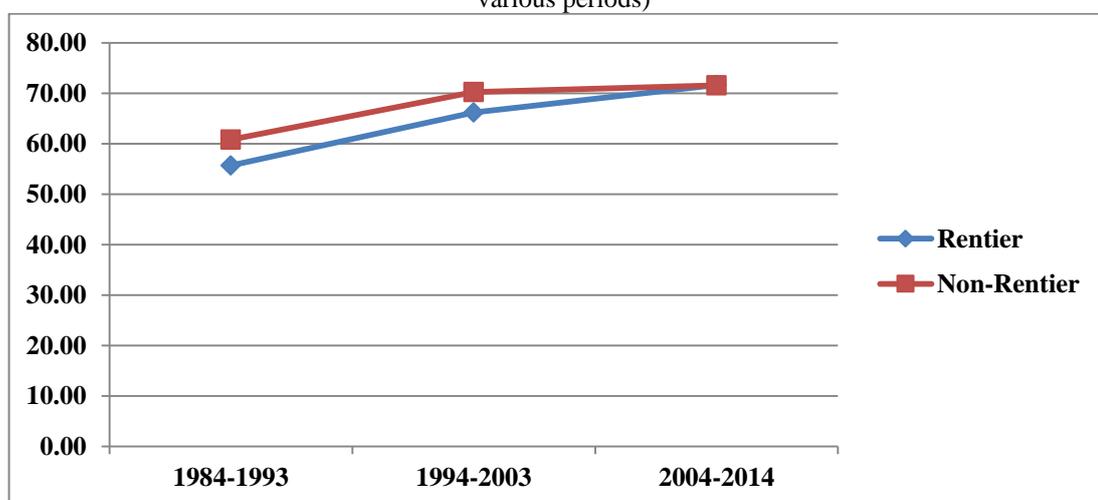
2.5 Business Environment in Oil-Exporting Countries

In order to provide a clear insight on the situation of institutional quality in oil-exporting countries, three different measurements are used; the ICRG composite risk of the PRS group, the Worldwide Governance Indicator (WGI) of the World Bank, and the Ease of Doing Business Indicator of the World Bank.

2.5.1 Composite Risk Index

The composite risk index is an indicator of a country's overall risk since it is derived from a country's political, economic, and financial risks. This index is issued by the PRS Group, and is an index value which provides a score between 0 and 100, where 0 = very high risk and 100 = very low risk. On a group level, non-rentier oil-exporting countries performed better compared to rentier oil-exporting countries over the periods 1984-1993 and 1994-2003. Figure 2-18 shows that the average composite risk index in non-rentier countries was 60.8 over the period 1984-1993 whereas it was 55.7 in rentier countries over the same period. Similarly, over the period from 1994-2003, it was 70.2 in non-rentier countries and 66.2 in rentier countries. However, the period from 2004-2014 has seen a dramatic shift since rentier oil-exporting countries (as a group) have made significant improvements. The average composite risk index in rentier oil-exporting countries reached 71.65, which is slightly higher than its value in non-rentier oil-exporting countries over that period, at 71.63 (PRS, 2015).

Figure 2-18: Composite Risk Index in Rentier and Non-Rentier Oil-Exporting Countries, (Average, various periods)



Source: The PRS Group, International Country Risk Guide, Table 2B: Composite Dataset.

Table 2-4 shows the average composite risk index values in oil exporting countries (at a country level) over the periods from 1984-1993, 1994-2003, and 2004-2014. The majority of OECs have made considerable improvements regarding composite risk over these three periods. These improvements provide a sign of the country's overall potential risk, and help FDI-decision makers to assess countries accordingly. Over the period from 2004-2014, the highest composite risk index values (showing less risk) are

reported in Norway at 91, Brunei at 87.78, Canada, at 83.7, Kuwait at 82.9, and UAE at 82.8, while the lowest values (highest risk) are recorded in Sudan at 52.2, Iraq at 53.4, Cote d'Ivoire at 60.8, Syria at 60.9, and Venezuela at 63.6 (PRS, 2015).

Table 2-4: Composite Risk Index in Oil-Exporting Countries, Average, Various Periods

Country	1984-93	1994-2003	2004-2014
Algeria	55.98	57.93	73.96
Angola	48.23	48.87	68.33
Argentina	49.82	68.83	70.08
Australia	80.10	81.82	79.73
Bahrain	63.94	75.16	77.43
Bolivia	44.63	66.70	69.34
Brunei	83.07	86.88	87.78
Bulgaria	61.84	68.36	69.02
Cameroon	54.38	59.04	68.35
Canada	83.76	84.18	83.73
Colombia	61.16	61.42	66.58
Congo	50.62	54.39	68.36
Cote d'Ivoire	60.85	60.07	58.47
Ecuador	53.92	59.81	64.84
Egypt	51.10	69.47	64.69
Gabon	64.84	66.41	73.02
Greece	61.47	75.14	68.44
Indonesia	56.37	60.33	66.71
Iran	43.79	68.07	66.72
Iraq	30.89	38.89	53.42
Kuwait	60.72	80.01	82.99
Libya	47.59	67.13	75.87
Malaysia	71.10	76.75	78.65
Mexico	62.99	70.20	74.18
Mozambique	39.83	54.30	65.63
Netherlands	88.00	86.73	82.63
Nigeria	48.50	54.79	62.89
Norway	87.10	89.57	91.00
Oman	64.40	77.12	81.81
Peru	41.70	65.57	71.52
Poland	54.73	77.16	75.07
Qatar	60.84	72.26	80.18
Saudi Arabia	62.10	74.09	79.75
Senegal	57.17	62.66	63.22
South Africa	61.06	71.37	70.60
Sudan	29.15	41.66	52.20
Syria	46.36	69.03	60.92
Trinidad & Tobago	60.40	72.52	79.30
Tunisia	55.67	72.21	69.69
UAE	59.53	78.41	82.80
United Kingdom	82.74	82.26	77.68
Venezuela	63.63	64.68	61.76
Vietnam	44.63	65.21	69.04
Yemen	52.89	64.46	63.72

Source: Researcher's calculations based on The PRS Group, International Country Risk Guide, Table 2B: Composite Dataset.

2.5.2 Worldwide Governance Indicator (WGI)

The “Worldwide Governance Indicators” (WGI) from the World Bank measure 6 governance indicators for 215 countries from 1996 onwards. The indicators are: “Voice and Accountability”, “Political Stability and Absence of Violence”, “Government Effectiveness”, “Regulatory Quality”, “Rule of Law”, and “Control of Corruption”. The WGI reflects the quality of institutions in a way that is assumed to have an impact upon the business environment in host countries; the value of the index ranges from -2.5 (weak governance performance) to 2.5 (strong governance performance).

Table 2-5 shows the average value of WGI for the 6 indicators above in OECs over the 10 years from 2005-2014. It shows that some countries show very strong governance performance, and some performed poorly over the period above. Overall, Norway, the Netherlands, Australia, Canada, and the United Kingdom had the best performance on most of the six governance indicators amongst oil-exporting countries, while the poorest performances were recorded in Sudan, Iraq, Angola, Libya, and Cameroon. On a group level, non-rentier oil-exporting countries had better governance environments compared with rentier oil-exporting countries. The average WGI scores in non-rentier oil exporting countries were 0.1 for control of corruption, 0.1 for rule of law, 0.3 for regulatory quality, 0.3 government effectiveness, -0.1 for political stability, and 0.1 for voice and accountability, while these scores were -0.4, -0.4, -0.5, -0.4, -0.5, and -0.9 in rentier oil exporting countries, for the six indicators, respectively (WB, 2015b).

Table 2-5: The Worldwide Governance Indicators (WGI) in Oil-Exporting Countries, Average 2005-2014

Country	Control of Corruption	Rule of Law	Regulatory Quality	Gov. Effectiveness	Political Stability	Voice and Accountability	Country	Control of Corruption	Rule of Law	Regulatory Quality	Gov. Effectiveness	Political Stability	Voice and Accountability
Rentier Countries							Non-rentier countries						
Algeria	-0.5	-0.7	-1.0	-0.5	-1.2	-0.9	Argentina	-0.5	-0.7	-0.8	-0.2	0.0	0.3
Angola	-1.3	-1.3	-1.1	-1.2	-0.4	-1.1	Australia	2.0	1.8	1.7	1.7	0.9	1.4
Brunei	0.6	0.6	1.0	0.9	1.2	-0.8	Bahrain	0.3	0.5	0.7	0.5	-0.6	-1.0
Congo, Rep.	-1.1	-1.2	-1.3	-1.2	-0.6	-1.1	Bolivia	-0.6	-1.0	-0.8	-0.5	-0.6	-0.1
Ecuador	-0.8	-1.1	-1.1	-0.7	-0.6	-0.3	Bulgaria	-0.2	-0.1	0.6	0.1	0.3	0.5
Egypt	-0.6	-0.3	-0.4	-0.5	-1.0	-1.1	Cameroon	-1.1	-1.1	-0.8	-0.9	-0.5	-1.0
Gabon	-0.8	-0.5	-0.5	-0.8	0.3	-0.9	Canada	2.0	1.8	1.7	1.8	1.0	1.4
Iran	-0.7	-0.9	-1.5	-0.6	-1.2	-1.5	Colombia	-0.3	-0.4	0.3	-0.1	-1.6	-0.2
Iraq	-1.4	-1.7	-1.2	-1.3	-2.4	-1.2	Côte D'ivoire	-1.0	-1.2	-0.8	-1.1	-1.5	-1.1
Kuwait	0.3	0.5	0.1	0.1	0.3	-0.6	Greece	0.0	0.6	0.7	0.5	0.1	0.8
Libya	-1.2	-1.0	-1.4	-1.3	-0.4	-1.6	Indonesia	-0.7	-0.6	-0.3	-0.3	-0.9	0.0
Nigeria	-1.1	-1.2	-0.8	-1.0	-2.0	-0.8	Malaysia	0.2	0.5	0.6	1.1	0.2	-0.4
Norway	2.1	1.9	1.5	1.9	1.3	1.6	Mexico	-0.4	-0.5	0.4	0.2	-0.7	0.1
Oman	0.2	0.6	0.5	0.3	0.7	-1.0	Mozambique	-0.5	-0.6	-0.5	-0.6	0.2	-0.1
Qatar	1.2	0.9	0.6	0.8	1.1	-0.8	Netherlands	2.1	1.8	1.7	1.8	1.0	1.6
Saudi Arabia	-0.1	0.2	0.1	-0.1	-0.4	-1.7	Peru	-0.3	-0.7	0.4	-0.3	-0.9	0.1
Sudan	-1.4	-1.3	-1.4	-1.3	-2.4	-1.7	Poland	0.4	0.6	0.9	0.6	0.8	1.0
Syria	-1.1	-0.8	-1.2	-0.9	-1.3	-1.7	Senegal	-0.4	-0.3	-0.2	-0.4	-0.2	-0.1
Trinidad & Tobago	-0.3	-0.2	0.5	0.3	0.0	0.5	South Africa	0.1	0.1	0.5	0.4	0.0	0.6
UAE	1.1	0.5	0.6	1.0	0.9	-0.9	Tunisia	-0.1	0.0	-0.1	0.2	-0.2	-0.8
Venezuela	-1.1	-1.6	-1.5	-1.1	-1.1	-0.9	UK	1.7	1.7	1.7	1.6	0.4	1.3
Yemen	-1.0	-1.1	-0.7	-1.1	-2.1	-1.3	Vietnam	-0.6	-0.4	-0.6	-0.2	0.2	-1.4
Rentier Average	-0.4	-0.4	-0.5	-0.4	-0.5	-0.9	Non-Rentier Average	0.1	0.1	0.3	0.3	-0.1	0.1

Source: Researcher's calculations based on The Worldwide Governance Indicators (WGI), available online at: (<http://info.worldbank.org/governance/wgi/index.aspx#home>)

2.5.3 Ease of Doing Business

The World Bank's Doing Business Project launched the Ease of Doing Business index in 2002. This index measures the business environment in 189 countries across the world in terms of business regulations and deals mainly with the most relevant procedures needed for foreign companies within the host country. The index covers 10 indicators: "Starting a Business", "Dealing with Construction Permits", "Getting Electricity", "Registering Property", "Getting Credit", "Protecting Minority Investors",

“Paying Taxes”, “Trading Across Borders”, “ Enforcing Contracts”, and “Resolving Insolvency”. Since 2002, the World Bank’s Doing Business Project has issued an annual report on the ease of doing business in 198 countries; the benchmark output of that report includes classifying countries according to the quality of the business environment. For example, the country which ranked 1 is considered to have the most friendly business environment, and the country which is ranked 189 is considered to have the least friendly business environment. Despite the importance of that ranking, it does not provide clear indications about progress of performance, since some countries may achieve progress but that progress may not necessary leads to changes in their ranking. Instead, starting from 2005, the World Bank’s Doing Business Project launched another measurement, which is the "Distance to Frontier" (DTF). This new measurement helps in assessing the performance of a specific country in improving its business environment (for the 10 indicators above as well as the overall indicator) compared with the “frontier” country. The frontier country here is the best performing country for each indicator. In this, sense if the highest score for the “Starting a Business” indicator is achieved by country A, at a score of 90 for example, the score 90 will be the frontier score, and when country B achieves a score of 60 in the same indicator, it will be 30 points from the frontier.

Table 2-6 shows that doing business in non-rentier oil-exporting countries is easier than doing it in rentier oil-exporting countries. The average Ease of Doing Business – Distance to Frontier index in the group's overall score was 65 points, whereas it was 54.9 points in rentier oil-exporting countries over the period from 2010-2016. That indicates that foreign companies can establish and operate businesses in non-rentier countries more easily compared with operating businesses in rentier oil-exporting countries. The establishment and operating of a business requires a lower number of procedures, fewer days and fewer fees. The United Kingdom has the most friendly business environment amongst oil-exporting countries, with an average Ease of Doing Business score of 83.7 over the period 2010-2016, followed by Norway at 82.6, Australia at 80.9, Canada at 80.3, and Malaysia at 78.3. The Arab-Gulf countries also had relatively friendly business environments over the same period. The performance recorded for the UAE was 73.4, followed by Qatar at 68.5, Saudi Arabia at 67.6, and Oman at 66.6 (WB, 2015a).

Table 2-6: Ease of Doing Business – Overall Distance to Frontier (DTF) in Oil-Exporting countries, Average 2010-2016

Country	Ease of Doing Business Index (overall rank)	Country	Ease of Doing Business Index (overall rank)
Rentier Countries		Non-Rentier countries	
Algeria	49.7	Argentina	56.8
Angola	40.2	Australia	80.9
Brunei	61.8	Bahrain	67.3
Congo, Rep.	38.7	Bolivia	49.1
Ecuador	57.5	Bulgaria	70.0
Egypt	56.6	Cameroon	46.1
Gabon	48.7	Canada	80.3
Iran	57.5	Colombia	68.7
Iraq	48.4	Côte D'ivoire	43.4
Kuwait	60.8	Greece	63.7
Libya	33.2	Indonesia	57.3
Nigeria	45.4	Malaysia	78.3
Norway	82.6	Mexico	73.4
Oman	66.6	Mozambique	54.3
Qatar	68.5	Netherlands	76.1
Saudi Arabia	67.6	Peru	70.6
Sudan	49.2	Poland	70.3
Syria	47.9	Senegal	44.6
Trinidad & Tobago	62.7	South Africa	68.2
UAE	73.4	Tunisia	67.2
Venezuela	37.6	UK	83.7
Yemen	53.3	Vietnam	60.1
Rentier Average	54.9	Non-Rentier Average	65.0

Source: Researcher's calculations based on the World Bank's Doing Business project (www.doingbusiness.org).

2.6 Conclusion

This chapter described issues in both FDI and oil-exporting countries. It showed that the global FDI inflows have seen a significant increase over the last 40 years or so. Globalisation and free market policies have played the most important roles in that increase. However the global FDI inflows and outflows have been severely affected by the global financial and economic crisis over the last 40 years. Significant decreases in FDI inflows as well as outflows are observed during, within, and after crisis periods. It is shown that developed countries are the key FDI exporters and importers globally; they were responsible for 80% of global FDI outflows and 60% of global FDI inflows over the period from 1970-2014. Sectorally, the services sector dominates the majority of

FDI flows in developed, developing, and transition countries followed by the manufacturing and primary sectors, respectively. Over the period from 1970-2014, oil exporting countries received 31% of global FDI inflows and were responsible for about 25% of Global FDI outflows (UNCTADstat, 2015). It is also shown that OECs dominate the current global oil market and the future of this industry. They have, in their territories, around 80% of total world crude oil and proven natural gas reserves. Equally, they produce 70% and 60% of the world's total crude oil and natural gas production, respectively, and export 50% and 90% of total world crude oil and natural gas exports, respectively (EIA, 2015). Finally, the quality of institutions data shows that non-rentier oil-exporting countries show better "quality" conditions compared with rentier oil-exporting countries, and some countries have achieved very high scores in all indicators such as Norway, the Netherlands, Australia, Canada, and the United Kingdom.

Chapter 3

Literature Review

3.1 Introduction

Foreign direct investment as a concept has ancient roots and it has witnessed significant development in its forms over history (Wilkins, 1970). The economics literature suggests that FDI can be explained through different theories, each theory has its own pros and cons from other theories' prospective. These theories have been emerged in a certain social, economic, and political conditions which formulated their core assumptions. The literature also suggests a number of determinants affect FDI inflows toward a specific country over another such as natural resources, market size, exchange rate, inflation, and institutions and so on. This chapter reviews a number of important aspects with respect to FDI in terms of its theories, determinants, and importance to the host countries. It also reviews the rentier state theory and the main characteristics of rentier countries. The departure point of this chapter is the historical background of capital movement across countries. The reason for starting from the early story of FDI is to give a clear idea of how these kinds of economic activities were started, and to explore the main features of cross border capital movement at that time. It then turns to deal with the definition and measurement of FDI in order to shed light on the developments in defining and measuring FDI over time, and also to provide clarification of the differences between the direct and indirect forms of foreign investment. This chapter also includes a theoretical narrative of the main theories that explain FDI; it starts from the earlier contributions in this sphere in order to understand how ideas have developed conceptually to reach the current explanation of FDI movement, along with some criticisms made of each theory. The other part examines the most common locational determinants of FDI in the literature; it explains the theoretical bases of each determinant along with some empirical findings of each one from different spatial destinations. The last part of this chapter covers the concept of Rentier States along with the main characteristics of these countries. The key features

focused on within this part will be economic, social and political; exploring how oil plays a role in the formation of oil-rentier countries.

3.2 A Brief History of FDI from its Origins to the Present

The beginnings of capital flow movements outside national boundaries first began as individual activities, then evolved to involve the activities of family businesses, followed by economic entities in the form of companies of modest sizes, and eventually evolved to take the form of large companies known as Multinational Corporations (MNCs) in today's world. Mira Wilkins summarizes the evolution of capital flow movement across history with the phrase "*the trader becomes an investor*" (Wilkins, 1970:3). She claims that the Sumerians were the first to hire people abroad, around 2500 BC, for the purpose of storing and selling their trading goods. She argues that FDI started to be undertaken by corporations in the Middle Ages " ... *in the Middle Ages Italian bankers such as Bradi and Peruzzi operated in England, representing the Papacy*" (Wilkins, 1991:5). Later on, in the Sixteenth Century, the East India Company opened branches overseas to serve its operations. The middle of the 1700s witnessed the emergence of British, French and Dutch business families and their endeavours to operate new businesses in America (Wilkins, 1970). The Industrial Revolution and the growing demand for energy has promoted greater capital flow movements which formed the main feature of FDI flows by the European and American corporations between the First and the Second World Wars (Greer and Singh, 2000). According to Mira Wilkins, the creation of Multinational Corporations began in Europe, and it is widely agreed that Europe was the first place to witness the emergence of MNCs (Wilkins, 1986). At the same time, there was a growing role of US MNCs but not in the same volume and number of those based in Europe. A dramatic change occurred in the 1950s; the European MNCs started to decline as a result of the accumulated effects of the Second World War and the Great Depression. It was a time of growing emergence for American MNCs (Wren and Jones, 2006) and later of German and Japanese FDI (Kojima, 1982). Most of the first American investments were towards neighbouring countries, Mexico and Canada in particular, expanding later to cover Latin America and England (Wilkins, 1974). From that time, the US began to dominate FDI movement. According to the World Investment Report of 2013, the USA became the world's

largest importer and exporter of FDI in the world from 1980s, and this trend has continued (UNCTAD, 2013b).

3.3 The Definition and Measurement of FDI

The definition of FDI has evolved and is still evolving over the time. FDI has seen several changes in terms of its description, measurement and calculation. The first formal definition of FDI was provided by the U.S Department of Commerce; this definition divides FDI into two parts, “Inward Investment” and “Outward Investment”. The 1973 inward survey conducted by the U.S Department of Commerce defines “Inward Investment” as *“all foreign equity interests in those American corporations or enterprises which are controlled by a person or group of persons... domiciled in a foreign country”* (U.S. Department of Commerce 1937:10). Whereas, the outward survey of 1950 defines outward FDI as *“the United States equity in controlled foreign business enterprises”* (U.S. Department of Commerce 1953:4) . According to that survey, four categories of entities have been defined under foreign investment, which are:

- *“Foreign corporations, the voting securities of which were owned to the extent of 25 percent or more by persons or groups of affiliated persons, ordinarily resident in the United States.”*
- *“Foreign corporations, the voting stock of which was publicly held within the United States to an aggregate extent of 50 percent or more, but distributed among stakeholders, so that no one investor, or group of affiliated investors, owned as much as 25 percent.”*
- *“Sole proprietorships, partnerships or real property- other than property held - for the personal use of the owner held abroad by residents of the United States.”*
- *“Foreign branches of United States corporations.”*

International Institutions have also made efforts to define FDI. The modern FDI definition was provided by the International Monetary Fund (IMF), in the fifth edition of the IMF’s Balance of Payments Manual (1993), which defined FDI as:

“the category of international investment that reflects the objective of a resident entity in one economy obtaining a lasting interest in an enterprise resident in another economy” (1993:86).

A slight change has been made to the above definition by The Organisation for Economic Co-operation and Development (OECD), which states that FDI:

“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” (OECD, 1996:7).

The OECD’s benchmark also describes a Foreign Direct Investor as:

“an individual, an incorporated or unincorporated public or private enterprise, a government, a group of related individuals, or a group of related incorporated and/or unincorporated enterprises which has a direct investment enterprise – that is, a subsidiary, associate or branch – operating in a country other than the country or countries of residence of the foreign direct investor or investors” (1996:8). Another definition is provided by Moosa (2002:265), who argues that FDI is a *“process whereby residents of one country - the source country - acquire ownership of assets for the purpose of controlling the production, distribution and other activities of a firm in another country”*. It seems clear, from FDI definitions, that the concept of FDI is related to the degree of influence and the level of control resulting from FDI rather than the amount or volume of the investment. However, for statistical and accounting purposes, most international institutions such as the WB, IMF, OECD, and UNCTAD have agreed to interpret the term “lasting Interest” numerically by the bright-line figure of 10% of the voting power. This interpretation is essential for two reasons. Firstly, it helps to distinguish between Foreign Direct Investment and other types of capital flows, in the sense that any capital flow equal to or greater than 10% of an entity's voting shares will be considered FDI. Similarly, any capital flows less than 10% of voting shares will be considered a portfolio investment. Secondly, it helps to facilitate the operations of International comparisons of FDI statistics published by countries around the world (UNCTAD, 1999). The efforts of International Institutions in harmonising FDI definitions and measurements have helped scholars, policy makers and even countries themselves to follow standard criteria. However, the conceptual framework of

FDI remains different (Lipsev et al., 1999). For example, Fu (2000) and Kiggundu (2002) argue that capital flows can be considered as FDI only if they were undertaken by private entities, excluding any capital flows in the form of loans provided by international organisations.”. Similarly, some countries, even members of the OECD, do not apply the 10% level to classify FDI, as is the case in Canada, France and Japan, mainly because of the nature of their accounting systems (Wren and Jones, 2006). The calculation of FDI⁷ is not an exception to that. The OECD recommends a benchmark calculation of FDI consisting mainly of the sum of four variables which are: retained earnings, equity capital, intra-company loans and intra-company borrowing (OECD, 1996). In 1997, the IMF and OECD launched what was called the Survey of Implementation of Methodological Standards for Direct Investment (SIMSDI), as an international standard FDI survey (IMF, 2003), which was implemented internationally.

3.4 Types of FDI

3.4.1 Motives-Driven FDI

MNCs’ motives in undertaking FDI can be classified under one of two broad possibilities, “aggressive” or “defensive” motives. The “aggressive” motives occur when the investing firm decides to invest abroad for the purposes of protecting its strategic options. Whereas, the “defensive” motives occur as a precautionary act against possible competition with other companies (Dunning, 1993). Within that broad description, there are four main types of FDI (Dunning, 2000), which are:

3.4.1.1 Resource-Seeking FDI

This kind of FDI targets the host country's supply of resources. Foreign firms may undertake FDI in a specific country for the objective of gaining benefits from natural resources that they offer such as crude oil, natural gas and agricultural factors. These resources might also be human resources such as low cost labour (Dunning, 1993). Theoretically, there is a positive impact from this kind of FDI on host countries. Resource-seeking FDI is supposed to increase the host-country's exports and thereby improve trade balances (Kojima, 1978, Gray, 1998). Woodward and Rolfe (1993) argue

⁷ Full details on how countries measure FDI can be found in: IMF 2003. Foreign Direct Investment Statistics: How Countries Measure FDI. Foreign Direct Investment Statistics Washington, D.C.: International Monetary Fund.

that since the 1980s, many countries in Asia, Latin America and Africa have started to pay more attention to export-oriented FDI and to change their investment restrictions gradually to open the way for such kinds of FDI. Accordingly, it is logical to find that resource-rich countries are more attractive destinations for resource-seeking FDI. Tøndel (2001) and Ledyeva (2007) find that massive amounts of investment received by the Commonwealth of Independent States CIS were in the natural resources sector; crude oil and natural gas in particular.

3.4.1.2 Market-Seeking FDI

MNCs may decide to invest abroad if considerable demand is found in a specific foreign market. Market-seeking FDI is often preceded by the export of the investing firm to the destination country (Dunning, 1993). Given the fact that Free Trade Agreements (FTAs) expand markets (Worth, 1998), countries that sign such agreements are more likely to attract more market-seeking FDI due to the possibility of serving a larger market. Evidence from Latin America (Ponce, 2006) and ASEAN (Thangavelu and Findlay, 2011) shows that FTAs have a positive impact on receipt of FDI as a result of the potential benefits expected from larger markets.

3.4.1.3 Efficiency-Seeking FDI

This type of FDI is associated with resource-seeking FDI and market-seeking FDI. It occurs when the investing firm endeavours to increase its production efficiency in a competitive economy (Dunning, 1993). In subsequent research, Dunning (2000) distinguishes between two factors at play, which encourage market-efficiency FDI; these are freer trade and lower-cost transportation. Alternatively, coding technology applications through licensing and management agreements have been another option for efficiency-seeking FDI. However, well-designed government policies and an encouraging FDI environment are pre-conditions for efficiency-seeking FDI target a specific country (Sethi et al., 2003).

3.4.1.4 Strategic Assets-Seeking FDI

A firm may undertake FDI in order to keep its domination of a specific production, or to protect its own intangible assets from competitors. The most common

forms of asset-seeking FDI are Joint Venture (JV) and Merger and Acquisitions (M&As) agreements, which became the key features of MNC activities to accumulate technological and managerial skills as well as marketing assets (Gugler and Boie, 2008, Prakash Pradhan, 2010).

3.4.2 Production Expansion FDI

3.4.2.1 Horizontal FDI

The horizontal type of FDI involves expanding the production of the same products that are produced in the investor's home country into the host country (Caves, 1971). In this sense it involves spatial expansion of production and it may or may not involve developing and upgrading the existing production infrastructure.

3.4.2.2 Vertical FDI

The vertical form of FDI involves operating abroad in order to promote production inputs or outputs (Caves, 1971). As an example of this type of FDI, Moosa (2002) observes that US car dealers started to build their own relationship networks in Japan in order to facilitate the access of their products into the Japanese markets, which was at that time dominated by Japanese cars dealers.

3.4.2.3 Platform FDI

This type of FDI involves those operations undertaken by investing firms in the host country for the purposes of exporting products to country other than the host country itself. The US investments in Mexico for the objective of access to the NAFTA market is an example of this type of FDI (Hanson et al., 2001, Ekholm et al., 2007).

3.4.3 Other Types of FDI

3.4.3.1 Escape FDI

Escape FDI is a type of investment made by firms in countries that impose strong restrictions on economic activities; those restrictions may include legal regulations or organisational macro policies. A clear example of this can be seen in the investments made by Israel in Europe with the objective of exporting to Arab countries (Dunning,

1993). Escape FDI in some cases is associated with the political-economic philosophy of a country, considering the claim that centrally planned economies tend to impose restrictions on firms' activities. Andreff (2003) finds that most outward FDI from the Russian Federation and The Commonwealth of Independent States (CIS) during the 1980s were escape investments as a reaction of the restrictive regulations which were imposed by governments in these countries upon local firms' activities.

3.4.3.2 Support FDI

This type of FDI occurs when affiliates undertake investment abroad to support inputs and/or outputs of the MNC's production activity by facilitating the distribution channels or providing intermediate goods at a lower cost (Dunning, 1993, Narula, 2002, Scott-Kennel, 2007). Support FDI is also known "trade-related investment" (Dunning, 1993). It is worth mentioning that this topic has received extensive interest within the World Trade Organisation (WTO) agreements; the Agreement on Trade-Related Investment Measures (TRIMs)⁸ in particular.

3.4.3.3 Passive FDI

Dunning (1993) defines passive FDI as an investment undertaken for the purposes of gaining benefits from capital appreciation rather than having an influential role in management through owning new assets, i.e. "active FDI". Arabic FDI in UK hotels during the 1970s is an example of such a type of FDI that targets financial benefits. Passive FDI may occur where individuals or small firms in the real estate sector hope for a future increase in asset values. It can be said that passive FDI is not related to the modern concept of FDI in terms of influence and control as much as it connected with the concept of portfolio investment (Dunning, 1993).

3.4.3.4 Fire-Sale FDI

Krugman (2000) identifies a special type of FDI called "Fire-Sale FDI"; he argues that during financial crises, FDI may flow towards countries experiencing the financial

⁸ Under the TRIMS agreement, WTO's countries-members should treat FDI under the same conditions they treat domestic enterprises and their investments.

crises mainly for two reasons. Firstly, governments during such periods reduce restrictions on FDI entry into their countries as part of their commitments with international institutions; particularly those programs imposed by the International Monetary Fund (IMF). Secondly, such crises lead to the depreciation of firms' assets, which allows foreign firms to enter those countries through Acquisitions and Mergers, and buy shares at less than their actual value. Most of the FDI flows to Mexico during 1985 and ASEAN during 1997-1999 have been documented as Fire-Sale FDI (Krugman, 2000, Aguiar and Gopinath, 2005, Acharya et al., 2011). Takagi and Shi (2011) Also point out that the Japanese FDI towards ASEAN has not had a significant effect during the crisis in the region. However, the recent crisis in the USA has not seen similar events. Calderon and Didier (2009) argue that FDI flows, based on the Fire-Sale FDI assumptions, do not apply for the crisis of 2007, as M&As have seen a significant decline as a result of the special structure of this crisis.

3.5 Multinational Corporations and FDI

According to John H. Dunning, a firm that undertakes operations across borders was known first as a “multi-territorial firm”⁹, and the work of Stephen Hymer in 1960 is considered as the first attempt to explain MNCs and FDI activities (Dunning, 1993:68),. In our globalised world, a considerable amount of FDI is conducted by MNCs (Moosa, 2002, Blonigen, 2006, Yang and Huang, 2011). The term “MNC” has been defined by many international organisations. The International Labor Organisation ILO defines MNCs as follows:

“Multinational enterprises include enterprises, whether they are of public, mixed or private ownership, which own or control production, distribution, services or other facilities outside the country in which they are based”. (ILO, 2006:2)

The growing role of MNCs in the global economy led the United Nations, in 1974, to establish a centre called the United Nations Centre on Transnational Corporations (UNCTC) as an international organisation aiming to support discussion of issues related to MNCs, such as political and economic factors, or legal regulations as

⁹ Dunning argues that this term was created first by Bye M. in his study entitled “Self-financed multiterritorial units and their time horizon”.

well as to help developing countries to deal with such corporations. A Transnational Corporation (TNC) is defined by The Draft UN Code of Conduct on Transnational Corporations (UNCTC) as:

“an enterprise, comprising entities in two or more countries, regardless of the legal form and fields of activity of these entities, which operates under a system of decision-making, permitting coherent policies and a common strategy through one or more decision-making centres, in which the entities are so linked, by ownership or otherwise, that one or more of them may be able to exercise a significant influence over the activities of others, and, in particular, to share knowledge, resources and responsibilities with the others”. (UNCTC, 1983:1)

Dunning asserts linkages between Multinational Enterprises (MNEs), Transnational Enterprises (TNEs) and FDI in one definition, suggesting that an MNE or TNE is:

“an enterprise that engages in foreign direct investment FDI and owns or controls value- adding activities in more than one country” (Dunning, 1993:3).

Despite the general similarity in the functions of MNCs and TNCs according to the above definitions, these two types differ in terms of firm structure (Drucker, 1997). The first distinction is that MNCs have a national identity, belonging to a specific country which is often the home country where their headquarters are based, whereas TNCs cannot be identified under any one nationality. The other difference is that MNCs have a separate plan for each market, with different objectives, while TNCs tend to follow a central plan with an independent decision for each subsidiary with regard to R&D and marketing policies (Morgan, 2001, Lane, 2001). The number of MNCs increased from 60,000 in 2004 (UNCTAD, 2004) to 82,053 parent corporations in 2009 (UNCTAD, 2009b). There have been developments in more than merely their numbers, as the importance of MNCs in the global economy also continues to grow. The data for 2012 reveals that the world's top 100 MNCs accounted for \$86.5 trillion assets, held \$26 trillion and counted 72 million employees (UNCTAD, 2013b). Moreover, some MNCs have asset bases which dwarf the GDPs of some countries. According to the World Development Report (2012) and the Fortune Magazine, 43 out of 100 of the world's largest economic entities were MNCs in 2012. The mutual relationship between

MNCs and Globalisation has opened great opportunities for MNCs, while the growing role of MNCs has furthered Globalisation (Rodrik, 1997). The reciprocal relationship between Globalisation and MNCs has led to new breed of Multinationals called “Dragon Multinationals”. Mathews (2002, 2006) identifies the approach of Dragon Multinationals¹⁰ in terms of the speed with which some corporations have succeeded in the internationalization of their activities; not thanks to technological innovation but to organizational dynamism that has helped these corporations to adjust their production according to market requirements and global developments. Globalisation has also led to a pattern of production called “Global Value Chains” (GVCs) which has become the main feature of today’s global economy. The fundamental feature of GVCs is the distribution of production processes among different locations or countries that offer better conditions for more efficient production (UNCTAD, 2013a, OECD, 2013). The GVCs in today’s world are responsible for around 60% of global trade which today amounts to nearly \$20 trillion (UNCTAD, 2013b).

3.6 The Importance of FDI for Host Economies

3.6.1 Impacts on Economic Growth and Development

The relationship between FDI and economic growth has explanation within the theory. According to the neoclassical models of growth, which also called Solow-Swan model and the exogenous growth model, FDI contributes to country’s economic growth via capital accumulation, it further suggests that the long-run economic growth depends on technology and employment tools. In the sense that a continuous technology development is a pre-condition factor for a continuous positive role of investment on country’s economic growth (Solow, 1956, Swan, 1956). However, these models suggest that FDI have the same impact as domestic investment on country’s economic growth. The new growth model has also explained the relationship between FDI and economic growth. That model, which is also called the endogenous growth model, suggests that FDI is more significant than domestic investment in terms of enhancing a country's economic growth (Romer, 1986, Lucas, 1988). Thus, FDI can affect the economic

10 Some MNCs that manufacture home appliances, such as Haier in China, Mabe in Mexico and Arçelik in Turkey are examples on Dragon Multinationals. The production processes of these MNCs are driven by low cost labour as well as high demand in developing countries, benefiting from managerial innovations. See Bonaglia, F., Goldstein, A. & Mathews, J. A. 2007. Accelerated internationalization by emerging markets’ multinationals: The case of the white goods sector. *Journal of World Business*, 42, 369-383.

growth of the host economy positively in two ways, directly and indirectly. The direct impact of FDI on economic growth occurs through new capital flows¹¹ which lead to an increase of capital accumulation in the host country and through the transfer of new technologies. In this regard, Moran (2003) argues that FDI into countries rich in natural resources is expected to have a significant positive impact on the balance of payments. The indirect impacts take the form of improvements in human capital and managerial skills due to the entry of new technologies into the production process (De Mello, 1999). However, Borensztein et al. (1998) argue that despite capital flows in the form of FDI increasing total investment in the host economy, the impact of transferring technology seems to have a greater influence on economic growth. Within the same context, given the indirect effects on economic growth, FDI plays an important role in achieving development through human capital formation, international trade integration and improving the business environment through promoting competition. Such progress could lead to poverty alleviation¹² particularly in developing countries (Brooks et al., 2010), and FDI may also have an influential role in promoting corporate social responsibility (OECD, 2002). The general trend shown by empirical studies examining the relationship between FDI and economic growth indicates that most research focused on developing countries has found a clear positive relationship between FDI and economic growth, unlike those focused on developed countries which either have found a negative or an ambiguous relationship between FDI and economic growth (Ozturk, 2007). For example, Mallick and Moore (2008) find that FDI contributes positively on economic growth in a study covers 60 developing countries over the period from 1970 to 2003. They elaborate further suggesting that the positive impact is greater within high-income developing countries compared with low-income developing countries. Another study reports a positive impact of FDI on both physical and human capital is the research of De Gregorio (1992), who finds a positive relationship between FDI and economic growth in 12 countries in Latin America during the period from 1950-1980.

11 In addition to the FDI flows to the host countries, the existence of foreign firms in a specific country will lead to an increase in tax revenues via corporate tax and these new revenues may enable the enhancing of social welfare services provided by governments. See: Lehnert, K., Benmamoun, M. & Zhao, H. 2013. FDI Inflow and Human Development: Analysis of FDI's Impact on Host Countries' Social Welfare and Infrastructure. *Thunderbird International Business Review*, 55, 285-298. AND: Nguyen, H. T. T., Nguyen, M. H. & Goenka, A. 2013. How Does FDI Affect Corporate Tax Revenue of the Host Country? : Centre d'Études des Politiques Économiques (EPEE), Université d'Evry Val d'Essonne.

12 It is worth noting that the United Nations Millennium Declaration, launched in 2000, identified FDI as an important factor for reducing poverty in Africa by 2014.

Further empirical evidence is found in a study conducted through panel data analysis of 46 countries during 1986- 1997 by Reisen and Soto (2001). They find that, in the long term, FDI can play a significant role in the economic growth of developing countries. Similar findings have been reported for 12 Asian countries during the period 1987-1997, by Wang (2009). However, some recent empirical evidence suggests that the positive impact of FDI on economic growth is subject to the presence of specific economic conditions in the host economy such as physical infrastructure and human capital, as well as an appropriate degree of trade openness (Kotrajaras, 2010, Wijeweera et al., 2010).

3.6.2 Technology Diffusion

FDI is regarded as a channel for transferring ideas (Rivera-Batiz and Romer, 1991, Barrell and Pain, 1997), and it is widely documented that most “new ideas” in the form of modern technologies and inventions are produced in developed countries, by MNCs in particular, thanks to their high level of expenditure on Research and Development (R&D) (UNCTAD, 2005). One of the important reasons that encourages countries to attract FDI is the desire of acquiring technology that they are unable to develop on their own. Adoption of advanced technologies by MNCs encourages domestic firms to develop their productivity by investing more in physical and human resources. In some cases, MNCs offer training to local employers in skills which eventually have beneficial effects for the whole economy. In addition, MNCs may provide training for domestic suppliers in order to help them to produce products that meet the required standards of production (Blomstrom, 1992). A number of empirical studies show positive impacts of FDI on the host country’s productivity through new technology diffusion. Aitken and Harrison (1999) find that the presence of FDI firms increases the productivity of small and medium-sized domestic enterprises. Furthermore, the research of Haskel et al. (2007), which covers the whole of the UK manufacturing sector from 1973-1992, finds that there is a positive relationship between the presence of FDI and total factor production, where an increase of 10 points in FDI's presence leads to a 5% increase in total production factors, which proves the existence of the indirect effects of FDI on local production. Zhang (2001b) Also concludes that FDI had positive effects on the Chinese economy in terms of technology diffusion during the period 1984-1998. However, within the same context, there is some research

that calls into question the ability of FDI to achieve the transfer of technology to the host economy, based on the claim that MNCs do not transfer highly advanced technology to their affiliates in host countries in order to maintain the superiority of domestic firms, and to protect themselves from potential competition (Glass and Saggi, 1998). In addition, MNCs may not spend as much on R&D in the host economy as they do in the country of origin, for the purpose of maintaining their technological advantage, and so their superiority, over local firms (Forte and Moura, 2013).

3.6.3 Impacts on Exports

FDI can play an influential role in international trade integration by promoting the host country's exports through transferring new technology to produce new products and upgrade local employment skills (Zhang, 2005). Another possibility is that domestic firms can gain benefits from the existence of MNCs in their home country by investigating and learning from those MNCs which already have their own exporting channels and experience (Aitken et al., 1997). Moreover, MNC affiliates in host economies often hold some advantageous positions such as owning brand names and operating international distribution-marketing networks through their parent companies; all of which enable MNCs to serve and access international markets easily, and thereby increase the host country's exports (UNCTAD, 1999). In addition, the presence of foreign companies in a certain sector increases competition among domestic firms, which encourages domestic firms to direct their activities towards exports. Greenaway et al. (2004), in their study which covers 3,662 UK's firms in the manufacturing sector from 1992 to 1996, find that FDI affected UK manufacturing sector exports positively. Within the oil sector, Nguyen and Xing (2006) conclude that FDI has prompted a massive increase in Vietnam's oil and heavy industry exports from US\$617 million in 1990 to US\$8.6 billion in 2004. Similar findings from oil exporting countries were found by Gawad and Muramalla (2013), who argue that FDI has a positive impact on exports of the Oil and Gas industries of 17 countries between 1995 and 2011. China also provides a clear example on the impacts of FDI on exports. The research of Naughton and Lardy (1996) and Zhang (2005) have empirically demonstrated a positive relationship between FDI and exports in china. From India, Banga (2003) finds that FDI had a positive impact on the diversification of Indian exports during the periods from 1994-1995 and 1999-2000. Rahmaddi and Ichihashi (2012) also finds a positive

relationship in the Indonesian manufacturing sector as a result of the presence of FDI during 1990-2008. However, According to Zhang (2001b) there are some cases where FDI does not contribute to increasing the host country's exports. For example, a host country's market-seeking FDI would focus upon serving the domestic market instead of targeting exports and it may prevent the development of the host country's comparative advantages through its focus on the exploitation of cheap labour and raw materials.

3.6.4 Domestic Firms' Development and Restructuring

Both private and state-owned domestic firms in the host country can gain benefits from the presence of FDI through linkages with MNCs and through the privatisation process (UNCTAD, 1999). The presence of FDI creates backward linkages with domestic firms through increasing the demand for intermediate goods. This process thereby might serve and promote industrial development in the host economy. These advantages are likely to be greater if MNCs have succeeded in transferring technology to domestic firms as it will increase their productivity and efficiency (Lin and Saggi, 2007, Batra and Tan, 2002). Moreover, the new competition rules that arise due to the presence of foreign companies may force or encourage domestic firms to develop and upgrade their production mechanisms in order to maintain their market share (Blomström and Kokko, 1996). The theoretical component which suggests a positive effect of FDI on domestic firms has been supported empirically in some earlier studies. Globerman (1979) provides evidence suggesting that FDI has a positive impact on employment productivity in the Canadian manufacturing sector. Blomström (1986) also finds that the existence of FDI in the Mexican manufacturing sector is associated with “structural efficiency” and positive competitiveness. The more detailed empirical evidence of Bosworth et al. (1999) covers 58 countries from 1978-1995 and finds that every \$1 US of FDI leads to an increase of about \$0.50 US in domestic investment. On a sectorial level, the research of Gorodnichenko et al. (2007) finds that FDI has a positive impact on long-established domestic firms and on sectors that do not require high qualifications, such as the service sector. Despite all the above evidence, some research takes the opposing view, suggesting that there is no clear evidence of the positive impact of FDI upon domestic firms. For instance, Haddad and Harrison (1993) find that the presence of foreign companies in the Moroccan manufacturing sector did not increase the productivity of Moroccan companies in this sector between 1985-1990.

Further evidence is produced by Aitken and Harrison (1999), who suggest that foreign companies crowd out domestic companies and compete with them in the most productive sectors of the host economy. FDI can also play a role within economic reform policies adopted by many developing countries, and State-Owned Enterprises (SOE) can also gain benefits from the presence of FDI. Mencinger (2003) argues that the presence of foreign investment in a particular country encourages efficiency among domestic privatized firms. From the perspective of foreign investors, enterprises offered for privatization and natural resource state enterprises are attractive opportunities in developing countries, based on the assumption that those enterprises already have monopolistic advantages over the local market, as well as often being well-regulated entities (UNCTAD, 1999, Sul et al., 2012). However, this kind of FDI might have severe implications for the host economy in terms of layoffs as a result of adopting new administration policies, and it might crowd out the "infant industries" due to their size and dominant role in the host economy (UNCTAD, 1999). In overall conclusion, it can be said that developing countries provide more evidence of the positive relationship between FDI and the efficiency of domestic firms than is provided by studies of developed countries (Lim, 2001).

3.6.5 Impacts Upon Local Employment

The labour market in the host economy can derive benefits from the presence of FDI through three main channels which are: job creation, wages ratio and skills development. FDI creates job opportunities in the host country¹³ in two ways: firstly, the establishing of new projects in the host economy by foreign firms requires local labour at different stages of the production cycle. Secondly, the linkages between MNCs and domestic firms in terms of the demand for intermediate goods will also help to create jobs in the domestic firms themselves to meet the growing demand for new products (UNCTAD, 1999). Bailey and Driffield (2002) find that FDI has increased the demand for skilled workers within 20 UK manufacturing sectors over the period from 1984–1992. Within the same context, Yabuuchi (1999) finds that FDI flows into the Export

13 There are some potentially positive impacts of FDI on the employment rate in parent countries: skilled-worker employment increased within Swedish firms that invested abroad. See: Blomström, M., Fors, G. & Lipsey, R. E. 1997. Foreign Direct Investment and Employment: home country experience in the United States and Sweden *The Economic Journal*, 107, 1787-1797.

Processing Zones (EPZs) play a significant role in reducing unemployment. Recent research by Habib and Sarwar (2013) finds that there is a positive long-run relationship between inward FDI and employment in Pakistan over the period 1970-2011. FDI could also affect per capita GDPs in the host economy directly and indirectly; directly wherein the MNCs often pay higher wages due to increased productivity and more effective management, allowing them to compete effectively and indirectly as a result of changes in the structure of the labour market. High wages paid by foreign firms may lead to increases in overall wage ratios in the host economy, and it may also affect supply and demand dynamics in the labour market which could push domestic firms to increase wages paid for local employment (Lipsev and Sjolholm, 2001, Arnal and Hijzen, 2008, Girma et al., 2013). Empirically, Aitken et al. (1996) find that wage levels paid by foreign firms in Mexico, the US and Venezuela - in different periods of time - are 30% greater than those paid by domestic companies. Similar findings from Indonesia are produced by Lipsey and Sjolholm (2001), who find that high-ranking workers in foreign firms earn double the wages of their counterparts in domestic firms, and lower-ranking workers receive 66% more than those working in domestic firms. Within the UK manufacturing sector, empirical evidence produced by Driffield and Girma (2003) suggests that higher wages paid by foreign firms has led to higher wages being paid by domestic firms in the UK electronics sector. In contrast, FDI is sometimes blamed for expanding the wage gap between high-ranking and lower-ranking workers (Taylor and Driffield, 2000, Chen and Ku, 2000). With respect to employee training, it is widely agreed that MNCs tend to spend extensively on training ; a tendency which contributes to developing local employment skills among those who work in foreign firms, while it can also encourage domestic firms to train their employees in order to reach higher productivity levels (UNCTAD, 1999). In some cases, local economic organisations in cooperation with international ones can play a role in developing local labour skills in the host economy through training agreements with the foreign firms (Brimble and Sherman, 1999)¹⁴

14 Thailand provides a clear example of cooperation among MNCs and local & international institutions, such as the international chambers of commerce, in setting up training programs for local Thai employees. See : Brimble, P. & Sherman, J. 1999. The Broader Impacts of Foreign Direct Investment on Economic Development in Thailand: Corporate Responses; Paper Prepared for High Level Roundtable on FDI and Its Impacts on Poverty Alleviation, December 1998, Brooker Group.

3.7 FDI Theories

The early FDI theories do not provide an obvious theoretical foundation for today's concept of FDI. According to Hosseini (2005), the dominant role of international trade compared with international capital movement in international production before the Second World War explains the earlier concentration upon trade more than FDI in the early literature. The subsequent contributions have dealt with cross-border investments as one block in its capital form (Kuşluvan, 2013). It also combined direct and indirect capital movements together. Buckley (2011) demonstrates that most of the early investment theories conflate "direct" and "indirect" forms, which he attributes to the lack of statistics enabling the distinguishing of these two forms of investment. Up until modern FDI theories, the literature suggests that FDI - in its modern concept- and MNC activities were not explained in one integrated theory until the 1960s, with Hymer's contribution particularly. The Monopolistic advantage theory of Hymer is considered as the first "obvious theory" that explains FDI and MNC functions regardless of its disputed validity or outstanding criticism that it faces. Wren and Jones (2006) point out that:

“Before this time there was no stand-alone theory of FDI, and the concept was treated in the same manner as international capital flows, which neglected many important features of FDI” P:27.

John Dunning also asserts that *“prior to the 1960s there was no established theory of the MNE or of FDI”* (Dunning, 1993:68).

It could be argued that a better understanding of FDI requires an assimilation of the conceptual framework of international production over history, which can form a link between the first contributions and the modern FDI and international production theories. Accordingly, this part deals with the main FDI theories that have been examined in the literature.

3.7.1 The Theory of International Trade/ Heckscher-Ohlin approach/ The Factor Proportions Model

The theory of international trade has two forms: the comparative advantage of Ricardo and the Heckscher-Ohlin form. Ricardo's theory¹⁵ (Ricardo, 1817) assumes that countries produce goods and services for their own advantages, for local consumption purposes initially, and that they may exports the surplus of that production to other countries, and they tend to import goods and services for which they do not own the factors of production. Based on this theoretical framework, Hecksher and Ohlin (1933) establish their theory. They suggest that trade amongst countries is associated with the "abundance" and "scarcity" of production factors such as capital, land and labour. In this view, countries produce and export products for which the factors of production are domestically abundant, and they import products for which the factors of production are scarce. This theory is also known as "The Factor Proportion Theory" (Morgan and Katsikeas, 1997) and "The Location Hypothesis" (Moosa, 2002). According to that theoretical understanding, FDI is seen as a factor of production/capital, and consequently it moves from abundance to countries where it is scarce (Lall and Streeten, 1977). The theoretical contributions during the 1960s and slightly earlier have dealt with FDI as fiscal capital, especially in the writings of Mundell (1957) and MacDougall (1960). Within a similar context, the research of Markusen (1984) and Helpman (1984, 2013) present a new generation of trade theory that explains FDI movement. They argue that the differences in resources and levels of technology between countries can explain the movement of FDI among countries. The theory of international trade faces some criticisms. One of the most iconic criticisms was produced by Leontief, who calls into question the realism of the theory, claiming that its assumptions are too simplified. He has tested the theory on US trade in 1974. At that time, the US had an abundance of capital and less labour, but the empirical results revealed that the US has exported labour-intensive products and imported capital-intensive products (Duchin, 2004). Other authors challenge the content of this theory;

15 Despite Ricardo's theory being unable to explain FDI, where it examines trade in two products between two countries at a local level. See: Kurtishi-Kastrati, S. 2013. Impact of FDI on Economic Growyh: An Overview of The Main Theories of FDI And Emperical Research. *European Scientific Journal*, 9 (7), 56-77., it nonetheless seems to have benefits in its later theoretical contributions regarding FDI.

they claim that it has many limitations as it deals with FDI as a movement of fiscal capital only without any consideration of other factors (Lipsey, 2004, Navaretti, 2004).

3.7.2 The Portfolio Theory/ The Differential Rates of Return/ The Risk Diversification Theory

The Portfolio Theory was presented first by Iversen (1935) who presumes that under specific conditions, such as the absence of risk and barriers, capital moves from low interest rate-countries to high interest rate-countries seeking a higher rate of return. Within this conceptual framework, the Risk Diversification Theory assumes that it is not merely rate of return which determines the movement of capital abroad, but that risk plays a similar role. In this sense, firms may diversify their investment abroad as a strategic option in order to reduce the total potential risk of their assets (Tobin, 1958, Agarwal, 1980). The Portfolio Theory faces extensive criticism in terms of its theoretical foundation as well as its empirical evidence. Theoretically, it has been challenged as it is not a realistic assumption (Denisia, 2010). Another weaknesses has been recorded against this theory as it has failed to explain FDI in an obvious way, where it considers only one direction of capital movement which is the outflow, and it has neglected other features of capital movement which can be transferred through FDI, such as technology and managerial skills (Hosseini, 2005, Dunning, 1973). Similar criticisms of this theory are provided by Hymer (1976), but the difference is that Hymer's work has led to a new theory, which will be explained below.

3.7.3 The Monopolistic Advantage Theory

The Monopolistic Advantage Theory are often attributed to Stephen Hymer who wrote most of this theory's contents in his PhD thesis entitled "The International Operations of National Firms: A study of Foreign Direct Investment"¹⁶. This theory explains MNCs' investment in host countries in terms of relative advantages and disadvantages, which they possess compared with domestic firms. On the one hand,

¹⁶ Hymer's PhD thesis was written in 1960 but published in 1976 by MIT press. See Pitelis, N. C. Stephen Hymer, the Multinational Firm and 'Multinational Corporate Capital'. VII Conference of the Greek Historians of Economic Thought. National University of Athens, 2005. 27-28. AND: Dunning, J. H. & Rugman, A. M. 1985. The influence of Hymer's dissertation on the theory of foreign direct investment. The American Economic Review, 75, 228-232.

MNCs in the host country face some disadvantages as a result of operating a new activity or activities in a different environment, socially, economically and politically, with barriers such as language, culture, regulations, per capita GDP and political factors. On the other hand, MNCs have some advantages that can place them in a superior position over their domestic counterparts. Such advantages might be intangible and/or tangible assets such as capital, advanced technology, brand names, and developed management skills. All these advantages enable MNCs to profit in the host country more effectively than domestic firms (Moosa, 2002, Hymer, 1976). Hymer's supervisor, Charles Kindleberger, contributes to the monopolistic advantages theory by suggesting that there are some characteristics that should be satisfied in order to obtain benefits from the advantages that MNCs possess. Firstly, these advantages should be held by the MNC itself. Secondly, they should be transferable and applicable in the MNC's branch(es) in the host country. Thirdly, they should be sizable to overcome domestic firms' advantages (Kindleberger, 1969). It could be argued that the monopolistic advantage theory concentrates on firm specific characteristics to explain FDI movements. Dunning and Rugman (1985) argue that this theory "*was to escape from the intellectual straightjacket of neoclassical- type trade and financial theory, and move us towards an analysis of the multinational enterprise MNE based upon industrial organization theory*". P: 228. However, Moosa (2002) criticizes this theory pointing out that it does not explain why firms choose FDI rather than alternatively exporting their products.

3.7.4 Product Life Cycle Theory

Product Life Cycle Theory explains FDI movement through the development of a product's life stages. According to Vernon (1966), there are three stages of a product cycle which are:

- i. The First stage - Growth: firms benefiting from new technologies and R&D start to produce new products, then the demand for new products starts first in the home country and firms increase their production for the purposes of satisfying domestic consumption needs.
- ii. The Second stage – Maturity: firms start exporting the products to similar high-level income countries. These countries will start imitating these products,

creating price competition which encourages firms in the home country to invest in lower-cost countries, seeking lower production costs in order to maintain their domination of the market (Moosa, 2002, Denisia, 2010).

- iii. The Third stage – Decline: innovating firms will start losing their advantages in producing the product as a result of price competition with other foreign firms.

According to these stages, FDI occurs at a particular stage when the firm has superiority, in the sense that in earlier stages of the product life cycle, FDI may take the form of local-market-oriented investment, where the local consumption is the target, and it may take the form of export-oriented FDI when exporting to foreign countries becomes the target (Jigme, 2006, Kurtishi-Kastrati, 2013). Some researchers look to this theory as the first attempt to explain FDI and MNCs activities through the interaction between technology, FDI and trade. However, it has been criticized as it is not valid for explaining FDI internationally, since it was created for investigating the production of one country. the USA, and during a particular period of time - the 1960s (Wren and Jones, 2006, Moosa, 2002). The product life cycle theory has been challenged by the recent research of Ayyagari et al. (2013) who find that the old Indian state-firms contribute to the economy more than new firms in terms of their employment contribution.

3.7.5 The Internationalisation Theory

The Internalisation Theory was presented first by Buckley and Casson (1976) based on Coase's "The nature of the firm" Coase (1937). According to this theory, a MNC chooses FDI as a strategic decision in order to replace market transactions costs with internal costs. Moosa (2002) explains this theory by giving an example of when a firm faces difficulties in purchasing a specific intermediate input – oil for example - at which time it may decide to invest abroad by establishing an oil refinery to overcome any potential problems which may affect its production. Alan Rugman, in his recent work Rugman (2013), draws connections between FDI as a strategic decision of MNCs and the efficiency of an MNC as an organization, pointing out that:

“internalization theory demonstrates that the MNE is an organization which uses its internal market to produce and distribute products in an efficient manner in situations where a regular market fails to operate” p:11.

It is worth mentioning that failure in obtaining intermediate goods is not the only reason that drives FDI according to this theory. Rugman (1980) further suggests that internalisation is a choice of MNCs where any production factor fails to satisfy production requirements in an effective manner. Within the conceptual development of FDI theories, the internalisation theory was a reaction to criticism facing the Monopolistic advantage theory of Hymer and it has been used for the benefit of subsequent theoretical contributions (Hosseini, 2005). Another contribution has been made to this theory recently by Blomstermo and Sharma (2003); the so-called Uppsala Model. According to this model, internalisation of MNCs' activities occurs in stages subject to accumulated information about the new destination, and MNCs take into consideration some important factors such as culture and geographical aspects before make the internalisation decision. The Internalisation Theory faces some criticism in terms of its generality (Rugman, 1980), and it relies on one specific factor – the industry factor - to explain FDI (Kurtishi-Kastrati, 2013, Wolf et al., 2012, Verbeke and Kano, 2012). Further, it considers the fiscal cost of production only as a driven factor of FDI and it neglects other factors such as culture and regulations in the host country (Jigme, 2006).

3.7.6 The Currency Areas Theory/ Aliber’s FDI Theory

Aliber’s theory of FDI associates exchange rates with the movement of FDI among countries. According to Aliber (1970, 1971, 1993), the variation in economic growth rates among countries leads to the variation in exchange rates among these countries. This encourages capital to move from strong to weak currency areas. In other words, firms from areas with highly appreciated currencies are less concerned about the exchange rate risk in countries when they invest in areas with relatively weaker currencies. Furthermore, that situation permits a firm operating under a strong currency to benefit from buying assets in countries with weaker currencies at less than their real value. Accordingly, countries that have strong currencies tend to become FDI exporters and countries with weak currencies tend to become FDI importers (Goldstein, 1991,

Moosa, 2002). The research of Froot and Stein (1991) supports Aliber's theory. Their findings suggest that the stability and strength of the Japanese Yen from 1978-1991 was one of the main reasons that helped Japan to become the biggest source of FDI during that period. Moreover, the decreasing value of the US dollar during the period 1973-1987 has been associated with an increasing FDI inflow to the US. Similar findings were produced by (Blonigen, 1997), who found a positive relationship between US dollar depreciations and Japanese FDI into the US during the period 1975-1992. Another contribution regarding the relationship between FDI and exchange rates can be found in the writings of Kohlhagen (1977), and Cushman (1988). However, some researchers have criticised this theory. Dunning (1988c), for example, suggests that the exchange rate theory of Aliber does not explain why firms invest abroad. He argues that it only gives an explanation of how firms finance their operations in the scenario of different exchange rates. Furthermore, Phillips and Ahmadi-Esfahani (2008) elaborate further, suggesting that there is no theoretical or empirical consensus to prove the linkages between FDI and exchange rates.

3.7.7 The Comparative Advantage Theory/ Kojima Theory/ The Macroeconomic Approach

The Macroeconomic approach towards FDI was created by Kojima (1973, 1978, 1982) and developed by Kojima and Ozawa (1984). Kojima makes a comparison between American and the Japanese FDI in the late 1950s and the 1960s, identifying two types of FDI which are "Pro-Trade" and "Anti-Trade FDI"; see (Ozawa, 2007). According to this approach, American FDI occurred because of the capital advantages in the US against the capital disadvantages in host countries. He identifies such kinds of FDI as an "Anti-Trade- FDI" which has negative impacts on trade and restructuring. Whereas, Japanese FDI which is "Pro-Trade FDI" occurred as a result of host countries' disadvantages in industry and this kind of FDI promotes exports and employment in host countries. This model explains FDI through the linkages between trade and FDI along with the comparative advantages, claiming that a country's comparative advantage is the main promoting vehicle of the country's exports, and that a country's comparative disadvantage is the main promoting vehicle of FDI. This theory takes into consideration the comparative advantage of a specific "industry" or "activity" in both

the FDI home country and host country. Kojima demonstrates the reason behind FDI movement clearly, suggesting that:

“Direct Foreign Investment should originate in the investing country’s comparatively disadvantaged (or marginal) industry (or activity), which is potentially a comparatively advantaged industry in the host country” (Kojima, 1982:2).

The Macroeconomic approach has many limitations. According to Buckley (1991), Dunning (2001) and Chatterji and Gangopadhyay (2005), Kojima’s theory of FDI is too general, not contemporaneous and does not even provide a dynamic explanation of FDI as it has neglected competitiveness and internalisation factors within its explanation of FDI movement.

3.7.8 The Investment Development Path (IDP) Theory/ The Five Stages Theory

The Investment Development Path theory was introduced first by Dunning (1981a) who examined the relationship between the Net Outward Investment NOI ($\text{NOI} = \text{Outward FDI} - \text{Inward FDI}$) and Per capita Gross Domestic Production (PGDP) in 67 countries during the period 1967- 1978. Later on, this theory has received several other contributions (Dunning, 1986, Dunning, 1988a, Dunning and Narula, 1996, Durán and Ubeda, 2001, Dunning, 2002, Durán and Ubeda, 2005, Narula and Dunning, 2010). According to Dunning (1981a), Dunning (1986), Fonseca et al. (2007), Hisarciklilar and Kayam (2009) and Narula and Guimon (2010), the FDI position varies depending on five levels of development, which are:

- i. The first stage (Countries with PGDP below US\$1,000 at 1994 prices) /Negative NOI ($\text{FDI} > \text{outward FDI}$)

This stage describes the characteristics of the least developed countries, when the country's locational advantages are insufficient as a result of non-attractive properties such as low per capita income, poor human and fiscal infrastructure and/or political-economic instability. The FDI situation within this stage is presumed to be limited in both inward and outward directions, and foreign firms tend to adopt an “exporting” option to such countries to avoid risks. The NOI will be negative at this stage.

- ii. The second stage (Countries with PGDP US\$1,000-3,000)/Negative NOI (FDI>outward FDI)

Due to some improvements in the country's locational advantages, the outward FDI starts to grow gradually and the country starts receiving small amounts of inward FDI, in the natural resources sector particularly. The NOI position at this stage remains negative because the country is still an FDI receiver.

- iii. The third stage (countries with PGDP US\$3,000-10,000)/Negative NOI (FDI>outward FDI)

This stage describes the development level of developing countries. Despite countries at this stage remaining FDI receivers, they will witness a growing outward FDI resulting mainly from development of the country's locational advantages such as per capita income, industry development and growing expenditure on R&D along with growing domestic labor skills. The NOI position also remains negative but with growing amounts of outward FDI.

- iv. The fourth stage (PGDP more than US\$ 10,000) – Positive NOI (inward FDI< outward FDI)

The position of FDI at this stage sees considerable changes in favor of outward FDI. New developments in the country's locational advantages promote the development of domestic firms, thanks to natural resource abundance and to the relatively low cost of employment which encourages firms to globalize their activities. The NOI at this stage turns from a negative to a positive position.

- v. The fifth stage (NOI fluctuating around Zero value) inward FDI=outward FDI

This stage provides an explanation of the FDI situation in advanced countries (USA, UK and Japan as examples), where inward FDI is equivalent to outward FDI or slightly greater or lesser in proportion. This happens mainly because of the similarity in the economic structures of these countries and due to the equivalent costs of production factors. Notably, the position of FDI at this stage becomes highly dependent on some influential factors such as global economic development, exchange rates and investment strategies adopted by governments, firms and even individuals.

It is worth noting that in their recent contribution to the Investment Development Path Theory, Narula and Dunning (2010) assert that there is no absolute positive relationship between FDI and development. In this sense, the growing role of MNCs in a certain country does not necessarily mean that the country will move from a specific development level to an advanced one. However, the Investment Development Path Theory pays considerable attention to the role played by governments in facilitating FDI (Dunning and Narula, 2003).

3.7.9 The Eclectic Paradigm of Dunning/ The OLI Approach

The Eclectic Paradigm was first presented by Dunning (1977)¹⁷ and elaborated subsequently by the same author in a number of publications, mainly in Dunning (1979, 1988b, 1993). The main statement of the OLI paradigm is that FDI occurs when three conditions are fulfilled. These three conditions are: Ownership-specific Advantages (O), Location-specific Factors (L) and Internalisation Advantages (I). According to (Dunning, 1979, Dunning, 1981b, Dunning, 1988a, Moosa, 2002, Hosseini, 2005), the firm firstly should have ownership advantages over other firms which place it in a pioneer position. The ownership advantages might involve tangible and/or intangible assets such as rights over a specific technology, brand name, an advanced marketing experience, an advanced production system, managerial skills or facilitated funds. The second condition, which is the Location advantage, is related to the host country rather than the firm itself. It constitutes a wide range of host country-specific factors which influence FDI decisions made by potential investors. They involve transport and communication costs, human and natural resources tariffs and trade regulations, human and fiscal infrastructure, political and institutional risk and factors related to the legal system. The third condition, Internalisation advantages, determines the firm's decision between export or investment options, based on how beneficial it is to the firm to utilise its own Ownership advantages, while benefiting from Location advantages in order to take FDI decisions in a specific country, rather than exporting its goods or services to that country. The importance of the Eclectic

¹⁷ The Eclectic Paradigm was first presented by Dunning at a Nobel Symposium held in Stockholm in 1976 and was published later in 1977. Dunning demonstrates that the origins of his work go back to the 1950s when he was writing his PhD thesis which examined American FDI in the UK manufacturing industry. That thesis concluded that the productivity of US firms was 2-5 times greater than that of UK firms mainly because of the effective management adopted by the US companies. See Dunning, J. H. 2001. The eclectic (OLI) paradigm of international production: past, present and future. *International journal of the economics of business*, 8, 173-190.

Paradigm comes from its attempt to explain “why” firms invest abroad, “where” they should invest and “how” (Dunning, 1977, 1980, 1993, Sethi et al., 2003). It is regarded as a comprehensive and broad approach to analysing FDI flows (Singh and Jun, 1995, Assunção et al., 2011), in the sense that it covers FDI “motives” as firm-specific factors in parallel with FDI “determinants” as host-country-specific factors based on a strategic view. Furthermore, the Eclectic Paradigm is an important theory for explaining outward FDI from developed countries (Hongbin, 2006), especially if we know that outward FDI from developed countries constitutes the greatest proportion of global outward FDI¹⁸. However, this argument has been identified as a point of weakness of the Eclectic Paradigm. For example, Buckley et al. (2007) and Banga (2003) point out that the OLI paradigm could not analyse the outward FDI from developing countries. More familiar criticisms are presented by Kojima (1982), who points out that the theory is merely a micro level explanation of FDI, and Rugman (2010) argues that it contains many determinants.

3.8 The Locational Determinants of FDI in Host Countries

According to the L advantages of Dunning’s hypothesis, MNCs, after the satisfaction of O advantages, look into host country locational advantages. This part focuses on the most examined locational determinants of FDI in host countries in the literature. All of these determinates are host-country specific determinants and this part investigates the theoretical framework of these determinants along with the empirical findings of each of them.

3.8.1 Market Size and Growth

Market size is presumed to determine inward FDI to host countries based on the hypothesis that assumes market size is a necessary factor for an efficient use of resources and in order to gain benefits from economies of scale (Scaperlanda and Mauer, 1969, Agarwal, 1980, Dunning, 1980). That means that greater market size promotes greater FDI inflows (Javorcik et al., 2011). The most common proxies of

¹⁸ According to the World Investment Report 2013, outward FDI flows from developed countries constituted 68.4%, 70% and 65% of global outward FDI in 2010, 2011 and 2012 respectively. P: xiii.

market size are GDP and GDP per capita. A number of empirical findings indicate that inward FDI is associated with the host country market size measured by GDP. A study by Asiedu (2006) utilising panel data analysis of 22 African countries over the period 1984–2000 shows that the largest African economies have attracted the greatest amounts of FDI. A broader analysis covering 60 developing countries in Asia, Africa and Latin America from 2003-2005 was conducted by Mottaleb (2007), who concluded there was a positive relationship between GDP and inward FDI. Similar findings are provided by recent research within the MENA region by Mohamed and Sidiropoulos (2010) and within BRIC by Vijayakumar et al. (2010). The other indication that reflects market size is per capita GDP. This variable reflects the potentiality of the market as well as the purchasing power of a population (Javorcik et al., 2011). A strong purchasing power indicates great demand for a MNC's products and services (Tsai, 1994). There is also some evidence on the positive relationship between FDI inflows and per capita GDP. Chakrabarti (2001) investigates the data from 135 countries in 1994; he concludes that market size measured by per capita GDP has a significant positive impact on FDI. Similar conclusions were reached by Cleeve (2008) regarding Sub-Saharan Africa. The other FDI determinant that deals with a country's GDP is market growth measured by GDP growth. Mottaleb (2007) finds that the greatest GDP growth-countries of his research sample of 60 developing countries have received the greatest amount of FDI. Cleeve (2008) also concludes similar evidence for Africa.

3.8.2 Infrastructure

Infrastructure as an FDI-determining variable includes physical infrastructure such as transportation and communication facilities, and it also includes institutional facilities such as regulatory systems and services (Wheeler and Mody, 1992, Demirhan and Masca, 2008). Foreign investors are keen to work in an environment with good quality infrastructure; such an environment will be seen as a supporting and facilitating atmosphere for their projects. Good infrastructure also plays an important role in increasing productivity through reducing transactions costs, as well as providing an efficient communications medium for investors with supply and demand channels (Jordaan and Du Toit, 2004, Kinda, 2010, Mottaleb, 2007). Different measurements can be utilised to express and quantify infrastructure. Phone lines per 1000 as an infrastructure proxy has been found as a promoting factor of inward FDI to Sub-Saharan

Africa over the period 1984–2000 in the research of Asiedu (2006). Further empirical evidence lead to similar conclusions from developing countries by Mottaleb (2007) and Kinda (2010); both researchers utilised internet users as a proxy for infrastructure. The more detailed research of Choi (2003) conducted on both parent and host economies of 67 countries concluded that a 10% increase in internet users leads to a 2% increase in inward FDI. It is worth noting that infrastructure can also be seen from different perspectives; investing companies may look at the poor physical infrastructure in a country as a potential sector for investment (Marr, 1997).

3.8.3 Exchange Rate

The discussion on exchange rates and their effects on investment was the main focus of the currency areas theory of Aliber, where he conveyed his argument to explain MNCs' FDI activities from strong exchange rate countries into those with a weak exchange rate (Aliber, 1971). However, Agarwal (1980) asserts that Aliber's theory differs from any research that explains FDI movement internationally, and that exchange rates have no effect on FDI flows themselves, as much as it has on the timing of investments. Exchange rates can affect FDI inflows in three main aspects: the exchange rate itself as a value of currency against another, changes and volatility and exchange rate regimes. Theoretically, MNCs from strong-currency countries can facilitate funding for their activities in a more effective manner in weak currency countries (Moosa, 2002, Takagi and Shi, 2011). Further, weak currency countries mean inexpensive assets from the perspective of firms operating out of strong currency-countries, which means that MNCs can buy assets in such countries (Cushman, 1985, Goldberg and Kolstad, 1994). Moreover, foreign firms in depreciated currency-countries can gain benefits from lower wages and enhance their competitive advantages against competitors or those who work in countries with appreciating currencies (Klein and Rosengren, 1994, Goldberg, 2009). A number of empirical a positive relationship between devaluation of exchange rates and inward FDI and a negative relationship between increasing exchange rates and inward FDI. Stevens (1998) finds that the US Dollar appreciation has negatively affected inward FDI to the US during the period from 1973 to 1988. Similar conclusions have been reached on the positive correlation between FDI inflows and exchange rate devaluation for 16 emerging economies from 1990-2002, by Udomkerdmongkol et al. (2006). Takagi and Shi (2011) also find that

the appreciation of the Japanese Yen against ASEAN currencies was the main driving factor of the Japanese FDI in ASEAN during 1987-2008. Changes and volatility in exchange rates also have effects on FDI; it imposes severe implications on the real value of FDI assets and it has similar impacts on the value of FDI profits (Busse et al., 2013, Goldberg, 2009). Empirically, Central and Eastern European countries that have lower exchange rate volatility have received greater FDI compared with those with higher volatility in rates during 1995-2008 (Arratibel et al., 2011). China provides a different example; Xu (2013) finds that exchange rate volatility is correlated with greater FDI inflows to China from 2005 to 2011. The third dimension of exchange rates is the type of exchange rate system. An exchange rate regime, whether it is fixed, intermediate or floating exchange rate can be seen as a sign of macroeconomic stability of the country (Buitert and Grafe, 2012). Abbott et al. (2012) find that fixed and intermediate exchange rate systems encourage inflows of FDI more than flexible systems; the findings were conclusions from empirical research covering 70 developing countries over the period 1985–2004. Aizenman (1993) Also finds that fixed exchange rate systems promote more inward FDI. However, Busse et al. (2013) argue that the positive effect of fixed exchange rate systems is robust in the case of developed countries only.

3.8.4 Institutional Factors

Douglass C. North presents a comprehensive vision on the role played by the quality of institutions on economic performance. He argues that *“Institutions affect the performance of the economy by their effect on the costs of exchange and production”* (North, 1990:5). In this view, poor quality institutions may act as an obstacle to production processes through disrupting the supply channels. In addition, MNCs are keen to work in environments with good quality institutions in order to increase their efficiency and develop firm-specific advantages (Dunning, 1998). In more detailed descriptions, the influence of institutional quality can be perceived through its impact on the "non-economic" costs of projects. Foreign firms in bad quality institutional environments have to deal with local institutions in the host country which costs them time and delays in different stages of the production process (Kinoshita and Campos, 2003). As an example of the importance of the quality of institutions, Rodrik (1997) argues that the success story of ASEAN economic growth is attributed to the quality of

institutions that have been established by their governments. A country's institutional regime is a reflection of the influence of the country's informal institutions, which is the effect of its culture on the country's formal institutions; its regulatory, political, and economic institutions (North, 1990, Holmes et al., 2013). A number of dimensions can be taken into the account within an institution's content. In terms of corruption as a proxy of institutional risk, Habib and Zurawicki (2002), Asiedu (2006), Cleeve (2008) and Mathur and Singh (2013) empirically find that corruption has a negative impact on FDI inflows within different regions and countries. The quality of the bureaucracy is another proxy for institutions; Kinoshita and Campos (2003) find that poor quality of a bureaucracy negatively affected inward FDI in 25 transitional economies from 1990-1998. Similarly, Erdilek (2003) produces evidence of a correlation between bad bureaucracy and inward FDI in Turkey. Rule of law has also been examined as affecting the perception of institutions, by Asiedu (2006) and Wang et al. (2012) with contrasting conclusions. While the first study finds a positive impact of a strong rule of law on FDI in Africa, the second study finds that there is no correlation between rule of law and inward FDI, presenting China as an example as it is regarded as a country with comparatively lesser rule of law, yet during the period it attracted the biggest share of global FDI flows. Maskus (1998) and Biswas (2002) have utilised the property rights¹⁹ index as a proxy for institutions; both find that secured property and contractual rights encourage FDI flows into host countries.

3.8.5 Political Risk

Political risk can be defined as "*The risk that the returns to investment may suffer as a result of low institutional quality and political instability*" (Hayakawa et al., 2013:13). Political factors have a considerable influence on FDI flows and may even have advanced importance in relation to expected economic benefits for a certain country (Aharoni, 1979). In theory, political risk is accounted for as a "sunk cost" or a cost of future events. Thus, uncertainty regarding political factors imposes additional and unpredictable costs (Hayakawa et al., 2013). It is relatively established that countries with high political risk are more likely to receive less FDI flows due to

¹⁹ Intellectual Property Rights have received growing importance within WTO agreements, particularly in The Agreement on Trade Related Aspects of Intellectual Property Rights TRIPS.

uncertainty over the economic and political conditions (Schneider and Frey, 1985, Brunetti et al., 1997, Gast and Herrmann, 2008). In addition, MNCs' decisions are very sensitive to changes in political institutions of host countries as a result of possible resulting threats to the business (Henisz, 2000, Busse and Hefeker, 2007). However, Rodrik (1997) argues that political risk plays a role in limiting FDI flows rather than impacting on the nature of FDI into a specific country. Furthermore, some big companies, especially those who invest in the natural resources field, could overcome the potential political risks of the host country by relying on their own security arrangements (Demirhan and Masca, 2008). Political risk as a concept involves a variety of indicators such as domestic political institutions (Henisz, 2000), type of political regime and level of democracy (Feng, 2001, Jensen, 2008), as well as internal and external conflict (Busse and Hefeker, 2007). The literature concerning the impact of political risk on FDI provides contrasting findings. On the one hand, some empirical research finds a positive correlation between lower political risk and inward FDI in developing countries (Busse and Hefeker, 2007, Krifa-Schneider and Matei, 2010, Hayakawa et al., 2013). The recent Arab spring revolutions have provided clearer evidence in this respect. In its 2011 report, the Multinational Investment Guarantee Agency (MIGA) finds that FDI inflows to the Arab spring countries, Tunisia and Egypt, have witnessed considerable decreases due to the political uncertainty of these countries (MIGA, 2011). On the other hand, the findings of other research are not consistent with the argument for the positive impact of political stability on FDI inflows. The research of Noorbakhsh et al. (2001) and Asiedu (2002) finds there is no significant correlation between political risk and FDI inflows.

3.8.6 Openness of Trade

Theoretically, the impact of trade openness on FDI inflows depends initially on FDI motives (Dunning, 1993, Markusen and Maskus, 2002). Trade openness policies have been perceived to attract export-oriented FDI more than other types of FDI (Rogmans and Ebbers, 2013). The share of international trade in a country's economy reflected by exports plus imports as a percentage of GDP is the most common measurement of trade openness. The literature on the relationship between trade openness and inward FDI are mixed. Liargovas and Skandalis (2012) Argue that *“the relationship between trade openness and FDI inflows is very complex, needs careful*

explanation and may depend on the characteristics of each case” (p:325). Recent research of Liargovas and Skandalis (2012) provides evidence of a positive correlation from 36 developing countries during the period 1990–2008. Further supporting evidence is provided by Chakrabarti (2001), Botrić and Škuflić (2006) and Mhlanga et al. (2010), who find a positive relationship between openness and FDI utilising exports plus imports as a percentage of GDP as a proxy for trade openness. It is worth mentioning that joining Free Trade Agreements enhances the degree of openness and allows countries to attract more export-oriented FDI and market-seeking FDI (Liargovas and Skandalis, 2012). In contrast, some studies reach different conclusions. For instance, Mohamed and Sidiropoulos (2010) and Vijayakumar et al. (2010) do not find any impact of trade openness on FDI inflows in the MENA region or for the BRICS. Whereas, Seim (2009) finds that trade openness impacts negatively upon the volume of inward FDI in transitional economies.

3.8.7 Labor Cost

Given that FDI is a cost-sensitive capital movement, MNCs move toward countries with low wage costs to reduce total production costs (Cushman, 1987, Bevan and Estrin, 2004). However, Globalisation has shaped a new form of relationship between FDI and the characteristics of labor where the demand has relatively shifted towards advanced-skilled labor (Pfeffermann and Madarassy, 1992). In general, there is a relative consensus upon the positive relationship between low cost labor and inward FDI. Kinoshita and Campos (2003) and Bevan and Estrin (2004) find a positive relationship between inward FDI and cheap labour in transition economies. Resmini (2000) also finds that EU Foreign Direct Investment towards Central and Eastern European Countries (CEECs) during 1990-1995 was driven mainly by lower wages for labour. Recent research by Brandl et al. (2013) differentiates MNCs' tendencies for reducing labour costs according to economic sector, suggesting that the tendency of MNCs to reduce labour costs is often more salient in the manufacturing sector and less in the services sector.

3.8.8 Inflation Rate

Inflation rates reflect macroeconomic stability in both monetary and fiscal policies (Omankhanlen, 2011, Kolstad and Wiig, 2012). Sensible and rational inflation rates indicate stable macroeconomic policies, given the fact that inflation leads to the difficulty of calculating the commitments of capital and it also has an impact on reducing the value of exports (Grosse and Trevino, 2005). Empirically, it has been noted that inflation has a negative influence on FDI with less evidence of a positive influence. Schneider and Frey (1985), in their research covering 80 developing countries find a negative correlation between inward FDI and inflation. Similar findings from transition economies is presented by Trevino et al. (2002) who find that inflation has a negative impact on inward FDI to Latin America during 1988-1999. In contrast, different findings were concluded from other research. For example, Omankhanlen (2011) does not find a relationship between the inflation rate and inward FDI to Nigeria over 30 years from 1980-2009. Whereas, Nurudeen et al. (2011) reach a conclusion that suggests a positive influence of the inflation rate on inward FDI also in Nigeria from 1970-2008.

3.8.9 Natural Resources

There is a general assumption suggesting that countries rich in natural resources, for instance crude oil and natural gas, tend to attract more FDI (Dunning, 1998, Asiedu, 2006, Sawkut et al., 2007). However, the empirical conclusions are slightly far from this assumption, with the evidence in this aspect being mixed. On the one hand, Asiedu (2006) finds that countries rich in natural resources in SSA have attracted FDI more than those with less natural resources during 1984-2000. Sawkut et al. (2007) also finds such positive relationships between FDI and natural resource abundance in 20 African countries from 1990-2005. Mohamed and Sidiropoulos (2010) point out a positive correlation between these variables from MENA countries over the period 1975-2006. On the other hand, the research of Mina (2007) suggests a different dynamic; he finds that natural resource abundance in the Gulf Corporation Council GCC has negatively affected inward FDI to these countries over the period 1980–2002. From a broader investigation, Asiedu (2013) finds a negative relationship between natural resource abundance and inward FDI in 99 developing countries from 1984 to 2011. The negative

impact of natural resources on FDI inflows might be attributed to a “resource curse” and its related economic, social and political problems as the massive inflows of foreign currency imposes new economic, social and even political conditions (Poelhekke and Van der Ploeg, 2010).

3.9 The political Economy of Oil-Rentier States

3.9.1 Oil-Rentier States: Definition and the Main Characteristics

The term “rent” has been an issue of discussion within classical economic theories and is associated with land ownership. It has been generally used to describe payments for the use of land; indeed, the influential economist Adam Smith clearly defines rent as “The price paid for the use of land” (Smith, 1976:161), while David Ricardo’s concept of rent draws connections between the scarcity of land and rent payments. Ricardo identifies two types of rent; scarcity rent and differential rent. Scarcity rent is that generated as a result of land’s scarcity and the inelastic supply, while differential rent is generated as a result of differences in the fertility of one area of land and another. He further argues that marginal (unfertilised) lands do not generate rent and that the rent for a parcel of land is determined by its level of fertility and its location (Ricardo, 2001). Karl Marx criticises Ricardo’s theory of rent, distinguishing between two types of rent: absolute rent and differential rent. Marx argues that absolute rent is the money paid because of a monopoly over land held by a social class of landowners, and that landowners get paid for their ownership of land regardless of the fertility of those lands. Meanwhile, differential rent, according to Marx, is the money paid to landowners for both their monopoly over land and the land’s other properties such as greater productivity, prime location and so on (Marx, 1981). The following contributions have formed the basis for the current notion of the concept of “rentier states”. John Maynard Keynes, in his publication entitled “The General Theory of Employment, Interest and Money”, clearly defines “the rentier” as “the functionless investor” and rent as merely generated from the “scarcity-value of capital” (Keynes, 1965: ch 24). Thus, based on the earlier contributions of the classical and neoclassical traditions, and those of Keynes, who developed the term “rent”, rentier states, in general, are those countries

where revenues are largely received from rent rather than taxes on wages and profits, with rent being generated from a “scarcity-value”; it could be a natural resource, geographical location, or even external aid (Dauderstädt and Schildberg, 2006). However, the term “rentier state” is often used to describe oil-exporting countries, and was first introduced by the Iranian scholar Hussein Mahdavy to describe the discovery of oil and its effects on wealth accumulation in Middle Eastern countries during the 1950s and 1960s. Mahdavy argues that Rentier States are “*those countries that receive, on a regular basis, substantial amounts of external rent*” (Mahdavy, 1970:428). He elaborates that definition further by giving four examples of such external rents, which are:

- vi. Revenues earned by some countries from utilising their geographical location advantages. For example, Egypt receives revenue from fees applied on ships crossing the Suez Canal.
- vii. Revenues earned by some countries as transit fees of in relation to other countries' oil pipelines crossing their territory.
- viii. Revenues earned by oil countries from exporting oil and natural gas.
- ix. Revenues earned by some countries as grants, such as those received by Israel and Jordan from the international community.

Hazem Beblawi suggests four conditions for naming a specific country as a rentier state which are; [1] “[...] where rent situations predominate” , [2] “the externality of the rent origins”, [3] “only few engaged in the generation of this rent” and [4] “the government is the principal recipient of the external rent” (Beblawi, 1987:51,52). It could be argued that “rentier states” as a concept does not refer to oil-abundant countries exclusively. Luciani (1987) demonstrates that there are other forms of income that lead to the creation of a “rentier state” according to the theoretical foundation of the concept. Furthermore, not all oil-producing countries are rentier states, where oil-rentier states is a descriptive notion of those countries which witness a significant impact of oil revenues resulting initially by exporting oil not by producing it. Beblawi (1987) claims that a rentier state, as a concept, can better be described through some social, rather than economic, characteristics: where the key feature of rentier state is the limited role played by people in the country’s production. Lisa Anderson, argues that the definition of a Rentier State is:

“a state reliant not on extraction of the domestic population’s surplus production but on externally generated revenues, or rents, such as those derived from oil” (Anderson, 1990: 62).

Accordingly, for the purposes of this research we argue that “rentier states” are countries who receive the major portion of their revenues from exporting their natural resources including any type of natural resource. Similarly, we argue that “oil-rentier states” are countries who receive the major share of their revenues from exporting oil and natural gas only.

3.9.2 The Economic Characteristics of Rentier States

When it comes to rentier states, the terms “Dutch disease” and “resource curse” emerge interchangeably to describe the economic, political and social characteristics of such states. The term Dutch Disease was presented first by The Economist (1977) to describe the problem that emerged in the Netherlands after discovering oil in the North Sea. Whereas, the term “resource curse” was first presented by Auty (1993) to describe how natural resource abundance could impact negatively upon a country’s economy²⁰. The Dutch disease is the concentration and the conversion of production factors toward the natural resources sector, which constitutes the bulk of the export sector at the expense of other productive sectors of the economy (Stijns, 2003).

Indeed, governments play a dominant role in economic activities of oil-rentier states; they are responsible for collecting oil revenues and for re-injecting these revenues into economic sectors under their supervision and control. Therefore, public expenditure would be the key factor that shapes the development pattern in oil rentier states (Abdel-Fadil, 1987). More specifically, the massive amount of oil revenues that enters the economy leads to an increase in demand for non-tradable goods and a decrease in demand for tradable goods (Sy and Tabarraei, 2010). Thus, most oil rentier

²⁰ It is worth noting that the Dutch disease and resource curse theories contradict the so-called “Verdoorn’s Law” in the economics literature. The basic idea of Verdoorn’s law is that, in the long-run, expansion in the export sector of a given country leads to specialisation in that sector, and subsequently to resources relocating towards the leading export sector, which eventually leads to economic growth. Verdoorn, P. J. 2002. Factors that Determine the Growth of Labour Productivity. Productivity Growth and Economic Performance. Springer, Kaldor, N. 1966. Causes of the Slow Rate of Economic Growth of the United Kingdom: an Inaugural Lecture, Cambridge University Press.

states tend to expand their expenditure on infrastructure, focusing on projects that meet the urgent and growing needs of population such as highways, hospitals and universities. Indeed, such policies lead to the neglecting of production capability of the country (Yano and Nugent, 1999, Abdel-Fadil, 1987).

The appreciation of the real exchange rate is another important element in oil-rentier states' economies. The continuous flows of foreign currency into oil-rentier states would logically impact upon the value of the domestic currency against foreign currencies. oil-rentier states often have strong currencies which generate new issues for the economy. Accordingly, the competitiveness of exports decreases, and the role of the services sector thrives at the expense of the manufacturing sector, which will eventually lead to stalled development (Sy and Tabarraei, 2010).

Given the fact that oil is an international commodity controlled by the forces of supply and demand globally, development strategies in oil-rentier states would be highly correlated with the global oil price and the level of domestic production (Karl, 2007). Within the same context, it is right that most oil-rentier states have a good history in terms of achieving considerable rates of economic growth reflected by GDP growth and per capita GDP. However, that does not necessarily mean that they have achieved a similar task with respect to development²¹, as development involves changes in many functions within the economy rather than GDP growth alone. The "catch-up development" model which was perceived to be a suitable framework to push the development process in oil rentier states has fallen due to the negative effects of natural resource abundance on economic growth (Meissner, 2010). Such a negative correlation has been documented within a number of research articles, such as Sachs and Warner (1995), Lal and Myint (1998) and Auty (2001). However, the negative impacts of natural resource abundance cannot be attributed to the existence of such resources themselves as much as it is attributed to the way of managing and utilising these resources²² (Al Sheikh and Erbas, 2012). Another problem is that the oil sector is

21 Economic development involves "structural change" which is different from the economic growth measured by GDP. In other words, economic growth is an important condition for development and it may lead to economic development or it might not. See: Kuznets, S. 1966. *Modem economic growth*, New Haven and London.

22 Norway provides a success story of a "resource blessing" rather than a "resource curse". See: Cappelen, Å. & Mjøset, L. 2009. Can Norway be a role model for natural resource abundant countries? *Chp*, 3, 44-72. And: Obi, C. 2010. Oil as the 'Curse' of Conflict in Africa: Peering Through the Smoke and Mirrors. *Review of African Political Economy*, 37, 483-495.

known as a low labor-intensity industry, which means it can only offer limited job opportunities to the society. In addition, the expected role of FDI in transferring technology seems to be less pronounced in oil-rentier states, due to the lack of linkages among economic sectors and the dominant role of the oil sector over the whole economy (Karl, 2007).

3.9.3 The Political Characteristics

A number of studies examine the interactions between natural resources and their impact on political aspects in countries rich in natural resources. In terms of the political regime form, there is a theoretical assumption suggests that natural resource abundance in a country leads to dictatorship. The first contribution in this field was presented by Mahdavy (1970), who argues that the dominant role of the government in the natural resources sector leads to the creation of authoritarian political regimes. This perception gained support from the idea that connects between the absence of taxation and the lack of democracy. Luciani (1987) makes connections between taxation and “representative democratic” systems, arguing that people in oil-rentier states do not tend to pay tax and it would be problematic to convince them to pay tax in a country with huge oil revenues. In addition, governments do not prefer to push towards that option for two reasons: they do not need tax revenues as a source of finance, and to avoid any demands for accountability and transparency in how the authorities would spend such revenues (Gervasoni, 2010). Samuel Huntington also contributes to this discussion demonstrating that:

“Oil revenues accrue to the state: they therefore increase the power of the state bureaucracy and, because they reduce or eliminate the need for taxation, they also reduce the need for the government to solicit the acquiescence of the public to taxation. The lower the level of taxation, the less reason for publics to demand representation” (Huntington, 1991:65).

The putative negative relationship between the level of democracy and natural resource abundance has been examined empirically in the literature. Ross (2001) investigates the data of 113 countries over the period from 1971 to 1997; he finds that those countries which have more natural resources, oil in particular, are more vulnerable

to having a less democratic political regime. Similar findings are presented by Aslaksen (2010) from investigating the data of 156 countries from 1972 to 2002, and by Goldberg et al. (2008) from the US states over 73 years. However, some other research reaches different conclusions. For example, Herb (2005) does not find a strong relationship between these two variables, while Dunning (2008) points out that oil may cause “democracy” and “authoritarianism”, subject to the influence of other related factors, and Haber and Menaldo (2011) do not find any relationship between natural resource abundance and the level of democracy.

It has also been pointed out in the literature that the existence of natural resources and the dependency on exporting primary commodities are reasons for the emerging of internal conflicts. Collier and Hoeffler (2004) draws connections between the government’s source of income and internal conflicts, demonstrating that countries that rely substantially on exporting primary commodities are more likely to suffer from internal conflicts. Other research postulates further, taking into consideration oil-rentier states as the vehicle for studying the relationship between oil abundance and the possibility of internal conflicts. Aslaksen and Torvik (2006) conclude that the reason behind the belief that oil rents lead to conflicts is the expected benefits from the conflict as they are perceived to be higher in higher-rent countries. The empirical findings on the correlation between natural resource abundance and conflict are not robustly consistent with the hypothesis. While Basedau and Lay (2009) find such a correlation between oil-dependency and the possibility of conflicts in poor oil countries measured by GDP per capita, and that rich oil countries tend to be more stable as they spend large amounts on internal security and may be involved in security agreements with other countries, they also assert that oil-rentier states that have high per capita GDP are less exposed of such threatens, where this proxy reflects social stability. Similarly, Basedau et al. (2013) point out that “democratic institutions” reduce the potential threats of the emergence of internal conflict in oil-rentier states. Obi (2010) demonstrates that conflicts in Africa cannot be attributed to the abundance of natural resources as the only reason.

3.9.4 The Institutional Characteristics

Rentier states do not rely on taxation to finance their economic activities. They often adopt a financial approach which tends to improvements in government

employees' wages; such a policy may lead to changes in the structure of the society towards expanding the middle class as they benefit from the growing rents received from exporting oil. Moreover, the production pattern of Rentier States that rely on less-intensive labor activities which are oil-related activities inhibits the demands on domestic employment and eventually leads to a decrease in the possibility of developing and upgrading employment skills (Herb, 2005, Vandewalle, 1987). Another feature is that authorities in oil-rentier states tend, in order to ensure their survival in power, to expand employment in governmental sectors which leads to the expansion of the middle class in the society through wages paid, and they tend also to distribute part of the rent to the layers of the social elite (Ali and Elbadawi, 2012). All these socio-political challenges formulate specific institutional characteristics in oil-rentier states. Al Sheikh and Erbas (2012) distinguish the situation of institutions in Oil-Rentier States in two dimensions: they claim that the rent generates a positive impact on institutions firstly if oil has been discovered in a country that already possesses high quality institutions, and secondly, if that country succeeded in managing and employing the rents to serve institutions. However, in countries that do not have good institutions and where oil is discovered later without any serious efforts to develop quality institutions, it would be logical to see negative effects and weak institutions.

Corruption is also documented as a phenomenon associated with oil rent. Ross (2001) argues that the dominant role of state companies in oil rentier states encourages the intervention of politicians and elites in production relationships. Karl (2007) argues that oil-rentier states have a special form of culture²³ where nepotism and clientelism relationships are very common phenomena, and that such kinds of conditions increase corruption. Arezki and Brückner (2011) Empirically examine the data of 30 oil exporting countries from 1992-2005 and find that corruption increased with increases in oil rents. Further, details of oil's impact on corruption are presented by Vicente (2010), who argues that corruption is more prevalent in buying votes in elections, granting scholarships and in customs.

23 Lociani, 1987 identifies Oil-Rentier States as "Hydrocarbon Societies", referring to societies that rely on hydrocarbon sources as their main source of wealth.

3.10 Conclusion

The literature review reveals important points for understanding FDI, in context with related issues. It can be said that humans have known cross-border business since the ancient times; such activity has evolved, and is still evolving over time. The contemporary concept of FDI, thanks to the work of international institutions such as the WB, IMF, UNIDO, UNCTAD and OECD, is a unifying formula which; firstly, distinguishes between the direct and indirect forms of foreign investment, and secondly, it considers other types of FDI in its modern approaches such as licensing, JV and M&As. All these developments in defining and measuring FDI help countries, international institutions and policy makers to have a source of data to assess the current position of FDI movements, and to build plans that help in directing FDI to serve countries' and global economic growth that is informed by global development goals in terms of reducing poverty and improving human development levels.

It is worth mentioning that MNCs have the most influential role in FDI movements in today's globalised world. However, this fact may have negative impacts upon the expected advantages from FDI. The dominant role of MNCs in the global movement of FDI may impact negatively on the development of other emerging corporations, especially from developing countries due to unbalanced competition conditions. That may also impose specific international production conditions which might be beneficial for MNCs themselves rather than having any positive impacts for poorer countries.

This chapter has reviewed the main FDI theories, starting from the early explorations of the topic, down to the latest theories. Each theory has its own strengths and weaknesses; some of them concentrate on explaining FDI at a micro level, while some others consider the macro level and others still, a combination between the micro and macro perspectives. For the purposes of this research, the most suitable theoretical framework is Dunning's Eclectic Paradigm or so-called OLI paradigm, simply because it considers the locational advantages, the L factors, of host countries which will be the key scope of this research.

With respect to FDI determinants, there is no one set of locational determinants which can be seen as a standard formula of FDI locational determinants. Every single research article utilises specific determinants and investigates them after controlling for other potential determinants in specific spatial dimensions over a specified period of time. It has been documented in this literature review that the impacts of FDI determinates vary between positive, negative and even natural. However, there is a relative consensus in the positive or the negative impacts of some determinants. It can be argued that evidence from developing countries shows that FDI reflects benefits on their economies (Loungani and Razin, 2001). In contrast, there are volumes of such evidence from developed countries (Johnson, 2006).

Finally, the chapter reviewed the main economic, social and political features of oil-rentier states, and documented that oil revenues impose specific characteristics in such countries. The dominant role of oil rent results in some specific economic features such as a lesser role of the manufacturing sector, except for oil manufacturing. The capacity of the economy's exporting sectors to compete internationally is lower due to appreciation of the local currency. Socially, oil leads to create “laziness societies” with a negative impact upon the quality of institutions. Politically, it is found that the theory suggests the presence of oil increases the possibility of internal conflicts. According to De Mello (1999), the "dynamics" of FDI in oil exporting countries are expected to be different from other states. Consequently, this research argues that these characteristics play a role in the volume and type of inward FDI into these countries. For instance, Dutch disease reflected by oil dependency levels, in turn measured by oil revenues as a share of GDP; have specific effects on inward FDI in oil-rentier states. Similarly, the special features of oil-rentier states impose specific impacts on the quality of institutions and eventually on inward FDI. All these assumptions, and others, will be under examination empirically in the following chapters.

Chapter 4

Determinants of FDI in Oil-Exporting Countries

4.1 Introduction

The first objective of this chapter is to examine the political and institutional determinants of FDI in oil-exporting countries, departing from the point of view maintains that exporting natural resources, crude oil and natural gas in particular, imposes specific political and institutional characteristics in the country on the long-run. The second objective of this chapter is to investigate the impact of the rentierism phenomenon on FDI determinants in oil-exporting countries. It is argued that heavily relying on oil in the long-run leads to the reshaping of economic and institutional features of the country in the long term. The data sample in this part will be categorised into two groups; the rentier countries group and non-rentier countries group. Rentier countries are those whose oil exports comprise 40% and above of their total exports as an average over the period from 1984-2013, namely Algeria, Angola, Brunei Darussalam, Congo, Ecuador, Egypt, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Norway, Oman, Qatar, Saudi Arabia, Sudan, Syria, Trinidad and Tobago, UAE, Venezuela and Yemen.²⁴ Conversely, non-rentier countries are those whose oil exports comprise less than 40% and more than 10% of total exports as an average over the period from 1984-2013;²⁵ namely, Argentina, Australia, Bahrain, Bolivia, Bulgaria, Cameroon, Canada, Colombia, Cote d'Ivoire, Greece, Indonesia, Malaysia, Mexico, Mozambique, Netherlands, Peru, Poland, Senegal, South Africa, Tunisia, United Kingdom and Vietnam.

24 Some rentier countries are excluded due to a lack of data such as: Azerbaijan, Kazakhstan, Russian Federation and Turkmenistan.

25 Oil exports are calculated using the country's average oil exports as a percentage of its total exports over 30 years from 1984-2013.

The third objective of this chapter is to analyse FDI determinants in OECs according to their religious identity. The argument here is that the religious identity, the Islamic identity of some oil-exporting countries, may affect the locational FDI determinants in these countries due to some factors related thereto, such as the legal system, or cultural and historical backgrounds. The data sample in this part will be divided into two groups: Islamic oil-exporting countries and non-Islamic oil-exporting countries. The Islamic oil-exporting countries group consists of 20 countries, namely; Algeria, Brunei Darussalam, Egypt, Iran, Iraq, Kuwait, Libya, Nigeria, Oman, Qatar, Saudi Arabia, Sudan, Syria, UAE, Yemen, Bahrain, Indonesia, Malaysia, Senegal, and Tunisia. While the non-Islamic oil-exporting countries group consists of 24 countries, which are; Angola, Congo, Ecuador, Gabon, Norway, Trinidad and Tobago, Venezuela, Argentina, Australia, Bolivia, Bulgaria, Cameroon, Canada, Colombia, Cote d'Ivoire, Greece, Mexico, Mozambique, Netherlands, Peru, Poland, South Africa, United Kingdom, and Vietnam. The empirical analysis of this chapter employs annual data. The dependent variable is Foreign Direct Investment, to be tested against 8 independent variables which are: oil reserves, Dutch disease, exchange rate, inflation rate, per capita GDP, oil price, openness, and composite risk.

4.2 Methodology

Where the objective of this thesis is to investigate the relationship between macro variables, it is more concerned about the general correlation between these variables. A quantitative methodology would be sufficient to reach this objective. Therefore, this thesis adopts a quantitative approach to answer its questions using secondary data from different sources such as the United Nations Conference on Trade and Development (UNCTAD); the World Bank (WB); the International Country Risk Guide (ICRG); The Worldwide Governance Indicators (WGI) and The U.S. Energy Information Administration (EIA).

A quantitative methodology is the most common approach in the literature of FDI determinants, see among others: (Phillips and Ahmadi- Esfahani, 2008, Leitão and Faustino, 2010, Omarkhanlen, 2011, Ranjan and Agrawal, 2011b, Hayakawa et al., 2013, Helmy, 2013, Mathur and Singh, 2013, Gupta and Singh, 2014, Goswami and Haider, 2014, Contractor et al., 2014, Acheampong and Osei, 2014, Asiedu, 2013,

Khachoo and Khan, 2012, Sahoo, 2012). Despite the widespread use of quantitative methodology in FDI determinants research, there are some studies utilise a qualitative methodology for examining FDI determinants, see for example as Ronan Patrick Coy (2012) and Hanna et al. (2014).

This thesis uses a panel data set, including 44 oil-exporting countries for the period of 1984 until 2013. In order to estimate panel data models, researchers frequently perform two estimation methods. The first method, which called the Mean Group estimator (MG), consists of averaging separate estimates for each group in the panel (Bangake and Eggoh, 2012). The PMG model offers consistent and efficient estimates in the long run (Pesaran and Smith, 1995, Pirotte, 1999). In addition, this estimator allows the parameters to be freely independent across groups and does not consider potential homogeneity between groups (Bangake and Eggoh, 2012). The second method is the typical panel method, which are the random or fixed effects and the GMM methods (for example, Arellano and Bond (1991)). These models generate inconsistent and misleading long-term estimates because of their technique in forcing the parameters to be identical across countries (Bangake and Eggoh, 2012). This problem is exacerbated when the period is long. The Pooled Mean Group PMG model is an intermediate estimator between the first and the second models above. It allows the short-run parameters, intercepts and error variances to be different between groups, but the coefficients are forced to be identical in the long-run (Pesaran et al., 1999). Bangake and Eggoh (2012) pointed out that the Pooled Mean Group PMG model includes the adjustment dynamic between the short-term and the long-term; the adjustment which is not provided by Dynamic OLS (DOLS) and Fully Modified OLS (FMOLS).

Thus, this thesis applies the Pooled Mean Group estimator (PMG) developed by Pesaran et al. (1999) in order to catch the long-run determinants of FDI in oil-exporting countries. The estimation is a combination of long run and short run results, and most importantly included the speed of adjustment term for error correction for long run and short run results. This term enables the model to be efficient enough in spite of having cointegrated variables, autocorrelation, heteroskedasticity and multicollinearity. It is worth mentioning that PMG estimation is often used where the data has large N and large T. This is mainly because of the asymptotic character of such data, the inherent heterogeneity of the parameters, and non-stationarity of the panel observations. The

PMG model can also be used in a moderate macro panel that contains around 15 T and N (Pesaran et al., 1999). A number of researchers utilise the PMG model to examine the short and long-run relationships; Ren et al. (2012b) examine FDI determinants in 14 MENA countries over 26 years using PMG. Ndoricimpa (2009) also utilises PMG to examine the relationship between FDI, exports and economic growth in 16 of the Common Market for Eastern and Southern Africa (COMESA) countries over 4 years from 1983-2007. Asteriou (2009) also examines macro level variables using a PMG model for 5 South Asian countries over 23 years.

Both Mean Group (MG) and Pooled Mean Group (PMG) estimation methods were introduced to address these problems in dynamic panel data. The only difference between these two models is that the MG method relies on estimation of N time series regressions and then averaging the coefficients, whereas the PMG method relies on pooling and averaging coefficients (Pesaran et al., 1999, Pesaran and Smith, 1995). The PMG estimated model establishes the following formula:

$$y_{it} = \sum_{j=1}^p \lambda_{ij} y_{i,t-j} + \sum_{j=0}^q \delta'_{ij} X_{i,t-j} + \mu_i + \epsilon_{it} \dots\dots\dots (4-1)$$

The above Autoregressive Distributed Lag (ARDL) specification has two parts – the first being the scalar parameter with the past value of the dependent variable, and the second part which contains coefficients of the independent variables (Xit). The second part of the model contains parameters that are vectors, and current and past values of independent variables. The condition for such an assumption would be that T is large enough to fit in models for groups of observations.

4.2.1 Model Specification

The econometric approach in this chapter utilises annual data based on a panel data analysis for OECs over the period from 1984-2013. A number of potential explanatory variables are selected according to the specific focus of the thesis, data availability, and to overcome the issue of multicollinearity amongst the independent variables. The benchmark model to be applied in this chapter takes the following form:

$$\ln FDI_{it} = \beta_0 + \beta_1 \ln OILRES_{it} + \beta_2 \ln DDIS_{it} + \beta_3 \ln EXCRT_{it} + \beta_4 \ln INFL_{it} + \beta_5 \ln PCGDP_{it} + \beta_6 \ln OILPRICE_{it} + \beta_7 \ln OPEN_{it} + \beta_8 \ln COMPRISK_{it} + e_{it} \dots\dots\dots (4-2)$$

Where:

lnFDI_{it} is the logarithm value of the net FDI inflows in country *i* at time *t*.

lnOILRES_{it} is the logarithm value of oil reserves in country *i* at time *t*.

lnDDIS_{it} is the logarithm value of Dutch disease in country *i* at time *t*.

lnEXCRT_{it} is the logarithm value of exchange rate in country *i* at time *t*.

lnINFL_{it} is the logarithm value of inflation rate in country *i* at time *t*.

lnPCGDP_{it} is the logarithm value of per capita GDP in country *i* at time *t*.

lnOILPRICE_{it} is the logarithm value of oil price in country *i* at time *t*.

lnOPEN_{it} is the logarithm value of openness to trade in country *i* at time *t*.

COMPRISK_{it} is the value of composite risk index in country *i* at time *t*.

The above model will be applied in five panels as follows:

- Panel 1, all oil-exporting countries, 44 countries, 1984-2013.
- Panel 2, rentier oil-exporting countries, 22 countries, 1984-2013.
- Panel 3, non-rentier oil-exporting countries, 22 countries, 1984-2013.
- Panel 4, Islamic oil-exporting countries, 20 countries, 1984-2013.
- Panel 5, non-Islamic oil-exporting countries, 24 countries, 1984-2013.

4.2.2 Variables

i. Oil Reserves

In theory, natural resources are considered one of elements of the locational (L) part of the (OLI) approach (Dunning, 2001). According to that approach, a greater presence of natural resources in a given country is expected to attract more FDI, especially in developing countries where the natural resources sector is credited with attracting a large proportion of FDI (Dunning, 1998, Asiedu, 2006, Buckley et al., 2007). Moreover, countries with considerable oil reserves are expected to attract natural resource-seeking FDI (Dunning, 1993). Chorell and Nilsson (2006) provide an example of such investment, when Chinese companies invest overseas in oil fields to secure future sources of energy and to meet the increasing demands for oil in their growing economy. However, there is no conclusive evidence for a positive impact of the

existence of natural resources on FDI inflows, where the related empirical research has reached different conclusions. For example, Asiedu (2006) finds that countries rich in natural resources, oil in particular, in the Sub-Saharan Africa (SSA) have attracted FDI more than those with fewer natural resources during the period from 1984-2000. Sawkut et al. (2007) also find such a positive relationship between FDI and natural resource abundance in 20 African countries from 1990-2005. In contrast, Mina (2007) finds that natural resource abundance (oil) in the Gulf Corporation Council GCC has negatively affected inward FDI to these countries over the period 1980–2002. In our model, based on the argument that natural resources attract resource-seeking FDI (Dunning, 1993), we first expect a positive relationship between oil reserves and FDI inflows to Oil-Rentier States. We secondly expect that our sample will reflect the extent to which FDI in Oil-Rentier States is driven by oil-abundance, where our sample contains countries with different levels of proven oil reserves.

ii. Dutch Disease

Dutch Disease as an explanatory variable of FDI has not been examined sufficiently in the related literature. Poelhekke and Van der Ploeg (2010:1) point out that *“it is surprising that there is no research available on the effects of natural resources on both the composition and volume of FDI”*. Indeed, the latter statement signifies two points; it first indicates the lack of studies examining both the direct and indirect impacts of natural resources on FDI, and it secondly adds significance to the current thesis as it is the first study that combines the direct impact of natural resources on FDI (represented by the existence of natural resources and the level of its abundance proxied by oil rent % GDP). The impacts of natural resources on FDI have often been studied as a single bloc. However, we identified only two findings regarding the indirect impact of natural resources on FDI. The first one is the research of Poelhekke and Van der Ploeg’ (2010), who find that *“the aggregate”* FDI in non-natural resources countries is greater, as compared with natural-resources countries, which indicates a negative impact of Dutch Disease on FDI. The other research which examines the relationship between FDI and natural resources is Asiedu (2013) who concludes that natural resources (measured by oil exports/total exports) have a negative impact on FDI. This thesis, therefore, will contribute to the literature in this field by investigating the impact of the Dutch disease/resource curse in a group of countries which are expected to show

significant impacts of oil on FDI, in both direct and indirect directions as they have the highest oil-dependence levels among other world countries. We do expect a mixture of impacts from Dutch disease on FDI. We firstly expect a positive impact on oil sectors because we believe that such sectors, in developing countries at least, offer considerable privileges for MNCs. In addition, oil sectors in developing countries often require specialized high technology which is difficult to source from domestic investors. Meanwhile, we expect a negative impact because we believe that the appreciation of the host country's currency will increase production costs which create an unattractive environment for FDI in non-oil sectors, and for exports-motivated FDI in particular.

***iii.* Exchange Rate**

Exchange rate is expected to play an important role with respect to FDI. It is theoretically identified as an important variable affecting the macroeconomic factors in the economy. Most importantly, high exchange rate (cheap currency) help in reducing production costs making companies' goods and services have a competitive advantages over other competitors (Bilawal et al., 2014). When it comes to examining FDI in oil-exporting countries, the issue of exchange rate gains greater importance as an important factor to be considered since oil-exporting countries, rentier countries in particular, tend to have a strong currency (low exchange rate against foreign currencies) and such a situation means high production costs. Thus, exchange rate in OECs is expected to have a negative impact upon FDI inflows, especially for export-seeking FDI simply because of high production cost which is expected in oil-exporting countries.

***iv.* Inflation:**

High inflation rate reflects macroeconomic instability and it seen as an unpredictable cost for FDI projects (Oman Khanlen, 2011, Kolstad and Wiig, 2012, Grosse and Trevino, 2005). A number of evidence on the negative impact of inflation on FDI inflows provided in the literature. For example, Boateng et al. (2015) find that inflation rate has a negative impact upon FDI inflows in Norway over the period from 1986 to 2009. Another evidence from a panel data analysis provided by Elkomy et al. (2016a) who find that high inflation plays a negative role on FDI inflows in 61 transition and developing countries over the period from 1989-2013. Another evidence from a panel data analysis provided by Okafor (2015) who finds that the US investment

into Sab-Saharan Africa SSA has been affected negatively by high inflation rate over the period from 1996 -2010. In light of the theoretical and empirical evidence on the negative impact played by high inflation on FDI inflows, it is expected to find similar evidence within oil-exporting countries. However, an insignificant role for inflation on FDI inflows in OECs is also expected especially within resource-seeking FDI countries, due to the fact that oil industry is a kind of a low-flexibility industry produces low-flexibility goods, hence, inflation may have no impact on FDI inflows.

v. Per Capita GDP:

This thesis applies per capita GDP as a measurement of wages following Redding and Venables (2004) and Grubaugh (2013). Low wage rate is one of the factors that MNCs consider when taking FDI decision especially for efficiency-seeking FDI, in the sense that low-wage countries are expected to attract more FDI. Inexpensive wages increases company's competitive advantages and the deferential between wage rate in the country of origin and the host country is an important factor for the FDI to be undertaken (Love and Lage-Hidalgo, 2000, Thomas and Grosse, 2001, Lipsey and Sjöholm, 2011). Empirically, Wattanadumrong et al. (2014) find that low wage rate is a positive significant variable in explaining FDI inflows into Thailand over the period from 1970-2004. Jensen and Rosas (2007) and Blanton and Blanton (2007) amongst others, provide other evidence from Mexico and non-OECD countries on the positive impact of low wage rate on attracting FDI respectively.

vi. Oil Price:

Oil price may have the most important role to play in Oil-Rentier States, due to the high degree of dependence on oil in these countries. Oil revenues, which depend on the oil price, can affect an Oil-Rentier State's economy positively and negatively. It is widely agreed that oil is responsible for economic growth in oil countries (Shaari et al., 2013). However, fluctuations in oil price have severe negative impacts on the economic conditions of oil-containing countries; via the increase in inflation and unemployment in particular (Shaari et al., 2012, Ahmad and Ali, 2012). Empirically, few studies examine the relationship between global oil price and FDI without clear absolute conclusions. For example, Gastanaga et al. (1998) utilise data of 49 Less Developed Countries (LDCs) from 1970 to 1995, and they find a negative relationship between oil price and

FDI into these countries. They also provide an explanation that suggests that as long as the oil price is high, a country becomes less "interested" in FDI. Mina (2007) reaches similar findings from the GCC but he elaborates further, suggesting that the relationship becomes positive if institutional variables are involved in the estimation. In his other study, meanwhile, Mina (2011) draws links between an increase in oil price and the increase in FDI inflows into The Middle East and North Africa (MENA) between 1985-2008. Our expectations for this variable follow the last research mentioned of Mina (Ibid) as we believe that Oil comprises the main feature of Oil-Rentier States, and that MNCs therefore consider all oil-related factors if they decide to invest there; with the oil price being one of the most important considerations, we therefore expect a positive impact of oil price on FDI.

vii. Openness:

A host country's trade openness is an important element for FDI, and its importance increasing specifically with export-motivated FDI (Markusen and Maskus, 2002). Openness is essential for foreign investors who target a particular country and planning to operate export-motivated FDI in that country. A high openness degree reflects good connections with the regional and global markets and foreign investors can be confident that they will have accessible channels for their exports. Given that the data sample in this thesis covers oil-exporting countries, and these countries assumed to have already established effective exporting channels, it is expected, therefore, to find a positive impact of openness on FDI inflows in oil-exporting countries.

viii. Composite Risk:

Given that the variable composite risk is a reflection of a country's political, financial, and economic risk, it is therefore a sign of country's overall risk (ICRG, 2011). A high composite risk ranking is a kind of uncertainty and instability and it is expected to influence FDI inflows negatively. Thus, it is expected to find a negative impact of a high composite risk on FDI inflows in oil-exporting countries, especially within oil-related FDI which requires large capital to be invested over a relatively long periods.

4.3 Data and Sources

The dependent variable is Foreign Direct Investment, measured by net FDI inflows as a percentage of Gross Domestic Production (GDP). The independent variables are: oil reserves measured by the British thermal unit (Btu) for both crude oil and natural gas²⁶, Dutch disease measured by oil rents as a percent of GDP, exchange rate by a country's local currency value against the US dollar, inflation is measured by the consumer price index, the per capita GDP in current US dollars, oil price by Brent crude oil price in US dollars per barrel, openness by trade as a share of GDP and the composite risk is an index value which takes a score between 0 and 100, where 0 = very high risk and 100 = very low risk.

All variables are transformed into logarithmic values, which is an important step before starting the estimations. According to Blanton and Blanton (2007) and Chang et al. (2001), transforming data into its logarithmic value is considered one of the required econometric processes to overcome non-stationarity and skewness problems. However, the data set in this research contains zero and negative values, which makes using the traditional logarithm transformation useless, as it would lead to the loss of many observations. One possible alternative method is called the “semi-log” method²⁷, which uses a special formula in order to transform all positive, negative and zero values into their logarithmic values at one time. Thus, following Busse and Hefeker (2007) and Ren et al. (2012a) the following formula is used²⁸:

$$y = \ln[x + \sqrt{(x^2 + 1)}] \dots\dots\dots (4-3)$$

26 Oil reserves are calculated by converting both crude oil (in barrels) and natural gas (in cubic feet) into British thermal units (Btu) and combining the results. Each 1 barrel of crude oil equates to 5.55 million Btu, and each 1 cubic foot of natural gas is equal to 1000 Btu. See: <http://www.kylesconverter.com/>.

27 Some research applies the semi-log method by adding a 1 consistent to all negative values. However, such a method cannot be applied in this research because of the existence of negative values in addition to zero values for many variables. See Yeyati, E. L., Panizza, U. & Stein, E. 2007. The cyclical nature of North–South FDI flows. *Journal of International Money and Finance*, 26, 104-130. Cavallari, L. & d'Addona, S. 2013. Nominal and real volatility as determinants of FDI. *Applied Economics*, 45, 2603-2610.

28 According to Busse and Hefeker (2007), Applying this formula helps to deal with negative and zero values by converting them from “linear scale at small absolute values to logarithmic scale at large values” (p:405).

Regarding the transformation of variables which are expressed as percentages, such as the inflation rate²⁹, oil rent as a % of GDP, and also similar issues with exchange rates expressed as an actual quantity of the local currency equivalent to US dollars. Some studies on FDI determinants utilise logarithm values for ratio variables such as the inflation rate and exchange rate. For example, Jimborean and Kelber (2014) use the logarithm of inflation within their study, to examine FDI determinants in Central and Eastern European countries (CEECs) from 1993-2013. Bengoa and Sanchez-Robles (2003) also take the log value of inflation within their study of FDI determinates in 18 Latin American countries over the period from 1970-1999. Meanwhile, Udomkerdmongkol et al. (2006) use the logarithm of the exchange rate in their study examining FDI determinates in 16 emerging countries over the period 1990-2002. The composite risk is the only variable which left without any transformation following Ali et al. (2010) and Tintin (2013) since it is an index value derived from a number of sub-variables. Table 4-1 describes variables' specifications and sources of data of all variables.

29 Using the log of inflation instead of the untransformed inflation level provides some advantages; it helps to overcome the problem of asymmetry in the initial distribution of inflation, and it is the best solution within non-linear models. See: Sarel, M. 1995. Nonlinear effects of inflation on economic growth, International Monetary fund. . And: Ghosh, M. A. R. 1997. Inflation in transition economies: how much? and why?, International Monetary Fund.

Table 4-1: Variables' Specifications, Sources of Data

Variable	Specification	Measurement unit	Source
FDI	Total annual net FDI inflow as a share of GDP	Net FDI inflows in millions US Dollars at current prices and current exchange rates	UNCTADstat
Oil reserves	Crude oil proved reserves (billion barrels). Proved reserves of natural gas (trillion cubic feet).	Both crude oil and natural gas reserves are transformed into Million British thermal units (Btu)	Energy Information Administration (EIA)
Dutch disease	Oil rents (% of GDP)	Percentage (oil rents and GDP is US Dollars)	The World Bank - World Development Indicators
Exchange rate	A country's local currency value against the US dollar	Official exchange rate (LCU per US\$, period average)	The World Bank - World Development Indicators
Inflation	The consumer price index	Consumer prices (annual %)	The World Bank - World Development Indicators
Per capita GDP	GDP divided by the number of people in the country	GDP per capita (current US\$)	The World Bank - World Development Indicators
Oil price	Brent dated (money of the year)	US dollars per barrel	BP Statistical Review of World Energy June 2015
Openness	Sum of exports and imports as a share of GDP.	Trade (% of GDP)	The World Bank - World Development Indicators
Composite risk	Composite political, financial, and economic risk	Index value (0-100)	The PRS Group- ICRG (Table 2B: composite dataset)

4.4 Descriptive Statistics

Tables 4-2, 4-3, and 4-4 show descriptive statistics for the data in terms of the number of observations, mean, standard deviation, minimum and maximum values for each variable. The tables show that FDI inflows vary among the five panels under examination. They range between -8.1% and 50.3% in panels 1 and 2, between -4.6% and 38.5% in panel 3, between -4.6% and 50.3% in panel 4, and between -8.1% and 40.6% in panel 5. That indicates a considerable variation in the data sample among the countries under examination in terms of their performance in attracting FDI. The best performance in attracting FDI is recorded in panel 5, non-Islamic oil-exporting countries, the average value of FDI inflows was 3.2%, while the poorest performance was recorded in panel 4, Islamic oil-exporting countries with 2.05%. All the independent variables also have vary values, indicating different levels of these variables according to the potential locational characteristics.

Table 4-2: Descriptive Statistics, Panel 1 (All Oil-Exporting Countries)

Variable	Obs.	Mean	Std. Dev.	Min	Max
FDI	1318	2.6	4.3	-8.1	50.3
Oil Reserves	1320	1.88E+17	3.66E+17	0	2.08E+18
Dutch Disease	1320	14.2	16.3	0	79.27042
Exchange Rate	1320	906.3	3505.1	0.000003	25000
Inflation Rate	1320	92.7	872.5	0.03	23499.2
Per capita GDP	1320	9577.2	14370.2	97.1	100898.4
Oil Price	1320	40.4	31.7	12.72	111.6
Openness	1227	72.1	36.4	11	220.4
Composite Risk	1320	66.05	13.4	22	92.3

FDI is the net FDI inflows in millions US Dollars at current prices and current exchange rates (% GDP)

Oil Reserves is crude oil and natural gas measured in British thermal units (Btu).

Dutch Disease oil exports as a percentage of GDP.

Exchange Rate is the official exchange rate (LCU per US\$, period average).

Inflation rate is the value of inflation, in relation to consumer prices (annual percentage).

Per capita GDP is the GDP divided by the number of people in the country (current \$US).

Oil price is the annual average crude oil price (Brent dated).

Openness is the sum of exports and imports of goods and services measured as a share of GDP.

Composite risk is an index score where 100=low risk, 0=high risk.

Table 4-3: Descriptive Statistics, Panel 2 (Rentier Oil-Exporting Countries) and Panel 3 (Non-Rentier Oil-Exporting Countries)

Variables	Obs		Mean		Std.Dev		min		max	
	Panel 2	Panel 3	Panel 2	Panel 3	Panel 2	Panel 3	Panel 2	Panel 3	Panel 2	Panel 3
FDI	658	660	2.4	2.8	4.7	3.8	-8.1	-4.6	50.3	38.5
Oil Reserves	660	660	3.22E+17	5.38E+16	4.60E+17	1.44E+17	0	0	2.08E+18	1.06E+18
Dutch Disease	660	660	25.7	2.7	16.2	3.1	0	0	79.3	20.5
Exchange Rate	660	660	876	936.6	3,867.0	3104	0.000003	0.000003	25000.0	20933.4
Inflation Rate	660	660	61.3	124.1	409.8	1163.6	0.03	0.11	8290.2	23499.2
Per capita GDP	660	660	10547.8	8606.6	16,289.6	12086.5	153.08	97.1	100898.4	67511.6
Oil Price	660	660	40.4	40.4	31.7	31.7	12.7	12.72	111.7	111.6
Openness	576	651	74.8	69.7	30.7	40.6	11.09	12.3	179.0	220.4
Composite Risk	660	660	64.5	67.6	14.8	11.8	22	29.1	92.4	90.6

FDI is the net FDI inflows in millions US Dollars at current prices and current exchange rates (% GDP)

Oil Reserves is crude oil and natural gas measured in British thermal units (Btu).

Dutch Disease oil exports as a percentage of GDP.

Exchange Rate is the official exchange rate (LCU per US\$, period average).

Inflation rate is the value of inflation, in relation to consumer prices (annual percentage).

Per capita GDP is the GDP divided by the number of people in the country (current \$US).

Oil price is the annual average crude oil price (Brent dated).

Openness is the sum of exports and imports of goods and services measured as a share of GDP.

Composite risk is an index score where 100=low risk, 0=high risk.

Table 4-4: Descriptive statistics, Panel 4 (Islamic Oil-Exporting Countries) and panel 5 (Non-Islamic Oil-Exporting Countries)

Variables	Obs		Mean		Std.Dev		min		max	
	Panel 4	Panel 5	Panel 4	Panel 5	Panel 4	Panel 5	Panel 4	Panel 5	Panel 4	Panel 5
FDI	598	720	2.05	3.1	3.6	4.8	-4.6	-8.1	50.2	40.6
Oil Reserves	600	720	3.25E+17	7.38E+16	4.67E+17	1.89E+17	0	0.00E+00	2.08E+18	1.85E+18
Dutch Disease	600	720	19.8	9.6	16.1	15.2	0	0.0	68.8	79.2
Exchange Rate	600	720	587	1172.4	2097.2	4326.5	0.001	0.000003	18414.4	25000
Inflation Rate	600	720	32.9	142.6	82.8	1177.1	0.03	0.0	1110.7	23499.3
Per capita GDP	600	720	9049.8	10016.7	13457.9	15083.7	153.07	97.2	93714	100898.4
Oil Price	600	720	40.4	40.4	31.7	31.7	12.7	12.7	111.6	111.7
Openness	516	711	80.3	66.1	40.3	32.02	11.08	12.34638	220.4	178.9
Composite Risk	600	720	64.5	67.3	14.4	12.5	22	29.13	89.1	92.3

FDI is the net FDI inflows in millions US Dollars at current prices and current exchange rates (% GDP)

Oil Reserves is crude oil and natural gas measured in British thermal units (Btu).

Dutch Disease oil exports as a percentage of GDP.

Exchange Rate is the official exchange rate (LCU per US\$, period average).

Inflation rate is the value of inflation, in relation to consumer prices (annual percentage).

Per capita GDP is the GDP divided by the number of people in the country (current \$US).

Oil price is the annual average crude oil price (Brent dated).

Openness is the sum of exports and imports of goods and services measured as a share of GDP.

Composite risk is an index score where 100=low risk, 0=high risk.

A correlation matrix is also calculated for the five panels in order to check for correlation among the variables. A coefficient of determinants between 0.7 and 0.9 is considered a strong correlation, which is viewed as posing a multicollinearity problem for the estimation (Dancey and Reidy, 2011). Overall, a correlation matrix for the five panels as shown in tables 4-5, 4-6, 4-7, 4-8, and 4-9, indicate that FDI has a weak correlation with all independent variables. Within panel 1, FDI is found to be negatively correlated with three variables, which are Dutch disease exchange rate and per capita GDP, and positively correlated with the rest of the variables. Among the independent variables, the per capita GDP is the only variable which is found to be relatively highly correlated with the composite risk variable at a 0.76 coefficient of determinants, while none of the other independent variables are found to be strongly correlated. There is a similar issue with panels 2, 3, 4 and 5; the per capita GDP variable is also found to be relatively highly correlated with the composite risk variable at coefficients of determinants of 0.79, 0.76, 0.72, and 0.80, respectively.

Table 4-5: Correlation Matrix, Panel 1 (All Oil-Exporting Countries)

	FDI	Oil Reserves	Dutch Disease	Exchange Rate	Inflation Rate	Per capita GDP	Oil Price	Openness	Composite Risk
FDI	1								
Oil Reserves	0.05	1							
Dutch Disease	-0.05	0.42	1						
Exchange Rate	-0.03	-0.13	0.13	1					
Inflation Rate	-0.02	0.08	-0.05	-0.03	1				
Per capita GDP	0.08	0.26	0.04	-0.41	-0.28	1			
Oil Price	0.25	0.07	0.11	0.09	-0.12	0.32	1		
Openness	0.26	0.07	0.27	-0.01	-0.24	0.26	0.24	1	
Composite Risk	0.24	0.19	0.01	-0.21	-0.34	0.76	0.28	0.43	1

FDI is the log value of the net FDI inflows in millions US Dollars at current prices and current exchange rates (% GDP)

Oil Reserves is the log value of both crude oil and natural gas measured in British thermal units (Btu).

Dutch Disease is the log value of oil exports as a percentage of GDP.

Exchange Rate is the log value of the official exchange rate (LCU per US\$, period average).

Inflation rate is the log value of inflation, in relation to consumer prices (annual percentage).

Per capita GDP is the log value of GDP per capita (current \$US).

Oil price is the log value of the annual average crude oil price (Brent dated).

Openness is the log value of the sum of exports and imports of goods and services measured as a share of GDP.

Composite risk is an index score where 100=low risk, 0=high risk.

Table 4-6: Correlation Matrix, Panel 2 (Rentier Oil-Exporting Countries)

	FDI	Oil Reserves	Dutch Disease	Exchange Rate	Inflation Rate	Per capita GDP	Oil Price	Openness	Composite Risk
FDI	1								
Oil Reserves	-0.12	1							
Dutch Disease	0.09	0.22	1						
Exchange Rate	-0.01	-0.12	0.13	1					
Inflation Rate	0.08	-0.05	-0.27	0.05	1				
Per capita GDP	0.03	0.37	0.2	-0.24	-0.44	1			
Oil Price	0.25	0.17	0.25	0.15	-0.06	0.38	1		
Openness	0.26	0.04	0.59	0.04	-0.32	0.42	0.25	1	
Composite Risk	0.14	0.26	0.34	-0.13	-0.44	0.79	0.33	0.54	1

FDI is the log value of the net FDI inflows in millions US Dollars at current prices and current exchange rates (% GDP)

Oil Reserves is the log value of both crude oil and natural gas measured in British thermal units (Btu).

Dutch Disease is the log value of oil exports as a percentage of GDP.

Exchange Rate is the log value of the official exchange rate (LCU per US\$, period average).

Inflation rate is the log value of inflation, in relation to consumer prices (annual percentage).

Per capita GDP is the log value of GDP per capita (current \$US).

Oil price is the log value of the annual average crude oil price (Brent dated).

Openness is the log value of the sum of exports and imports of goods and services measured as a share of GDP.

Composite risk is an index score where 100=low risk, 0=high risk.

Table 4-7: Correlation Matrix, Panel 3 (Non-Rentier Oil-Exporting Countries)

	FDI	Oil Reserves	Dutch Disease	Exchange Rate	Inflation Rate	Per capita GDP	Oil Price	Openness	Composite Risk
FDI	1								
Oil Reserves	0.19	1							
Dutch Disease	0.04	0.34	1						
Exchange Rate	-0.05	-0.15	0.26	1					
Inflation Rate	-0.13	0.14	0.06	-0.1	1				
Per capita GDP	0.15	0.26	-0.15	-0.55	-0.12	1			
Oil Price	0.26	0.06	0.13	0.04	-0.18	0.27	1		
Openness	0.3	0.03	0.08	-0.04	-0.18	0.12	0.23	1	
Composite Risk	0.37	0.26	-0.12	-0.3	-0.22	0.76	0.23	0.36	1

FDI is the log value of the net FDI inflows in millions US Dollars at current prices and current exchange rates (% GDP)

Oil Reserves is the log value of both crude oil and natural gas measured in British thermal units (Btu).

Dutch Disease is the log value of oil exports as a percentage of GDP.

Exchange Rate is the log value of the official exchange rate (LCU per US\$, period average).

Inflation rate is the log value of inflation, in relation to consumer prices (annual percentage).

Per capita GDP is the log value of GDP per capita (current \$US).

Oil price is the log value of the annual average crude oil price (Brent dated).

Openness is the log value of the sum of exports and imports of goods and services measured as a share of GDP.

Composite risk is an index score where 100=low risk, 0=high risk.

Table 4-8: Correlation Matrix, Panel 4 (Islamic Oil-Exporting Countries)

	FDI	Oil Reserves	Dutch Disease	Exchange Rate	Inflation Rate	Per capita GDP	Oil Price	Openness	Composite Risk
FDI	1								
Oil Reserves	0.05	1							
Dutch Disease	0.03	0.53	1						
Exchange Rate	-0.13	-0.12	-0.19	1					
Inflation Rate	0.03	0.09	-0.17	0.21	1				
Per capita GDP	0.16	0.26	0.41	-0.45	-0.48	1			
Oil Price	0.36	0.09	0.15	0.09	-0.08	0.36	1		
Openness	0.31	0.05	0.19	-0.25	-0.36	0.57	0.21	1	
Composite Risk	0.29	0.13	0.35	-0.21	-0.45	0.72	0.31	0.68	1

FDI is the log value of the net FDI inflows in millions US Dollars at current prices and current exchange rates (% GDP)

Oil Reserves is the log value of both crude oil and natural gas measured in British thermal units (Btu).

Dutch Disease is the log value of oil exports as a percentage of GDP.

Exchange Rate is the log value of the official exchange rate (LCU per US\$, period average).

Inflation rate is the log value of inflation, in relation to consumer prices (annual percentage).

Per capita GDP is the log value of GDP per capita (current \$US).

Oil price is the log value of the annual average crude oil price (Brent dated).

Openness is the log value of the sum of exports and imports of goods and services measured as a share of GDP.

Composite risk is an index score where 100=low risk, 0=high risk

Table 4-9: Correlation Matrix, panel 5 (Non-Islamic Oil-Exporting Countries)

	FDI	Oil Reserves	Dutch Disease	Exchange Rate	Inflation Rate	Per capita GDP	Oil Price	Openness	Composite Risk
FDI	1								
Oil Reserves	0.1	1							
Dutch Disease	-0.01	0.34	1						
Exchange Rate	0.02	-0.14	0.4	1					
Inflation Rate	-0.06	0.09	0.05	-0.2	1				
Per capita GDP	0.01	0.32	-0.14	-0.4	-0.14	1			
Oil Price	0.18	0.06	0.11	0.08	-0.15	0.3	1		
Openness	0.28	0.04	0.26	0.19	-0.14	0.04	0.27	1	
Composite Risk	0.19	0.32	-0.19	-0.23	-0.26	0.8	0.25	0.24	1

FDI is the log value of the net FDI inflows in millions US Dollars at current prices and current exchange rates (% GDP)

Oil Reserves is the log value of both crude oil and natural gas measured in British thermal units (Btu).

Dutch Disease is the log value of oil exports as a percentage of GDP.

Exchange Rate is the log value of the official exchange rate (LCU per US\$, period average).

Inflation rate is the log value of inflation, in relation to consumer prices (annual percentage).

Per capita GDP is the log value of GDP per capita (current \$US).

Oil price is the log value of the annual average crude oil price (Brent dated).

Openness is the log value of the sum of exports and imports of goods and services measured as a share of GDP.

Composite risk is an index score where 100=low risk, 0=high risk

4.5 Diagnostic Tests

It is important to perform some post-estimation tests to check the data for heteroskedasticity, stationarity, multicollinearity and autocorrelation. The Breusch-Pagan / Cook-Weisberg test, (Breusch and Pagan (1979) Cook and Weisberg (1983), is employed to check for heteroskedasticity. The chi-square values were 7.9 in panel 1, 45.2 in panel 2, 6.6 in panel 3, 0.03 in panel 4, and 21.8 in panel 5, indicating the presence of heteroskedasticity in the data for panels 2 and 5 according to the high value of chi2 and the small P value (Appendix 1).

The stationarity test is also performed in order to check for non-stationarity among the variables under examination. An augmented Dickey-Fuller test (Dickey and Fuller, 1979) is used. The results indicate that the variables per capita GDP, oil price, and composite risk are non-stationary in the five panels, while the variable oil reserves is found to be non-stationary within panels 3 and 5 only. Exchange rate is found to be non-stationary within group 4 only, and the openness variable is found to be non-stationary in panel 3 only (Appendix 2). All these non-stationary variables are retested using the first difference I(1) and found to be stationary after the first-differencing (Appendix 3). These results suggest that all variables are either I(0) or I(1) and none of them is I(2) or a higher cointegration level.

Similarly, the Variance Inflation Factor (VIF) test is used to check for Multicollinearity among the independent variables. After running an OLS regression, the VIF level for all variables is found to be less than 4³⁰. The maximum VIF values within panels 1, 2, 3, and 5 are found with the per capita GDP variable at 3.2, 3.5, 3.7, and 3.3 VIF values respectively, while the variable composite risk is found having the highest value within panel 4 at 3.9 VIF value (Appendix 4). That means that none of the independent variables have a serious Multicollinearity problem. The autocorrelation

30 The acceptable VIF level varies from one research to another, as some research considers 10 as the maximum VIF value: see Kennedy, P. 2003. *A guide to econometrics*, Cambridge, MIT press. and Hair, J. F., Tatham, R. L., Anderson, R. E. & Black, W. 2006. *Multivariate data analysis*, Pearson Prentice Hall Upper Saddle River, NJ., other research utilise 5: see Rogerson, P. 2001. *Statistical methods for geography*, Sage. see Pan, Y. & Jackson, R. 2008. Ethnic difference in the relationship between acute inflammation and serum ferritin in US adult males. *Epidemiology and infection*, 136, 421-431.

test³¹ for the five panels indicate significant autocorrelation between error terms of the variables, while the correlations between the residuals and their lag are equal to 0.59, 0.68, 0.47, 0.56, and 0.60 in panels 1, 2, 3, 4 and 5 respectively (Appendix 5).

4.6 Empirical Findings

This part discusses the empirical results obtained from the long-run estimations of PMG model. The first section discusses the overall determinants of FDI in panel 1- All oil-exporting countries, while the second section estimates and compares the long-run determinants of FDI in panels 2 – rentier oil-exporting countries and panel 3- non-rentier oil-exporting countries. The third section focuses on estimating and comparing the long-run determinants in panel 4-Islamic oil-exporting countries and panel 5- non Islamic oil-exporting countries.

4.6.1 Determinants of FDI in Oil-Exporting Countries

It is necessary to examine FDI determinants in panel 1 for all oil-exporting countries to provide a general sign regarding FDI determinants in this group of countries, for which oil plays a role in their economies regardless of how significant that role is. Within this panel, all of the eight variables are found to be significant determinants in explaining FDI, with different signs and significance levels.

Table 4-10 shows that the variable **oil reserves** is statistically significant, at 1% level. That implies that countries which have more oil and gas reserves receive more FDI in the long-run. The abundance of natural oil resources, crude oil and natural gas, is regarded as a comparative advantage in oil-exporting countries, and such advantage attracts FDI into this group of countries. Foreign investors tend to invest in the mining sector of oil exporting countries. The majority of this kind of investment seems to comprise foreign companies' ownership advantages such as knowhow, marketing relationships and other kinds of advantages. The latter justification is predicated on the fact that most oil exporting countries, rentier countries in particular, do not have finance problems since they already have capital accumulation from oil revenues and they do

31 We predicted the residuals and generated a new series called "lagres", which is the series for lag of residuals. When we obtained the line plot of the "lagres" variable with residuals, we observed strong autocorrelation.

not suffer from funding shortages. Further, investment flows into the oil sector may also lead to other kinds of investment related to it. For example, some investments may come to a specific country because the investment in oil fields in that country creates new investment opportunities such as those focussed on infrastructure, storing and transportation (Devereux and Griffith, 1998, Head et al., 1999). The positive relationship between natural resources, in their direct effect, on FDI is consistent with the Eclectic Paradigm (The OLI approach) of Dunning (1979, 1988b, 1993), which suggests that natural resources are a locational advantage (the L advantage) in the host country, promoting FDI. Several studies empirically find similar result. Dinda (2010) finds that oil and gas reserves are significant determinant in explaining FDI inflows into Nigeria within her study that covers the period from 1970-2006. Wahid et al. (2009) also find such a relationship from a study that cover broader sample of 20 African countries from 1990-2005.

Dutch disease is statistically significant at 5% level but with a negative sign in panel 1. That implies that countries which rely on oil more than others are less attractive destinations for FDI in the long-run. The rentierism economic pattern of oil-exporting countries, in terms of their reliance on oil, is found to play an adverse role in attracting FDI to these countries in the long-run. In fact, such a conclusion is expected according to the rentier state theory (Mahdavy, 1970, Beblawi, 1987, Luciani, 1987) which suggests that Dutch disease phenomenon plays a negative role in country's economy directly and indirectly. The direct negative impact of Dutch disease on a country's received FDI can be explained through the dominant role of the oil sector on the expenses of other economic sectors. When the oil sector, and the oil extraction sector in particular, becomes the dominant sector in a country, the other sectors lose growth opportunities, hence their role in a country's total production diminishes. In such cases, non-oil sectors lose potential FDI inflows, simply because the majority of production is associated with oil sector. In another word, Dutch disease works to curtail total country's capacity through undermining the competitiveness of tradable goods sectors such as agriculture and manufacturing due to the high production costs in these sectors. The indirect negative impact of Dutch disease on country's FDI can be explained through the impact upon the quality of institutions. According to the rentier state theory, Dutch disease plays a negative role on country's institutional quality in the long-run,

hence, the country becomes a less attractive destination for FDI, as “good” quality institutions are crucial requirements that foreign investors consider when they build their strategic plans. The negative impact of Dutch disease, which is also called “resource curse” in some research, on FDI inflows is consistent with the rentier state theory and other research in the literature, which suggests that resource curse harms country’s growth performance (Mahdavy, 1970, Beblawi, 1987, Luciani, 1987, Sachs and Warner, 2000.) and hence country’s FDI attractiveness. Empirically, Asiedu (2013) concludes a negative impact from resource curse on FDI, from a panel data study of 99 developing countries from 1984-2011.

Exchange rate³² is statistically significant at 1% level in oil exporting countries in the long-run, in the sense that countries which have higher exchange rates (cheaper currency) receive more FDI. This conclusion is consistent with the related literature since the appreciation of a country’s currency hinders FDI inflows through its role on country’s competitiveness (Aliber, 1971, Cushman, 1985, Goldberg and Kolstad, 1994, Moosa, 2002, Takagi and Shi, 2011). Foreign companies tend to work in countries that have inexpensive exchange rate especially if they were operating export-seeking FDI. Inexpensive currencies are, therefore, expected to encourage export-seeking FDI through the effects on reducing production costs. Exchange rates also have another role, by reducing the value of assets in host countries, and hence attracting more investment. The latter outcome likely promotes FDI in the form of partnerships as elements of privatisation processes in host countries. The positive relationship between high exchange rate (inexpensive currency) and FDI is supported empirically by other research, see for example: Stevens (1998); Udomkerdmongkol et al. (2006); Takagi and Shi (2011).

The **inflation rate** is a significant determinant of FDI in oil-exporting countries, at 1% level but with a negative sign. A higher inflation rate within OECs is associated with the receipt of less FDI inflows in the long-run. The negative association between the inflation rate and FDI inflows is expected based upon its negative impacts on the stability of macroeconomic and fiscal policies of host countries (Omankhanlen, 2011,

32 A high exchange rate indicates cheaper currency and more FDI, and a low exchange rate indicates expensive currency and less FDI.

Kolstad and Wiig, 2012). Given that the inflation rate is the general rise in price levels in an economy, that increase impacts on other factors. It leads to a rise in wage and other production factors such as raw materials and transportation, which eventually increases production costs and reduces profits. The other possible threat which might face MNCs in these countries is that MNCs' assets become vulnerable to declines in their real values due to inflation. Thus, foreign investors consider host countries with uncontrolled inflation rates to be risky investment destinations in the long-run. Several empirical studies find a similar negative relationship between higher inflation rates and FDI inflows. For example, Ranjan and Agrawal (2011a) find that inflation rates are significant negative determinants of FDI in BRIC³³ countries, in a study that covers the 35 years from 1975 to 2009. Okafor (2015) finds that the inflation rate is a negative factor affecting the US's FDI into 23 Sub-Saharan African (SSA) countries over the period from 1996–2010. Boateng et al. (2015) also finds that inflation has an adverse impact on FDI inflows into Norway over the period from 1986–2008.

The per capita GDP is significant at 1% level with a negative sign. This implies that countries with higher per capita GDP countries receive less FDI inflows in the long-run. The wage rate is regarded as one of the most important factors of production, especially from the prospective of export-seeking FDI and market-seeking FDI. A lesser wage rate means lower production costs and hence greater competitiveness against other market participants. Further, efficiency-seeking FDI also endeavours to operate within countries with lower wage rates in order to increase efficiency. In light of these findings, it seems that OECs are not a preferable destination for efficiency-seeking FDI as they do not provide a lower wage rate in the long-run. The negative relationship with the per capita GDP is found by a number of studies. Walsh and Yu (2010) conclude similar findings from a study covering 27 developed and emerging countries from 1985 to 2008. From a broader sample, Grubaugh (2013) concludes that the wage rate, by proxy of GDP per capita, has a negative impact upon FDI inflows in 74 countries over the period 1980–2008. Similar findings are reported by Dauti (2008) and Rivera and Castro (2013).

33 Brazil, Russia Federation, India and China

Oil price is a statistically significant determinants for FDI at 1% level. FDI inflows into OECs are associated with higher oil prices. In fact, it is expected to find that a higher oil price encourages more FDI inflows as it plays a positive role for both foreign investors and the economy of the host country. On the one hand, it is widely known within economics that when the price of a specific commodity increases, the profits increase accordingly (Becker, 1991). Thus, increases in oil price encourage foreign companies to invest to gain greater profits. It is also supposed to positively influence FDI indirectly; when oil revenues of the host country increase, more capital will be injected into the economy in the form of infrastructure and projects which enhance the country's business environment. Economic growth in the host country will also increase, resulting in greater purchasing power for individuals, which means more attractive factors for FDI. There is a lack of research examining the impact of oil price on FDI. While Stephens Balakrishnan et al. (2013) conclude that oil price has a positive relationship with FDI in a study covering the MENA region over the period from 1987 to 2008, Mina (2007) finds a negative correlation between the two variables in the GCC during the period 1980–2002. A similar negative association between oil price and FDI is concluded by Yazdanian (2014), who examines 14 oil-producing countries from 1986 to 2007 using panel data.

Openness to trade is an important factor in explaining FDI inflows into oil exporting countries in the long-run. This variable is positively significant at 1% level, reflecting a positive relationship between a country's trade openness and FDI inflows in the long-run. Given that countries under examination are all oil-exporting countries, they are expected to have high trade openness ratios. Foreign investors view a country's trade openness as a reflection of trade liberalisation, which provides them with the channels that connect them with the world economy, so that their products can reach broader markets. Thus, it is expected that a positive correlation will be found between trade openness and FDI inflows in oil-exporting countries. A high level of trade openness can also be seen as an indication of a good opportunity to achieve economic growth³⁴ (Sachs et al., 1995), in the sense that countries which have a higher ratio of

34 From different point of view, countries with higher trade openness ratio are prone to external crisis due to the strong correlation with the external world, see: Cavallo, E. A. & Frankel, J. A. 2008. Does openness to trade make countries more vulnerable to sudden stops, or less? Using gravity to establish causality. *Journal of International Money and Finance*, 27, 1430-1452.

trade openness are more likely to have higher levels of economic growth, which is also an important factor in attracting FDI. The positive impact of trade openness on FDI inflows is supported empirically by a number of studies. For example, Jadhav (2012) finds that trade openness is an important variable in attracting FDI into BRICS countries from a panel data analysis covering the period from 2000 to 2009. Further evidence, from 36 developing countries over the period from 1990-2008, is provided by Liargovas and Skandalis (2012), who find that trade openness, measured by different proxies, is a positive variable in explaining FDI inflows in the long-run. Sahoo (2012) provides similar evidence from the South Asian countries over the period 1985-2006.

Composite risk is a significant variable with a positive sign at 1% level, which means that less composite risk countries are found to attract more FDI in the long-run. This is despite the fact that the composite risk variable does not reflect a specific kind of risk, since it is extracted from three types of risk which are economic, financial and political; it gives an indication of the country's overall risk. The positive correlation between composite risk and FDI in OECs is expected, especially if these investments involve projects in heavy oil industries which require large amounts of capital over the long-term. Therefore, foreign investors are keen to protect their investments against any potential threats in the future, and they prefer to work in countries with lower composite risk. Another possible point of view may explain why composite risk is an important variable in oil-exporting countries. It is important for the continuance of investments, in the sense that as long as the country has less composite risk, foreign companies will consider reinvesting and/or renewing their contracts if working under a franchise investment scheme within the oil sector. The positive association between composite risk and FDI is supported empirically within some papers. Mehrens et al. (2002) find that the variable composite risk was a significant factor for US investment into five ASEAN countries, namely Thailand, Singapore, Malaysia, Philippines, and Indonesia, over the period from 1985 to 1999. Ramasamy and Yeung (2010) also reach similar conclusions, suggesting the importance of the composite risk variable in attracting FDI into the OECD countries from 1980 and 2003.

Table 4-10: Long-Run PMG Model Results for Panel 1 (All Oil Exporting Countries)

Dep. Variable FDI	Panel 1 All oil-exporting countries
Oil Reserves	0.0200*** (0.00548)
Dutch Disease	-0.253** (0.106)
Exchange Rate	0.0722*** (0.0247)
Inflation Rate	-0.111*** (0.0258)
Per capita GDP	-0.548*** (0.132)
Oil Price	0.460*** (0.0932)
Openness	0.818*** (0.175)
Composite Risk	0.0142*** (0.00526)
Constant	-0.123 (0.0925)
EC	-0.427*** (0.0530)
Observations	1182

Standard errors in parentheses

***Significant at 1% level.

**Significant at 5% level.

*Significant at 10% level.

FDI is the log value of the net FDI inflows in millions US Dollars at current prices and current exchange rates (% GDP)

Oil Reserves is the log value of both crude oil and natural gas measured in British thermal units (Btu).

Dutch Disease is the log value of oil exports as a percentage of GDP.

Exchange Rate is the log value of the official exchange rate (LCU per US\$, period average).

Inflation rate is the log value of inflation, in relation to consumer prices (annual percentage).

Per capita GDP is the GDP divided by the number of people in the country (current \$US).

Oil price is the log value of the annual average crude oil price (Brent dated).

Openness is the log value of the sum of exports and imports of goods and services measured as a share of GDP.

Composite risk is the composite risk index (100=low risk, 0=high risk).

4.6.2 The Impacts of Rentierism

In order to investigate whether there is a different role associated with a specific oil-dependence level, OECs are categorised according to their reliance on oil. It is expected to find different roles for “oil factors” in relation to FDI in these countries, where oil exports constitute a substantial portion of their total exports (40% and above). Similarly, lesser roles are expected in less oil-dependent countries. The impact of oil-dependence levels is investigated, by testing the same 8 explanatory variables in panel 2- rentier oil-exporting and panel 3- non-rentier oil-exporting countries, and comparing the results obtained by each estimation.

Table 4-11 shows that the comparison between the PMG long-run results of panel 2 and panel 3 reveals considerably different effects of the variables oil reserves, Dutch disease, exchange rate, and inflation. These differences are attributed to the rentierism phenomenon and its role in these countries, while the variables oil price and composite risk are found to have a similar influence on FDI in both rentier and non-rentier countries.

Surprisingly, **oil reserves** are insignificant variable in its effect on FDI in panel 2—rentier oil-exporting countries, while they are highly significant, with a positive sign, in panel 3- non-rentier oil-exporting countries. That means that in the long run, oil reserves have no impact on FDI inflows to rentier countries and positive impacts in non-rentier countries. The insignificant impact of oil reserves on FDI in rentier countries contrasts with the argument of the Eclectic Theory (The OLI approach), which suggests that countries with more natural resources are expected to attract more FDI. The L (Locational advantages) factor of the OLI approach is not applicable to the long run relationship between natural resources and FDI inflows in oil rentier countries, but is applicable in non-rentier countries. Further, the insignificant relationship between oil reserves and FDI in the long-run in oil rentier countries can be explained by a few points. Firstly, this may emerge due to the negative impact of a country's natural resources on the non-oil sector in the country, as well as the negative impact on the country's institutional quality. Countries which have large oil reserves are expected to export oil according to those reserve figures, and to receive greater rent revenues than countries with less oil reserves. In the long-run, adverse impacts are expected to emerge in their economies in both economic and institutional terms. Secondly, according to the World Investment Report 1994 (UNCTAD, 1994), there was a dramatic shift in FDI inflows from the primary sector toward secondary and services sectors starting in the late 1980s. FDI outflows from the top six developed countries (France, Germany, Japan, USA and UK) during the late 1980s and the beginning of the 1990s went toward secondary and services sectors at the expense of primary sectors (oil production and other activities). This tendency has been evidenced by the World Investment Report 2012, as Oman, Qatar and Saudi Arabia in 2010 received 59% of the FDI they attracted into the service sector and 27% into the manufacturing sector, while the primary sector received only 14% of total FDI into these three countries (UNCTAD, 2012:50). Thirdly,

investment in the upstream oil industry requires long-term strategies³⁵ along with large capital, and often involves high risks (PWC, 2013). Thus, investments toward this sector do not move flexibly compared with those in other industries. Fourthly, there is the sensitive nature of the oil industry in its upstream operations (exploration and production), as a country's oil production is often determined by other factors than the country's technical capacity and global oil market dynamics, and these factors cause the oil production industry to have limited investment capacities. The insignificant effect of natural resources on FDI inflows is concluded by Akpan et al. (2014), from both BRICS and MINT³⁶ countries between 2001 and 2011. Further, some studies conclude even more surprising results regarding the relationship between natural resources and FDI. They find a negative correlation between these two variables. For example, Mina (2007) finds that oil reserves have a negative impact upon FDI in the GCC over the period from 1980-2002, using panel data analysis. Asiedu (2013) also reaches similar conclusions of a negative impact of natural resources on FDI within a study covering 99 developing countries from 1984-2011.

The variable **Dutch disease**, measured by oil rent as a percentage of GDP, is statistically significant, with a negative impact on FDI in rentier countries, and is insignificant in non-rentier countries, implying that more oil-reliant countries are less encouraging destinations for FDI in the long-run. Given that the results obtained from the PMG model are for the long-run, the negative impact of Dutch disease on FDI inflows is attributed to its negative direct and indirect impact upon host countries' economies, via its impact on non-oil sectors' growth and the quality of institutions.

Exchange rate³⁷ have a differing influence on FDI in rentier countries and non-rentier countries. Within rentier oil-exporting countries, the exchange rate is insignificant, with a negative sign, in the sense that countries with cheaper currency attract less FDI. In contrast, it is statistically significant, with a positive sign, in oil-exporting non-rentier countries, implying that cheap currency countries receive more

35 Oil investment contracts are often for 50 year periods and it is rare for contracts to be signed for less than 30 years, see: Sauvart, K. P. 2013. *Yearbook on International Investment Law & Policy 2011/2012*, New York, Oxford University Press on Demand.

36 Mexico, Indonesia, Nigeria, and Turkey.

37 A high exchange rate indicates cheaper currency and more FDI, and a low exchange rate indicates expensive currency and less FDI.

FDI. The relationship between exchange rate and FDI in oil-exporting non-rentier countries seems natural and matches the theory as shown within the whole sample (panel 1-all oil exporting countries). The surprising issue is regarding the relationship between these two variables within rentier oil-exporting countries. The insignificant negative correlation between exchange rate and FDI in rentier oil-exporting countries contradicts the theory and the empirical findings in this regard, since cheap currency-countries are expected to attract more FDI. A possible explanation for this relationship is that the exchange rate in oil-rentier countries remains, on average, relatively higher than the level required for attracting non-oil FDI³⁸. In this sense, the rentierism phenomenon in rentier countries keeps the exchange rate far from influencing FDI, simply because the country's currency will remain at high levels compared with other countries and does not play a supportive role in attracting export-seeking FDI. Both the positive significant sign of Dutch disease and the negative significant sign of exchange rate support the idea that, to the degree that a country relies upon oil revenues, non-oil sectors become unattractive because of the impacts upon the exchange rate. The difference between the roles played by the exchange rate in rentier and non-rentier oil-exporting countries clearly confirms that FDI towards rentier countries is not export-seeking FDI, while it is in non-rentier oil exporting countries.

Inflation rate shows different effects on FDI inflows in rentier and non-rentier countries. It is significant in both groups but with a positive sign in rentier countries and a negative sign in non-rentier oil-exporting countries. The positive correlation between inflation and FDI in rentier oil-exporting countries implies that higher inflation-countries attract more FDI in the long-run. A possible explanation for this phenomenon can be found through deeper insight on the factors which cause inflation in rentier countries. It is worth mentioning that inflation in rentier countries is the result of both the global inflation rate and local inflation factors, but local inflation factors are expected to have the biggest influence on inflation in these countries (Kandil and Morsy, 2011). Thus, inflation in rentier countries is a result of an increase in oil revenues and the consequent increase in government expenditure, which eventually means more investment opportunities in the economy as a whole.

38 The average exchange rate for rentier countries (excluding Ecuador) is 281, while it is 915 in non-rentier countries over 29 years.

In terms of the relationship between the inflation rate and FDI in non-rentier countries, which is statistically significant at the 1% level with a negative sign. This means that countries which have a higher inflation rate receive less FDI in the long-run. In fact, an “acceptable” inflation rate is a reflection of stable macroeconomic policies. Thus, foreign investors care about inflation per se as well as its impacts upon other economic indicators. This result is consistent with the theory which suggests a negative impact of inflation on FDI, as inflation leads to the difficulty of calculating the commitments of capital and it reflects unstable fiscal and monetary policies (Omankhanlen, 2011, Kolstad and Wiig, 2012, Grosse and Trevino, 2005). This conclusion has also been supported empirically (see: Schneider and Frey (1985) and Trevino et al. (2002).

Per capita GDP plays a different role in FDI in rentier and non-rentier oil-exporting countries. It is highly significant at the 1% level in rentier countries and insignificant in non-rentier countries. According to the rentier state theory, it is well known that rentier oil-exporting countries often reflect the increasing oil wealth in the form of salaries for their citizens, and such a policy leads to an overall increase in the per capita GDP. Thus, a high per capita GDP within rentier oil-exporting countries increases production costs, which eventually results in a higher price for products and services. Accordingly, foreign investors will find it hard to invest in such countries, especially if they are engaged in export-seeking FDI, due to the high expected costs.

All other variables: oil price, openness and composite risk, play similar roles in FDI in both panels; rentier and non-rentier oil-exporting countries. The differences were only in the level of significance and the magnitude of coefficients. For example, the coefficient of the variable oil price in rentier oil-exporting countries is quadruple that of its magnitude in non-rentier oil-exporting countries. It is 1.378 in rentier countries and 0.355 in non-rentier countries. It could be said that a 1 unit increase in oil price leads to a four-fold increase in FDI inflows into rentier oil-exporting countries relative to the increase in non-rentier oil-exporting countries. Thus, in the long-run, oil price increases play a greater role in FDI in rentier oil-exporting countries and this is attributed to the rentier nature of these countries’ economies, since most of the economic activities are associated with oil in all its elements in terms of price, production, and exports.

Despite the variable openness being significant in both rentier and non-rentier oil-exporting countries, it plays a greater role in rentier countries compared with non-rentier oil-exporting countries. It is significant at the 5% level in panel 2 and at the 10% level in panel 3. The magnitude of the coefficient of this variable also differs between the two panels. It is 0.620 in panel 2 and 0.393 in panel 3, which means that foreign investors care about openness to trade in rentier countries more than they do in non-rentier oil-exporting countries. It also means that a 1 unit increase in openness leads to an increase in FDI inflows into rentier-oil exporting countries by almost 1.6 times the increase in non-rentier oil-exporting countries.

The variable composite risk is found to be significant at the 1% level in rentier oil-exporting countries and at the 10% level in non-rentier oil-exporting countries. This signifies that foreign investors care about composite risk in rentier countries more than they do in non-rentier countries. The positive impact of the variable composite risk on FDI inflows in rentier countries is five times greater than its impact on FDI inflows in non-rentier oil-exporting countries, since the magnitude of the coefficient of this variable is 0.057 in panel 2 and 0.011 in panel 3. This is also attributed to the rentierism phenomenon in terms of its impact on political and economic instability characteristics, and it is also attributed to the nature of oil-related investment, which needs more stable forecasts in order to persuade foreign investors to operate in these countries.

Table 4-11: Long-Run PMG Model Results for Panel 2 and 3
(Rentier Oil-Exporting Countries and Non-Rentier Oil-Exporting Countries)

Dep. Variable FDI	Panel 2		Panel 3	
	Rentier Oil-Exporting Countries		Non-Rentier Oil-Exporting Countries	
Oil Reserves	0.171	(0.259)	0.0246***	(0.00516)
Dutch Disease	-1.652***	(0.286)	-0.152	(0.122)
Exchange Rate	-0.0504	(0.0662)	0.0781***	(0.0264)
Inflation Rate	0.384***	(0.0532)	-0.133***	(0.0277)
Per capita GDP	-1.856***	(0.340)	-0.200	(0.152)
Oil Price	1.378***	(0.246)	0.335***	(0.0993)
Openness	0.620**	(0.255)	0.393*	(0.235)
Composite Risk	0.0574***	(0.0118)	0.0113*	(0.00624)
Constant	1.664***	(0.273)	-0.811***	(0.173)
EC	-0.377***	(0.0647)	-0.577***	(0.0895)
Observations	553		629	

Standard errors in parentheses

***Significant at 1% level.

**Significant at 5% level.

*Significant at 10% level.

FDI is the log value of the net FDI inflows in millions US Dollars at current prices and current exchange rates (% GDP)

Oil Reserves is the log value of both crude oil and natural gas measured in British thermal units (Btu).

Dutch Disease is the log value of oil exports as a percentage of GDP.

Exchange Rate is the log value of the official exchange rate (LCU per US\$, period average).

Inflation rate is the log value of inflation, in relation to consumer prices (annual percentage).

Per capita GDP is the GDP divided by the number of people in the country (current \$US).

Oil price is the log value of the annual average crude oil price (Brent dated).

Openness is the log value of the sum of exports and imports of goods and services measured as a share of GDP.

Composite risk is the composite risk index (100=low risk, 0=high risk).

4.6.3 The Impact of Religious Identity

In this part, the locational determinants of FDI are compared according to countries' religious identity. The data sample is divided into two panels: panel 4-Islamic and panel 5-non-Islamic oil-exporting countries. The Islamic oil-exporting countries number 20: Algeria, Brunei Darussalam, Egypt, Iran, Iraq, Kuwait, Libya, Nigeria, Oman, Qatar, Saudi Arabia, Sudan, Syria, UAE, Yemen, Bahrain, Indonesia, Malaysia, Senegal and Tunisia. The non-Islamic oil-exporting countries number 24: Angola, Congo, Ecuador, Gabon, Norway, Trinidad and Tobago, Venezuela, Argentina, Australia, Bolivia, Bulgaria, Cameroon, Canada, Colombia, Cote d'Ivoire, Greece, Mexico, Mozambique, Netherlands, Peru, Poland, South Africa, United Kingdom and Vietnam. The religious identity itself is not the main concern as much as some religion-related factors and their impacts upon FDI. In fact, Islamic oil-exporting countries share some common features³⁹ in terms of the legal system, religion, language and history, and these common features are expected to have an impact on the attractiveness of the country to investors. Over 30 years, the performance of oil-exporting Islamic countries, in terms of attracting FDI, was less than that of non-Islamic oil-exporting countries. On average, over the period from 1984-2012, Islamic oil-exporting countries have received only 2.1 % FDI inflows as a percentage of their GDP, while non-Islamic oil-exporting countries have received 3.1% over the same period (WB, 2014). In terms of the legal systems, all oil-exporting Islamic countries adopt either civil or Islamic laws as a legal system (CIA, 2013), and it is found that countries with civil and Islamic laws tend to have fewer protections for property rights, unlike countries that adopt common law systems, which provides greater property right protections (Lee et al., 2014). Given that oil investments involve committing large amounts of capital over a long period of time, property right protection becomes more important in oil-exporting countries. The Islamic identity of this group of countries may impose specific issues such as the Islamic banking system which prohibits specific interest or fees on loans. Other important aspects in this regard are the political-religious considerations. Most Islamic oil-exporting countries have previously been subject to Western colonialism, mainly by

³⁹ All Islamic countries are members of The Organisation of Islamic Cooperation (OIC).

the United Kingdom and France,⁴⁰ and some of them became independent in the early 1900s, whilst others achieved their independence later⁴¹ (Harik, 1990). This historical background of OECs may play a role in determining FDI inflows into these countries.

The variables Dutch disease, exchange rate, per capita GDP, and oil price have a different role on FDI inflows between the two panels. While the variables oil reserves, inflation rate, openness and composite risk have a similar role in both panels. Table 4-12 shows the long-run PMG results. **Oil reserves** is statistically significant in both panels, but they are more significant in Islamic countries (at the 1% level and at 10% in non-Islamic countries), indicating that a country's oil reserves are an important locational determinant of FDI regardless of the religious identity of the country, but that they play a bigger role in Islamic oil-exporting countries in the long-run. The positive long-run association between oil reserves and FDI in Islamic and non-Islamic oil-exporting countries can be explained from a political point of view as well. Despite the perception that investment in the oil sector involves high risk due to the volume of capital required, the new global political regime after 1990 produced a new political-oil investment relationship. The early 1990s saw dramatic changes in the world in one of the most important oil reserves and production areas, which is the Persian Gulf region. A new pattern of a military-political-economic relationship has emerged since 1990 between the USA and some of the GCC countries for the purpose of securing an important global source of energy.⁴² Protecting the global system from Saddam Hussein's regime was the visible rationale of the global coalition in its war against Iraq in the Persian Gulf. Securing an important source of global energy in the gulf was also a reason for that war and the subsequent wars in the region. Such a new scheme of collaboration helped to provide additional assurance for foreign investors into GCC countries and promoted oil specialised MNCs to set up long investment plans in that region.

40 According to In the Sykes-Picot agreement, signed between the UK and France after World War I in 1916, the Arab territories of the former Ottoman Empire were divided into spheres of influence between the UK and France. See Sykes-Picot Agreement available online on :(<http://www.saylor.org/site/wp-content/uploads/2011/08/HIST351-9.2.4-Sykes-Picot-Agreement.pdf>).

41 Yemen became independent in 1917, while the United Arab Emirates did so in 1971.

42 Since the gulf crisis in 1990, the US started to establish military bases in the GCC countries, and nowadays it has military bases in Saudi Arabia, Kuwait, Bahrain, Qatar, UAE and Oman. See: Degang, S. 2010. The US Military Bases in the Gulf Cooperation Council States: Dynamics of Readjustment. *Journal of Middle Eastern and Islamic Studies (in Asia)*, 4(4).

Dutch disease is different in its importance between the two panels. It is statistically significant at 1% level in both Islamic and non-Islamic oil-exporting countries, but with a positive sign in the first panel and a negative sign in the second. The rentierism economic pattern of Islamic oil-exporting countries in terms of their reliance on oil, as well as their religious identity plays an important role in attracting FDI to these countries. It is worth noting that the oil and gas industry comprises three sectors: upstream, midstream and downstream. The upstream industry refers to the exploration and production of oil and gas; the midstream includes all industrial functions regarding oil and gas after extraction, such as refining, while the downstream industry includes the final processes such as storing and transporting petroleum products to consumers (An et al., 2011). Thus, in light of the significant correlation between oil reserves, Dutch disease variables and FDI inflows, it could be said that in the long-run, FDI in OECs is correlated with upstream, midstream and downstream levels of oil and gas industries, since oil reserves refer to the extraction and production aspects of oil investment (the upstream sector), and the Dutch disease variable refers to the subsequent oil investment at mid and downstream levels. Accordingly, Dutch disease characteristics promote FDI inflows into Islamic oil-exporting countries in the long-run. This conclusion leads to another, which is that the negative impact of Dutch disease does not have an impact on FDI inflows into Islamic oil-exporting countries in the long-run, even with the proposed negative impact of Dutch disease on institutional quality. To sum up, it could be said that the rentierism pattern of a country's economy can have a positive relationship with FDI inflows only when considering the Islamic identity as a comparison benchmark.

Another notable difference between Islamic and non-Islamic oil-exporting countries is found regarding the impact of the **exchange rate**. Despite it is statistically significant variable for explaining FDI in both Islamic and non-Islamic oil exporting countries, it displays a positive sign in Islamic oil-exporting and a negative sign in non-Islamic oil exporting countries. This indicates that Islamic oil-exporting countries with a cheaper currency are found to receive less FDI compared with Islamic countries which have highly appreciated currencies. This conclusion adds further evidence that FDI inflows into Islamic countries are associated with their oil reserves as well as their degree of reliance on oil. It also provides another insight, to conclude that Islamic oil-exporting countries are not a preferable destination for export-seeking FDI or

efficiency-seeking FDI, since FDI in these countries is associated greatly with their oil reserves and their rentierism pattern. The positive correlation between exchange rate and FDI in non-Islamic oil-exporting countries is in line with the theory and the results obtained from panel 1 and panel 3.

The other variable which performs differently between the two panel is the **per capita GDP**. It is an insignificant variable for explaining FDI into Islamic oil-exporting countries, and a negative significant variable within non-Islamic oil exporting countries. Foreign investors, therefore, do not care about the per capita GDP in Islamic oil-exporting countries, since they most often operate oil-related projects for which the per capita GDP does not affect their production significantly. In contrast, the per capita GDP variable is statistically significant with a negative sign in non-Islamic oil-exporting countries, indicating the importance of a low per capita GDP as a determining factor for FDI inflows in the long-run, which matches the results obtained from panels 1, 2, and 3.

Oil price is also have differing roles between the two panels; the notable issue is that it is insignificant within Islamic oil-exporting countries and significant with a positive sign within non-Islamic oil-exporting countries. A possible explanation for the insignificant relationship between the two variables in Islamic countries is that when oil-specialised MNCs take a decision to invest in a specific country, they adjust their output prices according to the global oil price, maintaining fixed marginal profits. The latter explanation is supported by the fact that the demand for oil products is inelastic (Krichene, 2002), in the sense that it is hard for consumers to change their consumption behaviour of a specific good as a result of the changes in price. Thus, two factors have played a role in making oil price insignificant in explaining FDI within Islamic oil-exporting countries in the long-run. First, is the inelasticity of the demand for oil products, while second, is the nature of oil investment in terms of involving long term commitments, and therefore its inflexibility in terms of entry and exit to and from the host country.

The variables **openness** and **composite risk** are statistically significant in both Islamic and non-Islamic oil-exporting countries. The important issue is that the variable openness is more significant in Islamic oil exporting countries, at the 1% level,

compared with a 5% level for non-Islamic oil-exporting countries. Most important is the magnitude of the coefficient of this variable in Islamic oil-exporting countries, which is 1.123, compared with that for non-Islamic oil-exporting countries, which is 0,534. Therefore, it could be concluded that more liberal trade policies increase FDI inflows into Islamic oil-exporting countries by twice what they do in non-Islamic oil-exporting countries. The general trend of imposing civil laws in Islamic countries and the effects of applying such laws on the business environment overall makes foreign investors require additional assurance to invest in Islamic countries. Thus, a higher level of trade openness in Islamic oil-exporting countries can play that role. A similar finding is concluded with respect to the variable composite risk and its impact on FDI inflows in Islamic and non-Islamic oil-exporting countries. The positive impact of composite risk on FDI in Islamic countries is nearly four times its impact on FDI inflows in non-Islamic oil-exporting countries. The coefficients are 0.0474 and 0.0127 in Islamic and non-Islamic oil exporting countries, respectively. This implies that foreign companies care about composite risk in Islamic oil exporting countries more than they do in non-Islamic oil exporting countries. The issues the imposition of a civil law system, such as those which operate in Islamic countries, as well as other identity-related factors, impose additional potential risks for investment in Islamic countries, making composite risk a more important factor in Islamic oil-exporting countries.

Table 4-12: Long-Run PMG Model Results for Panels 4 and 5
(Islamic Oil-Exporting Countries and Non-Islamic Oil-Exporting Countries)

Dep. Variable FDI	Panel 4		Panel 5	
	Islamic Oil-Exporting Countries		Non-Islamic Oil-Exporting Countries	
Oil Reserves	0.0354***	(0.00586)	0.0391*	(0.0234)
Dutch Disease	0.443***	(0.160)	-0.466***	(0.146)
Exchange Rate	-0.985***	(0.191)	0.0725***	(0.0275)
Inflation Rate	-0.132***	(0.0374)	-0.0884***	(0.0315)
Per capita GDP	0.130	(0.262)	-0.512***	(0.165)
Oil Price	0.0638	(0.152)	0.515***	(0.124)
Openness	1.123***	(0.261)	0.534**	(0.258)
Composite Risk	0.0474***	(0.00969)	0.0127*	(0.00670)
Constant	-2.950***	(0.806)	0.0472	(0.104)
EC	-0.388***	(0.0937)	-0.470***	(0.0743)
Observations	495		687	

Standard errors in parentheses

***Significant at 1% level.

**Significant at 5% level.

*Significant at 10% level.

FDI is the log value of the net FDI inflows in millions US Dollars at current prices and current exchange rates (% GDP)

Oil Reserves is the log value of both crude oil and natural gas measured in British thermal units (Btu).

Dutch Disease is the log value of oil exports as a percentage of GDP.

Exchange Rate is the log value of the official exchange rate (LCU per US\$, period average).

Inflation rate is the log value of inflation, in relation to consumer prices (annual percentage).

Per capita GDP is the GDP divided by the number of people in the country (current \$US).

Oil price is the log value of the annual average crude oil price (Brent dated).

Openness is the log value of the sum of exports and imports of goods and services measured as a share of GDP.

Composite risk is the composite risk index (100=low risk, 0=high risk).

4.7 Results Consistency

For the purpose of proving the validity, consistency and efficiency of the PMG model, some essential assumptions should be fulfilled. First, in order to prove the existence of the long-run relationship between FDI and the explanatory variables, the error term coefficient must be significant, negative, and not less than -1 (Apergis and Payne, 2009). Table 4-13 shows that the error correction terms are significant at the 1% level in all groups, and the coefficients are negative and not less than -1. The error

correction term refers to the speed that the model returns to equilibrium following an exogenous shock. The 0 error correction value indicates no adjustment, and the -1 value indicates full adjustment.

Table 4-13: Error Correction Term (All Panels)

Panels	Error correction coefficient
All oil-exporting countries	-0.427***
Rentier oil-exporting countries	-0.377***
Non-rentier oil-exporting countries	-0.577***
Islamic oil-exporting countries	-0.388***
Non-Islamic oil-exporting countries	-0.470***

Another important assumption is the relative size of N and T, which is essential to perform a dynamic panel technique. The time series is 30 years, which is relatively long within macroeconomic data. The lowest value for N is 20, which is used to test FDI determinants in Islamic oil-exporting countries. That number is acceptable and can be considered as a moderate number of countries within macroeconomic variables. The other N sizes were 44 for all oil-exporting countries, 22 for rentier and non-rentier oil-exporting countries, and 24 for oil-exporting non-Islamic countries. Finally, the ARDL procedure helps in overcoming the problem of the serial correlation of the error correction term and the explanatory variables, providing consistency in the results of the PMG model by including the lag of FDI. Despite this, the PMG model is known to provide more efficient estimations over the Mean Group (MG) model in terms of the long-run slope homogeneity (Pesaran et al., 1999). The Hausman test is used to prove the efficiency of PMG after performing MG estimation for all groups and comparing the results. The null hypothesis in this test is that Pooled Mean Group PMG estimators are consistent and more efficient than Mean Group (MG) estimators. Hence, the PMG will be used if the p value is insignificant (more than 5%). Table 4-14 summarises the p values obtained from the Hausman sigmamore tests for all groups. The results clearly prove the superiority of the PMG model over those obtained from the MG model since the p value is insignificant in all models. Thus, the PMG model provides efficient estimations over the MG model in all groups and the results are acceptable.

Table 4-14: The Hausman Test MG/PMG (All Panels)

Panels	p value
All oil-exporting countries	0.9938
Rentier oil-exporting countries	0.9119
Non-rentier oil-exporting countries	0.9199
Islamic oil-exporting countries	0.8525
Non- Islamic oil-exporting countries	0.9930

Appendices 6, 8, 10, 12, and 14 show that the PMG and MG models clearly demonstrate that the PMG model displays more significant variables, and the MG model displays inflated coefficients. Appendices 7, 9, 11, 13, and 15 show the Hausman test and the comparison between MG and PMG for all groups.

4.8 Conclusion

This chapter empirically tested the potential long-run determinants of FDI in oil-exporting countries, for the purpose of addressing the research question What role is played by different determinants in attracting FDI into oil-exporting countries?. Countries that have been selected in the data sample are all oil-exporting countries, but they vary in terms of the degree of availability of oil resources, in addition to the extent of their dependence on these resources. Thus, "exporting oil" is used as the benchmark in selection of the data sample. That selection criterion, along with the categorisation and division of oil exporting countries according to their reliance on oil and religious identity, helped to provide deeper insight regarding each determinant according to each category. Despite this, the empirical findings reveal that there were different roles played by some variables in FDI inflows amongst the five panels. Overall, FDI inflows into OECs is determined significantly by oil reserves, Dutch disease, exchange rate, inflation, per capita GDP, oil price, openness, and composite risk. The impact of some of these variables was positive and was negative for others. A larger oil reserve, a higher exchange rate (cheaper currency), a higher oil price, a higher degree of trade openness, and a lower composite risk are found playing an encouraging role in attracting FDI in OECs when considering the whole data sample (panel 1 – all oil exporting countries). In contrast, Dutch disease (more oil-reliance), a higher inflation rate, and a higher per capita GDP are found to hinder FDI inflows into OECs in the long-run. The findings above are consistent with the theoretical prospects of the Eclectic Theory (OLI approach) since all these variables are considered as locational advantages

in oil-exporting countries. The findings are further supported by a number of empirical evidence in the literature.

When splitting OECs into rentier and non-rentier countries new results arise, indicating that oil-reliance level plays a role in changing the role played by some of the variables above. The comparison of the PMG estimations between rentier and non-rentier oil-exporting countries reveals that the variables oil reserves, exchange rate, and inflation rate have different influence on FDI inflows. Surprisingly, oil reserves have no impact on FDI inflows in rentier oil-exporting countries whereas it is a significant positive determinant for FDI inflows within non-rentier oil-exporting countries in the long-run. In the sense that foreign investors do not care about a country's oil reserves when building up their long-run investment strategies towards rentier countries and they do when considering operating projects in non-rentier countries. A possible explanation for that is that large oil reserves in most cases reflects a more oil-dependency level, more economic structural disorder, and thereby more Dutch disease problems. In addition, the long-run reliance on oil revenues first affect a country's economic structure and gradually evolves into its wider effect which is called "resource curse" which affect a country's institutional, political and even social structure. Further, foreign investors take into the account that the future outputs of "alternative energy" research may carry some energy alternatives for the global economy. Thus, foreign investors do not bet on country's oil reserves within rentier oil-exporting countries because of the indirect negative impact of these reserves upon country's overall attractiveness. With respect to the impact of other variables on FDI in rentier oil-exporting countries, a positive impact on FDI inflows is observed for the variables inflation rate, oil price, openness, and composite risk. In contrast, the impact of the variables Dutch disease and per capita GDP were negative on FDI inflows. Within non-rentier oil-exporting countries, the variables oil reserves, exchange rate, oil price, openness, and composite risk positively impact upon FDI inflows, while the variable inflation rate is found to impact negatively. Comparing the empirical results between rentier and non-rentier oil exporting countries reveals a number of important points with respect to some variables. The impact of the variables oil price, openness, and composite risk is found to be significant and positive on FDI inflows in both rentier and non-rentier oil-exporting countries. However, the impact of these variables on FDI inflows in rentier countries is greater than their impact on FDI in non-rentier oil-

exporting countries. Oil price is 4 times greater in rentier oil-exporting countries, openness is 1.6 times greater, and composite risk is 5 times greater.

The religious identity of OECs plays a role on the effect of each determinants on FDI inflows. The comparison of the PMG estimations between Islamic oil-exporting countries and non-Islamic oil-exporting countries shows that the variables oil reserves, Dutch disease, exchange rate, inflation rate, and openness are important factors for attracting FDI in Islamic oil-exporting countries in the long-run. Within non-Islamic oil-exporting countries, similar variables significant along with two other variables which are per capita GDP and oil price. Most importantly, some of these variables play a completely different role on FDI inflows in these two groups/panels. For example, Dutch disease plays a positive impact on FDI in Islamic countries and negative impact in non-Islamic oil-exporting countries. In the sense that as much as an Islamic country relies on oil as much as it receives FDI inflows and vice versa in non-Islamic countries. The variable exchange rate also plays a different role amongst the two panels, it plays a negative impact within Islamic countries and a positive within non-Islamic countries. A country's exchange rate within Islamic oil-exporting countries (expensive currency) is considered as one of rentierism characteristics and it hinders country's attractiveness due to its impact on MNCs' competitiveness. The last variable which is found having different impact between Islamic and non-Islamic oil exporting countries is oil price. Oil price have no impact on FDI inflows within Islamic oil-exporting countries due to the fact that most of these countries are rentier countries and MNCs often have "large capital" and "long-run commitments" investments and changes in oil price does not affect these investments. While oil price promotes attracting more FDI within non-Islamic oil-exporting countries due to the fact that most of these countries are non-rentier countries and higher oil price increases the margin profits of MNCs in their economies. It is worth mentioning that despite the variables openness and composite risk being found to have a positive and significant impact on FDI in both Islamic and non-Islamic oil-exporting countries, the magnitude of the coefficients of these variables are different. Trade openness is twice as important in Islamic compared with non-Islamic oil-exporting countries, and composite risk has a five times greater impact on FDI inflows in Islamic oil-exporting countries compared with non-Islamic oil-exporting countries.

Chapter 5

The Impact of Political and Institutional Risk on FDI in Oil-Exporting Countries

5.1 Introduction

Assessing the impact of different institutional risk factor on FDI inflows within oil-exporting countries is important for a number of reasons. Firstly, effective and "good" institutional infrastructure is considered as a locational advantage for host countries, and could help these countries to attract FDI (Bénassy- Quéré et al., 2007). Secondly, "bad" institutional factors, such as property rights, corruption and weak law systems could have an adverse effect on a country's FDI inflows (Galego and Caetano, 2012). Thirdly, oil-exporting countries, according to the statement of the rentier state theory, tend to have specific quality of political and institutional factors which may affect attracting FDI into these countries. Thus, it is important to determine which of the potential political and institutional factors have the most influential role on FDI in oil-exporting countries in order to suggest suitable policies for policy makers in these countries. The aim of this chapter is to investigate the impact of political and institutional risk on FDI in oil-exporting countries. It is built on the same theoretical background of chapter 4, which is the eclectic paradigm considering country's political and institutional risk as a country's locational advantages. Thus, the work of this chapter is based on that of the previous chapter (chapter 4), on the determinants of FDI in oil-exporting countries. The variable composite risk is found to be statistically significant over all panels in chapter four, indicating its importance for foreign investors engaging in FDI in oil-exporting countries. Despite the variable composite risk being important for providing general insight regarding a country's overall risk, it is also a broad measurement and does not provide a detailed vision on which element of its components is more important than the others. Thus, the objective of this chapter is to investigate the impact of 12 political and institutional risk variables. The data sample

will be also splitted into five panels, as in chapter 4, in order to investigate the impact of risk variables according to countries' oil dependent level and religious identity. The International Country Risk Guide (ICRG) political and institutional risk indicators are tested for a total of 12 variables as the main estimation, and the Worldwide Governance Indicators (WGI) are also tested as a consistency check for the results.

5.2 Methodology

This chapter is designed on the same theoretical background that the previous chapter designed with respect to the determinants of FDI in oil-exporting countries, it applies the same methodology which is the Pooled Mean Group estimation (PMG) developed by Pesaran et al. (1999). This methodology is chosen again in order to test for the role played by each institutional and political risk variable in attracting FDI in OECs in the long-run. Same reasons and justifications for applying the PMG model in the previous chapter are valid within this chapter, and same panel structure is applied over five panels. The only difference is that this chapter applies one component of the variable composite each time rather than the variable composite risk in its synthesis form, in addition to the 7 variables⁴³ that applied in the previous chapter (as control variables). The method used were discussed in details in chapter 4 (sub-section 4-2: methodology).

5.3 Model Specifications

For the objective of testing the role played by each element of the components of the composite risk variable in oil-exporting countries, this chapter utilises the ICRG political and institutional risk indicators. The number of these variables is 12 and they are expected to reflect different levels of significance and signs in oil exporting-countries. The variables are: government stability, internal conflict, external conflict, military in politics, religion in politics, democratic accountability, socioeconomic conditions, ethnic tensions, corruption, law & order, bureaucracy quality, and investment profile. Given that political and institutional risks are considered as locational determinants for FDI in the host country, they play a significant role in attracting FDI. A country's high political risk signifies its political instability and a country's "bad" quality institutions hurts FDI projects' profitability (Busse and Hefeker,

⁴³ Oil reserves, Dutch disease, exchange rate, inflation rate, per capita GDP, oil price, and openness.

2007, Baek and Qian, 2011). Therefore, a high risk in each of the components of the composite risk variable is expected to have a negative impact on FDI inflows in oil-exporting countries. In contrast, less-risk OECs are expected to attract more FDI inflows. Finally, this chapter applies the same benchmark econometrics model as used in chapter four. In the sense that the variables oil reserves, Dutch disease, exchange rate, inflation rate, per capita GDP, oil price, openness are included in the models as control variables, and they are in the same proxies as in the previous chapter and from the same sources. The variable composite risk is replaced by one of the above 12 risk variables each time, and they are all index values and used as they are, without any transformation as applied for the composite risk variable in chapter 4. Thus, 60 regression models⁴⁴ are reported in this chapter. The 12 risk variables are tested separately over the 5 models because a correlation between the 12 risk variables is expected due to the similarity of the conditions which affect them and some of them might have a large influence on others. Accordingly, the econometrics model takes the following formula:

$$\ln FDI_{it} = \beta_0 + \beta_1 \ln OILRES_{it} + \beta_2 \ln DDIS_{it} + \beta_3 \ln EXCRT_{it} + \beta_4 \ln INFL_{it} + \beta_5 \ln PCGDP_{it} + \beta_6 \ln OILPRICE_{it} + \beta_7 \ln OPEN_{it} + \beta_8 RISK_{it} (1 \text{ to } 12) + e_{it} \dots\dots\dots(5-1)$$

Where:

- lnFDI_{it}** is the logarithm value of the net FDI inflows in country i at time t.
- lnOILRES_{it}** is the logarithm value of oil reserves in country i at time t.
- lnDDIS_{it}** is the logarithm value of Dutch disease in country i at time t.
- lnEXCRT_{it}** is the logarithm value of exchange rate in country i at time t.
- lnINFL_{it}** is the logarithm value of inflation rate in country i at time t.
- lnPCGDP_{it}** is the logarithm value of per capita GDP in country i at time t.
- lnOILPRICE_{it}** is the logarithm value of oil price in country i at time t.
- lnOPEN_{it}** is the logarithm value of openness to trade in country i at time t.

⁴⁴ Testing all the 12 risk variables along with the 7 control variables displays an error type r(1400) in Stata, which refers to a numerical overflow that occurs when there are more than the standard number of effective observations.

And

RISK_{it} is one of the 12 political and institutional risk variables to be tested separately. These variables, according to the International Country Risk Guide Methodology ICRG (2011), are:

1. Government Stability: this variable reflects government's ability to do its duties and promises have been given to its electors. It measures government unity, power of legislation, and popular support to the government. It is an index value (a score of 12 points = Very Low Risk, a score of 0 points = Very High Risk) .
2. Internal conflict: this variable measures political violence in the country. The existence of armed or political oppositions, civil war, political violence, and civil disorder means high internal conflict risk. It is an index value (a score of 12 points = Very Low Risk, a score of 0 points = Very High Risk).
3. External conflict: this variable is an assessment of a country's involvement in political and/or armed external conflicts. Political internal conflicts including political pressure, trade restrictions, and sanctions have a negative impact on FDI projects. In addition, involving directly or indirectly in armed external conflicts have a similar negative impact on a country's business environment. It is an index value (a score of 12 points = Very Low Risk, a score of 0 points = Very High Risk).
4. Military in politics: military intervention or a high influential role of the military establishment in political life leads to weakness and fragility of the political situation in the country. In such cases, the possibility of military takeover and change the political regime increasingly affects the business environment creating kind of instability and uncertainty. It is an index value (a score of 6 points = Very Low Risk, a score of 0 points = Very High Risk).
5. Religion in Politics: this variable reflects the extent of representing the majority of religious groups in the government. The exclusion of other religion groups from the political life may lead to civil dissent or civil war, and eventually leads to political instability. It is an index value (a score of 6 points = Very Low Risk, a score of 0 points = Very High Risk).
6. Democratic Accountability: it measures how democratic the country is, and how a specific government is responsive to its people. It also reflect civil liberties and

political rights of the people. It is an index value (a score of 6 points = Very Low Risk, a score of 0 points = Very High Risk).

7. Socioeconomic Conditions: this variable reflects a country's social and economic conditions such as unemployment, consumer confidence, and poverty. These factors may affect government's work negatively by creating social dissatisfaction. It is an index value (a score of 12 points = Very Low Risk, a score of 0 points = Very High Risk).
8. Ethnic Tensions: this variable assesses the tension amongst groups in the country. One single ethnic may dominate the political and social life making other groups far from participation. such a condition affect a country's political and social stability. In contrast, harmonised societies provide a better political and social environment for businesses. It is an index value (a score of 6 points = Very Low Risk, a score of 0 points = Very High Risk).
9. Corruption: this variable measures a country's corruption level which adds additional and hidden costs on operating businesses. Paying bribes for obtaining services such as licenses, exemptions, tax assessments, and police protection in the host country threatens operating businesses. Corruption also affects country's economic and financial environment and eventually hinders FDI projects. It is an index value (a score of 6 points = Very Low Risk, a score of 0 points = Very High Risk).
10. Law & Order: it measures two aspects, the power and impartiality of the legal system in the country, along with popular observance of the law. It is an index value (a score of 6 points = Very Low Risk, a score of 0 points = Very High Risk).
11. Bureaucracy Quality: it is a measurement of country's institutional strength and quality of bureaucracy. Countries with strong and "good" quality of bureaucracy have the ability of maintaining strong institutions even if governments change. It is an index value (a score of 4 points = Very Low Risk, a score of 0 points = Very High Risk).
12. Investment profile: this variable is related to any other risk factors that have not been covered by political, economic and financial risk components. It is mainly an assessment of other risks facing FDI such as contract viability/expropriation,

profits repatriation, and payment delays. It is an index value (a score of 12 points = Very Low Risk, a score of 0 points = Very High Risk).

Applying the model above each time with one of the risk variables is expected to provide a detailed and precise account of the role played by each variable as a determinant of FDI. The above formula will be applied as follows:

- Panel 1, all oil-exporting countries, 43 countries, 1984-2013, 12 regressions.
- Panel 2, rentier oil-exporting countries, 21 countries, 1984-2013, 12 regressions.
- Panel 3, non-rentier oil-exporting countries, 22 countries, 1984-2013, 12 regressions.
- Panel 4, Islamic oil-exporting countries, 19 countries, 1984-2013, 12 regressions.
- Panel 5, non-Islamic oil-exporting countries, 24 countries, 1984-2013, 12 regressions.

Table 5-1 provides a detailed description on the components of each variable.

Table 5-1: Description of The ICRG Political and Institutional Risk

Variable	Score*	Sub-components/description
Government Stability	0-12	<ul style="list-style-type: none"> • Government Unity • Legislative Strength • Popular Support
Socioeconomic Conditions	0-12	<ul style="list-style-type: none"> • Unemployment • Consumer Confidence • Poverty
Investment Profile	0-12	<ul style="list-style-type: none"> • Contract Viability/Expropriation • Profits Repatriation • Payment Delays
Internal Conflict	0-12	<ul style="list-style-type: none"> • Civil War/Coup Threat • Terrorism/Political Violence • Civil Disorder
External Conflict	0-12	<ul style="list-style-type: none"> • War • Cross-Border Conflict • Foreign Pressures
Corruption	0-6	“Demands for special payments and bribes connected with import and export licenses, exchange controls, tax assessments, police protection, or loans”
Military In Politics	0-6	The military involvement in politics.
Religion in Politics	0-6	The domination of society and/or governance by a single religious group.
Law And Order	0-6	<ul style="list-style-type: none"> • The strength and impartiality of the legal system • The popular observance of the law
Ethnic Tensions	0-6	Tension within a country according to racial, nationality, or language divisions.
Democratic Accountability	0-6	<ul style="list-style-type: none"> • Free and fair elections for the legislature and executive as determined by constitution or statute, • The active presence political parties and a viable opposition, • Checks and balances among the three elements of government: executive, legislative and judicial. • Independent judiciary. • Protection of personal liberties through constitutional or other legal guarantees.
Bureaucracy Quality	0-4	Solidity/quality of bureaucracy when governments change

Source: International Country Risk Guide Methodology

* A higher score means less risk.

5.4 Descriptive Statistics

Table 5-2 shows descriptive statistics for the data from the five panels in terms of mean, standard deviation, minimum and maximum values for each variable. It is evident that all of the 12 political and institutional risk variables have a wide range of values within every panel, in the sense that the values range from the minimum (highest risk) to the maximum (lowest risk). This indicates a considerable variation in the data sample among countries under examination in terms of their influence on attracting FDI. Overall, panel 3, non-rentier oil-exporting countries, seems to show the best

performance across the majority of political and institutional risk variables. It has a higher level (a lower risk) among other panels at the mean in internal conflict by 8.86 points, external conflict at 10.1 points, military in politics at 4.03 points, corruption at 3.28 points, law and order at 3.67 points, bureaucracy quality at 2.41 points, and investment profile at 7.57 points. The highest levels (lowest risk) of the variables religion in politics, democratic accountability, and ethnic tensions are observed in panel 5, non-Islamic oil-exporting countries, at 5.06 points, 4.17 points, and 4.07 points respectively. Panel 4, Islamic oil-exporting countries, reports a higher level for government stability and socioeconomic conditions than other panels at the mean; 8.2 points and 6.15 points, respectively.

Given that the 12 risk variables are similar to each other and affect each other in one way or another, a correlation matrix is performed for the 12 risk variables to show the correlations between them. Table 5-3 shows the correlation matrix for panel 1 only to provide a general view on the correlation between these 12 variables, it indicates that the variable FDI has no strong correlation with any of the risk variables. Amongst the 12 political and institutional risk variables themselves, the variable internal conflict has a relatively high correlation with the variable law & order, at a 0.72 coefficient of determinants. The variable military in politics also has a relatively high correlation with the variable bureaucracy quality, at a 0.73 coefficient of determinants. A correlation matrix that tests for the correlation between each single risk variable and the control variables is also performed but not presented, and it shows lower levels of correlation overall. A stationarity test is also performed for the 12 risk variables of the 5 panels. Table 5-4 shows that within panel 1 (all oil exporting countries), the variables government stability, internal conflict, democratic accountability, socioeconomic conditions, law & order, bureaucracy quality, and investment profile were non-stationary. Within panel 2 (rentier oil-exporting countries), the variables government stability, internal conflict, religion in politics, democratic accountability, law & order, bureaucracy quality, and investment profile were non-stationary. Within panel 3 (non-rentier oil-exporting countries), the variables government stability, internal conflict, military in politics, democratic accountability, socioeconomic conditions, ethnic tension, corruption, law & order, bureaucracy quality, and investment profile were non-stationary. And within panel 4 (Islamic oil-exporting countries), the variables

government stability, internal conflict, military in politics, democratic accountability, socioeconomic conditions, corruption, law & order, bureaucracy quality, and investment profile were non-stationary. Within panel 5 (Non-Islamic oil-exporting countries), the variables government stability, internal conflict, religion in politics, democratic accountability, socioeconomic conditions, ethnic tension, corruption, law & order, bureaucracy quality, and investment profile were non-stationary. All of the non-stationary variables are retested using first differencing and all become stationary at $I(1)$, concluding that all variables in this chapter are either $I(0)$ or $I(1)$, and in similar order to those tested in chapter 4.

Table 5-2: Descriptive Statistics of Risk Indexes – All Panels

Variables	Mean					S.Dev					min					max				
	P1	P2	P3	P4	P5	P1	P2	P3	P4	P5	P1	P2	P3	P4	P5	P1	P2	P3	P4	P5
Government Stability	7.8	8.09	7.6	8.2	7.5	2.1	2.1	1.9	2.2	1.9	1	1	2	1	2	11.5	11.5	11.2	11.5	11.08
Internal Conflict	8.6	8.4	8.8	8.4	8.8	2.4	2.5	2.2	2.5	2.3	1	1	2	1	1.1	12	12	12	12	12
External Conflict	9.7	9.2	10.1	9.2	10.09	1.9	2.1	1.6	2.1	1.6	0	0	2	0	2	12	12	12	12	12
Military in Politics	3.6	3.1	4.03	3.3	3.8	1.7	1.7	1.5	1.5	1.7	0	0	0	0	0	6	6	6	5.6	6
Religion in Politics	4.1	3.5	4.7	3.0	5.06	1.5	1.4	1.3	1.2	0.9	0	0	1	0	1	6	6	6	5.5	6
Demo. Accountability	3.4	2.7	4.1	2.4	4.1	1.6	1.3	1.5	1.2	1.4	0	0	0	0	0	6	6	6	5	6
Socioeconomic Conditions	5.8	5.8	5.9	6.1	5.6	2.1	2.3	1.9	2.2	2.1	1	1	1.3	1	1.3	11	11	11	11	11
Ethnic Tensions	3.9	3.8	4.02	3.8	4.07	1.3	1.3	1.3	1.4	1.2	0	0	0.6	0	0.5	6	6	6	6	6
Corruption	2.9	2.5	3.2	2.5	3.2	1.2	1.05	1.2	0.8	1.3	0	0.5	0	0	1	6	6	6	5	6
Law & Order	3.5	3.5	3.6	3.6	3.5	1.4	1.3	1.4	1.2	1.5	1	1	1	1	1	6	6	6	6	6
Bureaucracy Quality	2.1	1.9	2.4	1.8	2.4	1.02	0.8	1.1	0.7	1.1	0	0	0	0	0	4	4	4	3.5	4
Investment Profile	7.3	7.08	7.5	7.3	7.3	2.4	2.4	2.3	2.2	2.5	1	1	1.17	1	1.1	12	11.5	12	11.5	12

P1: Panel 1, All oil-exporting countries

P2: Panel 2, Rentier oil-exporting countries

P3: Panel 3, Non-Rentier oil-exporting countries

P4: Panel 4, Islamic oil-exporting countries

P5: Panel 5, Non-Islamic oil-exporting countries

Table 5-3: Correlation Matrix, Panel 1, All Oil-Exporting Countries

	FDI	Gov. Stability	Int. Conflict	Ext. Conflict	Military in Politics	Religion in Politics	Democratic Accountability	Socioeconomic Conditions	Ethnic Tensions	Corruption	Law & Order	Bureaucracy Quality	Investment profile
FDI	1.00												
Government Stability	0.29	1.00											
Internal Conflict	0.19	0.38	1.00										
External Conflict	0.27	0.27	0.60	1.00									
Military in Politics	0.03	0.10	0.58	0.31	1.00								
Religion in Politics	0.21	0.09	0.43	0.40	0.41	1.00							
Demo. Account.	0.11	0.15	0.26	0.31	0.44	0.43	1.00						
Socioeco. Conds.	0.04	0.20	0.47	0.23	0.62	0.20	0.19	1.00					
Ethnic Tensions	0.09	0.25	0.57	0.28	0.38	0.37	0.15	0.31	1.00				
Corruption	0.03	0.07	0.34	0.20	0.53	0.36	0.48	0.44	0.26	1.00			
Law & Order	0.13	0.28	0.72	0.38	0.65	0.29	0.22	0.61	0.48	0.52	1.00		
Bureaucracy Quality	0.06	0.06	0.46	0.30	0.73	0.38	0.52	0.64	0.31	0.65	0.59	1	
Investment Profile	0.30	0.53	0.41	0.31	0.48	0.20	0.21	0.56	0.22	0.13	0.42	0.40	1

Table 5-4: Stationarity Test
 Fisher Test for panel unit root using an augmented Dickey-Fuller test (0 lags), Ho:unit root

	Panel 1	Panel 2	Panel 3	Panel 4	Panel 5
Government Stability	chi2= 80.5 Prob= 0.6467	chi2 = 37.94 Prob= 0.6497	chi2 = 42.57 Prob = 0.5329	chi2 = 31.02 Prob=0.7815	chi2 = 49.4 Prob=0.4136
Internal Conflict	chi2 = 92.7485 Prob= 0.2904	chi2 = 48.17 Prob= 0.2373	chi2= 44.57 Prob = 0.4474	chi2 = 36.4 Prob=0.5393	chi2= 56.2 Prob=0.1932
External Conflict	chi2 = 142.30 Prob = 0.0001	chi2 =65.82 Prob =0.0109	chi2 = 76.4 Prob=0.0017	chi2= 70.7 Prob=0.0010	chi2= 71.5 Prob=0.0154
Military in Politics	chi2 =130.2 Prob =0.0015	chi2 = 76.87 Prob =0.0008	chi2 = 53.3 Prob = 0.1579	chi2 = 46.3 Prob=0.1651	chi2 = 83.8 Prob=0.0010
Religion in Politics	chi2 =196.34 Prob = 0.0000	chi2 = 47.38 Prob= 0.2622	chi2 = 148.9 Prob = 0.0000	chi2 =174.4 Prob=0.0000	chi2 = 21.9 Prob=0.9996
Democratic Accountability	chi2 = 80.82 Prob= 0.63	chi2 = 39.26 Prob= 0.5916	chi2 = 41.5 Prob = 0.5770	chi2= 32.57 Prob=0.7181	chi2=48.2 Prob=0.4628
Socioeconomic Conditions	chi2 = 90.65 Prob = 0.3449	chi2 = 58.5 Prob= 0.0467	chi2 = 32.1 Prob= 0.9075	chi2 = 50.2 Prob=0.0879	chi2 = 40.3 Prob=0.7744
Ethnic Tensions	chi2 = 116.85 Prob = 0.0151	chi2 = 63.82 Prob =0.0165	chi2 = 53.02 Prob =0.1652	chi2 = 64.7 Prob=0.0044	chi2 = 52.09 Prob=0.3177
Corruption	chi2 = 60.9 Prob = 0.9812	chi2 = 29.7 Prob=0.9226	chi2 =31.2 Prob= 0.9257	chi2 = 22.76 Prob=0.9760	chi2 =38.2 Prob=0.8430
Law & Order	chi2 = 73.1 Prob = 0.8368	chi2 = 44.6 Prob = 0.3614	chi2 = 28.5 Prob = 0.9659	chi2 = 43.9 Prob=0.2332	chi2 = 29.1 Prob=0.9854
Bureaucracy Quality	chi2 = 59.7 Prob = 0.9860	chi2 = 45.85 Prob = 0.3154	chi2 =13.9 Prob= 1.0000	chi2 = 42.3 Prob=0.2895	chi2 =17.4 Prob=1.0000
Investment Pprofile	chi2 = 73.28 Prob = 0.8341	chi2 = 35.9 Prob =0.7333	chi2 = 37.3 Prob = 0.7506	chi2 = 30.6 Prob=0.7973	chi2 = 42.6 Prob=0.6903

5.5 Empirical Findings

The empirical estimations on the political and institutional risk in OECs will be presented in three separate parts. The first part empirically estimates these determinants in panel 1- oil exporting countries, while the second part compares the estimations between panel 2- rentier oil-exporting countries and panel 3-non-rentier oil-exporting countries. The third part compares the results between panel 4-Islamic oil-exporting countries and panel 5-Non-Islamic oil-exporting countries.

5.5.1 The Impact of Political and Institutional Risk on FDI in Oil-Exporting Countries

Higher political risk negatively affects a country's overall business environment in different ways such as political and social instability, poor services, weak law, etc. These effects increase when it comes to FDI which is a long-term business operation in the host country. Foreign investors often consider political and institutional risk in the host country as possible future threats which may affect a company's assets, stock price, and reputation. The main objective of this section is to address the research question on 'what are the main political and institutional determinants of FDI in oil-exporting countries?'. This question will be answered by testing the 12 political and institutional risk variables in the whole data sample. Overall, 10 out of the 12 risk variables are statistically significant in explaining FDI inflows into OECs in the long-run. These variables are: government stability, internal conflict, external conflict, religion in politics, democratic accountability, socioeconomic conditions, ethnic tensions, corruption, law & order, and investment profile. These results are largely identical to those reported in chapter 4 with respect to the role of composite risk on foreign investment flows. Most important is that the variables ethnic tensions, religion in politics, and law & order have a greater impact on FDI inflows in OECs than other political and institutional variables. The coefficient of the variable ethnic tensions is 0.345 followed by 0.335 for religion in politics, and 0.170 for law & order.

Table 5-5 shows that **Government stability** is statistically significant at the 10% level, implying that OECs which have more stable governments receive more FDI inflows in the long-run. The sub-components of the variable government stability show its importance for foreign investors who intend to operate medium or long term projects in the host country. The first sub-component is government unity; it gives the

impression to the foreign investor that there is homogeneity within the system of government and that there is almost a consensus in the decision-making process within the country. Further, it indicates that there is a degree of stability in orders and regulations and that there is no potential risk of their changing or trapping them. The second sub-component is legislative strength. Strong legislation is a sign that the government is working within a solid legal framework and that it is able to carry out its program. This establishes a sound framework for the business environment and encourages foreign investors to work in such an environment. Further, the independence of a country's judicial system is also an important element in this regard. Foreign investors view the independence of a country's judicial system as a sign of the strength and credibility of the overall legal system in the country. Thus, the existence of a strong and independent judicial system encourages foreign companies to invest long-term. Popular Support for the government and its policies is the third sub-component of the government stability indicator. Foreign projects are most likely to have business connections with the domestic society, and popular support for the government is an important issue within this context. Foreign companies need to be confident that the people, or the majority of them, are satisfied with their government and its decisions, and it is also important for foreign investors to sense a kind of homogeneity between the government and people in host countries.

Internal conflict is also statistically significant but at the 1% level, in the sense that countries with less internal conflict risk receive more FDI in the long-run. This variable reflects the actual or potential internal political threats in terms of civil war, political violence, and civil disorder. Indeed, these three sub-components are essential to build a long-run investment strategy in any country. In fact, internal conflicts have serious political and economic impacts on the entire corpus of private and governmental economic activities. Foreign and local investment, as well as governmental investment in a country, face severe implications if there are internal conflicts in that country. On the one hand, civil wars⁴⁵ and/or terrorism and/or civil disorder can force foreign investment to leave the country because of the possibility of the destruction of the projects. Internal conflicts do not only have adverse impacts on the assets of foreign

45 The literature suggests that civil wars are associated with export of primary commodities, see: Keen, D. 2012. Greed and grievance in civil war. *International Affairs*, 88, 757-777.

projects and the new projects which intend to start work in a country; they also hinder FDI operations by adding additional and unplanned costs to the entire production process, and such a risk increases if the foreign investors operate in a different social and cultural environment. On the other hand, internal conflicts undermine the whole development process in the country; they drain a country's resources in the form of military spending instead of allocating them to the construction of infrastructure or to a developing country's human resources. Government spending on the military increases during periods of internal conflict. For example, during the Angolan Civil War, the Angolan government spent nearly 5% of its GDP on the military every year, and this rose to 17% of its GDP in both 1993 and 1999. Similarly, for Sudan this figure was on average 1.8% of its GDP during the civil war from 1989 to 1997, while Mozambique spent approximately an average of 2.9% of its GDP on the military over the period from 1990 to 1992 during the Mozambican Civil War (WB, 2014). The positive relationship between lower internal conflict risk and FDI comes in line with the theory that conflict and post-conflict countries cannot offer an attractive business environment for FDI (UNCTAD, 2009a)⁴⁶. Empirically, several studies conclude in favour of that positive relationship. Busse and Hefeker (2007) conclude a positive association between a lower risk of internal conflict and FDI from a study covering 83 developing countries from 1984 to 2003. Ren et al. (2012a) also examine the relationship between internal conflict and FDI in 14 MENA countries from 1984 to 2009 and they found a positive relationship between lower risk of internal conflicts and FDI, using a panel ARDL method.

By the same token, **external conflict** is also a significant determinant for FDI in OECs in the long-run, at 1% level. That implies that countries facing less external conflict are found to receive more FDI inflows in the long run. Despite this, the internal and external conflict risks are similar and associated with each other; in terms of their effects on FDI, the sub-components of each variable reflect the differences between them. The ICRG's external conflict indicator involves three sub-indicators; namely war, cross-border conflict, and foreign pressures. The host country may be involved in a war directly or indirectly, which affects the country's overall political and economic

⁴⁶ Conflict and post conflict countries are expected to receive official development assistance (ODA) rather than FDI (UNCTAD, 2009)

stability. Other kinds of risks may also be considered as external conflict risks such as international sanctions and trade restrictions. These types of risks also have serious impacts upon FDI in the host country due to their impact on the ease of reaching the global market and trade openness. Foreign investors consider countries which have a future possibility of being involved in an external conflict as an unstable destination, due to the potential risks to their current projects as well as their future plans⁴⁷. Another important impact that can affect foreign direct investment projects in high external risk countries is related to the assets of FDI projects, as they are prone to facing significant depreciation during wartime in these countries. In addition, the negative impact of external conflict on FDI inflows may remain during post-war periods, where conflict and post-conflict countries are also vulnerable to other problems affecting FDI, such as having less property rights and higher corruption rates (UN, 2009), hence, these problems have a significant negative impact on FDI inflows. A range of evidence on the positive relationship between less external conflict risk and FDI is found within the empirical literature. Hayakawa et al. (2013) find that external risk is one of the most influential determinants of FDI; this study covers 90 countries from 1985 to 2007. Jude and Leveuge (2013) also reach similar findings from a study covering 94 developing countries from 1984-2009.

Religion in politics is the other important determinant variable for FDI in oil-exporting countries. It is statistically significant at the 1% level, signifying that OECs which have comprehensive representation for the majority of the ethnic groups in the society, can attract more FDI in the long-run. The dominant role of a particular religious sect in the political decisions of a given country provides an impression that there are possibilities for religious tensions within that country. It also signifies that there are important segments which are unsatisfied with the government, and such a situation leads foreign investors to think that potential disruptions, which are caused by religious and sectarian imbalances, may affect their investments in the long term. In contrast, foreign investors view countries with less ethnic tension as preferable destinations,

47 Investors from countries with less adherence to Corporate Social Responsibility (CSR) are expected to invest in conflict and post conflict countries with the objective of adopting a new brand and/or benefiting from capital allocated by international donors to these countries. See: Driffield, N., Jones, C. & Crotty, J. 2013. International business research and risky investments, an analysis of FDI in conflict zones. *International Business Review*, 22, 140-155.

where all, or the majority of, ethnic minorities are represented in the government, and the possibility of intra-society conflict is weak.

Democratic accountability is a significant variable in explaining FDI inflows into OECs in the long-run. This reflects the fact that foreign companies need to ensure the presence of democracy in the host country. It is found that democratic authorities provide protection of property rights, as well as protecting foreign projects from officials' intervention (Li, 2009, Bates, 2001). The long-term relationship between FDI projects and business and socio-political environments in OECs therefore requires stable long-term conditions. A peaceful transition of power, along with the existence of free and fair elections, opposition parties, and the protection of individuals' freedoms, are all important elements when MNCs assess the situation of democracy in oil-exporting countries. The positive relationship between democracy and FDI inflows is concluded empirically by a number of studies. Busse and Hefeker (2007) find that democracy is an important factor for attracting FDI, in a sample of 83 developing countries over the period 1984-2003. Busse (2003) also concludes that more democratic countries attract more FDI, based on a study covering 69 developing and emerging economies from 1972-1999.

Socioeconomic conditions is another important variable at 10% level. A high unemployment rate along with a high poverty rate are causes for the creation of troubled societies, and hence unsatisfied people can eventually affect the business environment. When the host country faces unemployment and poverty problems, people will become dissatisfied with the political situation and their government's policies, and such conditions pose a potential threat to the work and sustainability of foreign investment. Thus, OECs with less socioeconomic risk attract more FDI in the long-run.

A low risk of **ethnic tension** is also statistically significant at 1% level. Ethnic tensions occur within a society because of religious affiliations or ethnic differences, and they can form another element of social dissatisfaction. These disorders lead foreign investors to expect possible future risk from the overall political situation in the country and hence for their operations within the host country. However, that does not necessarily mean that all countries which consist of a mixture of different ethnicities, races and religions are prone to ethnic tensions. These tensions arise mainly because of

political and social marginalization and exclusion, racial discrimination, or even conflict between the ethnic groups over resources and wealth. Thus, foreign companies prefer to work within OECs with less ethnic tension in order to safeguard their long-term plans from any potential threats caused by ethnic tensions.

The variable **corruption** produces a surprising result regarding its impact on FDI inflows into oil-exporting countries. It is statistically significant at the 5% level but with a negative sign. This implies that OECs which have a higher level of corruption receive more FDI inflows in the long-run. This finding contradicts the overwhelming body of conclusions within the literature regarding the negative impact of a country's corruption level and FDI inflows; see for example: Kinoshita and Campos (2003), Busse and Hefeker (2007), Hakkala et al. (2008), Javorcik and Wei (2009). However, there is a possible positive impact of corruption on FDI inflows. According to Bardhan (1997), within "bad" bureaucratic quality countries, corruption may help in speeding up some bureaucratic delays, and foreign investors may prefer to pay bribes rather than facing delays in their transactions. The other explanation is provided by Swaleheen and Stansel (2007), who suggest that corruption has a positive impact on economic growth in countries which have a high degree of economic freedom, and it has a negative impact on economic growth in countries which have a low degree of economic freedom. The Index of Economic Freedom⁴⁸ shows that the average economic freedom scores for group1- all oil-exporting countries - were 59.9% and 60.5% in 2013 and 2015, respectively (where a lower corruption level is found to be significant and negative), and were 56.3% and 57% in group 2 - rentier oil-exporting countries - (where the corruption level is found to be significant and positive) in 2013 and 2015, respectively. Accordingly, taking into the account the theoretical association between economic growth and FDI inflows, the negative correlation between a lower corruption level and FDI inflows in oil-exporting countries is therefore justified. Another possible justification is produced by Smarzynska and Wei (2000), who argue that a higher level of corruption increases joint venture FDI projects with local partners, as local partners could reduce transaction costs such as for licensing and export permits. The latter statement can also be applicable in the case of oil-exporting countries, especially when

48 The 2015 Index of Economic Freedom is provided by the Heritage Foundation, available online at: (<http://www.heritage.org/index/>).

comparing the average corruption score for both panels 1 and 2. The average corruption score for panel 1 - all oil-exporting countries - (where a lower corruption level is found to be negative) is 2.9, while it is 2.5 for panel 2 - rentier oil-exporting countries - (where a lower corruption level is found to be positive on FDI inflows). The differences between panel 1 and 2 in terms of the average corruption score support the argument of Samarzynska and Wei, above, and can explain why a lower corruption level negatively influences FDI in panel 1- all oil-exporting countries.

The variable **law & order** is statistically significant at the 1% level, indicating that countries with less law & order risk are found to receive more FDI inflows in the long-run compared to other oil-exporting countries. The effectiveness of legislated laws in OECs is associated with more FDI inflows. In other words, strong judicial systems reinforce the certainty of operating projects in OECs in the long-run and thereby encourage more FDI inflows. Strong laws are not the only consideration for foreign investors; the application of laws and their role in creating a stable social environment is more important to them. Foreign investors prefer to work within countries which have a strong judicial system, defined by the presence of strong laws, along with robust application of these laws. Such an environment provides them with additional assurances for their investment in the long-run in oil-exporting countries.

A country's **investment profile**, in terms of contracts' viability/expropriation, profits repatriation, and payment delays, is the other locational risk which is statistically significant at the 10% level. OECs which have less investment profile risk can attract more FDI in the long-run. Indeed, foreign investors are keen to work within obvious contracting conditions, especially when it comes to the legal provisions regarding expropriation. Thus, any sign of possible expropriation may lead them to think twice before making FDI decisions in a specific country. In addition, repatriation of their profits to their home country or any other destination is a vital factor for them. Further, unexpected payment delays could affect foreign projects in many ways. For example, it affects projects' capital cycles and it may affect production cycles, as well as potentially breaking the trust between the foreign investor and the local partners.

Finally, the variables military in politics and bureaucracy quality are insignificant variables in explaining FDI into oil-exporting countries.

Table 5-5: Long-Run PMG Model Results for Panel 1 (All Oil Exporting Countries)

Dep. Variable: FDI	Panel1: All oil-exporting countries
Government Stability	0.0274* (0.0155)
Internal Conflict	0.118*** (0.0188)
External Conflict	0.0754*** (0.0246)
Military in Politics	0.00312 (0.0327)
Religion in Politics	0.335*** (0.0414)
Democratic Accountability	0.0694** (0.0340)
Socioeconomic Conditions	0.0457* (0.0245)
Ethnic Tensions	0.345*** (0.0301)
Corruption	-0.0881** (0.0409)
Law & Order	0.170*** (0.0372)
Bureaucracy Quality	0.0214 (0.0525)
Investment Profile	0.0335* (0.0187)
Observations	1,234

Standard errors in parentheses

***Significant at 1% level. **Significant at 5% level. *Significant at 10% level

Government Stability is an index value (a score of 12 points = Very Low Risk, a score of 0 points = Very High Risk).

Internal Conflict is an index value (a score of 12 points = Very Low Risk, a score of 0 points = Very High Risk).

External Conflict is an index value (a score of 12 points = Very Low Risk, a score of 0 points = Very High Risk).

Military in Politics is an index value (a score of 6 points = Very Low Risk, a score of 0 points = Very High Risk).

Religion in Politics is an index value (a score of 6 points = Very Low Risk, a score of 0 points = Very High Risk).

Democratic Accountability is an index value (a score of 6 points = Very Low Risk, a score of 0 points = Very High Risk).

Socioeconomic Conditions is an index value (a score of 12 points = Very Low Risk, a score of 0 points = Very High Risk).

Ethnic Tensions is an index value (a score of 6 points = Very Low Risk, a score of 0 points = Very High Risk).

Corruption is an index value (a score of 6 points = Very Low Risk, a score of 0 points = Very High Risk).

Law & Order is an index value (a score of 6 points = Very Low Risk, a score of 0 points = Very High Risk).

Bureaucracy Quality is an index value (a score of 4 points = Very Low Risk, a score of 0 points = Very High Risk).

Investment Profile is an index value (a score of 12 points = Very Low Risk, a score of 0 points = Very High Risk).

5.5.2 The Implication of Political and Institutional risk on FDI in Rentier and Non-Rentier Oil-Exporting Countries

This section addresses issues regarding the impact of political and institutional risk on FDI in rentier and non-rentier oil-exporting countries. It answers the research question: 'does the oil-dependence level play a role in terms of changing the impact of the political and institutional risk on FDI?'. Thus, the differences in roles played by each risk variable will be the main focus of this section. Again, the data sample is categorized into two panels, rentier and non-rentier oil-exporting countries. The number of non-rentier countries will remain the same as in chapter 4, with 22 countries, while Iraq is

excluded from the rentier countries group for lack of data for some of the political and institutional variables, and the total number of countries in this panel will be 21.

Government stability is significant in rentier countries and insignificant in non-rentier countries, in the sense that foreign investors care about government stability in rentier countries, and they do not in non-rentier oil-exporting countries. A deeper insight into the sub-components of the ICRG's government stability variable may help to provide an acceptable explanation of this difference. The sub-components of this variable are government unity, legislative strength, and popular support. Taking into account that the majority of rentier countries are developing and are either governed by autocratic governments or have a moderate level of democracy, high risk of government unity and/or absence of popular support within this group of countries, they are seen as a real threat which might destroy the whole political system in the country, and eventually pose severe risks to FDI projects. In contrast, the majority of countries in panel 3 (non-rentier oil-exporting countries) are either developed or transitional countries and they often have more advanced democratic political systems. Thus, foreign investors do not think that government instability will lead to destruction of the whole political system, and they are relatively confident that any changes will move through the democratic processes in non-rentier oil-exporting countries.

The variable **internal conflict** is insignificant within rentier countries, and highly significant, at 1% level, within non-rentier countries. Most of the rentier countries have autocratic regimes and the rentierism pattern of that group of countries adds more conditions to the stability and continuity of these regimes. Therefore, foreign investors believe that the autocratic nature of rentier political systems protects the country against any threats caused by internal conflicts. Further, the major global powers, the USA and its allies in particular, act to prevent any events that may affect global oil production, which is mainly produced in rentier oil-exporting countries. In contrast, the situation in non-rentier oil-exporting countries looks different. Most non-rentier oil-exporting countries have a high level of human rights, and most of them are governed by democratic regimes. Therefore, internal conflict cannot be treated in this group of countries as in rentier countries, and internal conflict poses severe implications for FDI in the long-run.

The variable **external conflict** also displays different results between panels 2 and 3. Surprisingly, low external risk is associated with lesser FDI inflows into rentier oil-

exporting countries in the long-run. This result is inconsistent with the theory and the empirical findings in this respect, wherein it is extensively held that conflicts push MNCs to escape the host country due to their severe implications on a country's political and economic conditions (Busse and Hefeker, 2007). However, a number of studies reach similar findings. For example, Asiedu and Lien (2011) find a positive relationship between high risk of internal conflict and FDI inflows, their findings come from a study covering 112 developing countries from 1982 to 2007. Busse and Hefeker (2007) also conclude a positive correlation between FDI and a high risk of external conflict, from a study covering 83 developing countries over the period from 1984 to 2003. More specifically, Fiodendji (2013) finds that external conflict impacts positively on FDI inflows only in countries rich in natural resources. Despite the above similar findings, none of these studies provide a clear justification for the positive relationship found. A possible explanation should consider two notable points. The first point is that there are sub-components to the ICRG's conflict risk measurement measure. According to ICRG (2011), the ICRG's guide methodology illustrates that the external conflict variable is constructed from 3 sub-variables; these are war, cross-border conflict, and foreign pressures. All of these three sub-variables have the same relative weight, which is 33.3 %, from the total score which ranges from a score of 0 (very high risk) – 12 (very low risk). The second point is the nature of oil-related FDI, which is mainly characterized by large capital deployment, inflexible and low demand elasticity. Based on the above points, a country's external conflict value may have a high score because of the cross-border conflict and foreign pressures components of the internal risk variable rather than the war component, and both of these components do not have an impact on FDI inflows as great as the component war has. For example, if country A has the following scores; 1 in cross-border conflict, 1 in foreign pressures, and 4 in war (the country not involved directly in any war), the overall score in the case of country A is $1+1+4=6$. Country B has a score of 4 in cross-border conflict (the country is not involved in a cross border conflict), 4 in foreign pressures (no foreign diplomatic pressure), and 1 in war (the country is involved directly in a war), the total score in this case is $4+4+1=9$ (less risk). In that case the foreign investor will prefer to work in country A rather than B, despite the total external risk being more in country B, simply because the external

conflict risk in country A does not affect his project directly, and it does in country B. This explanation is tested using the variable “war”⁴⁹ as a dummy variable, takes the value of 1 if armed conflict exists and 0 otherwise. Table 5-6 shows that the variable war is negatively associated with FDI in all the five panels, and highly significant in 4 out of the 5 panels, even within rentier oil-exporting countries where the relationship between a high risk of external conflict and FDI is found to be positive.

Another possible explanation is that foreign pressure, which is a sub-component of the ICRG’s external conflict variable, may have a positive impact upon FDI in the host country. Companies from specific countries may benefit from the diplomatic and political intervention of their home country when investing in some countries. For example, if country A has effective political power over country B, companies from country A may increase their investments in country B, so benefiting from that influence, to facilitate establishing projects in country B, and perhaps gaining preferential treatment within joint-venture contracts and privatization projects in country B over other competitors.

Table 5-6: Long-Run PMG Coefficients for the Variable War in All Panels

Panel	Ccoefficient
Panel 1 – all oil-exporting countries	-0.755*** (0.213)
Panel 2 – rentier oil-exporting countries	-0.136 (0.238)
Panel 3 – non-rentier oil-exporting countries	-0.888*** (0.208)
panel 4 – Islamic-rentier oil-exporting countries	-1.675*** (0.289)
Panel 5 – non- Islamic-rentier oil-exporting countries	-0.968*** (0.245)

*** determine significance at 1%.

Table 5-7 shows that **Democratic accountability** is the other variable which plays a different role regarding FDI in rentier and non-rentier countries. It is significant, at the 5% level, with a negative sign, in rentier countries and insignificant in non-rentier countries. That means that more democratic rentier countries receive less FDI inflows in the long-run. This surprising result can be explained through deeper analysis. As mentioned earlier, oil investments require huge capital over relatively long time periods,

49 Data on war is from the Uppsala Conflict Data Program (UCDP) Armed Conflict Dataset (Uppsala University). It takes the value of 1 if the country is involved in an armed conflict, and 0 otherwise. The data is from 1984-2008 and is available online; see: (http://www.pcr.uu.se/research/ucdp/datasets/ucdp_prio_armed_conflict_dataset/).

and most of these investments take the form of agreements between investors and the government (extraction and exploration investments in particular). Accordingly, any change in the political regime of the host country poses a potential risk to the validity of these agreements. In addition, the majority of rentier countries are developing and most of them have seen nationalisation movements⁵⁰ in the past, which seems to be a point of consideration for foreign investors as a possible threat to their investment. Further, one of the important features in rentier countries is the dominant role of elites in economic activities (Ali and Elbadawi, 2012), and since oil investment involves long term contracts, foreign investors, therefore, prefer to work within autocratic regimes rather than democratic ones. This is because such regimes enable them to build long-term relationships with elites in these countries and such regimes reassure them that their investments will not be at risk due to the uncertain outcomes of democratic processes. This explanation is supported by the recent events, among Arab Countries; the so-called “Arab Spring”. The new democratic transformations in Egypt have caused political instability and hence the emergence of Islamic parties and the creation of radical Islamic governments.⁵¹ The World Bank data on FDI in Egypt shows a considerable decrease in FDI inflows in 2011 (the year of revolution), where the net FDI inflow to Egypt dropped to -0.2% in 2011, compared with 5.9% and 9.3% in 2005 and 2006, respectively.

Socioeconomic conditions also perform differently in regard to FDI in rentier and non-rentier countries. It is insignificant in rentier countries and highly significant, at the 1% level with a positive sign, in non-rentier oil-exporting countries. That means that foreign investors do not care about socio-economic conditions in rentier countries, whereas they do in non-rentier oil-exporting countries. The significant positive association between this variable and FDI in non-rentier countries comes in line with those results obtained from the whole data sample (panel 1). Meanwhile, the insignificant correlation between it and FDI inflows in rentier countries can be explained through a deeper insight on the sub-components of socioeconomic conditions.

50 Most nationalisation movements in rentier states happened in the 1970s; see: Guriev, S., Kolotilin, A. & Sonin, K. 2011. Determinants of nationalization in the oil sector: A theory and evidence from panel data. *Journal of Law, Economics, and Organization*, 27, 301-323.

51 The Muslim Brotherhood leader, Mohamed Morsi, won the Egyptian election of 2012 after a democratic election following more than 30 years of the autocratic regime of Muhammad Hosni Mubarak.

The ICRG's socioeconomic conditions⁵² variable comprises 3 sub-variables which are: unemployment, consumer confidence and poverty. From foreign investors' perspectives, all of these sub-variables are considered to be country-specific issues which do not have as considerable an impact on foreign investments since the majority of FDI projects in rentier countries are oil-related projects and these conditions do not affect these projects significantly. Furthermore, foreign investors might find that socioeconomic conditions do not represent a real threat or they may even consider them an under-controlled threat if they were dealing with strong and stable governmental authority, especially in rentier countries. Such a relationship between socioeconomic conditions and FDI in rentier countries further proves that FDI in rentier countries is resource-seeking FDI, not market-seeking FDI, since important local economic indicators such as poverty and employment do not impact negatively upon FDI inflows. The negative relationship between socioeconomic conditions and FDI inflows is found also by Busse and Hefeker (2007), who concluded that socioeconomic conditions were negatively correlated with FDI inflows in 83 developing countries during the period from 1984 to 2003.

Corruption is found playing a differing role regarding FDI in rentier and non-rentier countries; it is statistically significant at the 1% level with a positive sign, in rentier countries, and insignificant but with a negative sign in non-rentier countries. Less corrupt rentier countries attract more FDI inflows in the long-run. Foreign investors consider the long-run effects of corruption in rentier countries to threaten their investments. The relationship between corruption and FDI in rentier countries fits the majority of studies within the literature, as less corrupt countries are considered to attract more FDI inflows, (see for example, Kinoshita and Campos (2003), Busse and Hefeker (2007), Hakkala et al. (2008), Javorcik and Wei (2009), ICRG (2011)). In fact, corruption is an inherent problem within rentier countries because of wealth-politics relationships in such states (Ross, 2001, Karl, 2007). It seems natural, then, that corruption hinders FDI in rentier countries since it imposes obstacles to FDI and generates additional unknown costs to foreign investment, which leads to lower inflows and declining technology transfer. It leads to uncertainty about the costs of obtaining

⁵² According to the ICRG, socioeconomic conditions are the sum of unemployment, consumer confidence and poverty variables, where 0= very high risk and 12= very low risk.

licenses and government facilities, and hence raises the risks for the investment, resulting in reluctance among foreign investors to establish projects for fear of inflated costs or malfunction of these projects, or even the chance of losing them entirely. Despite the insignificant correlation between corruption and FDI in non-rentier countries, it still signifies a negative sign

Bureaucracy quality is significant in both panels, at the 10% level and 1% level in rentier and non-rentier, respectively. However, it displays considerably different signs in these two panels. Within rentier oil-exporting countries, the variable bureaucracy quality is positively associated with FDI inflows in the long-run, indicating that rentier oil-exporting countries which have a “good” bureaucracy quality attract more FDI in the long-run. In contrast, “good” bureaucracy quality in non-rentier countries have a negative impact upon FDI inflows in the long-run. This finding contradicts the theory and the empirical findings in the literature, which suggest that efficient bureaucracy promotes FDI (Chan and Gemayel, 2003, Kinoshita and Campos, 2004). However, it is worth explaining the surprising negative association between bureaucracy quality and FDI in non-rentier oil-exporting countries in light of the association between corruption and FDI in this group, due to the strong correlation between corruption and bureaucracy. Since corruption have a positive impact on FDI in non-rentier oil exporting countries, it is therefore acceptable to find that bureaucracy has a similar impact on FDI in this group of countries. In other words, the positive impact of corruption, and thereby bureaucracy quality, is only observed within less oil-dependent countries. Thus, foreign investors prefer to work within more corrupt non-rentier oil-exporting countries in order to speed up their transactions and they may also tend to work in countries with lower bureaucratic quality which are more corrupt, to avoid competition with their competitors. This idea is supported empirically by Fung et al. (2009), who find that between 1968–2007, Chinese companies tend to work in more corrupt countries with less bureaucratic quality, as these countries do not impose strong or strict barriers.

The last variable which is found to perform differently between rentier and non-rentier oil-exporting countries is **investment profile**. This variable is highly significant at the 1% level within rentier oil-exporting countries, and insignificant within non-rentier oil-exporting countries. This signifies that foreign companies care about

expropriation, profits repatriation, and payment delays in rentier oil-exporting countries more than they do in non-rentier oil-exporting countries. This is mainly attributed to the rentierism nature of rentier countries and the nature of oil-related investments which involve large capital commitments over longer periods of time.

The variables military in politics, religions in politics, ethnic tensions, and law & order have similar impacts on FDI inflows in both rentier and non-rentier oil-exporting countries. **Military in politics** is insignificant FDI determinant in both panels, and similar to its impact when testing the whole sample of oil-exporting countries, panel 1. While the variables **religion in politics, ethnic tensions, and law & order** are all highly significant at the 1% level in both groups, and the results for panel 2 match the results obtained regarding the role of these variable from panel 1.

Table 5-7: Long-Run PMG Model Estimations for Panels 1&2 (Rentier & Non-Rentier Oil-Exporting Countries)

Dep. Variable FDI	Panel 2	Panel 3
	Rentier oil-exporting countries	Non-Rentier oil-exporting countries
Government Stability	0.123*** (0.0271)	0.0224 (0.0186)
Internal Conflict	0.0156 (0.0260)	0.131*** (0.0235)
External Conflict	-0.190*** (0.0384)	0.0999*** (0.0284)
Military in Politics	0.0195 (0.0916)	0.0402 (0.0533)
Religion in Politics	0.202*** (0.0647)	0.250*** (0.0509)
Democratic Accountability	-0.120** (0.0571)	0.0170 (0.0436)
Socioeconomic Conds.	-0.0203 (0.0397)	0.0926*** (0.0273)
Ethnic Tensions	0.228*** (0.0452)	0.304*** (0.0519)
Corruption	0.686*** (0.109)	-0.0757 (0.0551)
Law & Order	0.373*** (0.0745)	0.155*** (0.0452)
Bureaucracy Quality	0.128* (0.0767)	-0.157*** (0.0523)
Investment Profile	0.219*** (0.0349)	0.0307 (0.0233)
Observations	598	636

Standard errors in parentheses

***Significant at 1% level. **Significant at 5% level. *Significant at 10% level

Government Stability is an index value (a score of 12 points = Very Low Risk, a score of 0 points = Very High Risk).

Internal Conflict is an index value (a score of 12 points = Very Low Risk, a score of 0 points = Very High Risk).

External Conflict is an index value (a score of 12 points = Very Low Risk, a score of 0 points = Very High Risk).

Military in Politics is an index value (a score of 6 points = Very Low Risk, a score of 0 points = Very High Risk).

Religion in Politics is an index value (a score of 6 points = Very Low Risk, a score of 0 points = Very High Risk).

Democratic Accountability is an index value (a score of 6 points = Very Low Risk, a score of 0 points = Very High Risk).

Socioeconomic Conditions is an index value (a score of 12 points = Very Low Risk, a score of 0 points = Very High Risk).

Ethnic Tensions is an index value (a score of 6 points = Very Low Risk, a score of 0 points = Very High Risk).

Corruption is an index value (a score of 6 points = Very Low Risk, a score of 0 points = Very High Risk).

Law & Order is an index value (a score of 6 points = Very Low Risk, a score of 0 points = Very High Risk).

Bureaucracy Quality is an index value (a score of 4 points = Very Low Risk, a score of 0 points = Very High Risk).

Investment Profile is an index value (a score of 12 points = Very Low Risk, a score of 0 points = Very High Risk).

5.5.3 The Implication of Political and Institutional risk on FDI in Islamic and Non-Islamic Oil-Exporting Countries

This section investigates the impact of political and institutional risk factor upon FDI in Islamic and non-Islamic oil-exporting countries. The key question which will be addressed here is: 'does the religious identity play a role in terms of changing the impact of the political and institutional risk on FDI. To answer this question, OECs are categorised into two panels, Islamic and non-Islamic oil-exporting countries following

the same procedure as in the previous chapter. The number of Islamic oil-exporting countries is 19, as Iraq is also excluded, and the number of non-Islamic oil exporting countries is 24. The analysis in the section is focused on the difference between the political and institutional risk variables among Islamic and non-Islamic oil exporting countries.

Table 5-8 shows that 4 out of 12 variables have a considerably difference role in FDI between the two panels, namely military in politics, socioeconomic conditions, corruption, and bureaucracy quality. The variable **military in politics** is significant, at the 1% level with a negative sign, in Islamic countries, and significant at the 10% level with a positive sign, in non-Islamic oil-exporting countries. That implies that in the long-run, more FDI inflows are associated with more military intervention in politics within Islamic oil-exporting countries, while it is associated with less FDI inflows when observing non-Islamic oil-exporting countries. This kind of relationship can be explained via the association between the military and politics in Islamic countries. In fact, militarization and politics are strongly associated in Islamic countries and the majority of Islamic oil-exporting countries are autocratic and/or non-democratic regimes. However, this is seen as a reason for the sustainability and survival of governments in power for a long period of time. Thus, the increasing interdependence between militarization and politics in Islamic countries increases the sustainability and stability of the political system rather than threatening it, and the military institutions in these countries are often under the control of governments in these countries, in the sense that they are is not fully independent. Thus, such a correlation between militarization and politics provides more assurance for foreign investors that their investments will be in a relatively stable political environment in the long-run.

The variable **socioeconomic conditions** shows a considerably different impact on FDI inflows between Islamic and non-Islamic oil-exporting countries. It is statistically significant, at the 1% level with a negative sign, in Islamic oil exporting countries (less socioeconomic risk impacts negatively on FDI), and significant, at the 1% level but with a positive sign, in non-Islamic oil-exporting countries (less socioeconomic risk impacts positively on FDI). The finding regarding the role of the variable socioeconomic conditions on FDI in non-Islamic countries comes as expected and is consistent with those obtained from both panels 1 and 3 (all oil exporting countries and non-rentier oil

exporting countries), since less risk of socioeconomic conditions encourages FDI. The surprising issue is regarding the role of this variable within Islamic countries, since less socioeconomic risk is found to be associated with less FDI inflows in Islamic oil-exporting countries in the long-run. However, the negative impact of socioeconomic conditions and FDI is observed only within rentier and Islamic oil-exporting countries but it is insignificant in rentier oil-exporting countries and significant in Islamic oil-exporting countries. A similar relationship is found also by Busse and Hefeker (2007), who concluded that socioeconomic conditions were negatively correlated with FDI inflows in 83 developing countries during the period from 1984 to 2003.

The variable **corruption** is significant, at the 1% level and with a negative sign, within Islamic oil-exporting countries, implying that less corrupt Islamic oil-exporting countries receive less FDI inflows in the long-run. While this variable is significant, also at the 1% level but with a positive sign which means that less corrupt non-Islamic countries receive more FDI inflows in the long-run. These negative associations between less corruption risk and FDI within Islamic oil-exporting countries is similar to the results obtained regarding the relationship between this variable and FDI within group 1 (all oil exporting countries) and group 3 (non-rentier oil-exporting countries), since foreign investors, in some cases, prefer to work in corrupt countries to guarantee that they will get more advantages and to facilitate their operations, which benefit from their relationships with corrupt elites in the host country. Further, a deeper insight on the position of Islamic oil-countries in terms of corruption⁵³, compared with non-Islamic countries, provides another explanation. According to the ICRG data base, the average score of corruption for Islamic oil-exporting countries over the period from 1984-2013 is 2.5, compared with 3.2 in non-Islamic oil exporting countries. This indicates that corruption is an inherent phenomenon in this group of countries and FDI projects could not proceed smoothly without finding corrupt channels in the host country in order to operate projects, obtain licenses, and win partnership contracts. Figure 5-1 presents the Corruption Perceptions Index (CPI) for Islamic and non-Islamic oil-exporting countries in 2014; it shows that only two Islamic oil-exporting countries exceed the score of 50%, namely UAE and Qatar, while the majority of Islamic oil-exporting countries have low scores compared with non-Islamic oil-exporting countries.

⁵³ The CPI is a score of 100 points, where 100 = low corruption and 0 = high corruption.

Meanwhile, Islamic oil-exporting countries which have high levels of corruption (a lower CPI score), such as Saudi Arabia, Kuwait, Iran, Nigeria and Iraq, also have higher oil reserves, the variable which was found to be a significant determinant in attracting FDI in this group of countries in the previous chapter.

Bureaucracy quality is the last variable which displays a considerably different role between Islamic and non-Islamic oil-countries. It is statistically significant, at the 1% level with a positive sign in Islamic oil-exporting countries, indicating that “good” bureaucracy quality countries attract more FDI inflows in the long-run. This relationship comes as expected and is consistent with those found within rentier countries, since a “good” quality of bureaucracy promotes FDI. However, this variable has a different role in non-Islamic oil-exporting countries. It is significant, at the 1% level with a negative sign, indicating that less risk of bureaucracy quality hinders FDI into non-Islamic oil-exporting countries. The later finding is surprising as it is obtained from non-rentier oil-exporting countries, and the same explanation could justify this relationship, since some companies tend to work within countries with lower bureaucracy quality in order to avoid competition with other companies.

The rest of the variables are either significant in one panel and insignificant in another, or have similar impacts on FDI in both Islamic and non-Islamic oil-exporting groups. The variable **government stability** is significant in Islamic countries and insignificant in non-Islamic countries. Meanwhile, the variables **internal conflict**, **external conflict**, **religion in politics**, **democratic accountability**, and **ethnic tension** are insignificant in Islamic oil-exporting countries and significant at different levels and with positive signs in non-Islamic oil-exporting countries. This means that foreign investors do not consider these variables when undertaking a long-run investment plan in Islamic oil-exporting countries, and they do consider them within non-Islamic oil-exporting countries. The variables **law & order** and **investment profile** have similar positive impacts on FDI in both Islamic and non-Islamic oil-exporting countries. However, the importance of law & order in panel 5, non-Islamic oil-exporting countries, is nearly twice that in panel 4, Islamic oil-exporting countries, since the coefficient of this variable was 0.233 in panel 5 compared with 0.137 in panel 4. In contrast, the impact of a country’s investment profile in panel 5, non-Islamic oil exporting countries,

is five times greater relative to its impact in panel 4, Islamic-oil-exporting countries, since the coefficients were 0.236 and 0.0457 in panels 5 and 4, respectively.

Table 5-8: Long-Run PMG Model Results for Panels 4&5 (Islamic & Non-Islamic Oil-Exporting Countries)

Dep. Variable FDI	Panel 4	
	Islamic oil-exporting countries	Non-Islamic oil-exporting countries
Government Stability	0.0907*** (0.0218)	0.0157 (0.0224)
Internal Conflict	-0.0382 (0.0258)	0.139*** (0.0239)
External Conflict	-0.00662 (0.0329)	0.336** (0.148)
Military in Politics	-0.208*** (0.0588)	0.314* (0.177)
Religion in Politics	0.0975 (0.0678)	0.261*** (0.0574)
Democratic Accountability	0.0804 (0.0521)	0.361*** (0.129)
Socioeconomic Conditions	-0.146*** (0.0401)	0.605*** (0.155)
Ethnic Tensions	0.0951 (0.0615)	0.311*** (0.0484)
Corruption	-0.363*** (0.0774)	0.232*** (0.0585)
Law & Order	0.137*** (0.0508)	0.233*** (0.0548)
Bureaucracy Quality	0.319*** (0.0853)	-0.300*** (0.0637)
Investment profile	0.236*** (0.0362)	0.0457** (0.0199)
Observations	541	693

Standard errors in parentheses

***Significant at 1% level. **Significant at 5% level. *Significant at 10% level

Government Stability is an index value (a score of 12 points = Very Low Risk, a score of 0 points = Very High Risk).

Internal Conflict is an index value (a score of 12 points = Very Low Risk, a score of 0 points = Very High Risk).

External Conflict is an index value (a score of 12 points = Very Low Risk, a score of 0 points = Very High Risk).

Military in Politics is an index value (a score of 6 points = Very Low Risk, a score of 0 points = Very High Risk).

Religion in Politics is an index value (a score of 6 points = Very Low Risk, a score of 0 points = Very High Risk).

Democratic Accountability is an index value (a score of 6 points = Very Low Risk, a score of 0 points = Very High Risk).

Socioeconomic Conditions is an index value (a score of 12 points = Very Low Risk, a score of 0 points = Very High Risk).

Ethnic Tensions is an index value (a score of 6 points = Very Low Risk, a score of 0 points = Very High Risk).

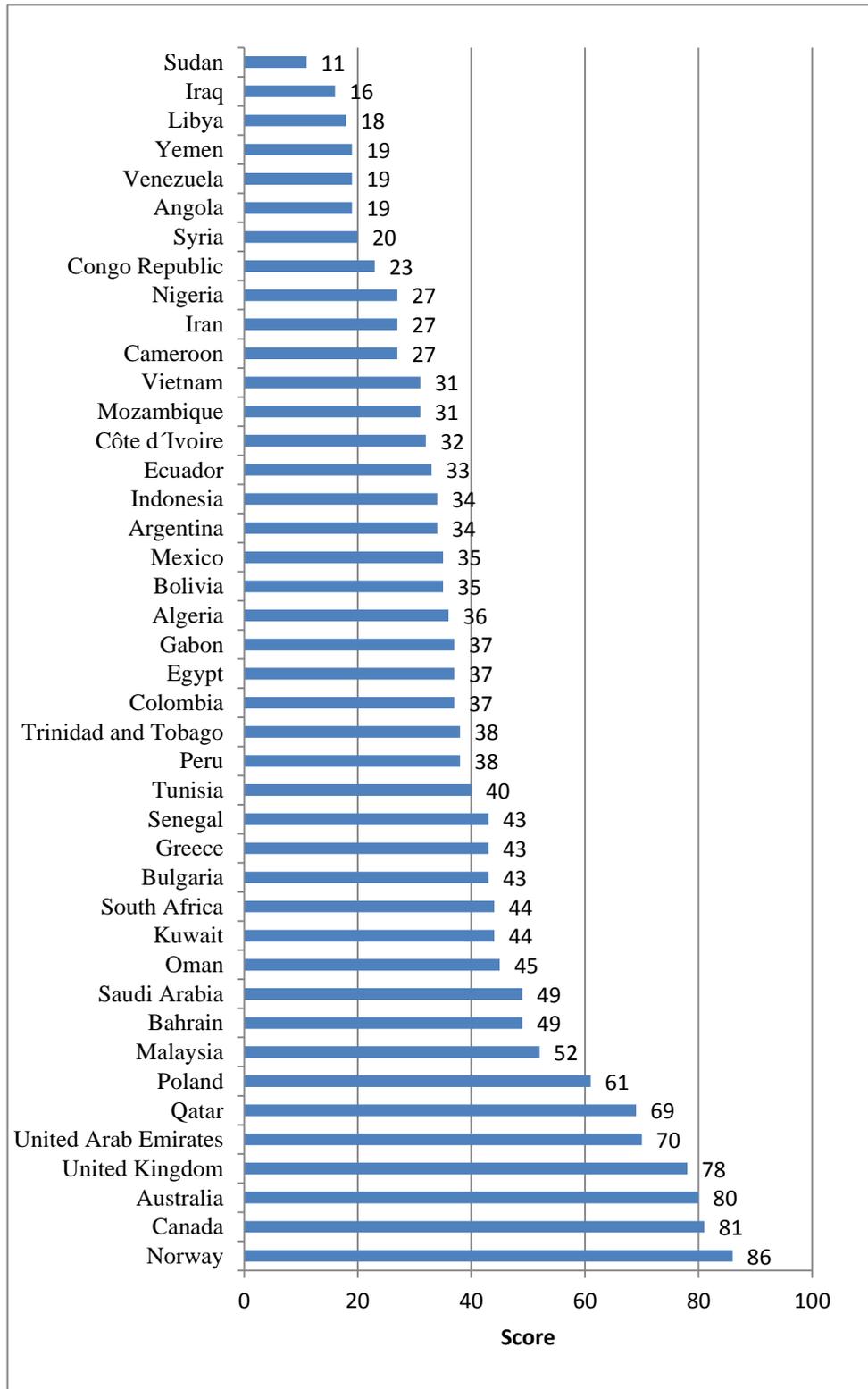
Corruption is an index value (a score of 6 points = Very Low Risk, a score of 0 points = Very High Risk).

Law & Order is an index value (a score of 6 points = Very Low Risk, a score of 0 points = Very High Risk).

Bureaucracy Quality is an index value (a score of 4 points = Very Low Risk, a score of 0 points = Very High Risk).

Investment Profile is an index value (a score of 12 points = Very Low Risk, a score of 0 points = Very High Risk).

Figure 5-1: Corruption Perceptions Index (CPI) for Islamic and Non-Islamic Oil-Exporting countries
2014



Source: Corruption Perceptions Index (CPI) 2014, Transparency International (<http://www.transparency.org/>)

5.6 Results Consistency

In order to prove the accuracy of the results obtained in this chapter, the World Bank's Worldwide Governance Indicators (WGI)⁵⁴ are used this time instead of the ICRG political and institutional risk indicators. The WGI indicators consist of 6 variables; voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption. These variables are very similar to the ICRG variables; the only difference is that they combine the relevant variables in one variable. For example, the WGI's political stability variable is a combination of political risk, internal conflict risk, external conflict risk, and external diplomatic pressure etc. Each variable takes a score between -2.5 and 2.5, where -2.5 indicates weak governance performance (high risk), and 2.5 indicates strong governance performance (low risk). The consistency check is carried out only for panel 1 (all oil exporting countries) for two reasons. Firstly, the WGI data is only available for 17 years (from 1996 to 2013), which is a relatively short period. This might challenge the reliability of the long-run relationships between the variables. Secondly, separating the data sample into rentier/not-rentier and Islamic/non-Islamic oil-exporting countries, along with excluding Iraq, would further affect the long-run relationships. The long-run PMG result is presented in table 5-9. It shows that all the WGI variables, except the variable control of corruption, are statistically significant with positive signs, indicating that a strong governance performance (low risk) positively affects FDI inflows into oil-exporting countries. These results are consistent with those obtained regarding the impact of political and institutional risk factors using the ICRG indicators. That means that the PMG results are correct and most of the variables impact positively upon FDI in the long-run in oil exporting countries. The only exemption is found regarding the impact of the variable control of corruption on FDI. The WGI's control of corruption variable is found to be insignificant, while the ICRG's corruption variable was found to be significant with a negative sign. However, this is attributed to the length of the time series for testing the WGI's corruption, and a longer time series may reveal a different result.

54 The World Bank's Worldwide Governance Indicators (WGI) data is available online at: (<http://info.worldbank.org/governance/wgi/index.aspx#home>).

Table 5-9: Consistency Check – WGI Indicators

Variables	Coefficients
Voice and Accountability	0.00688* (0.00394)
Political Stability	0.494*** (0.0501)
Government Effectiveness	0.981*** (0.134)
Regulatory Quality	0.968*** (0.136)
Rule of Law	1.514*** (0.125)
Control of Corruption	0.161 (0.116)

Standard errors in parentheses

***Significant at 1% level. **Significant at 5% level. *Significant at 10% level

Voice and Accountability: is an index value ranging from approximately -2.5 (weak) to 2.5 (strong) governance performance.

Political Stability: is an index value ranging from approximately -2.5 (weak) to 2.5 (strong) governance performance.

Government Effectiveness: is an index value ranging from approximately -2.5 (weak) to 2.5 (strong) governance performance.

Regulatory Quality: is an index value ranging from approximately -2.5 (weak) to 2.5 (strong) governance performance.

Rule of Law: is an index value ranging from approximately -2.5 (weak) to 2.5 (strong) governance performance.

Control of Corruption: is an index value ranging from approximately -2.5 (weak) to 2.5 (strong) governance performance.

5.7 Conclusion

This chapter tests for the impact of political and institutional risk on FDI inflows in oil-exporting countries. It replaces the variable composite risk with its political and institutional components. The variable composite risk has been tested in the previous chapter and found a significant positive variable in explaining FDI in all groups/models. Thus, this chapter replaces the variable composite risk with 12 political and institutional risk variables in order to investigate the role played by each variable in attracting FDI in oil-exporting countries. The main goal for this chapter is to answer the research questions; particularly: (1) What are the main political and institutional determinants of FDI in oil-exporting countries?, (2) Does oil-dependence level play a role in terms of changing the impact of the political and institutional risk on FDI?, and (3) Does the religious identity play a role in terms of changing the impact of the political and institutional risk on FDI?.

Overall, the long-run PMG estimations show that most of the political and institutional risk variables are significant in explaining FDI inflows when testing the whole OECs sample (panel 1- All oil-exporting countries). These results come as expected and are consistent with the significant role of composite risk in FDI which has been examined in the previous chapter. The variables government stability, internal

conflict, external conflict, religion in politics, democratic accountability, socioeconomic conditions, ethnic tensions, law & order, and investment profile are found to be statistically significant determinants for FDI inflows in OECs in the long-run. More specifically, the variables ethnic tensions, religion in politics, and law & order have a greater impact on FDI inflows in oil-exporting countries compared with the other political and institutional risk variables. This means that less risk of these variables is associated with higher FDI inflows and vice versa. The surprising issue which is found within this panel is regarding the impact of the variable corruption on FDI. A lower level of corruption is surprisingly found to be negatively associated with FDI inflows into OECs in the long-run, in the sense that foreign investors increase their investment in OECs when they find more corruption channels. That relationship is explained via three points: firstly, through foreign investors' desire to speed up their transactions to overcome delays in payments and licensing; secondly, through the theoretical positive relationship between corruption and economic growth within countries with less economic freedom, and thirdly, through the positive role of corruption in specific forms of FDI such as joint-ventures and privatisation projects especially within developing countries. The long-run PMG results for panel 1 (all oil-exporting countries), above, provide the answer to the first question regarding what the main political and institutional determinants are of FDI in oil-exporting countries.

Taking into account a country's oil-dependence level, the PMG estimations reveal some differences in the role played by some political and institutional risk variables. Four major differences are observed in this regard. The variable government stability is found to be an important determinant for FDI within rentier countries, and it has no impact upon FDI in non-rentier oil-exporting countries in the long-run. In contrast, the variable internal conflict is found to be significant in explaining FDI in non-rentier oil-exporting countries and insignificant within rentier oil-exporting countries. These two relationships are attributed to the rentierism phenomenon, and the nature of the political and social systems in rentier countries. Foreign investors care about government stability in rentier countries more than they do in non-rentier countries simply because rentier countries are exposed to conflicts regarding the wealth (oil) more than non-rentier countries, and changes in governments in that group of countries could threaten the entire foreign investment. Similarly, the insignificant role of internal conflict on FDI

in rentier oil-exporting is also attributed to the rentierism phenomena, since rentier countries are often governed by autocratic regimes and their authorities, along with their alliances, support practice of keeping the risk of internal conflict from affecting FDI in the long-run. In contrast, a lower risk of external conflict is found to be negatively associated with FDI in rentier countries, and positively in non-rentier oil-exporting countries. The negative relationship between lower external risk (measured by the ICRG's external conflict factor) and FDI reflects the impact of the overall score of the ICRG's external conflict factor, and it does not reflect the traditional measurement of external conflict expressed by "war". There is a possible positive relationship between the ICRG's external conflict factor and FDI taking into account the subcomponents of that variable, and it is found that political pressure exerted by one country on another may increase the FDI inflows from the first to the second country. Further, external conflict in its traditional measurement, "war", is also tested and found to have a significant negative impact upon FDI in 4 out the 5 panel, and even it has a negative impact on FDI but insignificant within the fifth panel, which is panel 2 (rentier oil-exporting countries). The variable democratic accountability also provides an interesting different result regarding FDI within rentier and non-rentier oil-exporting countries. More democratic rentier oil-exporting countries receive less FDI in the long run. That relationship is also explained via the rentier state theory, since democracy in rentier countries may reflect the possibility of changing the whole political system and the economic philosophy adopted in the country, and eventually affects the existence of foreign companies. Further, FDI projects in that case might face the risk of nationalisation. A lower risk of corruption and bureaucracy quality are positively correlated with FDI in rentier countries, and surprisingly negatively correlated with FDI within non-rentier oil-exporting countries. That reflects the importance of good quality institutions and good control of corruption in attracting FDI in rentier countries, but it also reflects the long-run negative association between these two variables and FDI in non-rentier countries, concluding that foreign investors invest more if they find corruption channels within non-rentier oil-exporting countries.

Considering the religious identity of oil-exporting countries, 4 variables behave differently in relation to FDI, namely military in politics, socioeconomic conditions, corruption, and bureaucracy quality. Similar to the role played by government stability

in rentier and non-rentier oil-exporting countries, the variable government stability is an important factor for FDI in Islamic countries and insignificant within non-Islamic oil-exporting countries. Similar to the explanation provided regarding the government stability potential risk in rentier countries, Islamic oil-exporting countries have also the same risk since most of them are rentier and developing countries, and government stability may affect the whole political system and the economic philosophy of the country. Less military intervention is surprisingly have a significantly negative impact on FDI in Islamic rentier oil-exporting countries, and this is explained through the importance of a strong correlation between military and political authorities within this group of countries for the stability of the political system, and thereby the validity of the long-term FDI contracts especially in oil-extracting industries. The variable socioeconomic condition is significant in both Islamic and non-Islamic oil-exporting countries, but it displays a negative sign in Islamic countries and a positive sign in non-Islamic countries. Accordingly, a lower risk relating to socioeconomic conditions is found to affect FDI inflows in Islamic countries in a negative way, which seems surprising since a high risk of these conditions may lead to social disorder. However, this relationship might be merely an association, especially considering the type of FDI in Islamic oil-exporting countries which has been concluded in chapter 4. The variables corruption and bureaucracy quality have different impacts on FDI in Islamic oil-exporting countries compared with non-Islamic oil-exporting countries. The variable corruption is significant with a negative sign in Islamic countries (less risk of corruption impacts negatively on FDI). This negative association is similar to that concluded from non-rentier countries regarding the relationship between corruption and FDI.

The surprising issue here is that the same association is observed within Islamic countries which are supposed to follow the regulations of the Islamic holy book, the Holy Quran, which forbids corruption-related behaviours⁵⁵ such as bribery. Finally,

55 Rehman and Askariy (2010) conclude that Islamic countries do not apply the teachings stipulated by Islam in the Holy Quran, from a study used "the Islamicity Index" covering 208 countries. The Islamicity Index comprises of 3 sub-indexes, Economic Islamicity Index (EI2), Legal and Governance Islamicity Index (LGI2), and Human and Political Rights Islamicity Index (HPI2). The overall ranking of the Islamicity Index shows that New Zealand, Luxembourg, and Ireland are ranked 1, 2, and 3 in this index, while most of Islamic countries are found having low scores, for example; Malaysia 38, Kuwait 48, Saudi Arabia 131, and Iran 163. See: Rehman, S. S. & Askari, H. 2010. How Islamic are Islamic Countries? *Global Economy Journal*, 10(2), 1-37.

bureaucracy quality have a significant positive impact on FDI in Islamic oil-exporting countries, and also a significant impact, but with a negative effect, on FDI in non-Islamic oil-exporting countries in the long-run (less bureaucratic quality risk impacts negatively on FDI); this kind of unexpected correlation within non-Islamic oil-exporting countries is also observed in non-rentier oil-exporting countries and can be explained through the idea that “bad” bureaucratic quality may encourage investors to invest in some countries in order to avoid potential competitors.

Chapter 6

Foreign Direct Investment (FDI) and Economic Growth in Oil-Exporting Countries: A causality Test

6.1 Introduction

Examining the relationship between FDI and economic growth in oil-exporting countries is important in that it explores whether FDI inflows contribute to these countries' economic growth. It also provides an insight on how a country's oil-dependence level and religious identity can play a role in gaining FDI-led growth benefits in this particular group of countries. Finally, exploring this relationship is important to investigate the impact of a country's economic growth on attracting FDI considering oil-dependence level and the religious identity. The aim of this chapter is to investigate the relationship between FDI and economic growth in the oil-exporting countries. It focuses on the causality test on whether FDI affects the economic growth or the relationship is reversed. It applies a different methodology to that applied in chapters 4 and 5; it utilises a heterogeneous panel causality test to achieve that aim. Thus, the causality tests in this chapter involve testing the causal relationship between FDI and economic growth in both directions, from FDI towards economic growth and from economic growth towards FDI. A comprehensive discussion on the underlying theories of explains the relationship between FDI and economic growth were presented in chapter 3 of this thesis (sub-section 3-6). In general, FDI-led growth theories suggest that FDI enhances host countries' economic growth through capital accumulation, technology transfer, and enhancing host countries' employment skills (Solow, 1956, Romer, 1986, Lucas, 1988, Swan, 1956). Meanwhile, host countries' economic growth is regarded as a locational advantage for FDI, in the sense that faster growing economies are expected to attract more FDI (Mottaleb, 2007, Cleeve, 2008). The importance of investigating the causal relationship between FDI and economic growth within the context of oil-exporting countries is to determine whether or not these countries have benefited from attracting FDI. The causal relationships

between FDI and economic growth in this chapter are tested in five panels, following the same categories as in chapters 4 and 5, over the same period of time. The structure of the chapter is as follows: section 2 reviews the methodology. Section 3 presents data description and section 4 presents the empirical results. Section 5 presents the consistency of the results. A discussion and conclusions are given in sections 6 and 7.

6.2 Empirical Literature

The prospective causal relationship between FDI and economic growth is well studied within all data types, time series, cross-sections, and panel data. Within time series analysis, some studies utilise the Vector Error-Correction Model (VECM) to test for causal relationships between FDI and economic growth in single countries. For example, Istaiteyeh and Ismail (2015) also utilise VECM to examine the impact of FDI on economic growth in Jordan from 2003-2013, and the findings also reject the hypothesis of the existence of a causal relationship between FDI and economic growth in Jordan over the period of the study. Other research utilises the Error Correction Model (ECM) to check for causal relationships. Tang and Tan (2014) apply the ECM to examine whether there is a causal relationship between FDI and economic growth in Malaysia in the period from 1972 to 2009; they find that FDI causes economic growth. Acaravci and Ozturk (2012) also apply the ECM to data for ten transition European countries, finding that FDI causes increases in GDP in the Czech Republic as well as the Slovak Republic. Some other research utilises different methodologies; Frimpong and Oteng-Abayie (2006) and Chowdhury and Mavrotas (2005) apply Toda and Yamamoto's (1995) approach to examine the relationship between FDI and economic growth in Ghana, and in three developing countries, respectively. The first research finds no causal relationship between FDI and economic growth, while the second finds a bidirectional relationship between the two variables in Malaysia and Thailand.

Within cross-sectional analysis, some studies apply the Ordinary Least Squares (OLS) method to explore the relationship between FDI and economic growth. For instance, Johnson (2006) utilises the OLS technique to examine the impact of FDI on economic growth in a study covering 90 developing and developed countries over the period 1980 – 2002. He finds that FDI contributes to economic growth only in developing countries, not developed ones. Balasubramanyam et al. (1996) also applies the OLS method with 46 developing countries from 1970-1985, and finds that FDI leads

to economic growth when export-promoting strategies are applied. Similarly, Carkovic and Levine (2002) apply an OLS and a Generalized Method of Moments (GMM) model to test the impact of FDI on economic growth in 72 developing and developed countries from 1960 to 1995. They conclude that there is no strong evidence that FDI causes economic growth. In a sectoral level study, Alfaro (2003) conducted a study to examine the impact of FDI on economic growth in primary, manufacturing, and service sectors in a sample of 47 countries over the period 1981-1999. The study finds that FDI does cause growth, but only in the manufacturing sector and does not have an impact on growth in the primary sector; the study also applies an OLS method.

Within panel data analysis, Borensztein et al. (1998) and De Mello (1999) are considered the most prominent studies in causality test research using panel data analysis. The first research utilises a Seemingly Unrelated Regression (SUR) to test the impact of FDI on economic growth in 69 developing countries over the period from 1970 to 1989, and finds that FDI has a positive impact upon economic growth and that that positive impact requires a specific level of education. The second paper applies the Granger causality test to explore the impact of FDI on economic growth in a group of 32 countries (OECD and non-OECD countries) over the 21 years from 1970-1990. The study finds that the positive impact of FDI on countries' economic growth depends on the integration and association levels between domestic investment and FDI. Other research applies different models such as the Vector Error-Correction Model (VECM), Error Correction Model (ECM), and Panel VAR model. As examples utilising the VECM, Liu et al. (2009) apply the VECM to examine whether there is a causal relationship between FDI and economic growth in 9 Asian countries from 1970 – 2002; they find a bidirectional relationship between FDI and economic growth in most of the countries in the sample. Haghnejad et al. (2014) also applied the VECM to data for 75 developing countries from 1980-2008, and found that FDI causes economic growth in the short-run, while there is a bidirectional relationship between the two variables in the long-run. Choe (2003) applies a panel VAR model to examine the relationship between FDI and economic growth in 80 countries from 1971 to 1995. The Error Correction Model (ECM) is also applied by a number of studies; Moudatsou and Kyrkilis (2011) apply panel ECM with data for EU and ASEAN countries over the period from 1970-2003, and find weak bidirectional causality between FDI and economic growth.

Abaidoo (2012) also utilises the ECM to examine the relationship between FDI and economic growth in Sub-Saharan Africa (SSA) over the period from 1977 to 2010. The study finds bidirectional causality between FDI and GDP in the sample, see table 6-1.

Table 6-1: Summary of the Relevant Literature on the causality relationships between FDI and Economic Growth

Time series research			
Study	Study Scope	Methodology	Findings
Belloumi (2014)	Tunisia 1970 – 2008	Vector Error-Correction Model (VECM)	No causal relationship between FDI and economic growth
Istaiteyeh and Ismail (2015)	Jordan 2003-2013	Vector Error-Correction Model (VECM)	No causal relationship between FDI and economic growth
Tang and Tan (2014)	Malaysia 1972 - 2009	Error Correction Model (ECM)	FDI causes economic growth
Acaravci and Ozturk (2012)	1994-2008	Error Correction Model (ECM)	FDI causes GDP in 2/10 countries
Frimpong and Oteng-Abayie (2006)	Ghana 1970-2002	Toda and Yamamoto Granger no causality test	No causal relationship between FDI and economic growth
	Chile Malaysia Thailand 1969-2000	Toda and Yamamoto	Chile (GDP → FDI) Malaysia and Thailand (FDI → GDP) and (GDP → FDI)
Cross-sectional research			
Johnson (2006)	90 countries 1980-2002	OLS	FDI causes economic growth only in developing countries
Balasubramanyam et al. (1996)	46 countries 1970-1985	OLS	FDI causes economic growth if combined with export-promoting strategies
Carkovic and Levine (2002)	72 countries 1960 - 1995	OLS, GMM	FDI does not cause economic growth
Alfaro (2003)	47 countries 1981-1999	OLS	FDI caused growth only in manufacturing sectors
Panel data research			
Borensztein et al. (1998)	69 developing countries 1970 - 1989	SUR	FDI causes growth – education is important
De Mello (1999)	32 countries 1970-1990	Granger causality test	FDI causes growth if there is an interaction with domestic investment
Liu et al. (2009)	9 Asian countries 1970-2002	VECM	There is a bidirectional relationship between FDI and economic growth FDI causes growth in the short-run.
Haghejad et al. (2014)	57 developing countries 1980-2008	VECM	A bidirectional relationship between FDI and GDP in the long-run.
Moudatsou and Kyrkilis (2011)	EU & ASEAN 1970-2003	ECM	Weak bidirectional causality between FDI and economic growth
Abaidoo (2012)	Sub-Sahara Africa (SSA) 1977 - 2010	ECM	Bidirectional relationship between FDI and growth

6.3 Econometric Approach

Studies on causal relationships between FDI and economic growth apply different models, mostly based on Granger's (1969) approach. Those studies examine the relationship either to confirm whether FDI contributes to countries' economic growth or to examine the magnitude of that effect if it exists, and some research targets both objectives. The basic idea of the granger causality test is that the past value of Y (lagged Y) can explain the improvement in the current value of X (Xt). Thus, this chapter tests whether or not the past value of FDI can explain the current value, and improvement in economic growth in OECs and vice versa. This chapter applies a newly-developed panel causality test; the Dumitrescu and Hurlin (DH) causality test which was introduced by Dumitrescu and Hurlin (2012). The DH causality test is a very similar method to the Granger test that was introduced by Granger (1969). The linear panel causality takes the following forms:

$$GDP_t = \gamma + \sum_{i=1}^k \alpha_i \cdot GDP_{t-i} + \sum_{i=1}^k \beta_i \cdot FDI_{t-i} + \mu_t \dots\dots\dots (6-1)$$

$$FDI_t = \phi + \sum_{i=1}^k \lambda_i \cdot FDI_{t-i} + \sum_{i=1}^k \delta_i \cdot GDP_{t-i} + \eta_t \dots\dots\dots(6-2)$$

Where GDP_t and FDI_t are the stationary time series for GDP and FDI respectively. μ_t and η_t Are error terms. k is the lag length.

A limited number of studies have applied the Dumitrescu and Hurlin (DH) causality test to explore the prospective causality between FDI and economic growth. To the best of the researcher's knowledge, there is only one paper to date which utilises this approach to explore the prospective causal relationship between FDI and economic growth. That research is Akbas et al. (2013), which utilises the DH method to investigate the prospective causal relationship between FDI and GDP in The Group of Seven⁵⁶ (G7) over the period from 1990-2011. This approach has been chosen over other methods for the following reasons: firstly, it is the most recent causality approach since it was developed in 2012. Secondly, it accounts for heterogeneity in panel data while the Granger method does not (Dumitrescu and Hurlin, 2012). Thirdly, it can be applied with different properties of T and N, where it can be applied when T>N and

⁵⁶ The United States, Canada France, Germany, Italy, Japan, and the United Kingdom.

when $N > T$ (Akbas et al., 2013). Fourthly, it estimates the causality of relationship between variables even with small panel data (Tugcu, 2014). Thus, the Dumitrescu and Hurlin (2012) approach seems the most appropriate approach for this research since panel 1 (all oil-exporting countries) has $N > T$, and all other panels 2,3,4, and 5 (rentier oil-exporting countries, non-rentier oil-exporting countries, Islamic oil-exporting countries, and non-Islamic oil-exporting countries) have $T > N$.

The analysis in this chapter involves applying the bivariate approach to test the relationship between FDI and economic growth. This approach is a fairly common one within a causality test context; it was first introduced by Granger (1969) and applied subsequently in a wide number of studies within the relevant literature, see among others: Granger et al. (2000)⁵⁷, De Mello (1999), Zhang (2001a), and Abbas et al. (2015). The bivariate causality test has an advantage over the multivariate, where it overcomes the problem of indirect causality when (an) “auxiliary” variable/s is/are included in the model (Dufour and Renault, 1998). This is the case in the sense that including more than two variables in the causality test may result in imprecise results on the direction of causality which runs from the explanatory variable towards the dependent variable, as a result of the impact of the explanatory variable on the third variable, and eventually on the dependent “target” variable. Further explanation of such indirect causality is produced by Konya (2004), who asserts that the inclusion of an “auxiliary” variable Z may have an indirect impact upon the variable X one period ahead, which may cause the variable Y at a subsequent period. In the case of the causality test applied in this chapter, if an “auxiliary” variable is included, such as oil reserves, in addition to FDI as a potential causal factor for GDP, then the model would account for the possibility that, for example, a country’s FDI inflows may lead to the discovery of new oilfields which may increase the country’s oil exports in the country and eventually lead to GDP growth⁵⁸. Thus, applying a bivariate causality test in this

57 Granger et al. (2000) apply the bivariate approach to examine the relationship between exchange rates and stock prices in 9 Asian countries from a daily dataset over the period from January 3, 1986 to June 16, 1998.

58 Panel causality test model in a bivariate system takes the form: $GDP_t = b_0 + b_1 FDI_{t-1} + \varepsilon_i$, while a multivariate causality test with an auxiliary variable included takes the following form: $GDP_t = b_0 + b_1 FDI_{t-1} + b_2 OILRSE_{t-1} + \varepsilon_i$

chapter helps in acquiring more precise results on the causal relationship between FDI and economic growth in oil-exporting countries.

6.4 Data Description

Research on the causal relationship between FDI and economic growth tends to use different proxies to measure the variables FDI and economic growth. The most common proxies for measuring FDI within causality test research are net FDI inflows and FDI as a percentage of GDP. Chakraborty and Nunnenkamp (2006), Tang et al. (2008), and Asghar et al. (2011) utilise net FDI inflows to represent FDI within causality test research. Meanwhile, Frimpong and Oteng-Abayie (2006), Lo et al. (2013), Esso (2010), and Acaravci and Ozturk (2012) measure FDI using FDI as a percentage of GDP as a proxy.

With respect to economic growth, some studies utilise real GDP as a proxy of economic growth, such as; De Mello (1999), Elboiashi (2011), Jayachandran and Seilan (2010), Tang et al. (2008), Asghar et al. (2011), and Acaravci and Ozturk (2012). Contrastingly, other studies utilise the annual GDP growth rate to measure economic growth, such as; Lo et al. (2013), Frimpong and Oteng-Abayie (2006), and Mencinger (2003).

For the purposes of this research, the variable FDI is proxied by inward FDI inflows in US Dollars at current prices and current exchange rates in millions and the source is UNCTADstat. The variable economic growth comprises the annual GDP in million US Dollars at market prices based on constant local currency and constant 2005 U.S. dollars, the source for which data is the World Bank (World Development Indicators). Both FDI and economic growth are used on annual bases to cover the 30 years from 1984 to 2013. Oil-exporting countries are also categorised, as in chapters 4 and 5, into 5 panels: panel 1- All oil exporting-countries (AOEC); panel 2- Rentier oil-exporting countries (ROEC); panel 3- Non-rentier oil-exporting countries (NROEC); panel 4- Islamic oil-exporting countries (IOEC), and panel 5- Non-Islamic oil-exporting countries (NIOEC).

Table 6-2 shows descriptive statistics for the variables FDI and economic growth in the five panels in terms of mean, standard deviation, minimum and maximum values.

The table clearly demonstrates that both variables, FDI and economic growth, show wide variation over all the 5 panels. This can be seen through the minimum and maximum values of both FDI and economic growth. The minimum value of the variable FDI is found within panel 3, non-rentier oil-exporting countries, -24859.7 million US Dollars, while the maximum value, 200039.2 million US Dollars, is found within panel 1, all oil-exporting countries.. The minimum value of GDP is found within panels 1, all oil exporting countries at US\$1,7 billion, and the maximum value, US\$ 2,960 billion, is found within panels 1,3, and 5. The mean and standard deviation for each variable are also shown in the table.

Table 6-2: Descriptive Statistics – All Panels

Panels	Variable	Obs.	Mean	Std. Dev.	Min	Max
Panel 1	FDI	1320	4545.2	13,831	-24,859	20,0039.2
	GDP	1314	1,700	3,410	1,700	2,963,265
Panel 2	FDI	660	1,470	3,670	-6,900	39,500
	GDP	654	74,813	1,090	1,700	748449.6
Panel 3	FDI	660	7625.2	18,719	-2,4859	200039.2
	GDP	660	264,6	4,490	1,968	2963265.2
Panel 4	FDI	600	1,669.8	3,884	-4,550	39455.9
	GDP	594	828.0	1,240	2,360	877,000
Panel 5	FDI	720	6,941	18,047	-2,4859	20,0039.2
	GDP	720	2,430	4,330	1,700	2,960

FDI is the inward FDI inflows in US Dollars at current prices and current exchange rates in millions.

GDP is annual GDP in million US Dollars at market prices based on constant local currency and constant 2005 U.S. dollars.

Panel 1: All oil exporting-countries

Panel 2: Rentier oil-exporting countries

Panel 3: Non-rentier oil-exporting countries

Panel 4 Islamic oil-exporting countries

Panel 5: Non-Islamic oil-exporting countries

6.5 Empirical Findings

The causality test involves three steps: the integration (stationarity) test, cointegration test, and direction of causality test. The first step is testing for integration, or checking whether the variables are stationary or not to determine the order of integration of the variables. An augmented Dickey-Fuller test (Dickey and Fuller (1979) and the Philips-Perron (PP) of Phillips and Perron (1988) test are used to test for stationarity. It is worth mentioning that both variables under examination should follow the same order of integration in order to proceed to the next step. The second step is testing for cointegration. Granger (1980) was the first to use the concept of “cointegration”, which reflects the long-run relationship between variables. In other words, if two variables are cointegrated, that implies that a long-run relationship

between the variables exists, in the sense that they move together over a specific time. Similarly, if two variables are not cointegrated, that means a long-run relationship between these variable does not exist. Pedroni's heterogeneous panel co-integration test Pedroni, (1999, 2004) is used to test for cointegration between FDI and economic growth. Pedroni's method comprises two main types of tests, panel and group tests. The panel test consists of four tests, which are panel V statistics, panel RHO, panel ADF, and panel PP statistics, while the group tests comprise three tests, being: group RHO, group PP, and group ADF statistics tests. The panel tests work by pooling the coefficients of autoregressive across countries, while the group statistics tests work on averaging autoregressive coefficients for each country in the panel. The last step within causality testing is testing the direction of causality between variables, which can be done after confirming the integration and cointegration between the variables.

6.5.1 Stationarity Tests

Two stationarity tests are performed in order to check for integration between FDI and economic growth in oil-exporting countries. The Augmented Dickey–Fuller (ADF) (Dickey and Fuller (1979) and the Philips-Perron (PP) of Phillips and Perron (1988) tests are used to check for stationarity in both FDI and economic growth series. The Null hypothesis H_0 for both tests is that the variables FDI and economic growth are integrated (they are non-stationary), while the alternative hypothesis H_1 is that the variables FDI and economic growth are not integrated (they are stationary). Table 6-3 shows that the variable FDI, measured by the logarithm of the FDI value (LogFDI) is stationary over the 5 panels according to the ADF and PP tests, while the variable economic growth, measured by the logarithm of the GDP value (LogGDP) is non-stationary. Accordingly, the variable LogGDP is transformed into its first difference and retested again. The ADF and PP tests show that the variable LogGDP becomes stationary after taking its 1st difference. The table also indicates that the H_0 is rejected in all the 5 panels since the P values are significant at the 1 % level. It could be said that the first condition for estimating causality in the relationship between FDI and economic growth is therefore fulfilled.

Table 6-3: Unit root tests: Augmented Dickey–Fuller (ADF) and Phillips and Perron (PP) Tests For Unit Root

	Test	Panel 1	Panel 2	Panel 3	Panel 4	Panel 5
LogFDI	ADF	0.0000	0.0006	0.0002	0.0245	0.0000
		166.3	80.8	85.4	59.4	106.8
	PP	0.0000	0.0000	0.0000	0.0000	0.0000
		313.4	140.7	172.7	113.4	199.7
LogGDP	ADF	1.0000	1.0000	0.9997	1.0000	1.0000
		25.1	6.3	18.8	7.01	18.08
	PP	1.0000	1.0000	1.0000	1.0000	1.0000
		20.6	5.8	14.8	6.6	13.9
1stDiffLogGDP	ADF	0.0000	0.0000	0.0000	0.0000	0.0000
		574.6	273	301.6	262	311.7
	PP	0.0000	0.0000	0.0000	0.0000	0.0000
		1047.1	563.3	483.4	485.9	561.1

Panel 1: All oil exporting-countries
 Panel 2: Rentier oil-exporting countries
 Panel 3: Non-rentier oil-exporting countries
 Panel 4: Islamic oil-exporting countries
 Panel 5: Non-Islamic oil-exporting countries

6.5.2 Cointegration Test

Pedroni’s panel cointegration test is performed for the 5 panels. The null hypothesis H_0 is that there is no cointegration between FDI and economic growth in oil-exporting countries, while the alternative hypothesis (H1) is that there is cointegration between FDI and economic growth in oil-exporting countries. In order to reject the null hypothesis, the panel V statistic should be significant and presumed to display a positive sign, while all the remaining statistics are presumed to be significant and to display negative signs (Pedroni, 2004). Table 6-4 shows that over the 5 panels, all “within” and “between” statistics displays a significant sign at the 1% level, and they display the expected signs, which are positive for panel V statistics and negative for the others. Thus, the null hypothesis of no cointegration between FDI and GDP in OECs is rejected over the 5 panels. This indicates that there is a long-run relationship between FDI and economic growth in OECs within the five selected categories.

Table 6-4: Pedroni Panel Cointegration Test

	Panel 1	Panel 2	Panel 3	Panel 4	Panel 5
Tests					
Within Dimension					
Panel v-ST.	0.0000	0.0000	0.0000	0.0000	0.0000
	17.3	11.9	12.5	11.1	13.5
Panel rho- ST.	0.0000	0.0000	0.0000	0.0000	0.0000
	-32.1	-22.1	-23.1	-21	-24.6
Panel PP- ST.	0.0000	0.0000	0.0000	0.0000	0.0000
	-54.9	-40.9	-37.5	-41.2	-36.8
Panel ADF- ST.	0.0000	0.0000	0.0000	0.0000	0.0000
	-65.4	-45.2	-47.8	-40	-53.2
Between Dimensions					
Group rho- ST.	0.0000	0.0000	0.0000	0.0000	0.0000
	-24.7	-17.3	-17.6	-16.6	-18.2
Group PP- ST.	0.0000	0.0000	0.0000	0.0000	0.0000
	-61.3	-44	-42.6	-42.9	-43.8
Group ADF- ST.	0.0000	0.0000	0.0000	0.0000	0.0000
	-67.3	-46.8	-48.3	-38	-56.4

*** determine significance at 1%.

The values in parentheses show t-stat values.

Panel 1: All oil exporting-countries

Panel 2: Rentier oil-exporting countries

Panel 3: Non-rentier oil-exporting countries

Panel 4: Islamic oil-exporting countries

Panel 5: Non-Islamic oil-exporting countries

6.5.3 Causality Tests

When two variables are cointegrated, one direction of causality relationship at least is expected between these variables (Fugarolas Álvarez-Ude et al., 2007). After confirming that the variables FDI and GDP series in OECs for the period from 1984-2013 are co-integrated, the next step would be testing for causality in the relationship between these two variables in each panel. The Dumitrescu and Hurlin panel causality (DH) test (Dumitrescu and Hurlin, 2012) is applied for the 5 panels in two directions, from FDI towards GDP first, and from GDP towards FDI second. The first null hypothesis is that FDI does not cause GDP in OECs in the long run, and the alternative hypothesis is that FDI does cause GDP in oil-exporting countries. The second null hypothesis is that GDP does not cause FDI in OECs in the long-run, and the alternative is that GDP does cause FDI.

In terms of the causal relationship between FDI and GDP, table 6-5 shows that the P value of the DH panel causality test displays insignificant values in panels 1, 2, and 3, and significant values in panels 3 and 5 only. This implies that FDI does not cause economic growth in all oil-exporting countries, rentier oil-exporting countries, and

Islamic oil-exporting countries, while it does cause economic growth only in non-rentier and non-Islamic oil-exporting countries.

Table 6-5: Dumitrescu and Hurlin (HD) panel causality test FDI → Economic Growth
H0: FDI does not cause economic growth
H1: FDI does cause economic growth

Dep.Var: GDP	Panel 1	Panel 2	Panel 3	Panel 4	Panel 5
P value	0.0644	0.9242	0.0067***	0.1998	0.0002***
T-Stat.	(1.8)	(-0.09)	(2.7)	(-1.2)	(3.6)
Direction	FDI does not cause GDP	FDI does not cause GDP	FDI→GDP	FDI does not cause GDP	FDI→GDP

*** determine significance at 1%.

The values in parentheses show t-stat values.

Panel 1: All oil exporting-countries

Panel 2: Rentier oil-exporting countries

Panel 3: Non-rentier oil-exporting countries

Panel 4: Islamic oil-exporting countries

Panel 5: Non-Islamic oil-exporting countries

The other direction of causality in the relationship is the impact of economic growth on FDI in oil-exporting countries. Table 6-6 shows that the P value is significant over the 5 panels at the 1% level. This signifies that economic growth does cause FDI in all categories of oil-exporting countries.

Table 6-6: Dumitrescu and Hurlin (DH) panel causality test Economic Growth → FDI
H0: FDI does not cause economic growth
H1: FDI does cause economic growth

Dep.Var: FDI	Panel 1	Panel 2	Panel 3	Panel 4	Panel 5
P value	0.0000***	0.0002***	0.0090***	0.0036***	0.0005***
T-Stat.	10.9	3.7	2.6	2.9	3.4
Direction	GDP → FDI				

*** determine significance at 1%.

The values in parentheses show t-stat values.

Panel 1: All oil exporting-countries

Panel 2: Rentier oil-exporting countries

Panel 3: Non-rentier oil-exporting countries

Panel 4: Islamic oil-exporting countries

Panel 5: Non-Islamic oil-exporting countries

6.6 Results Consistency

In order to confirm the results of the Dumitrescu and Hurlin (DH) panel causality test between FDI and economic growth in oil-exporting countries, per capita GDP is used as a proxy of economic growth instead of GDP. Per capita GDP is measured in current U.S. dollars, and the source of the data is the World Development Indicators (World Bank), while the variable FDI is tested using the same proxy as in the original test; that is, inward FDI inflows in US Dollars at current prices and current exchange

rates in millions, and the source for this data is UNCTADstat. Following the same steps as in the original test, the Augmented Dickey–Fuller (ADF) (Dickey and Fuller (1979) and Phillips-Perron (PP) (Phillips and Perron (1988) tests are used to check for stationarity with the new variable (per capita GDP). The ADF and PP causality tests show that the variable per capita GDP is not stationary (there is a unit root) in level I(0) over the 5 panels. Thus, the variable is transformed into its first difference and retested using the same tests, and the results show that this time it is reported as stationary, see table 6-7.

Table 6-7: Unit root tests Augmented Dickey–Fuller (ADF) and Phillips and Perron (PP) tests

Variables	Test	Panel 1	Panel 2	Panel 3	Panel 4	Panel 5
Log(per capita GDP)	ADF	1.0000	1.0000	0.9996	1.0000	1.0000
		(28.4)	(9.4)	(19)	(9.9)	(18.5)
	PP	1.0000	1.0000	0.9999	1.0000	1.0000
		(26.1)	(9.3)	(16.7)	(10)	(16)
1stDiffLog (per capita GDP)	ADF	0.0000	0.0000	0.0000	0.0000	0.0000
		(635.2)	(313.9)	(321.2)	(290.5)	(344.6)
	PP	0.0000	0.0000	0.0000	0.0000	0.0000
		(660)	(344.5)	(315.5)	(327)	(333)

*** determine significance at 1%.
 The values in parentheses show t-stat values.
 Panel 1: All oil exporting-countries
 Panel 2: Rentier oil-exporting countries
 Panel 3: Non-rentier oil-exporting countries
 Panel 4: Islamic oil-exporting countries
 Panel 5: Non-Islamic oil-exporting countries

Pedroni’s panel cointegration test is also performed for the five panels in order to test whether FDI and per capita GDP are cointegrated (whether there is a long-run relationship between the two variables). The results show that the majority of tests are significant; the only exception is found within panel 1 (all oil-exporting countries, where the Panel V statistics are found to be insignificant, while all other tests are significant. That means that the variables FDI and per capita GDP are cointegrated, in the sense that there is a long-run relationship between them, which means at least one direction of causality between FDI and per capita GDP is expected accordingly, see table 6-8.

Table 6-8: Pedroni Panel Cointegration Test

	Panel 1	Panel 2	Panel 3	Panel 4	Panel 5
Within Dimension					
Panel v-ST.	0.2566	0.0000	0.0000	0.0000	0.0000
	0.65	10.8	12.7	10.3	13.3
Panel rho- ST.	0.0000	0.0000	0.0000	0.0000	0.0000
	-11.9	-22.3	-22.9	-21.3	-24
Panel PP- ST.	0.0000	0.0000	0.0000	0.0000	0.0000
	-10.5	-37.8	-35.9	-37	-36.7
Panel ADF- ST.	0.0000	0.0000	0.0000	0.0000	0.0000
	-8.7	-38.4	-48.7	-36.4	-49.7
Between Dimension					
Group rho- ST.	0.0000	0.0000	0.0000	0.0000	0.0000
	-6.4	-17.2	-17.3	-16.6	-17.9
Group PP- ST.	0.0000	0.0000	0.0000	0.0000	0.0000
	-8.9	-42.1	-41.8	-40.8	-43.1
Group ADF- ST.	0.0000	0.0000	0.0000	0.0000	0.0000
	-6.6	-40.4	-52.4	-38.9	-53.3

*** determine significance at 1%.

The values in parentheses show t-stat values.

Panel 1: All oil exporting-countries

Panel 2: Rentier oil-exporting countries

Panel 3: Non-rentier oil-exporting countries

Panel 4: Islamic oil-exporting countries

Panel 5: Non-Islamic oil-exporting countries

The next step in causality test procedures is testing for direction of causality between the variables. Table 6-9 shows the results of the Dumitrescu and Hurlin (DH) causality test, and the p values display identical results; these indicate insignificance within panels 1, 2, and 4, and significance at the 1% level in both panels 3 and 5. This confirms the original findings, that amongst the five panels, FDI causes economic growth only in non-rentier and non-Islamic oil exporting countries.

Table 6-9: DH Panel Causality Test FDI → Economic Growth (per capita GDP)

H0: FDI does not cause economic growth

H1: FDI does cause economic growth

	Panel 1	Panel 2	Panel 3	Panel 4	Panel 5
P value	0.1237	0.7005	0.0033***	0.7488	0.0153**
T-Stat.	1.53956	0.38458	2.93915	-0.32018	2.42523
Direction	FDI does not cause GDP	FDI does not cause GDP	FDI → GDP	FDI does not cause GDP	FDI → GDP

*** determine significance at 1%.

** determine significance at 5%.

The values in parentheses show t-stat values.

Panel 1: All oil exporting-countries

Panel 2: Rentier oil-exporting countries

Panel 3: Non-rentier oil-exporting countries

Panel 4: Islamic oil-exporting countries

Panel 5: Non-Islamic oil-exporting countries

The other direction of causality (from per capita GDP towards FDI) is also confirmed, but with a slight difference in the results obtained compared to the original test. Table 6-10 shows the DH causality test; the P value this time displays significant signs for 4 out of the 5 panels, indicating that economic growth (measured by per capita GDP) causes FDI in all oil-exporting countries, rentier oil-exporting countries, Islamic oil-exporting countries, and non-Islamic oil-exporting countries. The only exception is observed within panel 3, where the P value is found to be insignificant, which is different to what was found in the original test.

Table 6-10: DH Panel Causality Test Economic Growth (per capita GDP) → FDI
H0: FDI does not cause economic growth
H1: FDI does cause economic growth

	Panel 1	Panel 2	Panel 3	Panel 4	Panel 5
P value	0.0000***	0.0005***	0.0776	0.0039***	0.0003***
T-Stat.	10.5497	3.45953	1.76496	2.88218	3.61222
Direction	GDP → FDI	GDP → FDI	GDP does not cause FDI	GDP → FDI	GDP → FDI

*** determine significance at 1%.

The values in parentheses show t-stat values.

Panel 1: All oil exporting-countries

Panel 2: Rentier oil-exporting countries

Panel 3: Non-rentier oil-exporting countries

Panel 4: Islamic oil-exporting countries

Panel 5: Non-Islamic oil-exporting countries

6.7 Discussion

Overall, the Dumitrescu and Hurlin panel causality (DH) test Dumitrescu and Hurlin (2012) shows that FDI causes economic growth in 2 out of 3 panels. The P value is found to be significant at the 1% level in both panels 3 and 5, indicating that FDI contributes to economic growth only in panel 3 (non-rentier oil-exporting countries) and panel 5 (non-Islamic oil-exporting countries). The other panels display different significance levels; the P value is found to be insignificant in panels 1, 2, and 4, indicating that FDI does not cause economic growth in panel 1 (all oil-exporting countries), panel 2 (rentier oil-exporting countries), and panel 4 (Islamic oil-exporting countries). These findings clearly signify two important issues. The first issue is that less oil-dependent countries acquire economic growth benefits from FDI to a greater extent than those countries which rely extensively on oil. This is in the sense that, to the degree to which an oil-exporting country relies on oil, it faces the possibility of losing FDI-led growth opportunities. The second issue is that applying civil and Islamic laws in oil exporting countries increases the possibility of losing FDI-led growth benefits.

Within panels 3 and 5, the positive impact of FDI on a country's economic growth, both panels display significant P value as shown in table 6-5, is consistent with both the Neoclassical Growth Theory and the New Growth Model, which suggests that FDI positively contributes to countries' economic growth through capital accumulation, technology transfer, and employment skills (Solow, 1956, Romer, 1986, Lucas, 1988, Swan, 1956). The findings are also consistent with related empirical literature regarding the positive impact of FDI on host countries' economic growth (Borensztein et al., 1998, De Mello, 1999). Further, it is expected that a positive impact of FDI will be observed upon economic growth in non-rentier oil exporting countries for two reasons. The first reason is that these countries are less oil-dependent and they have greater diversity in their economic sectors compared with panel 2 (rentier oil-exporting countries). Thus, FDI in these countries has more options within countries' sectors, and the accumulated effects of FDI appear in the form of more/new goods and services in these economies, and thereby economic growth. In addition, as a result of a lesser role being played by oil in this group of countries, their institutions are of a relatively better quality compared with those in rentier countries; this eventually attracts more FDI and more FDI-led growth opportunities. Similarly, it is expected that a positive impact will be observed of FDI upon a country's economic growth within non-Islamic oil-exporting countries since they apply common law, and there are no religious limitations affecting economic activities in their economies compared with Islamic oil-exporting countries. The most important point in this regard concerns protection of investments and property rights. Non-Islamic oil-exporting countries, through adopting common laws, offer better protections for foreign investors and this helps to promote the attraction of more FDI and the achieving of higher growth rates.

It is found that FDI does not cause economic growth in panel 2 (rentier oil-exporting countries) and panel 5 (Islamic oil-exporting countries). The oil sector dominates most economic activities in rentier countries and constitutes, in one way or another, a large portion of GDP in these countries. In addition, the limited capacity and sensitivity of the oil industry means rentier countries have limited opportunities for FDI. Therefore, FDI is not expected to play a role in capital accumulation in rentier countries because these countries already enjoy capital accumulation via oil revenues, and thereby they lose the opportunity of gaining economic growth effects through the FDI-capital

accumulation channel. Further, the nature of rentierism in these economies, in terms of lower quality institutions along with special social behaviours such as the tendency to hire foreign employment, keeps their own populations from acquiring new technical and managerial skills, so they lose out on FDI-led growth opportunities via the enhancing of employment skills channel. Acquiring new technologies via FDI is another channel which is expected to enhance economic growth in host countries. The impact of this channel also seems to be limited and weak in panel 2 (rentier oil-exporting countries). The majority of FDI into countries targets the oil sector, which is widely known as a limited-opportunities and low-intensity employment sector. Thus, the impact of technology will remain limited and thereby limited economic growth effects are expected. The relationship between FDI and economic growth in panel 5 (Islamic oil-exporting countries) can be explained through the same context, of the relationship between these variables in panel 4 (Non-Islamic oil-exporting countries), but from the opposite perspective. Applying Islamic or civil laws has an adverse impact on attracting FDI; these types of laws do not offer as much protection for FDI projects as those common-law countries. In addition, Islamic countries, due to some religious regulations, impose special rules, mainly within their banking systems, which affect the attraction of FDI, and thereby these countries lose FDI-led growth opportunities.

The other aspect of causal relationships between FDI and economic growth is the impact of economic growth upon FDI in oil-exporting countries. The Dumitrescu and Hurlin panel causality (DH) test (Dumitrescu and Hurlin, 2012) shows that economic growth causes FDI in oil-exporting countries. Over all the 5 panels, the P value is found to be significant at the 1% level, indicating that there is a positive economic impact on the attraction of FDI in all oil-exporting countries categories. Therefore, it can be said that the FDI which is attracted into OECs is growth-driven FDI, in the sense that economic growth plays an influential role in determining FDI into OECs regardless of oil-dependency levels or the religious identity.

6.8 Conclusion

This chapter applies a different methodology to that used in chapters 4 and 5. It applies a heterogeneous panel causality test for the purpose of testing for a causal relationship between FDI and economic growth in oil-exporting countries, using Dumitrescu and Hurlin's (2012) causality test. This chapter aims to answer two research questions. The first question is: Does FDI cause economic growth in oil-exporting countries?. After applying Dumitrescu and Hurlin's (DH) causality test, the results reveal that the answer to the first question is composed of two parts; both No and Yes. The 'No' part can be expressed as: No, since FDI does not cause economic growth when considering the whole sample, panel 1 (all oil-exporting countries), panel 2 (rentier oil-exporting countries), and panel 5 (Islamic oil-exporting countries). Meanwhile, the 'Yes' part comprises: Yes, FDI does cause economic growth in panels 3 and 5 (non-rentier and non-Islamic oil-exporting countries). Both high oil-dependence levels and the Islamic identity are found to have adverse effects, preventing oil-exporting countries from gaining FDI-led growth benefits. The second question was: Does economic growth cause FDI in oil-exporting countries?. The second part of Dumitrescu and Hurlin's (DH) causality test provides the answer to this question. The answer to that question is: yes, economic growth causes FDI over all the 5 panels, where a strong causal relationship is found between the two variables, running from economic growth towards FDI. A results consistency check is conducted using another proxy for economic growth, which is GDP per capita. After following the same steps which were applied in the original test, the results show that the majority of the findings are identical and the causal relationship between FDI and economic growth in oil-exporting countries is confirmed.

Chapter 7

Conclusions and Policy Implications

7.1 Introduction

The thesis has provided a comprehensive empirical insight into the determinants of FDI in oil-exporting countries as well as on the causal relationship between FDI and economic growth in that group of countries. It has examined these two factors over five panels in order to provide evidence on the influence of a country's oil-dependence level and its religious identity on these two factors.

The thesis is based on the Eclectic Theory and the Rentier State Theory as a theoretical background for its aim to examine the determinants of FDI, while it is based on the Neoclassical growth Theory and the New Growth Model for its aim to examine the causal relationship between FDI and economic growth in oil-exporting countries.

The thesis applied a quantitative approach using secondary data from the benchmark sources of FDI and other variables such as UNCTAD, WB, EIA, and the ICRG. The data sample for the thesis covers 44 oil-exporting and the time span is 30 years from 1984-2013. The Pooled Mean Group (PMG) estimator model and Dumitrescu and Hurlin's causality test are used to examine the determinants and the causality, respectively.

The thesis contributes to existing literature on FDI determinants since it is the first to examining this subject in oil-exporting countries, and it is also the first to consider both a country's oil-dependence level and its religious identity within the analysis. The most important findings of the thesis can be summarised in two points. The first point is that the openness and composite risk variables are the most important overall determinants for FDI in oil-exporting countries, and the variable law & order is the most important institutional and political risk variable for FDI in their economies. The second point is that FDI does not contribute to economic growth in oil-exporting countries in spite of the importance of that variable as a locational advantage in attracting FDI in oil-exporting countries. The findings of the thesis could help both policymakers and

potential investors in oil-exporting countries to build a wider view and to refine policies regarding different aspects covered in the thesis.

The overall objective of this thesis was to examine the long-run determinants of FDI in oil-exporting countries, along with the causal relationship between FDI and economic growth in that group of countries. The thesis also has a number of specific objectives, which are:

- i. Investigating the determinants of FDI in oil-exporting countries.
- ii. Testing the arguments of the Eclectic Paradigm within oil-exporting countries in the long-run.
- iii. Investigating the difference in the role played by each potential determinant over five categories of oil-exporting countries; all oil-exporting countries, rentier and non-rentier, and Islamic and non-Islamic oil-exporting countries.
- iv. Determining the impact of FDI on economic growth in oil-exporting countries, and over the same five categories mentioned above.
- v. Determining the impact of economic growth on FDI in oil-exporting countries, and over the same five categories mentioned above.
- vi. Suggesting policy implications according to research findings which can be useful for bodies involved in FDI in oil-exporting countries or other interested parties, policy makers in oil-exporting countries, investors, and international institutions in particular.

To achieve these objectives, the thesis is structured in seven chapters. The first chapter, the introduction, presents the background of the research in terms of research motivations, questions, objectives, contribution, methodology, research key terms and the structure of the thesis.

The second chapter describes a general overview with respect to issues relating to FDI and oil-exporting countries. The global FDI trends as well as their geographical and sectoral distribution were described historically, along with the main indicators

pertaining to oil-exporting countries in terms of natural resources, business environment, and their performance in attracting FDI.

The third chapter provides a literature review covering the scope of the thesis. It has demonstrated the historical emergence of FDI, FDI definitions, and FDI types. It has also covered aspects on the main theories of FDI and the impact of FDI on host countries' economies. It ends with a description of the main characteristics of oil-exporting countries with a special focus on rentier state theory and the impact of Dutch disease and resource curse on these economies.

The fourth chapter empirically examines the long-run determinants of FDI in oil-exporting countries applying the pooled mean group model (PMG). It tested FDI in oil-exporting countries against 8 potential determinants: oil reserves, Dutch disease, exchange rate, inflation rate, per capita GDP, oil price, openness, and composite risk. The consistency of the results is checked utilising the Hausman test in a comparison with estimations obtained from the mean group model (MG).

The fifth chapter represents an extensive empirical examination of the determinants of FDI in oil-exporting countries examined in the fourth chapter. It focuses on the impact of the political and institutional factors on FDI inflows in oil-exporting countries considering 12 political and institutional risk variables as potential determinants. The 12 variables were: government stability, internal conflict, external conflict, military in politics, religion in politics, democratic accountability, socioeconomic conditions, ethnic tensions, corruption, law & order, bureaucracy quality, and investment profile. The empirical results of this chapter are also checked in terms of their consistency, applying the World Bank's Worldwide Governance Indicators (WGI) which consist of 6 variables: voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption

The sixth chapter tested for a causal relationship between FDI and economic growth in oil exporting countries. Both directions of causality between FDI and economic growth are tested in this chapter, from FDI towards economic growth and from economic growth towards FDI. A new methodology is applied in this chapter,

which is the Dumitrescu and Hurlin (DH) causality test. A results consistency check is also applied in this chapter utilising different proxies for FDI and economic growth.

Finally, this chapter, the seventh chapter, provides a conclusion to the whole thesis based on the results obtained in the empirical chapters. It also identifies policy implications which can be drawn from the thesis, and it finally diagnoses the limitations of the thesis, providing suggestions for future work in the area.

7.2 Determinants of FDI in Oil-Exporting Countries

In addition to what has been found in the related literature on the most common determinants of FDI such as inflation, exchange rate, per capita GDP, openness, and risk, this thesis provides evidence on a number of determinants that have not been examined or tested extensively within the literature. It considers testing a number of determinants mostly related to the economic, political and social patterns of OECs such as Dutch disease, oil reserves, and oil price. The findings on the overall determinants of FDI in OECs suggest a number of important issues. The first notable result is that both openness and composite risk variables seem to be the most important for MNCs as locational determinants of FDI in oil-exporting countries, regardless of countries' oil-dependence levels or religious identity. This indicates that trade liberalisation and composite risk are very important factors in attracting FDI in oil-exporting countries. However, the significance level of these variables was slightly different among the five panels. For example, openness to trade is a less important variable in non-rentier countries compared with the other four panels. Similarly, the composite risk variable is more important when the country is categorised as rentier and Islamic, which means that MNCs are aware of composite risk when they intend to invest in rentier oil-exporting countries as well as Islamic oil-exporting countries, more so than when investing in non-rentier and non-Islamic oil-exporting countries.

Oil reserves are important for foreign investors in oil-exporting countries. The only exception is found within rentier oil-exporting countries, as oil reserves are insignificant variable for explaining FDI in the long-run. The impact of oil reserves upon FDI in panels 1, 3, 4, and 5 is consistent with the Eclectic Theory, which suggests that natural resources are an important locational factor for MNCs, but their role in panel 2, rentier oil-exporting countries, contradicts that theory but is consistent with the

Rentier State Theory, which suggests that relying on oil in substantial and regular bases weakens non-oil sectors' growth and the quality of institutions, thereby making the country less attractive for FDI.

The Dutch disease impacts negatively upon FDI inflows in oil-exporting countries. The only exception is within Islamic oil-exporting countries, as Dutch disease is positively associated with FDI inflows in the long-run in that group of countries. This conclusion signifies that despite the negative potential impacts of Dutch disease on a country's non-oil sector growth and its institutional quality, the rentierism economic type, to a certain degree, along with the Islamic identity of Islamic oil-exporting countries, partly explains FDI inflows into those countries in the long-run. Another important difference in the findings is regarding the impact of exchange rate on FDI. Within three panels, all oil-exporting countries, non-rentier oil-exporting countries, and non-Islamic oil-exporting countries, countries with cheap currencies attract more FDI in the long run. However, having a cheaper currency does not have a similar impact upon FDI in rentier and Islamic oil-exporting countries, since the average exchange rate in rentier countries remains above the required level to attract export-seeking FDI.

The inflation rate variable have adverse impacts on FDI in four panels, while having a positive impact in rentier oil-exporting countries only. This can be rationalised by the nature of inflation in that group, as it is a combination of local and international inflation. Further, the inflation rate in rentier countries is a sign of the level of expansion in government spending in these countries, which has a positive impact on a country's business environment.

The per capita GDP is statistically significant with a negative sign in four groups, and insignificant within Islamic oil-exporting countries, providing evidence that foreign companies do not care about this variable, except where host countries are Islamic.

A higher oil price promotes FDI in four panels of OECs in the long-run, exempt in Islamic oil-exporting countries, where it is an insignificant variable for explaining FDI in the long-run.

7.3 The Impact of Political and Institutional Risk on FDI in Oil-Exporting Countries

Detailed testing of the components of the variable composite risk confirms the importance of the majority of the political and institutional components of this variable in attracting foreign investment into oil-exporting countries. This is in line with what has been reported in chapter 4 regarding the importance of the variable composite risk for FDI inflows in OECs over the 5 panels.

Within panel 1, all oil exporting countries, a high score (low risk) of the variables government stability, internal and external conflicts, religion in politics, democratic accountability, socioeconomic conditions, ethnic tension, law & order, and investment profile enhances a country's attractiveness. That means that under stable and low political and institutional risk, foreign investors can be confident in building-up long-run investment strategies in oil-exporting countries. However, a high score for the corruption variable (lower risk of corruption) have a negative impact upon FDI inflows into oil-exporting countries. That means foreign investors prefer a certain level of corruption in oil-exporting countries' institutions to speed up their transactions or to acquire contracts from governments when they start considering investing in oil-exporting countries. This is attributed to the nature of the economic, social, and political characteristics of oil-exporting countries, especially with regard to the dominant role of elites and politicians in economic activities in this group of countries.

The comparative estimations of the PMG model between rentier and non-rentier OECs reveal some differences regarding the role played by the political and institutional components. Within rentier oil-exporting countries, a lower risk (a high score) in the variables government stability, religion in politics, ethnic tensions, corruption, law and order, bureaucracy quality, and investment profile encourages FDI inflows into this group of countries. These findings are expected, since high risk among these variables reflects a country's instability and affects long-run investment strategies. In contrast, low risk (a high score) among the variables external conflict and democratic accountability is surprisingly found to negatively affect FDI inflows into rentier oil-exporting countries. The negative association between the variable democratic accountability (a low risk) and FDI is explained by the fact that most rentier OECs are

developing countries and the majority of them geographically lie in regions of conflict or have suffered from conflicts over their history. Thus, democracy may lead to a total change of political regime and FDI projects/commitments can be affected accordingly. In addition, foreign investors, due to the dominant role played by elites in economic activities in this group of countries, often establish their investments, or obtaining of contracts, with the assistance/power of the existing elites. Thus, changes in the political system often lead to changes in the leading powers within the country as well, and FDI projects may lose important support. With respect to the relationship between external conflict and FDI as a low risk of external conflict, this is found to have a negative impact on FDI inflows. This result contradicts the theory as well as the mass of empirical findings in the literature since external conflicts are widely known as the most dangerous factor for FDI. However, this result is attributed to the form of the ICRG's measurement for external conflict and it does not reflect the traditional concept of external conflict. Alternatively, the Uppsala Conflict Data Program's (UCDP) war variable is tested and found to be significant, with a negative impact on FDI in all panels.

Within non-rentier oil-exporting countries, FDI inflows are significantly determined by a low risk among the variables internal conflict, external conflict, religion in politics, socioeconomic conditions, ethnic tensions, and law and order. The surprising issue within this group is regarding the relationships between bureaucracy quality and FDI, and corruption and FDI. A low risk of bureaucracy (a high score) has a negative impact on FDI inflows in non-rentier OECs in the long-run. Similarly, a low level of corruption in non-rentier OECs shows a negative sign in relation to FDI in the long-run despite the variable being insignificant. Severe competition, along with investors' desire to speed-up their transactions in non-rentier oil-exporting countries, are the main reasons for the negative relationship between the variables corruption and bureaucracy quality and FDI in the long-run.

Testing the institutional and political variables in Islamic and non-Islamic OECs produces a number of differences as well. Within Islamic oil-exporting countries, a low risk (a high score) for the variables government stability, law and order, bureaucracy quality, and investment profile promotes the attracting of FDI inflows in the long-run, while a low risk (a higher score) among the variables military in politics, socioeconomic

conditions and corruption is found to hinder FDI inflows. Foreign investors view politicians' interventions in politics within Islamic OECs as a way of enhancing their political stability and maintaining the relationships which have been established with governmental bureaucrats. It also provides them with guarantees as to the validity of the investment contracts that they adhere to. Corruption in this group is also found to have a positive relationship with FDI as has been found within panels 1 and 3, with similar justification. Within non-Islamic oil-exporting countries, FDI is determined by low risk among the variables internal conflict, external conflict, military in politics, religion in politics, democratic accountability, socioeconomic conditions, ethnic tensions, corruption, law and order, and investment profile, while a low risk for the variable bureaucracy quality (a high score) is found to influence FDI inflows negatively in this group of countries. Finally, law and order is the only variable amongst the 12 institutional and political risk variables for which a low risk is found to have a positive impact on FDI inflows in OECs over all panels. In this sense, the variable is the most important factor regardless of oil-dependence level or the religious identity of oil-exporting countries.

7.4 FDI and Economic Growth in Oil-Exporting Countries

The causal relationship between FDI and economic growth is also examined in OECs over the same 5 panels. The impact of FDI on economic growth in OECs is first tested and it is found that FDI causes economic growth only in 2 out of 5 panels, namely non-rentier OECs and non-Islamic oil-exporting countries. The positive association between FDI inflows and economic growth in non-rentier and non-Islamic OECs is consistent with both the Neoclassical Growth Theory and the New Growth Model (Solow, 1956, Romer, 1986, Lucas, 1988, Swan, 1956). FDI in these two panels is therefore expected to contribute to a country's economic growth via capital accumulation, technology transfer, and employment skills. In contrast, the social, economic and political conditions of rentier OECs and the application of Islamic/civil laws within Islamic OECs leads these countries to lose out on FDI-led growth opportunities. With regard to the impact of economic growth on FDI inflows, the thesis finds that economic growth in OECs leads to the attraction of more FDI inflows. This finding applies to all of the 5 panels, indicating the importance of a country's economic growth for FDI inflows, as a locational factor affecting FDI.

7.5 Policy Implications

The findings of this thesis reveal important factors that significantly affect FDI inflows into oil-exporting countries, and also point out the form of the relationship between FDI and economic growth in that group of countries. Having tested the long-run overall determinants of FDI in oil-exporting countries, these countries should work on building well-planned, applicable, and dynamic strategies to diversify their economies in a way that reduces oil-dependence levels in order to overcome the impact of the Dutch disease and resources curse on their economies. This also applies to planning public budgets in such a way that they give wider roles to the private sector, especially in providing infrastructure projects and services. Such a policy can help to maintain development plans during low oil price periods; the issue which faced OECs and affected all governmental plans severely during recent years from the end of 2014. In light of what has been reported in chapter 6 of this thesis regarding the positive impact of economic growth on FDI inflows in OECs over the 5 tested panels, it is necessary to recall that economic growth in OECs is strongly connected with the global oil price. A high oil price reflects more economic growth opportunities and therefore more FDI. Thus, oil exporting countries are more likely to suffer as a result of oil price drops; therefore, the issue of economic diversification becomes more crucial, and FDI projects may be the alternative solution for OECs in all of their forms, especially private enterprise, public-private partnerships, and Build-Operate-Transfer agreements.

Further, a number of steps are suggested for policymakers in OECs in order to attract different types of FDI. For the objective of attracting export-seeking FDI, OECs should work on: (a) controlling a balanced exchange rate to encourage export-seeking FDI, and this, in fact, is the most difficult challenge facing macroeconomic policymakers in OECs due to the effect of oil revenues, especially in rentier oil-exporting countries; (b) OECs should establish monetary policies that maintain acceptable inflation rates in order to provide foreign investors with an economically-stable environment in the long-run; (c) promoting and attracting export-motivated FDI, especially in midstream and downstream oil industries such as petrochemicals, refineries and transportation; this can be done by issuing new laws and regulations which give more privileges to foreign investors to encourage them to invest in these sectors. In light of the results displayed by the variables openness and composite risk,

both are positively associated with more FDI inflows in OECs over the 5 panels. It can be concluded that OECs should place emphasis upon the openness and composite risk factors. Policymakers in OECs should work on building smooth, effective, and dynamic trade channels with the global economy and they should understand that these channels are essential for attracting FDI into their countries. Working on the components of the political and institutional elements of the variable composite risk is also essential for attracting more FDI into oil-exporting countries.

With respect to the political and institutional risk variables, OECs should work on reducing all types of risk affecting the business environment. Indeed, all of the 12 political and institutional risk variables under examination are important in one way or another, but the variables which have been found to be more important over more than 3 panels are essential to consider. OECs should improve their performance with respect to the variables government stability, internal conflict, external conflict, military in politics, religion in politics, democratic accountability, socioeconomic conditions, ethnic tensions, corruption, bureaucracy quality, and investment profile. More specifically, OECs should focus more on the law & order variable, which is found to be significant with a positive impact on FDI inflows over the 5 panels. Thus, policymakers in OECs should first focus on building a strong and impartial legal system which can help to provide investors with additional assurance; building such a system can help in improving other institutional factors as well. Finally, providing data transparency and making available the country's economic database are important for investors, while the adoption of an "open window" policy by investment promotion agencies to facilitate and speed up investors' transactions should be considered. For companies which have not invested in OECs before or which have future plans to so invest, it is worth reminding them that oil exporting countries have received considerable amounts as a share of FDI inflows in spite of some economic, political and institutional risk. According to the United Nations Conference on Trade and Development (UNCTAD), OECs have attracted 31% of global FDI inflows over the period from 1970-2014 (UNCTADstat, 2015). That portion of FDI inflows indicates two important points. It first indicates that OECs have potential FDI opportunities and attractive locational advantages. Secondly, it indicates that OECs have made good improvements in their business environments and that some of them have genuinely established a good quality

business-friendly atmosphere. Thus, foreign companies are encouraged to think of investing in OECs due to their economic potential, not in oil-industry only, but also within oil-related activities such as transportation and financial services. Another important recommendation for investors can be drawn from the latest oil price drop which began in 2014. Some oil-exporting countries, rentier countries in particular, have set broad and ambitious expenditure plans due to high oil revenue expectations before the drop in the year 2014, including commitments to new construction such as new extracting projects, refineries, and infrastructure. Lower oil prices created serious challenges for their compliance with these financial undertakings. Thus, huge investment opportunities are now open in such countries if foreign investors succeed in offering mutually agreeable FDI proposals.

7.6 Limitations of The Thesis

The researcher understands that there are a number of limitations due to the research methodology chosen, the research questions, and the data sample. Firstly, where the thesis is built on two theories, the Rentier State Theory and the Eclectic Theory, it was crucial to focus on the long-run relationship between FDI and the explanatory variables only and to neglect the short-run determinants. That is simply because the Rentier State Theory suggests that rentier countries are: *“those countries that receive, on a regular basis, substantial amounts of external rent”* (Mahdavy, 1970:428). The “regular bases” term here refers to the long-run relationship and according to macroeconomic indicators, the Dutch disease and resource curse influences are supposed to affect a country’s economy and institutional quality only in the long-run. Thus, it was necessary to focus on the long-run determinants of FDI in oil-exporting countries. However, neglecting the short-run determinants can be considered as one of the research's limitations. Secondly, excluding some OECs from the analysis represents another research limitation. Due to limited data availability, the thesis excluded Azerbaijan, Kazakhstan, the Russian Federation and Turkmenistan⁵⁹ from the oil-exporting sample, thus missing a considerable number of observations which may have had an influence on the empirical results. Thirdly, it was important to compare the empirical results for the determinants of FDI in OECs with Non-oil-exporting countries;

⁵⁹ These countries were parts of the Former Soviet Union, and gained their independence in 1991. Thus, no data is available for their economies from 1984-1991, and some of them until 1995.

the problem with this, however, was due to the chosen model and variables. The thesis tested some variables which do not exist in non-oil-exporting countries such as Dutch Disease and oil reserves. Thus, the comparison is invalid and cannot be done. Fourthly, the absence of an acceptable alternative measurement for the political and institutional risk variables is another research limitation. The ICRG's institutional and political risk variable is the only available dataset that measures institutional and political risk in detail and is the only source that provides data from 1984 onward.

7.7 Future Work

The literature on FDI is rich in research which examines the determinants of FDI empirically. However, a limited amount of research focuses on examining these determinants in the long-run, and much fewer consider the impact of the Dutch disease/resource curse on FDI. In terms of the research examining the determinants of FDI in oil-exporting countries, it could be said that this thesis is the first to examine FDI determinants in this group of countries. Therefore, it is expected that due to the research limitations stated above, the thesis does not cover all related issues regarding the long-run determinants of FDI in oil-exporting countries. Accordingly, there is the potential for future work on the long-run determinants of FDI in oil-exporting countries. Firstly, estimating longer series, including more countries, testing alternative macroeconomic, institutional and political risk variables could help in developing a wider and more accurate vision for the long-run determinants of FDI in oil-exporting countries. Secondly, estimating the long-run FDI determinants in individual countries can also help in confirming the results reported by this thesis, and this should be in time series analysis form. Thirdly, the sectoral distribution of FDI in OECs can provide further possible examination regarding the causal relationship between FDI and OECs at sectoral level⁶⁰. Fourthly, a qualitative methodology applying firm-level interviews could contribute extensively to the scope of the subject and could strengthen the findings greatly.

⁶⁰ This kind of data is unavailable for the time being.

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Appendices

Appendix 1: Heteroskedasticity Test (overall FDI determinants model)

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
 Ho: Constant variance
 Variables: fitted values of FDI

Panel 1 (All Oil-Exporting Countries)	Panel 2 (Rentier Oil-Exporting Countries)	Panel 3 (Non-rentier Oil-Exporting Countries)	Panel 4 (Islamic Oil-Exporting Countries)	Panel 5 (Non-Islamic Oil-Exporting Countries)
chi2(1) = 7.97 Prob > chi2 = 0.0047	chi2(1) = 45.29 Prob > chi2 = 0.0000	chi2(1) = 6.63 Prob > chi2 = 0.0100	chi2(1) = 0.03 Prob > chi2 = 0.8586	chi2(1) = 21.89 Prob > chi2 = 0.0000

Panel 1: All oil exporting-countries
 Panel 2: Rentier oil-exporting countries
 Panel 3: Non-rentier oil-exporting countries
 Panel 4: Islamic oil-exporting countries
 Panel 5: Non-Islamic oil-exporting countries

Appendix 2: Stationary Test (overall FDI determinants model)
 Fisher Test for panel unit root using an augmented Dickey-Fuller test (0 lags)

Ho: unit root

	Panel 1	Panel 2	Panel 3	Panel 4	Panel 5
FDI	chi2=268.3 Prob=0.0000	chi2 = 86.15 Prob=0.0002	chi2=182.1 Prob= 0.0000	chi2= 89.9 Prob=0.0000	chi2=178.3 Prob=0.0000
Oil Reserves	chi2 =184.6 Prob=0.0000	chi2 = 134.8 Prob=0.0000	chi2= 49.7 Prob = 0.2552	chi2= 133.82 Prob=0.0000	chi2= 50.7 Prob=0.3652
Dutch Disease	chi2 =324.6 Prob=0.0000	chi2 = 182.6 Prob=0.0000	chi2 =124.04 Prob = 0.0000	chi2=98.9 Prob=0.0000	chi2= 225.6 Prob=0.0000
Exchange Rate	chi2 =192.09 Prob=0.0000	chi2 = 67.9 Prob=0.0118	chi2 = 124.1 Prob =0.0000	chi2 = 44.7 Prob=0.2790	chi2 =147.3 Prob=0.0000
Inflation Rate	chi2 =250.4 Prob=0.0000	chi2 =137.7 Prob=0.0000	chi2 = 112.7 Prob =0.0000	chi2 =100.2 Prob=0.0000	chi2 =150.2 Prob=0.0000
Per capita GDP	chi2 = 26.5 Prob=1.0000	chi2 = 9.5 Prob=1.0000	chi2 = 17.2 Prob = 0.9999	chi2= 10.1 Prob=1.0000	chi2= 16.4 Prob=1.0000
Oil Price	chi2 = 5.3 Prob=1.0000	chi2 = 2.66 Prob=1.0000	chi2 = 2.66 Prob = 1.0000	chi2 = 2.4 Prob=1.0000	chi2 = 2.9 Prob=1.0000
Openness	chi2 = 125.3 Prob=0.0055	chi2 = 70.9 Prob=0.0061	chi2 = 54.34 Prob = 0.1364	chi2 = 60.03 Prob=0.0217	chi2=65.2 Prob=0.0490
Composite Risk	chi2 = 79.2 Prob= 0.73	chi2 = 29.2 Prob=0.9575	chi2 = 50.02 Prob = 0.2466	chi2 = 26.7 Prob=0.9459	chi2 = 52.4 Prob=0.3044

Panel 1: All oil exporting-countries

Panel 2: Rentier oil-exporting countries

Panel 3: Non-rentier oil-exporting countries

Panel 4: Islamic oil-exporting countries

Panel 5: Non-Islamic oil-exporting countries

Appendix 3: Stationary Test for non-stationary variables (first differencing) (overall FDI determinants model)
 Fisher Test for panel unit root using an augmented Dickey-Fuller test (0 lags)
 Ho: unit root

	Panel 1	Panel 2	Panel 3	Panel 4	Panel 5
FDI	--	--	--	--	--
Oil Reserves	--	--	chi2=577.1 Prob=0.0000	--	chi2=636.04 Prob=0.0000
Dutch Disease	--	--	--	--	--
Exchange Rate	--	--	--	chi2=332.9 Prob=0.0000	--
Inflation Rate	--	--	--	--	--
Per capita GDP	chi2=919.64 Prob=0.0000	chi2=476.7 Prob=0.0000	chi2=442.8 Prob=0.0000	chi2=449.3 Prob=0.0000	chi2=470.2 Prob=0.0000
Oil Price	chi2=1222.02 Prob=0.0000	chi2=611.01 Prob=0.0000	chi2=611.01 Prob=0.0000	chi2=555.4 Prob=0.0000	chi2= 666.5 Prob=0.0000
Openness	--	--	chi2=558.6 Prob=0.0000	--	--
Composite Risk	chi2= 778.5 Prob=0.0000	chi2=398.3 Prob=0.0000	chi2=380.1 Prob=0.0000	chi2=318.3 Prob=0.0000	chi2=460.1 Prob=0.0000

Panel 1: All oil exporting-countries

Panel 2: Rentier oil-exporting countries

Panel 3: Non-rentier oil-exporting countries

Panel 4: Islamic oil-exporting countries

Panel 5: Non-Islamic oil-exporting countries

Appendix 4:
Multicollinearity Test for Groups 1, 2, 3, 4, and 5 (overall FDI determinants model)

	Panel 1		Panel 2			Panel 3			Panel 4			Panel 5						
Variable	VIF	1/VIF	Variable	VIF	1/VIF	Variable	VIF	1/VIF	Variable	VIF	1/VIF	Variable	VIF	1/VIF				
Per capita GDP	3.22	0.31	Per capita GDP	3.59	0.28	Per capita GDP	3.71	0.27	Composite Risk	3.96	0.25	Per capita GDP	3.31	0.30				
Composite risk	2.99	0.33	Composite Risk	3.16	0.32	Composite Risk	3.13	0.32	Per capita GDP	3.81	0.26	Composite Risk	2.88	0.35				
Dutch Disease	1.44	0.69	Openness	2.1	0.48	Exchange Rate	1.74	0.57	Dutch Disease	1.83	0.55	Openness	1.96	0.51				
Openness	1.44	0.70	Dutch Disease	1.84	0.54	Oil Reserves	1.38	0.72	Exchange Rate	1.68	0.60	Exchange Rate	1.61	0.62				
Oil Reserves	1.39	0.72	Inflation Rate	1.39	0.72	Dutch Disease	1.37	0.73	Oil Reserves	1.55	0.65	Oil Reserves	1.52	0.66				
Exchange Rate	1.39	0.72	Oil Price	1.33	0.75	Openness	1.33	0.75	Openness	1.4	0.71	Inflation Rate	1.46	0.69				
Oil Price	1.22	0.82	Oil Reserves	1.33	0.75	Oil Price	1.24	0.81	Oil Price	1.24	0.81	Exchange Rate	1.43	0.70				
Inflation Rate	1.21	0.83	Exchange Rate	1.18	0.85	Inflation Rate	1.16	0.86	Inflation Rate	1.2	0.83	Oil Price	1.29	0.78				
Mean VIF	1.79		Mean VIF	1.99			Mean VIF	1.88			Mean VIF	2.08			Mean VIF	1.93		

* Non stationary variables are transformed to the first differencing

Panel 1: All oil exporting-countries

Panel 2: Rentier oil-exporting countries

Panel 3: Non-rentier oil-exporting countries

Panel 4: Islamic oil-exporting countries

Panel 5: Non-Islamic oil-exporting countries

Appendix 5: Autocorrelation Test (overall FDI determinants model)

Panel 1 (Obs = 1213)		Panel 2 (Obs = 566)		Panel 3 (Obs = 647)		Panel 4 (obs=507)		Panel 5 (obs=706)	
	res	lagres		res	lagres		res	lagres	
res	1		1			1			1
lagres	0.59	1	0.68		1	0.47		1	0.60

Panel 1: All oil exporting-countries
 Panel 2: Rentier oil-exporting countries
 Panel 3: Non-rentier oil-exporting countries
 Panel 4: Islamic oil-exporting countries
 Panel 5: Non-Islamic oil-exporting countries

Appendix 6 :PMG and MG estimations for Panel 1(all oil-exporting counties)

VARIABLES	PMG Long-run	MG Long-run
EC	-0.427*** (0.0530)	-0.799*** (0.112)
Oil Reserves	0.0200*** (0.00548)	-4.649 (3.424)
Dutch Disease	-0.253** (0.106)	1.029 (3.523)
Exchange Rate	0.0722*** (0.0247)	-81.13 (79.30)
Inflation Rate	-0.111*** (0.0258)	-0.138 (0.391)
Per capita GDP	-0.548*** (0.132)	-2.629 (2.093)
Oil Price	0.460*** (0.0932)	1.881 (1.223)
Openness	0.818*** (0.175)	1.794 (2.870)
Composite Risk	0.0142*** (0.00526)	0.156 (0.101)
Constant	-0.123 (0.0925)	-45.33* (26.80)
Observations	1,182	1,182

Standard errors in parentheses

***Significant at 1% level. **Significant at 5% level. *Significant at 10% level.

Appendix 7: Hausman test MG and PMG for Panel 1(all oil-exporting countries)

Variables	(b) MG	(B) PMG	(b-B) Difference	sqrt(diag(V_b-V_B)) (S.E.)
Oil Reserves	-4.65	0.02	-4.67	8.06
Dutch Disease	1.03	-0.25	1.28	8.29
Exchange Rate	-81.13	0.07	-81.21	186.69
Inflation Rate	-0.14	-0.11	-0.03	0.92
Per capita GDP	-2.63	-0.55	-2.08	4.92
Oil Price	1.88	0.46	1.42	2.88
Openness	1.79	0.82	0.98	6.75
Composite Risk	0.16	0.01	0.14	0.24

b = consistent under Ho and Ha; obtained from xtpmg
 B = inconsistent under Ha, efficient under Ho; obtained from xtpmg
 Test: Ho: difference in coefficients not systematic.
 $\chi^2(1) = (b-B)'[(V_b-V_B)^{-1}](b-B) = 0.00$
 Prob> $\chi^2 = 0.9797$.

Appendix 8: PMG and MG estimations for Panel 2 (rentier oil-exporting countries)

VARIABLES	PMG	MG
	Long-run	Long-run
EC	-0.377***	-0.661***
	-0.0647	-0.194
Oil Reserves	0.171	-5.668
	-0.259	-5.741
Dutch Disease	-1.652***	-1.69
	-0.286	-1.846
Exchange Rate	-0.0504	-161
	-0.0662	-158.6
Inflation Rate	0.384***	-0.269
	-0.0532	-0.741
Per capita GDP	-1.856***	-6.109
	-0.34	-3.77
Oil Price	1.378***	2.631
	-0.246	-1.909
Openness	0.620**	4.438
	-0.255	-5.052
Composite Risk	0.0574***	0.245
	-0.0118	-0.194
Constant	1.664***	-25.38
	-0.274	-37.42
Observations	553	553

Standard errors in parentheses

***Significant at 1% level. **Significant at 5% level. *Significant at 10% level.

Appendix 9: Hausman test MG and PMG for panel 2 (rentier oil-exporting countries)

Variables	(b) MG	(B) PMG	(b-B) Difference	$\sqrt{\text{diag}(V_b - V_B)}$ S.E.
Oil Reserves	(5.67)	0.17	(5.84)	14.62
Dutch Disease	(1.69)	(1.65)	(0.04)	4.69
Exchange Rate	(161.02)	(0.05)	(160.97)	403.96
Inflation Rate	(0.27)	0.38	(0.65)	1.89
Per capita GDP	(6.11)	(1.86)	(4.25)	9.60
Oil Price	2.63	1.38	1.25	4.86
Openness	4.44	0.62	3.82	12.87
Composite Risk	0.25	0.06	0.19	0.49

b = consistent under H_0 and H_a ; obtained from xtpmg

B = inconsistent under H_a , efficient under H_0 ; obtained from xtpmg

Test: H_0 : difference in coefficients not systematic

$\chi^2(1) = (b-B)'[(V_b - V_B)^{-1}](b-B) = 3.33$

Prob> $\chi^2 = 0.9119$

Appendix 10: PMG and MG estimations for panel 3 (non rentier oil-exporting counties)

VARIABLES	PMG Long-run	MG Long-run
EC	-0.577*** (0.0895)	-0.936*** (0.108)
Oil Reserves	0.0246*** (0.00516)	-3.631 (3.868)
Dutch Disease	-0.152 (0.122)	3.748 (6.836)
Exchange Rate	0.0781*** (0.0264)	-1.250 (0.884)
Inflation Rate	-0.133*** (0.0277)	-0.00704 (0.278)
Per capita GDP	-0.200 (0.152)	0.851 (1.603)
Oil Price	0.335*** (0.0993)	1.131 (1.558)
Openness	0.393* (0.235)	-0.851 (2.748)
Composite Risk	0.0113* (0.00624)	0.0666 (0.0590)
Constant	-0.811*** (0.173)	-65.28* (38.76)
Observations	629	629

Standard errors in parentheses

***Significant at 1% level. **Significant at 5% level. *Significant at 10% level.

Appendix 11: Hausman test MG and PMG for panel 3 (non rentier oil-exporting counties)

Variables	(b) MG	(B) PMG	(b-B) Difference	$\sqrt{\text{diag}(V_b - V_B)}$ S.E.
Oil Reserves	(3.63)	0.02	(3.66)	7.65
Dutch Disease	3.75	(0.15)	3.90	13.52
Exchange Rate	(1.25)	0.08	(1.33)	1.75
Inflation Rate	(0.01)	(0.13)	0.13	0.55
Per capita GDP	0.85	(0.20)	1.05	3.17
Oil Price	1.13	0.34	0.80	3.08
Openness	(0.85)	0.39	(1.24)	5.43
Composite Risk	0.07	0.01	0.06	0.12

b = consistent under H_0 and H_a ; obtained from xtpmg

B = inconsistent under H_a , efficient under H_0 ; obtained from xtpmg

Test: H_0 : difference in coefficients not systematic

$\chi^2(1) = (b-B)'[(V_b - V_B)^{-1}](b-B) = 3.22$

Prob> $\chi^2 = 0.07199$

Appendix 12: PMG and MG estimations for panel 4 (Islamic oil-exporting counties)

VARIABLES	PMG Long-run	MG Long-run
EC	-0.388*** (0.0937)	-0.630*** (0.211)
Oil Reserves	0.0354*** (0.00586)	-6.342 (6.320)
Dutch Disease	0.443*** (0.160)	4.816 (7.145)
Exchange Rate	-0.985*** (0.191)	-177.0 (174.4)
Inflation Rate	-0.132*** (0.0374)	-0.393 (0.814)
Per capita GDP	0.130 (0.262)	-5.580 (4.428)
Oil Price	0.0638 (0.152)	2.852 (2.118)
Openness	1.123*** (0.261)	4.935 (5.527)
Composite Risk	0.0474*** (0.00969)	0.280 (0.212)
Constant	-2.950*** (0.806)	-51.46 (54.97)
Observations	495	495

Standard errors in parentheses

***Significant at 1% level. **Significant at 5% level. *Significant at 10% level.

Appendix 13: Hausman test MG and PMG for panel 4 (Islamic oil-exporting countries)

Variables	(b) MG	(B) PMG	(b-B) Difference	$\sqrt{\text{diag}(V_b - V_B)}$ S.E.
Oil Reserves	(6.34)	0.04	(6.38)	12.48
Dutch Disease	4.82	0.44	4.37	14.11
Exchange Rate	(176.99)	(0.99)	(176.00)	344.38
Inflation Rate	(0.39)	(0.13)	(0.26)	1.61
Per capita GDP	(5.58)	0.13	(5.71)	8.74
Oil Price	2.85	0.06	2.79	4.18
Openness	4.94	1.12	3.81	10.91
Composite Risk	0.28	0.05	0.23	0.42

b = consistent under H_0 and H_a ; obtained from xtpmg

B = inconsistent under H_a , efficient under H_0 ; obtained from xtpmg

Test: H_0 : difference in coefficients not systematic

$\chi^2(1) = (b-B)'(V_b - V_B)^{-1}(b-B) = 4.05$

Prob> $\chi^2 = 0.8525$

Appendix 14: PMG and MG estimations for panel 5 (Non- Islamic oil-exporting counties)

VARIABLES	PMG Long-run	MG Long-run
EC	-0.470*** (0.0743)	-0.939*** (0.101)
Oil Reserves	0.0391* (0.0234)	-3.239 (3.537)
Dutch Disease	-0.466*** (0.146)	-2.126 (2.540)
Exchange Rate	0.0725*** (0.0275)	-1.258 (0.855)
Inflation Rate	-0.0884*** (0.0315)	0.0739 (0.255)
Per capita GDP	-0.512*** (0.165)	-0.170 (0.967)
Oil Price	0.515*** (0.124)	1.071 (1.406)
Openness	0.534** (0.258)	-0.825 (2.559)
Composite Risk	0.0127* (0.00670)	0.0520 (0.0544)
Constant	0.0472 (0.104)	-40.23** (19.46)
Observations	687	687

Standard errors in parentheses

***Significant at 1% level. **Significant at 5% level. *Significant at 10% level.

Appendix 15 : Hausman test MG and PMG for panel 5 (Non-Islamic oil-exporting countries)

Variables	(b) MG	(B) PMG	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
Oil Reserves	(3.24)	0.04	(3.28)	9.09
Dutch Disease	(2.13)	(0.47)	(1.66)	6.53
Exchange Rate	(1.26)	0.07	(1.33)	2.20
Inflation Rate	0.07	(0.09)	0.16	0.66
Per capita GDP	(0.17)	(0.51)	0.34	2.48
Oil Price	1.07	0.52	0.56	3.61
Openness	(0.82)	0.53	(1.36)	6.57
Composite Risk	0.05	0.01	0.04	0.14

b = consistent under Ho and Ha; obtained from xtpmg

B = inconsistent under Ha, efficient under Ho; obtained from xtprgm

Test: Ho: difference in coefficients not systematic

$\chi^2(1) = (b-B)'[(V_b-V_B)^{-1}](b-B) = 1.48$

Prob>chi2 = 0.9930