

**Foreign Direct Investment in Saudi Arabia:
Joint Venture Equity Shares and Source Country Characteristics**

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Joint Venture Equity Shares and Source Country Characteristics**

**A thesis submitted to Newcastle University UK for the degree of Doctor of
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**Foreign Direct Investment in Saudi Arabia:
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Abstract

The thesis explores the nature and determinants of foreign direct investment (FDI) in Saudi Arabia over the period 1960-2005. Saudi Arabia is of interest as it lies between a traditional developed and developing country. The thesis utilises a unique project-based dataset on about 19,000 investments in the Kingdom, of which 5,000 involve foreign ownership. The data were supplied by the government of Saudi Arabia, the first time they have been released for study. Overall, the thesis makes three main contributions. First, it analyzes the nature of FDI in Saudi Arabia. The analysis shows that most FDI has occurred since the major liberalisation under the 2000 Foreign Investment Act, which is comparable in scale to total investment in domestic projects since 1960. By volume of FDI, the thesis highlights the importance of oil and related industries, although the vast majority of projects are non-oil related. These are principally in manufacturing, from nearby Arab states and located in the Middle region around Riyadh.

Second, following a review of the relative literature on the determinants of FDI, the thesis analyzes the source characteristics of the investors by aggregating the data at the country level. It finds that a range of factors affect the number of foreign-owned projects, including size, distance, economic freedom and past investment levels, but much poorer explanations

are found for the investment scale, possibly reflecting the dominance of the oil sector. Third, following a further literature review, it analyzes the effect of country political risk on the foreign equity share in joint ventures at the project level. Here, it finds that severe risk may actually increase the foreign equity share, which is attributed to the benefits that ownership brings in the form of control. Further, those projects in minority foreign ownership appear most sensitive to risk. These results contribute to a literature, which to date has focused almost solely on the FDI entry mode either as whole or joint venture.

Chapter 1

Introduction

1.1 Motivation for the Study

Foreign Direct Investment (FDI) is one of the main drivers of economic efficiency and growth for many developed and developing countries. This has led policymakers to search for ways to attract foreign investors, using instruments at both the macro and microeconomic levels. At the macro level, research in developed countries over the last few decades has shown that the relationship between foreign investment and country risk is negative, implying that higher risk leads to lower levels of foreign ownership. Further, an increasing number of studies, but mainly for developed countries, show that source country characteristics can help explain the overall pattern of FDI inflows. Consequently, in order to encourage FDI, policymakers have increasingly focused on the factors that could be improved in order to encourage this investment as a possible method for achieving sustainable economic development.

In Saudi Arabia, attracting FDI as a means to reduce the dependence on the oil revenues has gained critical importance to policymakers. FDI inflows rose over the period 1960-2005 from a relatively low level of about SRs 5 billion in the early 1960s to reach nearly SRs 170 billion over the period 2001-05 (constant prices). However, the contribution of the private sector to the economy has declined from 33 per cent of Gross Domestic Product in 1968 to 28 per cent in 2007. It suggests that the problems of a small private sector and the lack of diversification of the Saudi economic structure are likely to worsen if anything.

Given these difficulties, there is a general agreement between policymakers that the future economic and political stability of Saudi Arabia will depend on its ability to attract FDI to strengthen the private sector and diversify the economy. However, while more FDI is needed to sustain economic growth, the question is how is this to be achieved? One necessary step is to determine the factors that increase the investment share of the foreign investors in projects, as these investors play a substantial role in the economic development of many developed and developing countries. The motivation for this thesis is to explore the determinants and nature of FDI in the rapidly developing economy of Saudi Arabia over a long time period, and in particular whether risk discourages the equity stake of foreign investors.

1.2 Objectives and Contribution of the Study

Prior to the Second World War, the share of FDI inflows in global business was small, but since this time there has been a major increase in the share of FDI inflows in global business, mainly arising from the developed countries. Thus, global inflows of FDI were \$13 billion in 1970, but increasing to \$2,100 billion in 2007. Despite this enormous increase in FDI, there has been a shift of FDI inflows over time away from the developed countries and towards developing countries. In relation to Middle East and North Africa (MENA) countries, the share of FDI inflows has increased by around fourteen-fold over 1986-05, although MENA countries account for a small share of FDI within developing countries.

The pattern of global FDI flows relate to a range of determinants in the economic, political, cultural, technological and financial spheres, although the findings on these derive mainly for developed countries and only occasionally from developing countries, so that their relevance of the MENA countries is questionable. In relation to Saudi Arabia, this is a wealthy country

within MENA, but somewhere between a traditional developed and developing country. Since Saudi Arabia differs from a developed country in many respects, including its human capital, institutions and culture, as well as the nature of its industries, then by analyzing FDI determinants for this country potentially offers fresh insights on the nature of FDI.

The objectives of this thesis are to examine FDI in Saudi Arabia over the period 1960-05, and then focus on the effects of different country risk factors on the foreign joint venture equity shares, and the source country determinants of incoming FDI flows at the country level. Many studies show a negative relationship between country risk and foreign ownership, implying higher risk leads to lower equity shares, while other studies analyze the determinants of FDI flows from the host country point of view. However, these studies are mainly for developed countries, whereas it is argued above that different conditions apply in Saudi Arabia, possibly leading to different results. For the first time, this study undertakes a detailed analysis of FDI in Saudi Arabia, analyzes the source country characteristics of this FDI and the factors that determine the joint venture equity shares of foreign investors.

In summary, the thesis focuses on foreign projects in Saudi Arabia over the period from 1960 to 2005. Its main objectives of the study are to:

- Describe, in detail, the pattern of FDI in Saudi Arabia over this period.
- Examine the effect of risk on the foreign joint venture equity share.
- Investigate the source country determinants of incoming FDI.

The thesis makes a number of important contributions. First of all, and for the first time, it “unpicks the locks on the doors” of the Saudi Ministry of Commerce and Industry in order to

obtain a large micro dataset on foreign and domestic projects. It consists of observations on around 19,000 projects that include 5,000 projects in foreign ownership. These data are described in detail, and analyzed at the level of the project, the level of the individual investor and at the level of total investment arising from different countries. This enables a broad understanding to be gained on the nature of foreign investment in Saudi Arabia, and compared to domestic investment. The data on projects with foreign ownership form the basis for the remainder of the thesis in order to explore the joint venture equity shares and source country characteristics of FDI, but for investments occurring since the early to mid-1980s. These represent the other two major contribution of the thesis.

In the case of the empirical analyses, the recent literature for developed countries enables us to identify many of the factors that potentially influence the equity share and source country characteristics, and to test these for Saudi Arabia. According to my knowledge, only a handful of similar studies have been undertaken for developing countries, but using only a small sample of firms. The thesis uses techniques such as Ordinary Least Squares, but also other estimation methods such as the negative binomial model, , tobit model, logit model and the Heckman selection procedure. To the best of my knowledge, these methods have not previously been applied in such as way in these contexts.

1.3 Organization of the Thesis

The thesis is divided into two main parts and six chapters. Part I, which comprises chapters 2 to 4, discusses the general geographical, political, social and economic background of Saudi Arabia, including the legislation in relation to FDI (Chapter 2). Part I also undertakes the literature review on the determinants of FDI from both theoretical and empirical perspectives

(Chapter 3), and considers the literature on the FDI ownership structure (Chapter 4). Part II of the thesis comprises Chapters 5 to 7, and contains the empirical parts of the study in line with the above three objectives. These are for the analysis of the pattern of FDI in Saudi Arabia (Chapter 5), the examination of the effect of risk on the foreign joint venture equity share (Chapter 6) and analysis of the source country determinants of incoming FDI (Chapter 7). Finally, Chapter 8 concludes and gives some recommendations to policymakers.

In more detail the chapters are as follows:

Part I: Economic Background and Literature Review

Chapter 2: The Saudi Economy and Legal Framework for FDI. This gives a general overview of Saudi Arabia, and aims to give the reader a broad knowledge of the country, covering three main features: its economy, its legal framework for FDI and its FDI inflows in the context of the wider region. The chapter shows that not only does Saudi Arabia hold a strategic position in the Middle East and North Africa (MENA) region, but that it is well-endowed with energy. However, it faces acute economic problem arising from its dependence on oil, so that since 2000 it has sought to liberalise its economy by encouraging FDI.

Chapter 3: The Determinants of FDI: Theoretical Conceptualizations and Empirical Studies. The chapter reviews and describes the determinants of FDI. It begins by considering the definitions of FDI, and considers the evolution of the determinants of FDI from different theoretical perspectives. Empirical studies that seek to test these different theories are then surveyed, which shows the importance of FDI inflows. The chapter reviews the different

definitions of FDI, and relating this to that adopted by Saudi Arabia. It surveys in detail the literature on the determinants of FDI from both theoretical and empirical points of view.

Chapter 4: The Ownership Structure of Foreign Investment. The chapter reviews and describes the literature on the ownership structure of foreign investments. It begins by considering the different theoretical motivations for the ownership structure, discussing four mainstream perspectives on this. Empirical evidence on the choice between whole ownership or a joint venture, and in the case of the latter on the choice of the equity share are considered. The chapter reviews the empirical evidence on the implication of risk for the equity share.

Part II: Empirical Analysis

Chapter 5: Foreign Direct Investment in Saudi Arabia. This chapter explains the nature of the data used in the study. The data were originally collected by Saudi Arabia Ministry of Commerce and Industry. They cover investments by all licensed companies in Saudi Arabia dating back to the year 1960. The chapter describes how this study managed to obtain these data, which are confidential to this study. The chapter then compares foreign and domestic investment in projects, before focusing on the foreign investment. It considers the pattern according to projects, individual investor and the number of investors arising from different countries, showing that the FDI is heavily concentrated according to several factors.

Chapter 6: Political Risk and the Ownership Structure of Foreign Direct Investment. The chapter considers the relationship between country political risk and ownership level in FDI joint ventures. Its purpose is to examine the effect of different kinds of political risk on

the foreign equity share at the project level for Saudi Arabia over 1985-2005. Two stages of estimation are employed for the study of the effect of political risk on ownership share. First, for the investment scale and number of investors, and second, using these as instruments, for the estimation of the equity share on risk. The chapter finds that the response varies according to the severity of the risk, so that for more serious risks firms increase their share to get more ownership, whereas for less serious risks they cut their share, which is like elsewhere.

Chapter 7: Source Country Characteristics and FDI Inflows to Saudi Arabia.

Aggregating the FDI data at the country level, the chapter examines the source characteristics of incoming FDI to Saudi Arabia over the period 1980-2005 to investigate the extent to which these explain the inflow of FDI. In explaining the determinants of FDI, it utilizes a range of project-related and country-related variables from various sources. The FDI inflows equation is estimated using two measures of FDI: the number of investment projects incoming in each year from each country and the total amount of investment inflow. This is separately estimated using techniques such as a negative binomial, for the first measure, and tobit regression and Heckman selection procedure, for the second measure.

Chapter 8: Conclusions and Recommendations. Finally, the concluding chapter discusses the main findings on the study of country political risk and the source country characteristics and FDI in Saudi Arabia, and relates these to the literature reviews and also to the problems faced by Saudi Arabia. It concludes that foreign investments are highly concentrated in its scale in the manufacturing sector and the Middle region around Riyadh, and the main source of FDI by project is the West Asia part of the MENA region, although it is the North America followed by Western Europe regions in terms of investment amount. It was also found that

with serious risks firms will increase their equity share, but will reduce it in the case of less risk. It also concludes that the economic size of the source country, the geographical distance, cultural distance and past investment experience are important determinants of FDI. The chapter considers the limitations of the study, including the data used. Recommendations and suggestions for further research are also presented.

Chapter 2

The Saudi Economy and Legal Framework for FDI

2.1 Introduction

In the last 70 years Saudi Arabia has become the world's largest economy in the production and exporting of oil, which has promoted its economic development. During this time, the amount of inward FDI has grown substantially, from around Saudi Riyals (SRs) 5.2 million in 1961 to SRs 83,798 million in 2005 (about £13.4 billion), and which has been encouraged by policymakers. The purpose of this chapter is to provide background information about the economy of Saudi Arabia, and about the nature and growth of this FDI, focusing particularly on the legal environment for FDI, which was relaxed from the year 2000. The aim is to give a foundation for the subsequent detailed analysis of FDI in Saudi Arabia in Chapter 5. To this end, the chapter gives background information on the global trends in FDI.

The chapter begins by giving an overview of the Saudi economy in Section 2.2 using the main indicators to describe the development of this economy. It shows the importance of oil, and the attempts by the Saudi Arabia government to diversify its economy, including by FDI. Section 2.3 presents the legal framework governing FDI in Saudi Arabia. Broadly, before 2000, the Kingdom had a highly restrictive policy towards FDI, and whole investments were virtually allowed only in exceptional circumstances, but since then it has been encouraged in order to promote economic development. Finally, FDI flows in the wider region and in Saudi Arabia are considered in Section 2.4. Section 2.5 concludes this chapter.

2.2 The Economy of Saudi Arabia

2.2.1 Overview

The Kingdom of Saudi Arabia is both an Arab and an Islamic country. It was established by King Abdulaziz Al-Saud as the modern Kingdom of Saudi Arabia in 1932, since when it has been under the leadership of six different rulers. Throughout, the country has witnessed massive development in every part of its economic and social fabric. This has enhanced real changes of people's economic and social life, and indeed since 1968 Gross Domestic Product (GDP) in Saudi Arabia has increased by about ten-fold in real terms. The Kingdom is characterized geographically by its location at the crossroads between the Asian and African continents, and specifically by its location in the Arabian Peninsula. Historically, the Peninsula has played a vital role as a trade centre and a land for several civilizations over past millennia. The Peninsula is also the birthplace of the Islamic religion.

According to Ham *et al*, (2004) the size of Saudi Arabia is about the size of Western Europe, covering around 80% of the Arabian Peninsula; or about 2,149,690 square kilometres. It is bounded by seven countries and three substantial bodies of water, as shown in Figure 2.1. The Red Sea lies on the west coast and the Arabian Gulf, Bahrain, Qatar and the United Arab Emirates on the east. Saudi Arabia has borders with Yemen and Oman in the south, and Jordan, Iraq and Kuwait to the north. Saudi Arabia's terrain is varied but on the whole fairly barren and harsh, with salt flats, gravel plains, and sand dunes, but few lakes or permanent streams. In the south is the Rub Al-Khali (Empty Quarter), the largest sand desert in the world. In the southwest, the Tihama mountain ranges of Asir Province rise to over 9,000 feet. The "Najd" plateau of the Central Region is where the capital city of the kingdom, Riyadh, is

located. There are five geographical regions, which together are sub-divided into thirteen provinces (see Figure 2.1). These are the: Middle region (Riyadh and Alqassim Provinces); Western region (Makka and Almadinah Provinces); Eastern region (Eastern Province); the Southern region (Jazan, Najran, Asir and Albaha Provinces); and the Northern region (Hail, Tabuk, the Northern frontier and Aljawf Provinces).

Figure 2.1: Map of Saudi Arabia and its Provinces



Source: Saudi Central Department of Statistics and Information, 2009.

Most of the population of Saudi Arabia is concentrated in the cities of Jeddah and Makka in the west, Riyadh in the centre and Dammam and Al Khobar in the east. Three great deserts isolate Najd from the north, east and south, as the Red Sea escarpment does from the west. In the north, the An Nafud desert covers about 55,000 square kilometres. Stretching more than 125 kilometres south from the An Nafud in a narrow arc is the Ad Dahna desert. At its

southern end, it merges with the Rub Al-Khali which covers more than 550,000 square kilometres. Most of this area is waterless and uninhabited, except for a few Bedouin tribes.

The total population of the Kingdom in 2007 was 24.2 million, and the population structure indicates that the Kingdom has a distinctive demographic trend. The annual report of the Saudi Arabia Monetary Agency (SAMA) for the year 2008 shows that the population aged below 15 years-old represents 34.5 per cent of total population, compared with 28.3 per cent for the world as a whole. Further, the population of 65 years of age and over represents just 2.8 per cent compared with 7.3 per cent for the world. So, generally speaking, the Kingdom has a relatively young population, like many developing countries.

The Kingdom is considered to be one of the major countries of the Middle East and North African (MENA) region. According to the World Bank report (Middle East and North Africa Region Economic and Development Prospects, 2007), the MENA region consists of three kinds of economy: *resource-poor, labour-abundant economies* (i.e. Arab Republic of Egypt, Jordan, Morocco, Tunisia, Lebanon, and Djibouti); *resource-rich, labour-abundant economies* (i.e. Algeria, Islamic Republic of Iran, Iraq, Syrian Arab Republic, and Yemen); and *resource-rich, labour-importing economies* (i.e. United Arab Emirates, Kuwait, Libya, Qatar, Oman, and Bahrain). Saudi Arabia is included in the latter group, being resource rich but labour importing. In the year 2000, MENA accounted for five per cent of the world's population and two-and-a-half per cent of world output. Saudi Arabia has the largest economy of all MENA countries. In 2005, its GDP was approximately 315 billion US dollars, which represents more than 25 per cent of the total output of all the MENA countries (World Bank, 2008). Over the last few decades the World Bank has stated that MENA has narrowed the gap with other developing countries.

The dominant output of the Kingdom's economy is oil. According to SAMA (2008), the share of oil revenue in Saudi national gross domestic product (GDP) was approximately 55 per cent in 2007. The private sector share of the GDP is much smaller, and only represents around 28 per cent. Table 2.1 shows oil has taken an increasing share of total output from 46 per cent in 1968 to 55 per cent in 2007, which is an increase over the whole period of around 20 per cent, while both public and private sectors have decreased, each by about the same amount.

Table 2.1: GDP by Sector

Sector	1968	2007
	%	%
Oil	46	55
Private	33	28
Public	21	17
Total	100	100

Source: Saudi Arabia Monetary Agency (SAMA), Annual Report, 2008.

The major partners in the non-oil trade for the Kingdom of Saudi Arabia are the Gulf Corporation Council (GCC) countries. These include the United Arab Emirates, the Kingdom of Bahrain, Oman, Qatar and Kuwait, as well as Saudi Arabia. According to SAMA (2008), trade with other GCC countries represented 32.7 per cent of the Kingdom's total non-oil exports in 2008. Trade with other Arab trading partner countries in the non-oil goods and services is only about 18 per cent.

2.2.2 The Development of the Saudi Economy

Since its foundation in 1932, Saudi Arabia has achieved a phenomenal transformation of its economy, which is quite different to anywhere else in the world (Knaverhase, 1978; Askari,

1990). The country, which started almost from scratch, has become a major influence in the world economy and is able to interact economically with the rest of the world, including foreign investors (SABB, 2007). Prior to this transformation, Saudi's economy was marked by relatively primitive economic activities. In the 1940s it was characterized by fragmented rural areas and isolated tribes, and it had no health system or formal education, which was reflected in a high degree of illiteracy among people. To illustrate this, then as observed by Knaverhase (1978), in his work on the Saudi Arabian economy:

"In 1940 the wheel was not in general use in most areas of the nation. Saudi Arabia had a pastoral economy based on the raising of goats, sheep and camels. The majority of the urban population lived in small villages built of mud-brick and earned a living from subsistence agriculture..." (p. 57).

Overall, Saudi economic development has been supported by the exploitation of its tremendous oil reserves since 1938, which has enabled the Kingdom to establish institutions and to build basic infrastructure. It has gradually become the world's leading oil producer and exporter, and is at the top in terms of the world's leading proven oil reserves. Table 2.2 shows the real growth rate of the Saudi economy for different sub-periods from 1971 to 2005.¹ Generally it reveals good growth rates throughout the period, indicating continued expansion. The major contributing factor to this was the incremental discovery of huge reserves of oil.

¹ It shows the rapid development of Saudi Arabia in the early 1970s and the contraction in the early 1980s.

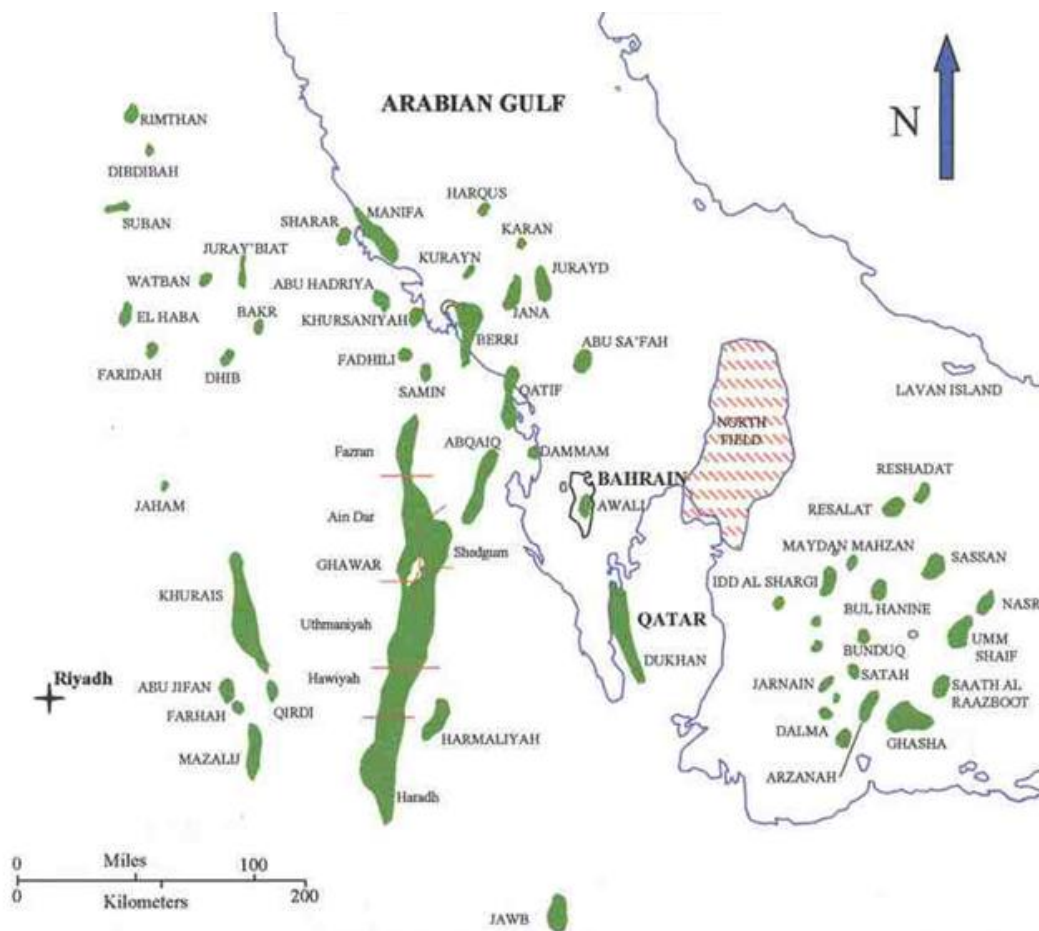
**Table 2.2: Real GDP Growth Rate, 1971-2005
(Five Year Averages)**

Period	Real GDP Growth Rate
1971-1975	20.62
1976-1980	7.06
1981-1985	-4.48
1986-1990	3.42
1991-1995	2.98
1996-2000	2.54
2001-2005	3.94

Source: Saudi Arabia Monetary Agency (SAMA), Annual Report, 2008.

The discovery of oil commenced in 1938 with the Aldahran field on the east coast by the California Arabian Standard Oil Company (CASCO), an affiliate of the American company Standard Oil of California (SOCAL), which is known today as the Chevron Corporation. However, initially this discovery led only to a small change in development. Of greater significance were two critical factors that triggered a real change in the Saudi economy and life. The first of these was the establishment in 1944 of the Saudi American Oil Company (Aramco, predecessor of Saudi Aramco), which has dominated the production of oil in the country since its first commercial exports in 1939. The second factor was the discovery of massive oil fields and the establishment of new towns from 1946 onwards. Figure 2.2 shows that these oil fields are mainly located in the Middle and Eastern regions of Saudi Arabia. More than one-half are located in eight super-giant fields (see below). The Saudi Oil Minister recently stated that proven reserves will grow from 262.3 billion of barrels currently to around 420 billion barrels by 2025 as a result of exploration and further appraisal drilling (International Energy Agency, 2005).

Figure 2.2: Oil Fields in the Middle and Eastern Regions



Source: Greg Croft Inc.

The Kingdom of Saudi Arabia currently utilizes around 30 fields to produce oil, as shown in Table 2.3. The largest fields in terms of reserves are Ghawar, followed by the other six super-giant fields of Safaniyah, Manifa, Shaybah, Zuluf, Khurais and Berri. These fields represent approximately 76 per cent of total Saudi reserves (Table 2.3), with Ghawar the world's largest oil field. So far, the cumulative production from these fields represents 36 per cent of the remaining reserves (105.6 billion barrels of 289.4 billion barrels of reserves in Table 2.3). The lion share of the oil production in Saudi Arabia comes from the Ghawar, Safaniyah and Abqaiq fields, which account for more than 80% of Saudi's total oil production (Table 2.3).

Table 2.3: Oil Fields in Saudi Arabia

Field	Year of first Production	Remaining Proven and Probable Oil Reserves at 2004 (Billion Barrels)	Cumulative Production to 2004 (Billion Barrels)
Abqaiq	1946	5.5	13
Qatif	1946	9.2	0.8
Ghawar	1951	86.3	60.7
Safaniyah	1957	39.6	15.4
Khursaniyah	1960	3.3	1
Abu Hadriyah	1961	1.2	0.6
Fadhili	1963	0.6	0.3
Khurais	1963	16.8	0.2
Abu Sa'fah	1966	6.8	1.7
Manifa	1966	22.8	0.3
Berri	1967	15.3	3.1
Harmaliyah	1973	1.9	0.2
Marjan	1973	9.3	0.7
Zuluf	1973	18.2	1.8
Ghinah	1994	0.3	0
Hawtah	1994	2	0
Hazmiyah	1994	0.5	0
Umm Jurf	1994	0.2	0
Shaybah	1998	20.7	0.8
Other fields	-	29	5
Total	-	289.4	105.6

Source: International Energy Agency, World Energy Outlook, 2005.

The possession of huge oil fields puts Saudi Arabia at the top of world's proven oil reserves. According to the US Energy Information Administration (2008), Saudi Arabia has the world's largest proven oil reserves at 262.3 billion barrels at 2007, followed by Canada, Iran, Iraq and Kuwait. The dominant position of Saudi Arabia is shown in Table 2.4.

Table 2.4: Proven World Oil Reserves, 2007

Country	Proven Oil Reserves (Billion of Barrels)
Saudi Arabia	262.3
Canada	179.2
Iran	136.3
Iraq	115.0
Kuwait	101.5
United Arab Emirates	97.8
Venezuela	80.0
Russia	60.0
Libya	41.5
Nigeria	36.2

Source: US Energy Information Administration, 2008.

As mentioned, Saudi Arabia was able to first exploit these reserves through the establishment of the Saudi American Oil Company (Aramco) in 1944, but this was enhanced by the Saudi Government's acquisition of Aramco in 1980, since when the new state monopoly company, Saudi Aramco, has made Saudi Arabia the world's leading oil producer (Table 2.5 below). According to the President and Chief Executive Officer of the company, it has been able to do this due to several core competencies: an emphasis on innovation, an efficient network of consumers and reliable managerial skills, as well as of course the utilization of the rich oil fields (Saudi Aramco, 2007). According to the company, these have contributed to the gradual expansion of its operations.

Table 2.5: Top World Oil Producers, 2007

Country	Production (Thousand Barrels Per Day)
Saudi Arabia	10,248
Russia	9,784
United States	8,457
Iran	4,034
China	3,912
Mexico	3,500
Canada	3,422
United Arab Emirates	2,948
Venezuela	2,670
Kuwait	2,616

Source: US Energy Information Administration, 2008.

The oil has contributed either directly or indirectly to economic development through the building of macroeconomic systems and microeconomic improvements. However, the thrust of economic growth and development in the Kingdom of Saudi Arabia have occurred only within the past three decades (Hashem and Diyab, 1990), after the establishment of the Organization of the Petroleum Exporting Countries (OPEC) in 1960, and particularly in the 1970s, when there was a remarkable increase of oil prices as a result of economic and political factors. Table 2.6 shows that the oil price 'shocks' of 1974 and 1979 helped the Kingdom to increase its output in nominal terms by more than two-fold between the sub-periods of 1971-75 and 1976-80.

Although the Kingdom witnessed and enjoyed an economic boom during the late 1970s and early 1980s, which generated unprecedented revenue, the country was lacking in physical infrastructure, as well as effective health, education and other services. It was also lacking strategic reinvestment plans for its acquired revenues. Equally, of concern was that the

Kingdom faced a potentially serious problem of economic structure due to its heavy dependence on oil and lack of economic diversification (Abdel-Rahman, 2002). In fact, oil revenues represent the majority of the country's total GDP. The share of the oil revenue of the total Saudi GDP was high and approaching 70 per cent in the early 1970s (Table 2.6). It shows the Kingdom's heavy reliance on oil revenues, and which has been increasing since the late 1980s.

Table 2.6: Output of the Saudi Oil Sector over Time

Period	Output of the Oil Sector		Share of GDP %
	(SR m, current prices)	Growth Rate	
1971-75	303,894	-	68.5
1976-80	960,573	216.0	57.5
1981-85	1,043,775	8.7	44.0
1986-90	485,524	-53.5	27.9
1991-95	906,596	86.7	36.4
1996-00	1,095,708	20.9	36.3
2001-05	1,891,804	72.7	44.2

Source: Saudi Arabia Monetary Agency (SAMA), Annual Report, 2008.

As well as a dependence on oil, the other concern is a lack of diversification of the economy, which raises questions about the sustainability of the economy. This became apparent in the late 1960s and was a key issue leading to the publication of the first Development Plan in 1970 (see Saudi Ministry of Economy and Planning, 2006). Since 1970, and despite Saudi's oil-driven economy, the country has managed to register some impressive economic growth rates, as reported in Table 2.2 above. However, the lack of diversification has meant that with the global fluctuation in oil prices, and with a continuing need for revenue to finance its consumption and investment expenditures, the Kingdom has sometimes ended up with remarkable budgetary deficits, for example a deficit of 25.3 per cent of GDP in 1987. As an

explanation for this, Abdel-Rahman (2002) notes that Saudi's oil production in 1980-81 reached nearly 10 million barrels per day, but due to the discovery of new oils fields in other parts of the world, the development of energy substitutes and a global economic downturn, production declined to just 3 million barrels per day by 1985 (see Table 2.7). As a result, revenues dropped sharply and a massive budgetary deficit ensued. The Kingdom also suffered a similar fate in 1997 due to factors including the East Asian economic crisis and an increase in non-OPEC oil production, such that the "combination of such factors led to a slack in the demand for oil and cut oil prices by over one-third" (Abdel-Rahman, 2002: p. 4).

Table 2.7: Saudi Oil Production

Year	Oil Production (Million Barrels Per Day)
1981	9.81
1982	6.48
1983	4.54
1984	4.08
1985	3.17
1986	4.78
1987	4.12
1988	5.16
1989	5.06

Source: Saudi Arabia Monetary Agency (SAMA), Annual Report, 2008.

2.2.3 The Development Plans

The realization that the heavy reliance on oil meant economic growth might be unsustainable in the long-run, coupled with instabilities in the short-run, fuelled the Kingdom's desire to implement development plans to help foster and achieve economic diversification. The Kingdom began to implement a new development approach in 1969, when the oil revenues

started to rise dramatically creating huge budget surpluses with which to build the necessary infrastructure and services. The first development plan commenced in 1970 covering the five-year period up to 1974, and since then there have been seven plans, covering five year periods up to 2005.² The main long-term objective of these plans is to enhance the economy and improve economic well-being, which is reflected in the first plan that focused on giving the private sector a greater role in the economy. In order to achieve this, the government then formed five-year development plans, aimed principally at organizing and better-utilizing the country's resources and reducing its dependence on oil revenues.

At the core of the development plans is a strategy for economic reform through privatization and the promotion of private investment. The most distinctive feature of these plans is the adoption of free market principles in order to enhance private sector efficiency and growth. Ramady and Saeed (2007) note that in trying to achieve economic diversification the Kingdom opted to promote decentralized, private and market-based economic activities. This took the form of a three-pronged approach, involving: the attainment of membership of the World Trade Organization; privatization of core government services; and the promotion of foreign direct investment to foster technology transfer and domestic economic stimulus (Najem and Hetherington, 2003). Abdel-Rahman (2002) eloquently sums up the approach as follows:

"To achieve the desired liberalisation and reform, the deployed mechanisms focused on privatisation and investment promotion. Private investment was encouraged and the Kingdom turned to Foreign Direct Investment (FDI) as an appropriate vehicle that could revitalise its economy and diversify its productive base through its anticipated

² The plans are not formally published, but the key objective and aims were later made available in the 2006 *Achievements of the Development Plans: Facts and Figures*, and this forms the basis for the discussion.

contributions to the manufacturing and other sectors and hence to production, income and employment" (p. 4).

The first three development plans covered the years from 1970 to 1984.³ Since these plans came at a time when the oil revenues increased substantially, they shared similar targets. According to the Saudi Ministry of Economy and Planning (2006), "the first three development plans (1970-84) aimed to enhance the infrastructure, diversify the economy, develop the human resource and encourage the private sector to play an active role in the economy" (p. 32). This period was therefore characterized by an expansion in government spending and the establishment of funds to support industrial and agricultural projects.

The next four development plans went from 1985 to 2005.⁴ At this time, the Kingdom faced serious financial difficulties caused by the instability of the international oil market, which contributed to falling oil revenues. However, the Kingdom managed to accommodate these difficulties, and according to the Saudi Ministry of Economy and Planning (2006) "the fluctuation and decline in the oil prices led to a fall in national income, but the Kingdom was able to overcome these difficulties by giving greater focus to reducing government spending" (p. 32). Hence, by controlling and balancing revenues and expenditures, as well as enhancing

³ The first development plan, over the period 1970-74, was aimed at enhancing economic growth rate by increasing government spending. These aims were rolled over into the second plan over 1975-79, however with greater emphasis on government spending. The third plan over 1980-84 also focused on increasing government spending and expanding the finance of the private sector to stimulate investment.

⁴ The fourth development plan over the period 1985-89 was aimed at improving non-oil exports focusing mainly on the manufacturing industry and especially the petrochemical sector. The fifth plan covered the period 1990-94 and focused on stabilizing the economy, improving the business environment and enhancing living standards. The sixth plan over 1995-99 focused on improving human resources, increasing productivity and enhancing living standards. The seventh plan over 2000-04 was based on previous plans, giving priority to human resources, privatization, increasing productivity and improving public services. The eighth plan covered the period 2005-09 and was aimed at further enhancing living standards, creating more jobs, expanding the public services and improving the competitiveness of the economy. The ninth plan over 2010-14 will focus on enhancing and balancing regional development, improving living standards, further enhancing the human resources and reducing the unemployment rate, reinforcing the contribution of the private sector in the economy and encouraging the orientation towards achieving the knowledge-based economy.

the efficiency of public institutions, the Kingdom was able to overcome the decline in growth rates and to continue to develop its infrastructure, as well as diversifying the economy.

Nevertheless, despite the private sector growing substantially over the past four decades, the Kingdom's economy is still dominated by oil revenue. The private sector grew by more than 50-fold in nominal terms over the period 1970-2007, but its contribution to GDP still fell from 33 per cent in 1970 to 28 per cent in 2007. This compares with the oil sector, which grew by 75-fold in nominal terms over 1970-07, an increase from 47 to 55 per cent of GDP. The expansion of production and investment in the private sector has been supported by a strong increase in foreign direct investment. This was promoted by the seventh development plan (covering 2000-04) through government policy, and attention now turns to this.

2.3 Legal Framework for Foreign Direct Investment

The dependence on the private sector as a driving force for the Kingdom's economy has been a central part of a strategy to attain sustainable and rapid economic growth. To improve the private sector's participation in the economy, an enhancement to the 'business climate' was essential, and a crucial part of this was legislation to encourage foreign direct investment that was at the forefront of the development plan for 1975-79. Up to that time FDI was governed by the 1979 Foreign Investment Act, which had sought to boost foreign investment into Saudi Arabia, and hence enhance the private sector's contribution to the Saudi economy. However, a review of the 1979 Foreign Investment Act at the end of 1990s showed that it deterred FDI flows.

This was because the 1979 Foreign Investment Act gave priority to Saudi firms and to joint ventures with Saudi participation, as well as prohibiting foreign investment in some sectors (Khyeda, 2007). Further, it prevented foreign investors from obtaining a license unless it is accompanied by foreign technical expertise. This led to a re-evaluation of the existing law and the subsequent introduction of a new law in the year 2000. The Saudi Arabia's Council of Ministers approved the 2000 Foreign Direct Investment Act under a Royal Decree and it established a new Saudi Arabian General Investment Authority (SAGIA). Overall, the law introduced a number of changes that relaxed the restrictive rules against foreign investment, seeking to make Saudi Arabia more open and to liberalize trade. Given its importance, the 18 Articles comprising the 2000 Foreign Investment Act are presented in Appendix 2.1. These are referred to below.

2.3.1 The 2000 Foreign Investment Act

The new law was administered by the Saudi Arabian General Investment Authority (SAGIA) under the guidance of the Supreme Economic Council. A number of significant changes were made under the Act, which are as follows. First, certain restrictions were made against FDI under the old law, including the prohibition of foreigners from investing in sectors that were reserved for the government and domestic investors, such as printing and publishing services, telecommunications services, the transmission and distribution of electrical power, pipeline transmission services, education services, hospital and health services, insurance and the electric power generation (Khyeda, 2007, p. 82). Under Article 3 of the new law (see Appendix 2.1), these sectors were no longer closed and foreign investors were able to freely

invest, except for certain sectors that are given in a 'Negative List' designation, and which is compiled by SAGIA and approved by the Supreme Economic Council.⁵

This 'Negative List' is updated and revised from time to time. The latest list (2009) includes 15 sectors, two of which are industrial sectors and the other thirteen are in service activities. The industrial sectors are oil exploration / drilling and the manufacture of military equipment, while the service sectors include real estate investment in the holy cities of Makka and Almadina, security and detective services and printing and publishing. The Saudi Arabian government policy is focused on a continued reduction of the 'Negative List', with complete abolishment the ultimate goal (see Khyeda, 2007, p. 80).

Second, the new law has relaxed other restrictions that faced foreign investors, including investment licenses, but which are still required by all investments in Saudi Arabia. By an 'investment' it is meant any domestic or foreign project for both transferring capital and production, and by any mode of entry. The new law changed the licenses in two ways: foreign investors were allowed to obtain more than one license across different activities; and the processing of licenses was speeded up. Under the old law, the granting of a license was a complicated and time-consuming process, but this is now no longer the case. Article 2 gives SAGIA thirty days to make a decision about an investment application (see Appendix 2.1), such that if the decision has not been made by then SAGIA is obligated to issue the required license for the investor regardless. This change facilitates the exploitation of opportunities by foreign investors as they occur across different sectors.

⁵ This Negative List sets out all those activities in which foreign investment is prohibited in accordance with Article 3 of the 2000 Foreign Investment Act.

Third, as a further change to facilitate the establishment of foreign companies, Article 5 of the new law allows foreign companies 100 per cent ownership of projects (Appendix 2.1). Further, under Article 6, a foreign investment enjoys the same fiscal and other incentives afforded to domestically-owned projects, such as that under the National Industries Protection and Encouragement Regulations and the industrial loans offered in accordance with the provisions of the Industrial Development Fund. Another issue that was resolved by the new law concerns foreign sponsors. In Saudi Arabia all foreigners need a local legal sponsor in order to work in the country. Article 9 states that foreign investors as well as their foreign employees shall be sponsored by their licensed investment project. They are also entitled to possess the required real property for practicing the licensed activity.

Finally, the taxation of foreign investment is also modified by the new law. In general, domestic firms are required to pay a 'zakat' (a charitable donation), which is a 2.5 per cent tax on assets. Article 14 of the new law states that foreign investors are treated in accordance with the tax codes valid in Saudi Arabia that states that foreign-owned corporations and the foreign-owned portion of joint ventures are subject to corporate income tax, which is 20 per cent of net profit. This level of corporation tax is considered to be among the five countries with the lowest company taxes in the world (World Bank, 2007). To protect foreign investors from paying 'double taxation', Article 5 of the Executive Rules of the Foreign Investment Act states that investors can benefit from any agreements on the avoidance of double taxation to which the Kingdom is a signatory. The Executive Rules are given in Appendix 2.2.⁶

As a result of the improving climate for foreign investment in Saudi Arabia and sustained high oil prices, foreign direct investment has boomed since the Foreign Direct Investment

⁶ The Executive Rules of Foreign Investment Act are the rules for implementation.

Act in 2000 (Library of Congress, 2006). Table 2.8 shows the total number of foreign projects and FDI flows over 1960-05 prior to and after the introduction of the new law in 2000. It shows that the number of foreign projects has more than doubled between 2000 and 2005, and the FDI flows have increased to a level equal to the whole period 1960-99, indicating a remarkable improvement in the attractiveness of the country to FDI. As such, Saudi Arabia has become the largest host economy for FDI in the MENA region, overtaking the previous largest attractor of FDI, which was Turkey (UNCTAD, 2008; p. 8).⁷

Table 2.8: Total FDI Flows Prior to and After the New Law, 1960-2005

Period	FDI Flows (SR m)	Share of FDI Flow (%)	No. of Projects	Share of Projects (%)
1960-1999	175,159	49.8	1,589	31.8
2000-2005	176,297	50.2	3,409	68.2
Total	351,456	100.0	4,998	100.0

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Overall, the replacement of the rigid old law by the new law has its positive impact not only on promoting the entry of foreign investment but more generally on the environment in which it operates. Under the old law, even after the approval of proposed projects by the authorities, foreign investors often still have to deal with more than a dozen government offices to see their project through (El-Sheik, 1984; p. 63). Since the introduction of the new law, the process is now concerned with encouraging rather than impeding foreign investment.

⁷ Recently, under the leadership of King Abdullah bin Abdulaziz Al Saud (the sixth ruler of Saudi Arabia), the Kingdom has adopted several reform initiatives with the aim of reinforcing democracy and further opening-up of the country to new investment. The aim is to achieve a stable political environment, sustainable economic growth and an attractive business-friendly climate (Saudi Ministry of Economy and Planning, 2006).

2.4 FDI Inflows to Saudi Arabia and the Wider Region

Over the recent decades there has been a phenomenal worldwide expansion of FDI inflows.⁸

In this section, we will briefly consider the recent trends in global FDI inflows, but focusing on the MENA region, and in particular on FDI inflows to Saudi Arabia.

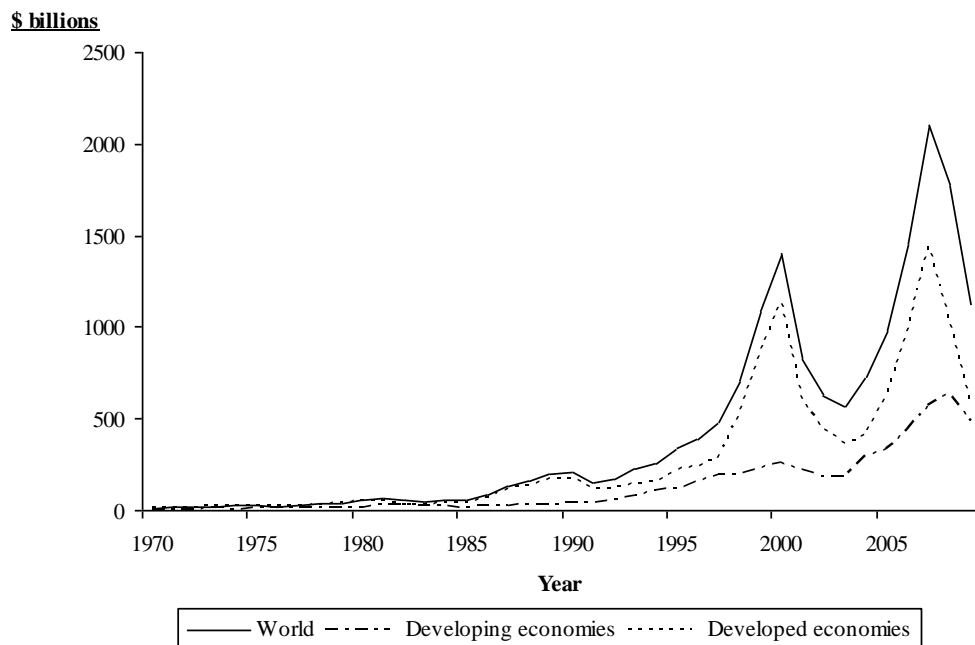
2.4.1 World FDI Inflows

Prior to the Second World War, international production (including foreign direct investment) comprised only a very small share of global business (Hosseini, 2005). The economic and political instability during this period, besides the remarkable cultural, political and economic differences between countries, imposed many restrictions on direct investment. Thus, before the War, FDI was considered to be a special case of portfolio investment, that of the parent firm lending to or investing in a subsidiary (see Chapter 3 for definitions of portfolio versus direct investment). However, after 1945 a new era of international business commenced, of which there were several notable features in the general climate for international investment (Jones and Wren, 2006; Hood and Young, 1999). These are improvements in technology and communication systems, greater economic and political stability, the formation of trading blocks and a more liberalized attitude of host governments. FDI inflows in the immediate post-war period were relatively stable, and so we focus on FDI in the years since 1970.

⁸ FDI inflows need not be the same as outflows, as according to the World Investment Report (2006) the former refer to “the activities of foreign affiliates in the host economy” (p. 297), while outflows refer to “the activities of foreign affiliates of home-based TNCs abroad” (p. 297).

With the general improvement of the worldwide business environment, FDI inflows grew at an unprecedented level over 1970-09. Figure 2.3 shows that there was a substantial increase in world FDI inflows after 1970, measured by inward FDI at current prices, from \$13 billion in 1970 to \$2,100bn in 2007 (UNCTAD FDI Database, 2009). In fact, FDI was stable up to 1976, with yearly average flows of \$19bn, but then it fluctuated between 1977 and 1985 (not apparent from Figure 2.3), but at low levels, after which the substantial increase began.

Figure 2.3: Global FDI Inflows, 1970-2009



Source: UNCTAD, Foreign Direct Investment Database, 2009.

Note: FDI measured by inflow at US Dollars at current prices in billions.

Figure 2.3 shows that FDI reached a peak of \$1,401bn in 2000, but after which was followed by a severe downturn, and reaching a trough of \$566bn in 2003, before rising again towards the end of 2007. This was followed by a severe downturn in the last two years of the decade. We now briefly discuss each of the main phases, distinguishing between three sub-periods: the early stage (1970-76), the intermediate stage (1977-85) and the growth stage (1986-date).

2.4.1.1 The Main Phases of Global FDI

In 1960, the US accounted for about three-fifths of the accumulated foreign direct investment stake in market economies, the UK was responsible for one-sixth, and the rest was fairly evenly distributed between other OECD countries. Perhaps the most striking feature of the changing pattern of international production over the post-war period is its diversification by the country of origin (Dunning, 1979), with FDI becoming increasingly important as one of the main forms of international production (Hosseini, 2005).

Table 2.9 shows the stock of FDI according to the country of origin for years between 1967 and 1976. In total the FDI stock rose by more than two-fold over 1967-76. It also shows that the United States and United Kingdom were the main generators of FDI, representing around 70 per cent of the total FDI stock by 1967. However, their share of world FDI decreased to represent 59 per cent by 1976. The combined share of West Germany and Japan grew from 4 per cent to 14 per cent over the same period.

Table 2.9: FDI Stock by Country of Origin

Country of Origin	1967	1971	1973	1975	1976	1967	1971	1973	1975	1976
	(US\$'bn)					Percentage distribution				
United States	56.6	82.8	101.3	124.2	137.2	53.8	52.3	51.0	47.8	47.6
Great Britain	17.5	23.7	26.9	30.8	32.1	16.6	15.0	13.5	11.9	11.2
West Germany	3.0	7.3	11.9	16.0	19.9	2.8	4.6	6.0	6.2	6.9
Japan	1.5	4.4	10.3	15.9	19.4	1.4	2.8	5.2	6.1	6.7
Switzerland	5.0	9.5	11.1	16.9	18.6	4.8	6.0	5.6	6.5	6.5
France	6.0	7.3	8.8	11.1	11.9	5.7	4.6	4.4	4.3	4.1
Canada	3.7	6.5	7.8	10.5	11.1	3.5	4.1	3.9	4.1	3.9
Netherlands	2.2	4.0	5.5	8.3	9.8	2.1	2.5	2.8	3.2	3.4
Sweden	1.7	2.4	3.0	4.4	5.0	1.6	1.5	1.5	1.7	1.7
Belgium-Luxembourg	2.0	2.4	2.7	3.2	3.6	1.9	1.5	1.4	1.2	1.2
Italy	2.1	3.0	3.2	3.3	2.9	2.0	1.9	1.6	1.3	1.0
All Others	4.0	5.1	6.3	15.3	16.8	3.8	3.2	3.1	5.7	5.8
Total	105	158	199	259	287	100.0	100.0	100.0	100.0	100.0

Source : Dunning, 1979 from UN(1978).

Over the period 1977-85, the world economy went from growth to recession, and FDI inflows reflected this. Table 2.10 shows that world FDI inflows increased from \$27bn in 1977 to \$70bn by 1981, but that it fell back to around \$50bn in the mid-1980s. The table also shows that FDI inflows to developed countries increased from \$20bn at 1977 to \$46bn by 1981, representing 65 per cent of the world FDI inflows. However, while FDI inflows to developing countries remained stable at \$7bn up to this time, it tended to increase thereafter. The year 1982 is notable, when around half of the world FDI went into developing countries, which is no doubt due to the much smaller flows between developed countries.

Table 2.10: FDI Inflows, 1977-1985
(US \$'bn)

Region	1977	1978	1979	1980	1981	1982	1983	1984	1985
Developed Countries	20	25	34	47	46	32	33	39	42
Share of Total	(74)	(74)	(80)	(86)	(65)	(55)	(65)	(69)	(75)
Developing Countries	7	9	9	7	24	26	18	18	14
Share of Total	(26)	(26)	(20)	(14)	(35)	(45)	(35)	(31)	(25)
All Countries	27	34	42	54	70	58	50	57	56

Source: UNCTAD, Foreign Direct Investment Database, 2009.

Note: FDI inflows measured at current prices.

Since the second half of the 1980s, foreign direct investment has emerged as an important channel for international business. In fact, the unparalleled growth of FDI since 1985 may be explained, in part, by the strong recovery of the world economy from the recession of the early 1980s, and the ensuing high growth rates in both developed and developing countries (UNCTAD, 1991). Table 2.11 shows world FDI inflows to both developed and developing countries over 1986-05 at current prices. This is now considered.

Table 2.11: FDI Inflows, 1986-2005
(US \$'bn, five year averages)

Region	1986-90	1991-95	1996-00	2001-05
Developed Countries	656	742	2,989	2,426
% of total	(83)	(65)	(74)	(65)
Developing Countries	134	389	1,014	1,195
% of total	(17)	(34)	(25)	(32)
All Countries	790	1,143	4,042	3,723

Source: UNCTAD, Foreign Direct Investment Database, 2009.

Note: Shares may not sum to 100% due to transition economies. FDI inflows measured at current prices.

Table 2.11 shows that foreign direct investment inflows grew substantially over 1986-2005, increasing approximately five-fold from \$790bn over 1986-90 to \$3,723bn over 2001-05 (current prices). UNCTAD (1991) attributes this to the strong recovery of the world economy from the recession of the early 1980s. FDI inflows to developed countries also grew substantially from about \$656bn to \$2,426bn over the same period, although it did not keep pace, and their share of total FDI inflows declined from 83 to 65 per cent.

FDI inflows to developing countries increased at a faster rate, by about nine-fold from \$134bn over 1986-90 to \$1,195bn over 2001-05, and their share of the world FDI inflows grew remarkably from 17 to 32 per cent, although from a much smaller base. Overall, there has been a gradual shift of FDI inflows away from the developed countries, which reflects the incremental importance of the developing countries in the global landscape. We now examine these inflows in relation to the MENA region, and in particular to Saudi Arabia.

2.4.2 FDI Inflows to the MENA region

MENA refers to the Middle East and North Africa region, although the definition of MENA is not wholly agreed upon by the international agencies. UNCTAD defines MENA as two separate regions: *West Asia*, which includes Bahrain, Cyprus, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Palestinian territories, Qatar, Saudi Arabia, Syrian Arab Republic, Turkey, United Arab Emirates and Yemen; and *North Africa*, which includes Algeria, Egypt, Libyan Arab Jamahiriya, Morocco, Sudan and Tunisia. It differs from the World Bank definition of MENA, which includes Israel, but which is considered as a developed country by UNCTAD. Since our data on FDI flows were collected from the UNCTAD, *Foreign Direct Investment Database*, we follow the UNCTAD definition of MENA.

The features of the MENA region play an important role in influencing FDI inflows. In general, the MENA countries rely heavily on oil, have a relatively weak economic base, high population growth and unemployment rates, but have low levels of integration with the world financial and capital markets and have underdeveloped institutions (Hisarciklilar *et al*, 2006). However, these factors vary between MENA countries, so that there is in fact a high variance in FDI inflows between countries. MENA countries have also implemented different reform programmes in order to enhance their competitiveness and attractiveness to FDI. According to the World Bank (2007), although many trade agreements have been initiated between these countries, bilateral trade between the MENA countries is still small compared with other global economic areas. Nevertheless, the World Bank (2007) reports that the business climate of the MENA countries has improved, as they strive to encourage FDI through liberalization of their economies and privatization.

FDI inflow to the MENA region over 1986-05 is shown in Table 2.12, with a breakdown by North Africa and West Asia, and by sub-period. In general, FDI inflows into the region have increased monotonically over 1986-05, growing by around fourteen fold, and reaching \$121 billion over the sub-period 2001-05. This is not sufficient for MENA to substantially increase its share of developing countries FDI flows. The share of FDI inflows into MENA was around 10 per cent of total FDI inflows into developing countries over 2001-05, but growing by only 4 per cent over the whole period from 7 per cent over 1986-90.

Table 2.12: FDI Inflows in the MENA Region, 1986-2005

Region	Inflows (US \$'bn)			
	1986-90	1991-95	1996-00	2001-05
North Africa	6.4	8.4	13.9	33.3
West Asia	2.4	11.9	17.1	88.0
MENA	8.8	20.3	31.0	121.3
All Developing	133.8	389.5	1,013.6	1,195.0
All Countries	789.6	1,142.6	4,041.9	3,723.5

Source: UNCTAD, Foreign Direct Investment Database, 2009.

Note: FDI inflows measured at current prices.

FDI inflows in the North Africa and West Asia parts of the MENA region have, in general, increased over 1986-05. However, West Asia has performed better compared to North Africa, since while FDI inflows into West Asia increased sharply, by more than thirty-six-fold over 1986-05, FDI inflows into the North Africa increased by only five-fold. Table 2.12 shows FDI inflows in the West Asia countries of the MENA region represented 27 per cent of the total MENA inflows over 1986-90, but since then FDI inflows to these countries steadily increased, such that over 2001-05 the share reached nearly 73 per cent.

Table 2.13 shows the leading five countries within the MENA region with the highest share of FDI inflows over 1986-05. These are Turkey, accounting for 15.9 per cent, United Arab Emirates (15.6 per cent), Egypt (12.6 per cent), Saudi Arabia (9.5 per cent) and Lebanon (8.3 per cent). Around half of FDI inflows were concentrated in just three countries: Turkey, United Arab Emirates and Egypt.

Table 2.13: Highest Country Shares of FDI Inflows in MENA Region, 1986-2005

Country	FDI Inflows	
	(US \$'m)	%
Turkey	28,908	15.9
UAE*	28,245	15.6
Egypt	22,813	12.6
Saudi Arabia	17,280	9.5
Lebanon	15,124	8.3
Others	69,088	38.1
MENA	181,458	100.0

Source: UNCTAD, Foreign Direct Investment Database, 2009.

Note: FDI measured at current prices. *United Arab Emirates.

2.4.3 FDI Inflows into Saudi Arabia

FDI inflows to Saudi Arabia are shown in Table 2.14, which reveals that FDI amounted to SRs 344 billion over 1976-2005. The table gives a breakdown by 5-year periods. In general, FDI inflows over the whole period followed a U-shaped trend (see Figure 2.4 below), such that FDI initially declined after 1976, reaching the lowest level of only SR 9,225 million in the sub-period 1986-90, but since then FDI has increased, reaching SR 169,616 million between 2001 and 2005. UNCTAD (2006) attributes the huge increase of FDI inflows to Saudi's accession to the World Trade Organization (WTO) in November 2005. According to the WTO, "this accelerated the country's integration into the global economy as well as its liberalization of inflows FDI" (UNCTAD, 2006; p. 66). A second factor was undoubtedly the 2000 Foreign Investment Act and the establishment of SAGIA, which helped to stimulate the inflow of investment into the country and to promote business opportunities.

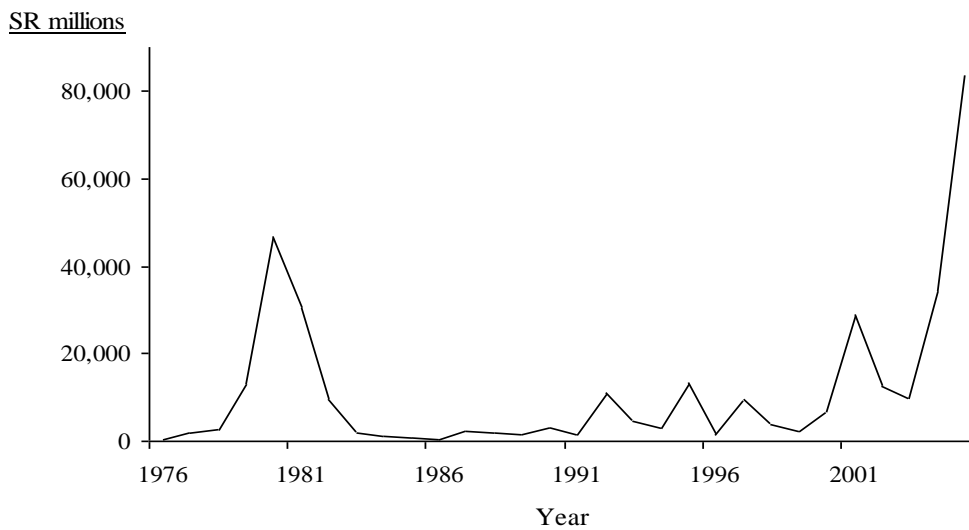
Table 2.14: FDI Inflows, 1976-2005

Period	FDI Inflows (SR m)	Share of Total FDI Inflows
1976-1980	64,997	18.9
1981-1985	42,987	12.5
1986-1990	9,225	2.7
1991-1995	33,392	9.7
1996-2000	23,705	6.9
2001-2005	169,616	49.3
1976-2005	343,922	100.0

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Note: FDI measured at constant 2000 prices.

Figure 2.4: FDI inflows to Saudi Arabia, 1976-2005



Source: Investment Database, Saudi Ministry of Commerce and Industry.

Note: FDI measured at constant 2000 prices.

A further factor affecting FDI is the oil industry. Table 2.15 shows the relationship between FDI inflows into the Kingdom and the output of its oil sector. Allowing for the strong trend over time, it illustrates that FDI inflows to the Kingdom are to some extent positively related

with oil revenues. Increased oil activity suggests greater opportunities for investment, leading to both stronger revenues and to more FDI inflows, and vice-versa.

Table 2.15: Output of the Oil Sector and FDI Inflows, 1976-05

Period	Oil Output (SR m)	Inward FDI (SR m)
1976-80	960,573	64,997
1981-85	1,043,775	42,987
1986-90	485,524	9,225
1991-95	906,596	33,392
1996-00	1,095,708	23,705
2001-05	1,891,804	169,616

Source: Investment Database, Saudi Ministry of Commerce and Industry and Saudi Arabia Monetary Agency (SAMA) Annual Report, 2008.

Note: Oil output measured at current prices. FDI measured at constant 2000 prices.

The FDI inflows to Saudi Arabia have come from a large number of source countries in different global regions. This is further analyzed in Chapter 5 using the unique dataset constructed for the purpose of this thesis. However, for now, the FDI inflows by the number of projects and size of investment by supra-national origin over the period 1960-05 are shown in Table 2.16. Not unsurprisingly, more than half of FDI projects in Saudi Arabia came from the MENA region, in which the West Asia part accounts for the vast majority of projects. However, this region accounts for only 20.6 per cent of the total foreign investment by amount, which indicates that these projects are smaller in scale. The largest amount of FDI inflows is from North America, accounting for nearly one-third of total volume of FDI. However, by average scale per project, it falls behind that of the Far East.

Table 2.16: Foreign Projects by Supra-national Origin, 1960-2005

Country	No. of Projects	Investment Amount (SR m)	Investment Share of Total FDI	Average Investment Per Project (SR m)
MENA (West Asia)	2,356	68,578	19.5	29.1
MENA (North Africa)	487	3,947	1.1	8.1
Western Europe	774	78,269	22.3	101.1
North America	545	96,948	27.6	177.9
Far East	216	73,336	20.9	339.5
Rest of the World	547	22,060	6.3	40.3
Not classified*	73	8,318	2.4	113.9
Total	4,998	351,456	100.0	70.3

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Note: Investments measured at constant 2000 prices. * = These are projects where several countries have equal biggest shares, and so are not classified.

In terms of the number of projects, Table 2.17 shows the five countries with the largest number of inward FDI projects to Saudi Arabia. These are Jordan (519 projects), Syria (515), Egypt (442), the United States (404) and Palestine (376). The total number of projects from these five countries represents 45 per cent of the total number of FDI projects in Saudi Arabia over 1960-05. Four of these are from the West Asia part of MENA, indicating the importance of cultural distance between host and home countries as a determinant of FDI. However, while these countries are ranked the most important in terms of the number of projects, they have a small share of the total amount of FDI flows, which combined is only 4.9 per cent.

Table 2.17: Largest Country of Origin by Number of Projects, 1960-2005

Country	No. of Projects	Share of Total Projects	Investment Amount (SR m)	Share of Investment
Jordan	519	10.4	8,366	2.4
Syria	515	10.3	3,692	1.1
Egypt	442	8.8	3,666	1.0
United States	404	8.1	68,157	19.4
Palestine	376	7.5	1,536	0.4
Other Countries	2,742	54.9	266,039	75.7
Total	4,998	100.0	351,456	100.0

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Note: Investments measured at constant 2000 prices.

In terms of the amount of investment, Table 2.18 shows that the largest five countries ranked as a major source of FDI flows are: the United States (19.4 per cent of the total FDI inflows), Japan (18.4 per cent), France (8.8), Kuwait (8.4) and Bermuda (6.8). Since there is only one country from the MENA region, Kuwait, this clearly shows that the largest investors in terms of investment are outside of the MENA region.

Table 2.18: Largest Country of Origin by FDI Amount, 1960-2005

Country	Investment Amount (SR m)	Share of Total FDI
United States	68,157	19.4
Japan	64,694	18.4
France	31,099	8.8
Kuwait	29,476	8.4
Bermuda	23,988	6.8
Other Countries	134,042	38.1
Total	351,456	100.0

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Note: Investments measured at constant 2000 prices.

2.5 Conclusions

This chapter has presented detailed background information about the economy of Saudi Arabia, focusing on FDI. Although the Saudi economy has grown from a relatively simple economy from just forty years ago to become a fairly sophisticated economy, the dependence on oil revenues has been a serious challenge facing the country. It has made the economy vulnerable to economic shocks, and has led to a series of development plans since 1970 that seek diversification through market reform and the encouragement of foreign investment. In 2000 it includes the Foreign Investment Act and the establishment of the Saudi Arabian General Investment Authority (SAGIA), with the explicit purpose of promoting FDI.

The chapter finds that the reform steps appear to have been successful in tackling the weaknesses in the old Foreign Investment Act and removing the restrictions facing foreign investors. It has meant that the amount of FDI inflows between 2000 and 2005 is roughly equal to that during the thirty years prior to the year 2000. While FDI to the MENA region represents only a small part of total inflows to the developing countries, it is concentrated in five countries, with Saudi Arabia in the fourth place. Further, the chapter finds differences in number of projects and amount of investment arising from different sources. Although half of projects originate from the West Asia part of MENA, around two-thirds of total investment originates from Northern America, Western Europe and the Far East. Nevertheless, if the primary purpose of FDI is to diversify the Saudi economy, then it remains heavily dependent on oil revenues. In the next two chapters, we consider the literature, before examining in-depth FDI in Saudi Arabia in Chapter 5.

Appendix 2.1: The 2000 Foreign Investment Act

Article 1

The following expressions and terms shall have the meaning ascribed beside each, unless the context deems otherwise:

- A. THE COUNCIL: The Supreme Economic Council.
- B. BOARD OF DIRECTORS: The Board of Directors of the General Investment Authority.
- C. THE AUTHORITY: The General Investment Authority.
- D. THE GOVERNOR: The Governor of the General Investment Authority and Chairman of the Board of Directors.
- E. FOREIGN INVESTOR: The natural person of non-Saudi nationality or otherwise the body corporate, where all partners are non-Saudi nationals.
- F. FOREIGN INVESTMENT: Investment of Foreign Capital in a licensed activity under this Act.
- G. FOREIGN CAPITAL: The Foreign Capital in this Act shall mean, for example but not limited to, the following funds and rights as long as they are possessed by a Foreign Investor:
 - 1. Money, instruments, securities and commercial instruments.
 - 2. Foreign Investment profits if they are invested to increase the capital, expansion of existing projects or establishment of new projects.
 - 3. Machinery, equipment, supplies, spare-parts, means of transportation and production requirements relevant to the investment.
 - 4. Legal rights i.e., licenses, intellectual properties, technical know-how, administrative skills and production techniques.
- H. PRODUCTION FACILITIES: Projects for the production of industrial and agricultural products (plant and animal).
- I. SERVICE FACILITIES: Service and construction projects.
- J. ACT: The Foreign Investment Act.
- K. THE RULES: The Rules of Implementation of this Act.

Article 2

Without prejudice to the requirements of regulations and agreements the Authority shall issue a license for a Foreign Capital Investment in any investment activity in the Kingdom, whether permanent or temporary.

The Authority shall make a decision about the investment application within thirty days after the completion of documents provided for in the Rules. In the event that the specified period elapsed without the Authority rendering a decision about the application it shall be obligated to issue the required license for the investor.

If the Authority shall deny the said application within the specified period, then the pertinent decision of denial shall be justified, and the party against whom the decision of denial had been issued shall have the right to contest such decision according to regulations.

Article 3

The Council shall have the authority to issue a list of activities excluded from Foreign Investment.

Article 4

Subject to Article 2, the Foreign Investor may obtain more than one license in different activities, and the Rules shall specify the necessary measures.

Article 5

Foreign Investments licensed under the provisions of this Act, may be in either of the following forms:

1. Facilities owned by a national and a Foreign Investor.
2. Facilities wholly owned by a Foreign Investor.

The legal form of the Facility shall be determined according to regulations and directives.

Article 6

A project licensed under this Act shall enjoy all the benefits, incentives and guarantees enjoyed by a national project according to regulations and directives.

Article 7

The Foreign Investor shall have the right to reallocate his share as derived from the selling of his equity, or from the liquidation surplus or profits generated by the facility, out of the Kingdom or to use by any other legal means, and he shall also be entitled to transfer the required amounts to settle any contractual obligations pertaining to the project.

Article 8

The foreign facility licensed under this Act shall be entitled to possess the required real estates as might be reasonable for practicing the licensed activity or for the housing of all or some of the staff as per the provisions for non-Saudi nationals real estate acquisition.

Article 9

The Foreign Investor and his non-Saudi staff shall be sponsored by the licensed facility.

Article 10

The Authority shall provide all those interested in investment with all necessary information, clarifications and statistics, together with all services and procedures to facilitate and accomplish all matters pertaining to the investments.

Article 11

Investments related to the foreign investor shall not be confiscated wholly or partially without a court order, moreover, it may not be subject to expropriation wholly or partially except for public interest against an equitable compensation according to Regulations and Directives.

Article 12

1. The Authority shall inform the Foreign Investor in writing when violating the provisions of this Act and its Rules in order that such violation be rectified within a period of time determined appropriate by the Authority for rectifying such violation.

2. Without prejudice to any greater penalty, the Foreign Investor under the existence of the violation shall be subject to any of the following penalties:

- A. Withhold all or part of the incentives and benefits allocated for the Foreign Investor.
- B. Imposition of a financial fine not exceeding SR. 500,000 (Five hundred thousand Saudi Riyals).
- C. Cancellation of the Foreign Investment license.

3. The imposition of the penalties referred to in paragraph (2) herein above, is rendered by a resolution by the Board of Directors.

4. A petition against the penalizing resolution may be brought before the Board of Grievances according to its regulations.

Article 13

Without prejudice to the Agreements in which the Kingdom of Saudi Arabia shall be a party of:

1. Disputes arising between the Government and the Foreign Investor relating to his licensed investments under this Act shall as far as possible be settled amicably, and if this shall prove to be impossible, then the dispute shall be settled according to regulations.
2. The disputes arising between the Foreign Investor and his Saudi partners relating to his licensed investments under this Act shall as far as possible be settled amicably, and if this shall prove to be impossible, then the dispute shall be settled according to regulations.

Article 14

All Foreign Investments licensed under this Act shall be treated in accordance with the Tax codes valid in Saudi Arabia and its amendments.

Article 15

The Foreign Investor undertakes to abide by all regulations, rules and directives valid in Saudi Arabia together with international agreements in which it is a part thereof.

Article 16

The implementation of this Act shall not prejudice the vested interests of Foreign Investments that legally existed before this Act shall come into force, however, these projects in conducting their activity or increasing their capital shall be subject to its provisions.

Article 17

The Authority shall issue the Rules, which shall be published in the Official Journal, and shall be effective as of the date of its publishing.

Article 18

This Act shall be published in the Official Journal, and shall be effective thirty days after its publishing, and shall invalidate the Foreign Capital Investment Act issued by the Royal Decree no. (M/4), dated 2/2/1399 (H), together with any contradicting provisions.

Appendix 2.2: The Executive Rules of the Foreign Investment Act

First: Definitions

Article 1

For the purpose of implementing these Executive Rules the following terms and expressions shall have the meanings indicated opposite thereto, unless the context requires otherwise:

The Council

The Supreme Economic Council

The Board of Directors

The Board of Directors of the Saudi Arabian General Investment Authority

The Chairman of the Board of Directors

The Chairman of the Board of Directors of the Saudi Arabian General Investment Authority

The Governor

The Governor of the Saudi Arabian General Investment Authority

The Authority

The Saudi Arabian General Investment Authority

Foreign Investor

A natural person who is not a Saudi national, or a corporate entity, partners thereof are not Saudi nationals

Foreign Investment

Investment of Foreign Capital in an activity licensed under the Act and the rules

Foreign Capital

For purposes of the Act and the Rules, Foreign Capital shall mean, but is not limited to the following assets and rights so long as they are held by a Foreign Investor:

1. Cash, securities and commercial papers.
2. Foreign Investment profits if reinvested to increase capital expand existing investment entities or establish new ones.
3. Machinery, equipment, fixtures, spare-parts, means of transportation and production requirements related to the investment.
4. Intangible rights such as licenses, intellectual property rights, technical know-how, administrative skills and production techniques.

The Act

The Foreign Investment Act

Products Facilities

Projects for the production of industrial and agricultural products (crops and livestock)

Service Facilities

Service and contracting projects

The Rules

The executive Rules of Foreign Investment Act

The Center

Investors Service Center Stipulated in Article (9) of the Saudi Arabian General Investment Authority's Act

Second: The Fields of Investment

Article 2

The Authority is authorized to issue a license for foreign capital investment in the Kingdom for any investment activity whether permanent or temporary with the exception of the activities excluded under the third article of the Act.

Article 3

The Board of Directors shall periodically review the list of activities excluded from foreign investment in order to shorten it and submit it to the Council to consider its approval.

Article 4

Foreign Investments licensed under the provisions of The Act and The Rules may be in either of the following forms:

1. Entities jointly owned by a national and a foreign investor.
2. Entities wholly owned by a foreign investor.

Third: Benefits, Incentives and Guarantees

Article 5

Foreign Investment projects shall enjoy all the benefits, incentives and guarantees extended to national projects, including the following:

1. The incentives stipulated in the Protection and Promotion of National Industries Act issued by Royal Decree No. 50 dated 23.12.1381 H.
2. Ownership of real estate required to carry out the investor's licensed activity or for his residence and his staff housing according to the provisions of the Regulation of Ownership and Investment in Real Estate by Non-Saudis issued by Royal Decree No. M/15 dated 17.04.1421 H.
3. The benefits ensuing from agreements of avoiding double taxation and agreements of promotion and protection of Investment which are signed by the Kingdom.
4. Prohibition of any full or partial confiscation of investment without a court order or subjecting them to expropriation wholly or partly except for the public interest and against fair compensation.
5. Foreign investors are entitled to repatriate their share that is derived from the sale of his equity, from surplus of liquidation or the profits generated by the entity and to dispose of it by any legal obligations. He is also entitled to transfer required amounts to fulfill any contractual obligations in respect of the project.
6. Shares can be freely exchanged amongst partners and others.
7. The licensed entity is entitled to sponsor the foreign investor and his non-Saudi staff.
8. The licensed entity is entitled to obtain industrial loans in accordance with the regulations of The Saudi Industrial Development Fund.
9. The losses incurred by the entity may be carried forward to the following years and will not be calculated at tax settlement of the years during which the entity reaps profits.

Fourth: Licensing Conditions and Criteria

Article 6

The conditions for granting a Foreign Investment license by The Authority shall include the following:

1. The investment activity to be licensed should not be in the List of excluded activities from Foreign Investment.
2. The intended Product should comply with the Kingdom's rules and regulations, or the laws of the European Union or the United States of America in the absence of those laws, in terms of standards and specifications, raw materials and production processes.
3. The license applicant should be a natural or nominal person who has come to the Kingdom for investment.
4. The Foreign Investor should not have been convicted in the past for substantial violations of the provisions of The Act.
5. The Foreign Investor should not have been convicted in the past of financial or commercial violations whether in the Kingdom or in other countries.
6. The grant of a license shall not result in the breach of any international or regional agreement to which the Kingdom is a party.

Article 7

The Foreign Investor may obtain more than one license to practice the same activity or a different activity(s) subject to the following conditions:

1. The conditions set forth under Article (6) of The Rules must be satisfied.
2. Licensing applications to practice the same activity submitted by natural or moral persons shall be considered as expansion of established projects applications.
3. The Board of Directors will reconsider these conditions periodically or when deemed necessary.

Article 8

The Foreign Investor may purchase local or foreign investment entities or shares thereof subject to the conditions set forth in Article (5) and Article (6) of The rules.

Fifth: Licensing Procedures

Article 9

The Authority shall prepare an investment guide containing a description of the procedures for obtaining both permanent and temporary licenses and their modifications, as well as the forms, required documents to obtain the licenses and any information needed by the investor. The guide shall also list the incentives, benefits and guarantees to be enjoyed by The Foreign Investor. In addition, the guide must contain substantial information about the following:

1. Foreign Investment Act, its rules and supplementary decisions.
2. The Statute of the General Investment Authority and the Executive Rules of the General Investment Authority.
3. The Regulation of Ownership and Investment in Real Estate by Non-Saudis.
4. Protection and Promotion of National Industries Act.
5. Labor and Workmen Act and Social Insurance Act.
6. Zakat, Tax and Customs Regulations.
7. Legal Sharia Procedures Act.
8. Penal Procedures Act.
9. Legal Profession Act.
10. Companies Regulations (Commercial Register, Trade Fraud, Banks Monitoring).
11. Intellectual Property Protection Regulations (Trade Marks Act, Copyrights Protection Act, Patents Act).
12. Residence Act.

The guide shall also contain special sections on the customs and traditions observed in the Kingdom and shall be updated regularly.

Article 10

Applications to obtain a foreign investment license shall be submitted to the Applications Reception Unit of The Center, using the designated form. The application must contain all the necessary information; satisfy all documentation requirements cited therein and be signed by the applicant or his duly authorized representative. The Center shall notify the license applicant by a written or electronic receipt note including the number of the application record and its date.

Article 11

The Authority may accept complete licensing applications and the required attached documents that are delivered by post, e-mail or fax. The licensing decision may be issued accordingly; provided that it will be delivered to the applicant only after The Authority receives the original documents when deemed necessary.

Article 12

Decisions on submitted applications are subject to the provisions of The Act, The Rules and the resolutions of The Board of Directors. The Governor, or his assigned delegate, shall sign the licensing decisions within thirty days. National holidays shall be excluded from the mentioned period.

Article 13

The Center shall notify the investor, by hand delivery, registered mail, e-mail or any other means, of the final decision issued with respect to his application.

Article 14

If The Authority rejects the application for a new license or the modification of an existing license, its rejection shall be justified. The foreign Investor may object to the rejection decision before The Board of Directors within thirty days effective from the date on which he is notified of the rejection decision.

Article 15

The Board of Directors shall consider the objection and reach a decision on it within thirty days from the date of its submittal. If the objection was rejected, the license applicant shall have the right to challenge the rejection decision before the Board of Grievances.

Sixth: Obligations of the Foreign Investor

Article 16

The licensed investor shall start the practical steps required for setting up the entity in accordance with the time schedule submitted by him to The Authority. The Authority shall, if The Foreign Investor shows adequate reasons for delays in the implementation procedures,

extend the period specified in the schedule, provided that the extensions shall not exceed one year in total. The extension shall not exceed one year unless a decision to that effect is made by The Board of Directors.

Article 17

When The Authority does not approve the extension requests specified by the time table, and if The Foreign Investor is found not to be diligent after the extension, The Board of Directors may then revoke the license. A Foreign Investor whose license is revoked under this Article shall bear the consequences of revocation.

Article 18

Licensed entities must abide by the conditions and primary objectives upon which the licenses are issued. No modifications shall be made unless approved by The Authority.

Article 19

Owners of licensed entities shall adopt an accredited accounting system and a budget for their entities approved by an authorized accounting office. Upon request, owners of licensed entities shall provide The Authority with statistics or information in respect of their entities.

Seventh: Violations

Article 20

Authority officials, empowered by a written mandate by The Governor or his designated representative, shall have the right to monitor the implementation of the provisions of The Act and The Rules. For this purpose, they have the right to examine records and all documents relating to the investment activity and shall pinpoint violations and submit necessary reports to The Governor or his designated representative. The assigned officials shall maintain the confidentiality of the information and documents they examine.

Article 21

The Board of Director shall issue a list of violations and penalties pertaining to the violation of the provisions of The Act, The Rules, the licensing conditions and the rules of their implementation and the implementation of the penalties therein.

Article 22

The Authority shall notify the Foreign Investor in writing regarding any violation of the provisions of The Act, The Rules and the licensing conditions; and shall allow a suitable period of time, as specified by the list of violations and penalties, to correct them. If the Foreign Investor fails to implement the necessary corrections, he shall be subject to any of the penalties provided for in the list of violations and penalties.

Article 23

The Board of Directors shall form a committee consisting of at least three members, one of whom shall be a legal counselor and shall develop rules and procedures for its functioning. The responsibilities of the committee shall be to review violations of the provisions of The Act provisions and The Rules and the licensing conditions. The committee shall hear the parties accused thereof, to consider their defenses and to suggest what it sees according to what specified by The Act and the list of violations and penalties. The Board of Directors shall render the penalty decision.

Article 24

The Foreign Investor with to whom the penalty decision is issued according to Article 23 of The Rules may object to the rejection decision before the Board of Directors within thirty days effective from the date on which he is notified of the rejection decision.

Article 25

The Board of Directors shall consider the objection and make a decision on it within thirty days from the date of its submittal. If The Board of Directors confirms the penalty the license applicant shall have the right to challenge the rejection decision before the Board of Grievances within 60 days effective from the date on which he was notified of the decision.

Eighth: Disputes Settlement Committee

Article 26

The Board of Directors shall form, subject to Article 13, paragraph 2 of The Act, a committee composed of at least a chairman and two members to be named The Investment Disputes Settlement Committee. This committee shall consider the disputes arising between the Foreign Investor and his Saudi partners in respect of a licensed investment under The Act. The committee shall work to settle the dispute amicably. In case an amicable settlement could not be reached, the dispute shall be settled through arbitration according to the Arbitration Act and its executive rules issued by Royal Decree No. (46) Dated 12.7.1403 H. This committee is the competent body to consider the dispute as stipulated in the Arbitration Act.

Chapter 3

The Determinants of FDI:

Theoretical Conceptualizations and Empirical Studies

3.1 Introduction

There is a large literature analyzing foreign direct investment (FDI), reflecting both the interest in understanding the determinants of FDI and its location. Many theories have sought to explain these from different perspectives, of which the early contributions essentially followed the developments in international trade. Later, other perspectives and conceptualizations of FDI were adopted, which differ in their theoretical foundations, and arising from literatures such as institutional and industrial economics. Empirically-based research has sought to test these different theories and to analyze the location of FDI, using data for countries that include both developed and developing countries.

The purpose of this chapter is to review this literature on the determinants of FDI from both theoretical and empirical points of view, in order to provide some motivation for the subsequent empirical work that examines FDI outflows and joint venture equity shares. The chapter is broadly based, while in Chapter 4 we consider the literature relating more specifically to the entry mode, making reference to the determinants of FDI considered in this chapter. This chapter starts in Section 3.2 by considering the definition of FDI, and relating this to that adopted in Saudi Arabia. It describes in Section 3.3 the evolution of the determinants of FDI from different theoretical perspectives. The empirical studies that seek to

test these different theories are then examined in Section 3.4, giving some weight to location studies, but which is conducted in light of the models discussed in Section 3.3. Conclusions from this chapter are drawn in Section 3.5.

3.2 The Definition of FDI

The International Monetary Fund (IMF, 1993) and the Organization for Economic Co-operation and Development (OECD, 1996) provide a widely accepted definition of FDI. They define FDI as the category of international investment that reflects the objective of a resident entity in one economy ("direct investor" or "parent enterprise") obtaining a 'lasting interest' and control in an enterprise resident in another economy ("direct investment enterprise"). These criteria help us to distinguish a foreign direct investment from a portfolio investment, where the notion in the foreign direct investment enterprise is defined as "the percentage of ownership that should be used as a threshold (10 per cent) below which investments are treated as portfolio investments and above which they are treated as direct investments" (Brewer, 1994; p. 117). The definition of FDI in Saudi Arabia makes no distinction between FDI and portfolio investment, although very few projects in Saudi Arabia have less than 10% foreign ownership, so that for practical purposes the definitions are the same.

According to the Executive Rule of Foreign Investments Act (2000) of Saudi Arabia, "FDI is investment of foreign capital in an activity licensed under the Act and the rules" (p. 1). The executive rules of the Act point out that foreign capital includes the following assets and rights, as long as they are held by a foreign investor:

- Cash, securities and commercial papers.
- Foreign investment profits if reinvested to increase capital, expand existing investment entities or establish new ones.
- Machinery, equipment, fixtures, spare-parts, means of transportation and production requirements related to the investment.
- Intangible rights such as licenses, intellectual property rights, technical know-how, administrative skills and production techniques.

In Saudi Arabia there is no threshold level that distinguishes between FDI and portfolio investment (i.e. 10% ownership), so that the executive rule of the Foreign Investments Act defines FDI in the following two forms:

- Entities that are wholly owned by a foreign investor (s). Full ownership may be made by either mode of entry, i.e. acquisition or ‘greenfield’ start-up, and these may be joint ventures between foreign investors.
- Entities jointly owned by a national and a foreign investor. In this form, a joint-venture project is not subject to any threshold percentage share by the foreign investor, but less than a 100 per cent share.

Although the definition of FDI used by Saudi Arabia could lead to the level of FDI in the country being overstated when compared to the OCED definition, in practice the number of investments below the 10% threshold level is very small (over the period 1960-05 we find below that there were just 97 projects were in this category, which is about 1% of total projects). However, the main premise of FDI in the theoretical literature relates to the concept of control that a single direct investor has in the overseas enterprise. It is this concept that has

been at the heart of the development of the theoretical literature on FDI, and it is the development of these theories that we shall look at in the next section.

3.3 The Theoretical Determinants of FDI

The interest in FDI, and the development of theoretical models and empirical studies used to understand it began to emerge in the period immediately following the Second World War, between 1945 and 1960, a period when FDI flows began to gain prominence in the global economy. However, these early models (and consequently the empirical studies also) were missing a distinct theoretical underpinning, as FDI was treated on the same basis as trade theories, and so a separate conceptualization was lacking. FDI was given increasing attention from the late 1960s onwards, a period over which global FDI flows increased dramatically from \$13 billion in 1970 to \$1,800 billion in 2007. During this period, foreign direct investment began to emerge as a concept of its own right, crossing a number of disciplinary boundaries, including economics, politics and management.

In essence, these theories try to answer the following questions: First, why do firms choose to transfer their operations from the home to the host country? Second, why do they choose to do this instead of exporting or licensing? Finally, why do they choose to locate in a particular area? The chronological development of these new theories is now discussed in the following eight subsections of this chapter.

3.3.1 International Trade Theory

The early theoretical models that aimed to explain FDI were based on international trade

theory, and in particular the Heckscher-Ohlin model of neoclassical trade theory, within the framework of 'the 2 x 2 x 2 model'. As Lancaster (1957) puts it, "the Heckscher-Ohlin model provided, for the first time, an analysis that was capable of integrating the factor markets into international trade theory in a satisfactory way" (p. 19). It is a general equilibrium model that determines a country's comparative advantage, assuming that there are two countries (home and foreign) and two commodities requiring two factors of production (capital and labour), in addition to the use of land. It further assumes identical production technologies between the two countries and perfectly competitive commodity markets, but differences in the factor intensity of constant-returns-to-scale production functions and differences in the factor endowments of the two countries.

According to Heckscher-Ohlin theorem, countries specialize in producing the commodity that utilizes the locally abundant factor of production most intensively. So, for example, if the production of one commodity is relatively capital-intensive, then the country that has relatively more capital compared to the other country will produce that good. This implies that labour is relatively scarce, so that it attracts higher wages. Capital therefore flows elsewhere to seek cheaper labour in order to get higher returns. This provides a powerful explanation for foreign direct investment.

In the Heckscher-Ohlin model the countries are endowed with different quantities of factors of production, which determines their price, but Samuelson (1953) extended this model by arguing that the prices of the factors would gradually equalize between the two countries. This is the Heckscher-Ohlin-Samuelson (HOS) model. The basic logic of the HOS model is that under free trade, factor prices will be equalized across countries regardless of the difference in factor endowments. Vanek (1968) explored whether international trade occurs

according to the differences in factor endowments between countries. He generalized the Heckscher-Ohlin model into a multi-factor, multi-good and multi-country model (i.e. more than two in each case) to analyze the actual relationships between countries, which is called the Heckscher-Ohlin-Vanek (HOV) model.

The role of FDI is described implicitly by the basic Heckscher-Ohlin model, whereby FDI occurs in the form of capital flows from capital-intensive countries to other countries that are characterized by cheap labour. However, Lancaster (1957) states that the Heckscher-Ohlin model can be sharply criticized on the grounds of its strong assumptions, i.e. the model has countries that have identical production functions that use identical factors to produce identical goods with the property of constant returns to scale. Lancaster points out that "these assumptions are necessary (but not sufficient) to result in the equalization of factor prices throughout the world" (p. 20). He states that "the assumptions of identical production functions and of constant returns to scale have been attacked as 'unrealistic'" (p. 20). The assumptions of the Heckscher-Ohlin model are also criticized in the sense that "they eliminate all differences between countries except with regard to factor endowment" (Kierzkowski, 1987; p. 2). According to Kierzkowski (1987), the criticisms have led economists to explore the implications of the assumptions, which in turn have led to the emergence of alternative models of FDI.

3.3.2 The Theory of Firm-Specific Ownership Advantages

The first attempt to treat FDI as a stand-alone theory, as opposed to a strand of international trade theory, was initiated by Hymer (1960). Hymer drew his framework from industrial economics and asserting that in order for a firm to overcome international barriers to

production a firm must possess firm-specific ownership advantages (i.e. some form of monopolistic advantage). These are intangible assets, such as patents, marketing experience, superior management or new technologies, without which the firm is at a disadvantage compared to domestic firms in the host country for FDI.

Unlike conventional international trade theories, Hymer's theory distinguishes between portfolio investment and FDI. Hymer found that attributing portfolio investment to the interest differential between countries was an inadequate theoretical explanation of FDI since it ignores ownership advantages and the concept of control. He pointed out that the inward movement of capital occurs not only in response to rising interest rates in the host country to gain higher returns, but also the desire to obtain a certain level of control over the firm to improve profitability and to transfer its ownership advantages. Thus, Hymer observed that FDI occurs when a firm possesses ownership advantages over its competitors in an industry, allowing the firm to enter markets in other countries.

The early efforts to develop and extend this theory came from Kindleberger (1969), who emphasised Hymer's argument about market imperfections and firm-specific advantages that can be derived from acquiring intangible assets – such as superior technology, raw materials, management and other internal capabilities – that are not available to rivals in the host country. Caves (1971) also adopted the theory to show how FDI provides a reliable explanation of the motives of firms to transfer operation across borders as a way of gaining hold of locational advantages. According to Caves, FDI could be understood in the context of firms who seek to expand their monopolistic economic rent in order to penetrate other overseas markets. In this sense, FDI was seen as a mode of international investment as distinct from the standard theories based on international trade.

3.3.3 Product Life Cycle Theories

Another criticism of the neoclassical comparative advantage models came from Vernon (1966), who argued that it failed to take into account the role of innovation and economies of scale in explaining FDI. As a consequence, Vernon developed the product life cycle model to explain FDI, conceptualizing it in terms of two factors: the nature of the product; and the development level of the country. Vernon suggested three stages of a 'product life cycle': the new product, the mature product and the standardized product stages. In the first stage, advanced countries will be the place to develop and produce the product, as most of the potential inputs are available, such as the advanced technology, qualified managers and skilled labour. By the mature stage, the product characteristic and production processes start to become standardized, so that there is less emphasis on product development, and the product starts to become less dependent on being located close to the home economy. The final stage is when the product starts to become fully standardized. At this stage, the production of the standardized product becomes more likely to move to foreign countries that are characterized by lower labour costs, such as less developed countries, so that a foreign investor can cheaply produce its product.

Krugman (1979) supported Vernon's concept of the product cycle and developed a general-equilibrium model of product cycle trade that highlighted the importance of 'technological gaps' and 'innovation circles'. The model explains the role of the 'gap' through an innovation circle that starts from the production of a new product by the industrialized country or region, "the North", which exports it to the less developed country or region, "the South". When the technology is disseminated to the South, the North will begin to import the goods that result from it, but then begin to produce another new product with a new technology, thus starting a

new innovation circle. This process implies a continuous gap in technology between the North and the South.

Linked to the product life cycle theory is the Uppsala School theory of FDI, developed by Johanson and Wiedersheim (1975). Johanson and Wiedersheim investigated four large Swedish multinational corporations (MNCs). During the course of their investigation, they observed the gradual development of small incremental changes in firm behaviour, which they believed to explain the process of firm internationalization. These changes occurred in four steps: from no exporting, to exporting via foreign agents, establishing a subsidiary, and finally transferring the production to foreign market.

Johanson and Vahlne (1977) later gave more insight to Johanson and Wiedersheim's work by asserting that firms take steps by using foreign market intelligence that serves to push their level of commitment to investing abroad. When MNCs first intend to invest abroad there exists a 'cultural distance', which limits their knowledge of the investment climate in the foreign market. However, once they make a commitment to invest and start the investment process, they gradually tend to gather knowledge and experience of the investment climate, which enables them to produce and operate more effectively in their given markets. The fundamental principle underlying both the product life cycle and the Uppsala school theories is the emphasis on the incremental commitment to international investment, both over a period of time and in a number of stages.

3.3.4 Firm-based Theories of FDI

Other theories of FDI also move away from traditional economic theory, and are instead

based on theories of the firm. One such theory is by Aharoni (1966), who developed the behavioural theory of FDI. Originally, the behavioural theory was initiated by March and Simon (1958) who attempted to provide a model to analyze intra-organizational decision-making. Their model considers the influences that affect individuals in their environment and the way that they respond to these. A significant contribution in formulating the model of the behavioural theory of the firm came from Cyert and March (1963) who focused on the firm, as well as economic decision-making processes. They clarified the effects of the organization's structure and practices on developing goals, formulating expectations and implementing choices in reaching a decision. According to the authors, the decision-making process has four major steps: organizational goals; organizational expectations; organizational choice and organizational control.

Aharoni draws upon the behavioural model of Cyert and March (Dunning, 1974) using this to analyze the FDI decision-making process by MNCs operating in the US. Aharoni points out that this process depends not only on economic factors but also on other environmental factors, individual characteristics and relationships and structures within the organization that create conflicts and commitments during the process of decision-making. Teece (1985) summarizes Aharoni's views by stating that "the direct investment process is governed by more than just economic incentives" (p. 237). Aharoni identified four stages upon which the foreign investment decision is made: the decision to target the foreign market; the investigation process; the reviewing process and finally the foreign investment process. In turn, these four stages depend upon behavioural theories of the firm, comprising the organizational structure, goals, expectations, choice and control.

The behavioural theory of FDI is not the only theory to draw upon theories of the firm. The

‘internalization theory’ of FDI (Buckley and Casson, 1976) is based upon Coase’s (1937) theory of the firm. Buckley and Casson (1976) initially make a comparison between the different forms of transactions amongst firms and then explore why firms are better-off internalizing these transactions within the firm rather than between different firms. Buckley and Casson attempt to explain the reason firms choose to invest overseas rather than licensing or exporting their product instead. They show that their theory is an extension of the firm-specific theory of Hymer as they emphasize that it is not just firm-specific theories that are important for foreign investment, but crucially that the investment decision depends on internalizing the firm-specific advantage within the firm. Buckley and Casson assert that this is particularly relevant for MNCs, as markets of intermediate goods, such as production processes, marketing techniques and managerial experience, are characterized by high risk which can lead to high transaction costs, so that such markets are internalized.

In summary, although expansion to other markets might be a profitable strategy, MNCs confront various trade restrictions, such as tariff or non-tariff barriers, that raise the cost of investment. The creation and accumulation of firm-specific advantages enables MNCs to utilize their technological and marketing know-how and management capabilities to efficiently manage their assets and to produce more competitive products, but subject to behavioural and organizational structure constraints. In order to remain more competitive than its rivals the MNC internalizes ownership to protect its advantages, but this makes it more capable of expanding across borders with the aim of exploiting foreign markets.

3.3.5 The Eclectic Paradigm (OLI)

Some economists have argued that even though the ownership specific advantages and

internationalization theories are capable of justifying the existence of FDI, they still lack a complete logical explanation. For instance, Dunning (1979) points out that it is "the dissatisfaction with these partial explanations of international production, and the lack of a formal model relating it either to trade or other modes of resource transfer that led economists to favour a more eclectic approach to the subject" (p. 274-5). In addition, Lall (1980) strongly suggests that "any study of international involvement which leaves one or other of these aspects out of account may be rather unrealistic" (p. 120). As Dunning (2001) states, "no single theory of international trade can satisfactorily explain all forms of cross-border transactions in goods and services" (p. 176), and furthermore these theories "are complementary, rather than substitutable, to each other" (Dunning, 2000; p. 166).

Dunning (1979) argues that the occurrence of FDI cannot be related to one area of economics, instead it needs to bring several strands of theory together in order to draw a reliable and complete story that is capable of providing a logical description to the elements that determine the process of the flow of foreign direct investment. Though a lot of theorists concentrated mainly on one strand of thinking to provide an economic description to FDI, Dunning sought to bring all the strands together in his theory, which is known as the 'eclectic paradigm'. In a series of papers, Dunning (1977, 1979, 1981, 1988) utilizes international trade theory with other relevant economic theories in order to create a comprehensive explanation of FDI, which is known as the 'eclectic paradigm of FDI' or the Ownership-Location-Internalization (OLI) theory. Dunning observed that for a MNC to invest abroad it must acquire three specific advantages at lowest cost: ownership, location and internalization advantages. These are considered in turn.

The ownership advantages (O), (as discussed by Hymer) require a firm to have in its

production process a competitive advantage over its foreign rivals, such as patents, new technologies, reputation or managerial knowledge. Exporting firms could be motivated to utilize their advantage for their own interest instead of selling or licensing the advantage to other firms. The internalization advantages (I) (as discussed by Buckley and Casson) assume that contracting with external firms in a foreign market is a risky option. It might lead to revealing the ownership specific advantages to firms in foreign markets and hence current contracting firms could be potential future competitors. Therefore, internalizing the advantage becomes important since a firm hierarchy is a more reliable strategy for organizing transactions.

Complementary to ownership and internalization advantages are the location specific advantages (L). Location specific advantages imply that firms need to gain benefits from locating in the foreign country, otherwise they would not need to undertake the foreign investment. For example, firms may need to produce close to the final customer in order to minimize transaction costs or to gain access to a particular input of production. In summary, the OLI paradigm emphasizes that for FDI to occur a firm should possess an ownership advantage that need to be internalized within the firm and should gain benefits from locating in the overseas country.

Dunning (1988) extended his OLI framework by including country, industry, and firm-specific structural variables, as summarized in Table 3.1. The Table shows how OLI characteristics may vary according to country, industry and firm specific considerations, which can be examined in further detail. For example, if the home country is characterized by advantages such as abundant factor endowments (resources and skilled labour), large market size and innovative oriented government policy, then country-specific advantages will define

the nature of the ownership, location and internalization advantages of firms. In the above example this will affect firm's ownership advantages and lead firms to have access to resources, be larger in size or to be more innovative. A similar story will occur within industry and firm specific considerations (see the columns of Table 3.1). For example, industries and firms characterized by high levels of technology will have ownership advantages of an innovative nature.

Location advantages are determined according to the characteristics of the home and host country, but unlike ownership advantages, location advantages are immobile and difficult to transfer. Country characteristics will play a significant role to the choice of location. For example, physical and what Dunning refers to as 'psychic distance' between countries indicates the economic and cultural differences between home and host country. The positive links between the home and the host country implies political relations between them, and hence firms will seek a foreign market in a country with links with their home country. Therefore, the economic and cultural ties will inevitably reduce the level of the host country political risk, which makes it more attractive for FDI. Government intervention through, for instance, tariffs or taxes also represents a significant role as a country specific factor in the choice of location. Tariffs barriers make host countries less likely to be favourable to FDI. Hence, proximity between countries and the policies of country's governments are important for MNCs to exploit their advantages. Industry factors can also be crucial to the location of FDI. In some industries, for instance, there can be high or low transportation costs of intermediate and final goods products and high or low tariff barriers that will affect the location decision of the foreign investor. The nature of competition between firms in the industry may also vary according to location.

Table 3.1: OLI Model: Country, Industry and Firm-Specific Considerations

	Country (Home - Host)	Industry	Firm
Ownership	Factor endowments (e.g. resources and skilled labour) and market size and character; government policy towards innovation, protection of proprietary rights, competition and industrial structure, government controls on inward direct investment	Degree of product or process technological intensity; nature of innovations; extent of product differentiation; production economics (e.g. if there are economies of scale); importance of favoured access to inputs and/or markets	Size, extent of production, process or market diversification; extent to which enterprise is innovative, or marketing-oriented, or values security and/or stability, e.g. in sources of inputs, markets, etc.; extent to which there are economies of joint production
Location	Physical and psychic distance between countries; government intervention (tariffs, quotas, taxes, assistance to foreign investors or to own MNEs, e.g. Japanese government's financial aid to Japanese firms investing in South East Asian labour-intensive industries)	Origin and distribution of immobile resources; transport costs of intermediate and final goods products; industry specific tariff and non-tariff barriers; nature of competition between firms in industry; can functions of activities of industry be split? Significance of 'sensitive' locational variables, e.g. tax incentives, energy and labour costs	Management strategy towards foreign involvement: age and experience of foreign involvement (position of enterprise in product cycle, etc.); psychic distance variables (culture, language, legal and commercial framework); attitudes towards centralization of certain functions, e.g. R&D, regional office and market allocation etc.; geographical structure of asset portfolio and attitude to risk diversification
Internalization	Government intervention and extent to which policies encourage MNEs to internalize transactions, e.g. transfer pricing; government policy towards mergers; differences in market structures between countries, e.g. with respect to transaction costs, enforcement of contracts, buyer uncertainty, etc.; adequacy of technological, educational, communications, etc. infrastructure in Host countries and ability to absorb contractual resource transfers	Extent to which vertical and horizontal integration is possible/desirable, e.g. need to control sourcing of inputs or markets; extent to which internalizing advantages can be captured in contractual agreements (cf. early and later stages of product cycle); use made of ownership advantages; cf. IBM with Unilever-type operation; extent to which local firms have complementary advantage to those of foreign firms; extent to which local firms have complementary advantage to those of foreign firms; extent to which opportunities for output specialization and internalization division of labour exist	Organizational and control procedures of enterprise; attitudes to growth and diversification (e.g. the boundaries of a firm's activities); attitudes toward subcontracting ventures, e.g. licensing, franchising, technical assistance agreements etc.; extent to which control procedures can be built into contractual agreements

Source: Dunning (1988), p.31, Table 1.4.

Internalization advantages occur when MNCs tend to utilize its ownership advantages and place its investment in a foreign country in order to benefit from significant locational

advantages. At the country level, countries differ in terms of the extent to which policies encourage MNCs to internalize transactions, such as transfer pricing, government policy towards mergers and the ability to absorb contractual resource transfers. For example, if the policies encourage internalizing transaction costs (e.g. transfer pricing), MNCs will be more likely place its investment in this country. At the industry level, industries differ in terms of the level of controlling the sourcing of inputs, the extent to which internalizing advantages can be captured in contractual agreements and the extent to which local firms have complementary advantages to those of foreign firms. Organizational and control procedures may also differ between firms, as well as firms' attitudes towards growth and diversification such as subcontracting, franchising, licensing and technical assistance agreements.

Dunning's eclectic paradigm is often seen to be the most comprehensive framework to describe FDI, with Dunning (1993) describing his work as "a general framework for determining the extent and pattern of both foreign owned production undertaken by a country's own enterprises and also that of domestic production owned by foreign enterprises" (p. 76). Indeed, "it also provided a framework for a comparison between theories, by establishing the common ground or the points of contact between them, and clarifying the relationship between different levels of analysis and the different questions theorists have been concerned to address" (Cantwell and Narula, 2001; p. 156).

3.3.6 Classical Location Factors

Within the framework of the eclectic paradigm, Dunning (1993) gave an insight into the location dimension of FDI by reflecting on the motivations for MNCs to utilize their ownership advantages to invest in foreign markets. The motives are classified as: market-

seeking, resource-seeking, efficiency-seeking and strategic-asset-seeking. They help to characterize the classical motives for FDI location, and can be considered as follows.

According to Dunning (1993), from a *market-seeking* point of view, investors transfer their operations to other countries in order to protect their market shares from rivals or to increase their market shares by exploiting other markets to sell their products and services. Therefore, fast-growing industries in a host country will encourage MNCs to expand their activities in these industries, which is a market-seeking explanation for FDI. The *resource-seeking* investors tend to operate in the host country market if this country is resource abundant (e.g. raw materials, energy and cheap labour). This provides investors with supplies of cheap and stable resources and such advantages will reduce costs of production, making them more competitive. It encourages MNCs to move production to these countries.

The *efficiency-seeking* investors look to reduce their costs and to become more efficient by operating in countries with different factors of endowments, economic and public policies or through receiving government incentives. Operating in only a few countries will reduce some costs and enhance the efficiency of MNCs, so that cost factors are important for investors who follow the efficiency-seeking strategy. Finally, *strategic-asset-seeking* investors aim to protect or enhance their ownership advantages and / or to diminish the importance of their competitors' advantages.

These motives tend to base the location decision of foreign investors on, what are generally referred to in the literature as, classical location factors. Examples of such classical factors include market size and market growth for market-seeking FDI, wages for resource-seeking FDI, transports costs for efficiency-seeking FDI and managerial expertise for strategic-asset-

seeking FDI. Dunning (2000) observed that "over the past two decades, changes in the world economic scenario and knowledge about MNE activity have led to a relative decline in market seeking (MS) and resource-seeking (RS) FDI both of which tend to be based on the static ownership advantages of the investing firms" (p. 173). Hollenstein (2005) also states that "strategic asset-seeking strategies have become more important, giving rise to mergers and acquisitions as well as to strategic alliances" (p. 436). In general, the location component of FDI has become increasingly analyzed and theories of FDI have begun to adopt a location dimension in these models.

3.3.7 Agglomeration Location Factors

Location factors have been further investigated in the literature through incorporating the concept of agglomeration. Agglomeration economies are defined by Guimaraes *et al* (2000) as "economies that are external to a firm, but internal to a small geographic area" (p. 116). Firms might agglomerate (i.e. locate close to one another) in the same industry in one area or across several industries within the area, and this location decision is based on the nature of the externalities. According to Henderson *et al* (1995), externalities can be categorized as either static externalities or dynamic externalities. Static externalities emerge when firms deal and react to immediate information about the current situation in the market place. These externalities can take two forms: first, 'localization economies', which occur when firms benefit from clustering in the same industry. The second is 'urbanization economies', which occur when firms are located in diversified industries.

Dynamic externalities deal with past and present accumulated information regarding productivity and employment. These long-run relationships provide MNCs and domestic

firms with accumulated knowledge about the industry. As with static externalities, there are two types of dynamic externalities: first, localization externalities, which Glaeser *et al* (1992) call Marshall (1890) - Arrow (1962) - Romer (1986) (MAR) externalities. This type of externality takes into account the benefits of accumulated knowledge among firms in the same industry. The second is Jacobs externalities where firms cluster across industries. According to Jacobs (1969), technological spillovers arise between diversified industrial structures. Firms are expected to yield more accumulated knowledge when they are located in proximity to other industries, since "the exchange of complementary knowledge across diverse firms and economic agents facilitates search and experimentation in innovation" (Panne and Beers, 2006; p. 879).

For MAR externalities, Marshall (1890) observes three main reasons for spatially-concentrated industries, which are: labour market pooling, intermediate goods supply, and demand and knowledge spillovers. First, in the case of labour market pooling, "the concentration of several firms in a single location offers a pooled market for workers with industry-specific skills, ensuring both a lower probability of unemployment and a lower probability of labour shortage" (Krugman, 1991a; p. 484). Thus, firms will be induced to locate their production near to other firms in the same industry in order to gain access to the same pool of industry-specific skilled labour (Jones and Wren, 2006).

The second force of localization emerges from intermediate goods supply and demand. "Firms in a downstream industry will create demands for intermediate products, this encouraging the development of an upstream industry supplying these products" (Venables, 1996; p. 54). For example, in an imperfectly competitive industry, increasing returns to scale will encourage the entry of new firms who will, on one hand, be able to contribute to a

reduction in prices and production of new products. These will lead to the availability of various intermediate products with lower prices. Thus, generally speaking, a growing industry induces the emergence of suppliers who provide tailored inexpensive inputs and services to buyers. Finally, knowledge accumulated in one firm can be passed to other firms in the same industry when they are located close to each other. Head *et al* (1995) argue that, "physical proximity may enhance knowledge flows by making casual communication less costly" (p. 226). For example, when firms strongly concentrate in a certain geographical area, they create a better environment for knowledge dissemination and the promotion of innovative activities.

Although, it is usual to explain the agglomeration of foreign and domestic investments in the light of localization and urbanization economies, recently Lee *et al* (2007) argue that the agglomeration of foreign firms differs from their domestic counterparts. According to these authors, foreign firms normally face barriers to entry such as culture, language and institutions, which do not hold in the case of domestic firms. Therefore, they suggest industrial linkage agglomeration that takes four types: agglomeration driven by the concentration of foreign direct investment in a region (and in particular FDI from the same home country); region-industry-specific endowment-driven agglomeration; forward linkage agglomeration; and finally, backward linkage agglomeration.

The first type indicates that the communication network among firms from the same home country encourages start-ups firms from this country. The second, region-industry-specific endowment-driven agglomeration occurs since the heterogeneity between several regions allows firms to consider factors of endowment in their determination of the region in which they place their operations. The third, forward linkage agglomeration asserts that MNCs will

choose a location where there is a demand for its products. Finally, backward linkage agglomeration indicates that MNCs would be induced to enter a certain region when intermediate inputs suppliers are available. Therefore, a number of agglomerative forces may lead to the attraction and location of foreign direct investors.

3.3.8 The New Growth Theories and Economic Geography

The role of the MNC and the importance of agglomeration economies have also been highlighted by the new economic growth and economic geography literatures. Martin (1999) points out that the locational concentration of economic activity is explained by the new endogenous growth theory by Romer (1986). The original contribution came from the neo-classical growth theory by Solow (1956). Solow's model was an attempt to explain the long-run rate of growth as the result of the interactions between conventional factors of inputs and technology. The model treated technological progress as an exogenous process and the driving force for the steady-state growth rate.

In the 1980s, the new growth theory, or endogenous growth theory, was developed by Romer (1983, 1986, 1990), which challenged the neo-classical growth model and attributed the sustained increase in growth rates to technological change. The creation of new knowledge was endogenized in the model as a main source of growth. Profit maximizing firms engage in costly research and development activities in order to produce innovative products, which will efficiently allow them to undertake investments in foreign markets, and thus, will lead to transfer the knowledge to local economies. Romer (1990) indicated the influential role of FDI as one of the contributing channels in the dissemination of knowledge and ideas and therefore the transferring of technology to other regions in the world, and this is expected to

generate growth endogenously to the local economy. Lucas (1988) also incorporated explicitly technological change in the explanation of economic growth pointing out that new growth theory stressed the importance of technology in the growth rate, assigning minor roles to other contributory factors. The link between this theory and geographical concentration is highlighted by Martin (1999), who argues that “the new ‘endogenous growth theory’ that has emerged in recent years by focusing either in inter-regional transfers of human capital or localized technological progress as the mechanisms underlying the locational concentration of economic activity” (p. 68).

In relation to FDI, the emphasis of the new growth theory is how it affects economic growth, so that according to Lim (2001), "FDI's contribution to growth, which comes through its role as a conduit for transferring advanced technology from the industrialized to developing economies and the channel of such spillovers is through the linkages between MNCs and its domestic suppliers and customers" (p. 3). However, according to Acs and Varga (2002), spatial issues are largely ignored, but which recent research has sought to rectify. Thus, economic geography seeks to explain the spatial concentration of economic activities, with the main development in this field coming from Krugman and the New Economic Geography, which explores why and when manufacturing becomes concentrated in a few regions, but stressing the importance of non-market agglomeration economies (Krugman, 1991a). Krugman (1991b) develops a general equilibrium model to explain the spatial concentration of economic activities by focusing on three factors: increasing returns, transport costs and the demand for manufacturing goods. For the spatial concentration to occur, low levels of transport costs and increasing returns to scale will encourage MNCs to concentrate in regions where there is high demand for their products, and where there is a greater supply of intermediate inputs. These models now play a crucial role in the theoretical

analysis of FDI location.

3.3.9 Summary of the FDI Theory

This section has presented an extended discussion on the evolution of research on the theoretical determinants of FDI, comprising its generation, nature and location. It started by introducing the Heckscher-Ohlin theorem as an early explanation of FDI based on the concept of comparative advantage. However, this theory failed to recognise the unique nature of FDI and it was Hymer's firm specific theories that have become the backbone for understanding FDI. As Jones and Wren (2006) point out, "before Hymer, there was no theory of foreign direct investment as such, with FDI treated in the same way as any other cross-border transfer of capital" (p. 40). Indeed, Hymer's theoretical contribution deepened our understanding of this phenomenon by attracting our attention inside the firm and noting the distinction between capital flows and FDI.

This has been followed with the crucial contributions from a number of theories that have explored different aspects of FDI, most notably the OLI eclectic paradigm of Dunning. This paradigm has been extended over time to include strategic and social aspects of FDI flows, as well as focusing on the locational aspects of FDI. The location of FDI has played an increasingly central role in the theoretical literature of FDI, and has been extended by the recent theories of economic growth and new economic geography. These theories now supply us with a rich framework to develop the reasons behind why, how and where firms engage in foreign direct investment.

3.4 Empirical Studies on FDI Determinants

According to Blonigen (2005), "real-world trends have led to substantial recent interest by the international economics literature to empirically investigate the fundamental factors that drive FDI behavior" (p. 383). Thus, in line with the development of theory, there has also been a substantial increase in the number of empirical studies examining FDI. This seeks to examine empirically the factors that also give motivation to the theory, so that in this section a general overview of the empirical studies is presented in the light of the models discussed in Section 3.3, following broadly the same structure.

3.4.1 International Trade Theory

Most of the early studies of the Heckscher-Ohlin theorem were based on two countries, but with more than two factors of production. Tharakan (1978) analyzes location across European markets of manufacturing products arising from multinational corporations (MNCs). The study uses pooled data for 34 manufacturing products from Germany for the year 1972; for 15 manufactured products from France for 1970-72; and 18 manufactured products for the year 1968 from the Benelux countries (i.e. Belgium, Netherlands and Luxembourg). The Heckscher-Ohlin hypothesis is captured by the capital intensity (measured by physical capital per product in each country), the product differentiation terms, which include the levels of product differentiation and standardization (captured by advertising expenditure and the number of specified production standards registered in each country), and tariffs on the imports of product. The findings indicate that the most significant effect for FDI comes from capital intensity, which lends some support to the Heckscher-Ohlin model.

The production standards are more significant than advertising expenditure, while tariffs have a significant and positive influence on imports.

The Heckscher-Ohlin model has been tested empirically by hypothesizing different factors of production in trade flows, instead of the traditional capital and labour. The argument is from Clifton and Marxsen (1984), who argue that traditional capital and labour are unreliable to determine country's factor abundance. In their study they use a different formula for determining factor abundance based on the profit and wage content. A capital abundant country is where its gross domestic product per worker is greater than the world gross product per worker. This measurement is used to examine trade patterns for a sample of nine countries in the year 1968, comprising Australia, Ireland, Japan, New Zealand, the United Kingdom, United States, Israel, Korea and Kenya. The study finds that the first seven countries are capital abundant, but that the last two are labour abundant. It finds that the trade patterns support the theory for all countries except Israel, Kenya and the United Kingdom although of these had substantial trade deficits.

In the context of Heckscher-Ohlin theory, Wood (1994) argues that these studies treat capital as an immobile factor, but that it is internationally mobile, which can lead to incorrect predictions. Wood examines the patterns of trade between the North (industrial countries) and the South (developing countries) using two factors (skilled and unskilled labour) and two goods (skill-intensive and labour-intensive manufacturers). The study finds that North countries are abundant in skilled labour and hence tend to export skilled-intensive products, while South countries are abundant in unskilled labour and trade in non-skilled-intensive products. However, empirical tests of the Heckscher-Ohlin theories have tended to

concentrate on trade patterns rather than FDI, so that attention is focused in the remainder of this section on the empirical work that is linked explicitly to FDI.

3.4.2 The Theory of Firm-Specific Ownership Advantages

Hymer's monopolistic advantages theory stresses the importance of acquiring ownership advantages in order for firms to offset the extra costs involved in overseas production. Based on this theoretical background, Lall (1980) attempts to explore the key factors that contribute to the growth of the multinational corporations (MNCs) in foreign production ('transferable advantages') and in exports ('non-transferable advantages'). This is for a sample of 25 US manufacturing industries, using a set of explanatory variables that include R&D expenditure, marketing expenditure (i.e. product differentiation), capital intensity, scale economies and production skills. Using OLS the study finds that the technological intensity of an industry encourages both exports and the transfer of operations abroad, but with a slightly greater tendency to export. Product differentiation encourages the transfer of operations across borders, while capital intensity does not show a significant influence on foreign production. Scale economies, production and other skills show a similar effect as technological intensity. The exploitation of intangible assets is therefore found to be a reason for transferring production between countries.

In general, there has been a great deal of attention on US MNCs investing abroad. This is understandable as the US accounts for a sizeable amount of global FDI, although it may give a misleading picture, as it may be that FDI from other countries seek a different set of advantages. Lall and Siddharthan (1982) recognize this and take a different approach, by seeking to explore the nature of the monopolistic advantages of foreign investors that invest

in the US. Their sample covers 45 industries in the US in 1974 and explanatory variables that include product differentiation advantages (measured by an industry R&D level and amount of advertising expenditure), skills (measured by average employee remuneration in each US industry), entrepreneurial advantages (non-production workers as a proportion of all employees in each US industry), multi-plant operations, economies of scale and tariff and non-tariff trade barriers. Neither product differentiation, skills nor entrepreneurial advantages were significant in explaining the distribution of foreign investments in the US. Firms with multi-plant operations showed a strong positive effect, which suggests that in industries in which multi-plant operations are common the foreign share of sales is higher, indicating an informational issue. Trade protection showed a positive and highly significant effect, which reflects the important role of trade barriers in forcing foreign investors to transfer their production overseas.

Other studies cover countries outside the US. Saunders (1982) investigates the role of intangible assets in determining inter-industry variations in foreign ownership in the Canadian manufacturing sector. Using a two-stage least squares estimation technique for a sample of 84 three-digit Canadian manufacturing industries, several sets of explanatory variables are regressed, e.g. technology, innovative designs, sales promotion strategies, managerial resources, labour costs and tariff protection. The findings support the view that intangible assets are important in determining the pattern of foreign ownership. The importance of ownership advantages for FDI is also investigated for FDI from European countries. Thus, for Greece, Anastassopoulos (2003) analyzes the relative advantages of MNCs and domestic enterprises for the Greek food industry (the highest recipient of inward FDI). Utilizing panel data for 1988-92 and a probability regression analysis, it is found that factors such as marketing, knowledge intensity and skill intensity all show a significant

positive relationship to the probability of these MNCs investing elsewhere in the food industry, supporting the role of ownership advantages.

Finally, a feature of the literature is its focus on the investment flows from and between developed countries. Recently, there has also been interest in explaining whether foreign investment in developing countries share similar ownership advantages. For Mexico, Love and Lage-Hidalgo (1999) use a panel data model to examine the determinants of sectoral FDI by US multinational affiliates. This study focuses on the effect of ownership advantages on the flow of investment to the industrial sector over the period 1989-92. To capture the ownership advantages of the US FDI flows, the study implements cross-industrial sector analysis by exploiting several relevant explanatory variables, such as R&D for technological knowledge, capital expenditure for capital intensity, and employee compensation for ownership advantages that are related to human knowledge. The findings support the generally found view that emphasizes ownership advantages in both technological and human knowledge as the key determinants of FDI.

3.4.3 Product Life Cycle Theories

Vernon's product life cycle theory (1966, 1979) is relatively little examined empirically. However, one study is Hirsch and Bijaoui (1985) who use a sample of 111 manufacturing firms over 1977-81, and find that R&D-intensive firms gain higher exports in comparison with less R&D-intensive firms, which is used as evidence that the product life cycle model explains export performance. Mullor-Sebastian (1983) tested the product life cycle theory using three empirical tests of industrial groups based on the United States over 1965-73. He finds a significant correlation between the growth rates of goods production and trade

balances, and that industrial groups perform better when they have higher growth rates. He argues that rapid growth of these industrial groups leads to a stronger competitive position, and concludes that the results support the product life cycle theory.

Lutz and Green (1983) analyzed the difficulties that face the exports of manufactured products in the United States over the period 1963 to 1974, and whether there are any applications to the product life cycle theory. The level of exports of the United States was compared with the level of exports of the United Kingdom, West Germany and Japan for the same period. The results showed that the pattern in the export of technology-intensive products in the United States, the United Kingdom and Japan is relatively consistent with the product life cycle theory.

The Uppsala School theory of Johanson and Wiedersheim (1975) that describes the four-step process by which firms enter foreign markets according to an "establishment chain", has been empirically examined in several countries. It reveals similar patterns of entry. Thus, for the United States, Davidson (1980) examines the role of corporate experience in determining the mode of operation. By using a sample of 180 US MNCs for the year 1975, representing 13,000 foreign investment projects, they conclude that MNCs tended to prefer countries in which they have previously had a successful investment experience.

Related to this, a number of researchers have tested models that identify market specific experiential knowledge as a central concept to explain the internationalization process and the choice of entry mode into foreign markets. Erramilli (1991) examined the international experience effect in 151 United States service firms and found that firms diversify their investments geographically even in countries with very different cultures when their

experience increases, whereas firms with less experience tend to enter markets that are fairly similar to the US, thus emphasizing the importance of cultural distance. In addition, Kogut and Singh (1988) asserted the role of cultural distance and experience in the flows of foreign direct investments by examining 228 different types of entries into United States for the years 1974 to 1980. Utilizing a multinomial logit model the results emphasized the role of cultural distance and experience, and indicate that the cultural distance effect tend to decrease with an increase in the experience of firms.

Finally, Eriksson *et al* (1997) argue that as previous studies investigated the role of experience in specifying the entry mode they neglected to account for the perceived cost of the lack of knowledge in the internationalization process. They pointed out that the lack of foreign business knowledge implies a higher perceived cost. A sample of 362 service firms was used to test this hypothesis. The results of their study confirmed that experiential knowledge in the internationalization of a firm implies costs that are related to collecting, encoding, transferring and decoding this knowledge, as well as changing the organizational resource structures and routines, and that these costs are important determinants of foreign direct investment

3.4.4 Firm-Based Theories of FDI

In principle, the internalization theory helps to explain the best strategic direction MNCs need to follow in order to access foreign markets, i.e. FDI, exports and licensing. This is because it stresses that if the benefits generated by internalizing the firm's advantage such as technology or innovation are greater than the costs of accessing them through either exporting or licensing then the MNC will choose FDI. In the review of the literature, only a

limited number of empirical studies was found concerning the internalization theory. We now consider a couple of these, although further studies examining the internalization theory are incorporated in the broader eclectic paradigm, which is discussed below

An early empirical study that tested this theory was Rugman (1981), who examined it in the context of US technology transfer to Canada. Technology was measured by R&D expenditure for a sample of 35 foreign subsidiaries and Canadian firms that are active in R&D for the year 1977. Rugman hypothesized that subsidiaries undertake less R&D than Canadian firms since they internalize the firm-specific advantages of their parent firms if they gain net benefits that exceed those achieved by exporting or licensing. However, the study found no statistical support for the theory. Pugel *et al* (1996) examined Japanese FDI in US manufacturing industry. They found that technology and marketing assets (measured by R&D and advertising intensities respectively) have a significant positive effect on Japanese FDI, so that Japanese firms may be able to internalize these ownership advantages in investing into US industries.

3.4.5 The Eclectic Paradigm (OLI)

The eclectic paradigm of Dunning has been widely used as a comprehensive framework to examine the determinants of foreign direct investment. Dunning's framework has guided most of the recent empirical studies that have tried to identify the determinants of FDI and international production, as it is based on integrating various theoretical strands. It is a powerful framework for the majority of studies that are concerned with explaining the activities of firms outside their home country boundaries, as we now see.

Early empirical work was undertaken by Dunning and McQueen (1981), who sought to support the eclectic framework by using a large dataset for the international hotel industry. The sample included 81 MNCs from 22 countries and 1,025 foreign hotels. Perhaps not surprisingly, it was found that the framework was useful in explaining the patterns of foreign involvement in the industry. The nature of the ownership advantages of MNCs, such as trademarks, knowledge and operating experience, was found to explain the predominance of foreign investments in the hotel industries, and were also found to reduce the managerial costs compared with new entrants into the market.

Much more recent work has built on the framework. Galán and Benito (2001) examine 103 Spanish MNCs to explore which of the Ownership, Internalization or Location factors determines FDI flows. The results confirm the significance of intangible assets, and more specifically experience, technological and innovative capabilities, and superior management in foreign investment. Using firm-level data, König (2003) seeks to identify the determinants of FDI using Swiss firm-level data by utilizing logit and probit methods. The role of the eclectic paradigm was used to develop the econometric model and choice of explanatory variables. The results confirmed the significance of ownership advantages, such as R&D expenditure, new products and firm's size in expanding internationally.

Inward investment to the United Kingdom has also been investigated in the light of the eclectic framework. Driffield (2002) analyzed the FDI determinants utilizing panel data at a 3-digit manufacturing industry level for the period 1984-92. The dependent variable is capital expenditure by foreign firms and the explanatory variables include industry profitability, market size, market growth, industry concentration, R&D, advertising intensity, capital intensity, economies of scale, industry exports and imports and regional concentration. While

ownership advantages through R&D, advertising intensity and capital intensity are significant determinants of FDI, the location advantages through past levels of inward investment and regional agglomeration were found to be more important than trade performance variables measured by industry exports and imports and regional concentration. The results also showed that profitability and market size attract FDI.

Tatoglu and Glaister (1998) use the eclectic paradigm to investigate the motivation for foreign-owned firms to invest in Turkey. The study involves a sample of 98 firms with Western foreign multinational parent firms investing in Turkey over the period from 1954 to 1994. A binomial logit regression was conducted, and the results supported several of the eclectic paradigm characteristics. It was found that the ownership advantages (e.g. international experience, trademark, economies of scale, technological and managerial know-how) encourage firms to engage in FDI in each Turkish industry. However, firms may choose to internalize their ownership advantages (e.g. high technology and R&D intensity) more in the manufacturing sector than in the service sector due to the nature of the higher transaction costs in this sector. Locational advantages (e.g. market potential, host government policies, the level of infrastructure and the availability of qualified labours) are less significant, but it is more important in the service sector due to the importance of the level of infrastructure and the availability of qualified labour.

Finally, for China, Pheng and Hongbin (2006) also support the eclectic framework when applying it to 31 Chinese construction MNCs in 2001. The ownership advantages, such as reputation and accessibility to resources are important for Chinese MNCs to engage in FDI. For the locational advantages, it was found that a large cluster of Chinese MNCs in the host country influences the decision of other Chinese MNCs. Finally, if the reduction of the

transaction costs (e.g. information search and business negotiation costs) leads to better performance than the internalization advantages is matter.

Overall, this empirical literature highlights the importance of the ownership advantages in the decision of firms to engage in FDI, with the important ownership advantages found to be technological and managerial know-how, product differentiation, scale economies, trade barriers, marketing expenditure, firm's experience, firm size and trademarks. While ownership advantages are necessary conditions for FDI to locate, these studies also show the importance of locational factors, which are now considered empirically.

3.4.6 Location Determinants

A great majority of empirical studies on the locational determinants of FDI are based on the US as the home or the host country, since the US represents a large global proportion of both inward and outward FDI. In 1960, the US accounted for about three-fifths of accumulated FDI stake of market economies (Dunning, 1979). The main determinants in the majority of these studies are found to be the size of the market, previous investment in the industry, entry barriers, business climate and the economic and political stability. A notable study by Daniels (1970) sought to explain the motivation behind firms entering the US market between 1954 and 1968. This study found that the increase of the physical distance has an important role in discouraging firms from entering the US market, which reduces the volume of FDI. Scaperlanda and Mauer (1969) also sought to identify the determinants of US investments in the European Economic Community by hypothesizing three determinants (market size, market growth and trade barriers), but only the size of the market has a significant effect.

The empirical studies are guided by theoretical framework, but have utilized different analytical approaches between cross-section, time series and panel data, and have used a variety of explanatory variables. The studies have mainly focused on MNCs from the developed countries as the home or host country, and have been drawn from two streams. The first explains the characteristics of investments that come from one home country and flow to one or several host countries, and the second explains the characteristics of investments from a number of home countries to one host country. I review this literature by focusing on the countries or broad geographical regions that have been central to the empirical analyses, focusing on a range of factors that are discussed in the theoretical literature. These are the United States, European countries, the Far East and Emerging Markets, and of course for the Middle East and North Africa (MENA) countries.

3.4.6.1 The United States

Lall and Siddharthan (1982) examine foreign MNCs in 45 US manufacturing industries and find that foreign MNCs are positively related with industries that are characterized by high effective protection rates and by high shares of shipments in the industry. They also find that foreign MNCs tend to avoid industries that are characterized by high levels of scale economies and concentration. Another study, by Wheeler and Mody (1992), focuses on the choice of location. They examined US MNCs in manufacturing industries in 42 countries using explanatory variables such as labour cost, the level of corporate taxation and market size for classical variables, as well as infrastructure, industrialization and the level of foreign direct investment as a measure of agglomeration. They found that agglomeration effects are large and positively related to FDI, but also that the classical variables of market size and labour costs also have a positive impact on FDI.

Grosse and Trevino (1996) find that FDI to the US has a significant positive relationship to source country exports to the US and source country GDP, whilst on the other hand FDI to the US has a significant negative relationship with exchange rates, source country imports from the US and the cultural and geographic distance between the US and source countries. In their analysis of US FDI, Barrell and Pain (1996) find that market size, R&D expenditure and labour and capital costs positively impact on outward US FDI. However, it was also observed that unstable short-term exchange rates discouraged the flow of investment. Love and Lage-Hidalgo, (2000) examine the determinants of FDI from US MNCs to Mexico for the period 1967-1994 using co-integration analysis. They find significant support for market size as a proxy for potential sales volumes (measured by GDP per capita) and find that labour costs are an attractive factor to FDI.

In a further study of US outward investment, Biswas (2002) examined the flow of US FDI to 44 countries over 1983-90 by incorporating non-traditional political risk factors, such as regime type (measured by country autocracy and democracy), regime duration (measured by the number of years the country has been democratic or autocratic), and property rights and corruption in government. These are in addition to traditional factors such as the wage rate and infrastructure. It finds that country-specific characteristics (e.g., quality of infrastructure, regime type and property rights) positively impact on the flow of FDI, whereas a regime's duration and labour costs negatively affect FDI.

3.4.6.2 European countries

The investigation of FDI for European countries has received much less attention from economists compared to US inward and outward FDI. However, Culem (1988) examined the

bilateral trade between six developed countries, including the European Economic Community (EEC) and the US. He found that growth rates and tariff barriers played a significant role in determining FDI location from the US to the EEC, and vice versa. However, whereas market size was significant for EEC FDI locating to the US, this did not appear to be the converse. Other studies for Europe are more recent, and these can be examined for several leading European countries as follows.

With reference to inward FDI to the UK, Pain (1993) used aggregate data of location factors. His results underscore the importance of market size, relative factor prices and the nonproduction costs of trade. Giuletta *et al.* (2004) criticize Pain's (1993) work for using aggregate data only that focuses on macroeconomic location determinants of FDI, and neglecting the variation of FDI across industries. They carry out regressions on the role of FDI 'ownership factors' using disaggregated panel data for 14 food processing industries in the UK manufacturing sector over 1982-91. They use a set of variables related to: ownership assets, including product differentiation, managerial skills and capital intensity; to market structure, such as sales growth rate, labour productivity, concentration ratios and imports level; and to macroeconomic and other location factors, such as the relative cost of capital, the cost of labour and exchange rates. The results show that firm-specific characteristics and market structure contribute more in explaining FDI than do simple macroeconomic factors.

The study of FDI has occurred in other European countries. For instance, Moore (1993) investigated FDI in Germany by conducting a series of estimations on a set of variables of outward German FDI for a number of foreign countries. He finds that the market size and real wage of the host country attract German FDI. In the Central and Eastern Europe (CEEC) countries, Resmini (2000) analyzes the determinants of European Union FDI in the CEECs in

manufacturing sectors. He finds that wage differentials and the degree of ‘openness’, ‘proximity’ and agglomeration economies (the latter measured by industrial concentration) all play important roles, but depending on the particular sector. Finally, Bevan and Estrin (2004) carry out a study on the determinants of FDI from Western countries to the CEEC countries. They found that the GDP of host and home countries, proximity and labour costs are important factors in determining FDI inflows, although the host country risk proves otherwise, acting as a deterrent.

3.4.6.3 The Far East and Emerging Markets

Kogut and Chang (1991) investigate Japanese FDI across 297 manufacturing industries in the United States and find that more Japanese outward FDI occurred in industries that had greater R&D expenditure, while voluntary restraints on Japanese exports encouraged FDI to flow to the US. Kimino *et al* (2007) examine FDI inflows into Japan from 17 source countries for the period 1989-2002. They tested several variables relevant to the investing country such as the source country market size, bilateral trade, the relative exchange rate, exchange rate volatility, relative borrowing costs, relative labour costs and source country risk. They found that, contrary to previous studies, market size, exchange rates and labour costs are insignificant in determining the inflow of FDI, whereas the relative exchange rate fluctuation, higher borrowing costs and an attractive business climate in investing countries were encouraging factors to invest in Japan. They also found a negative impact from the export performance of the source country on MNCs in Japan.

Elsewhere, using a gravity model, Frenkel *et al* (2004) examine the determinants of FDI flows from developed countries ‘G-5 countries’ to emerging markets in three regions: Latin

American, Asia and Central and Eastern Europe for the period 1992-2000. They found that distance between the host and home countries, economic development, the GDP growth rate and host country risk all play a crucial role in determining FDI flows. No support is found for the effect of inflation nor for the exchange rate.

In the context of emerging markets, Thomas and Grosse (2001) note that very little work has been carried out for the country-of-origin factors that are related to FDI into these developing nations, but which are increasingly important in the global economy. In the context of Mexico, Thomas and Grosse (2001) carry out an experiment on country-of-origin factors related to Mexican FDI from 11 source countries for the period 1980-95. They find that, in contrast to previous studies, cultural and geographical distance leads to increasing FDI, and they attribute this to two possible reasons. The first is that more FDI in Mexico flows from non-Latin countries such as the US, Germany and Japan, compared to Latin American countries, for the reason that economic factors are more important than cultural factors in explaining FDI in emerging markets. They also find, contrary to their expectation, that the higher is the GDP in the home country the lower the FDI level. They also found that bilateral trade, wage rate, GDP and exchange rate have positive effects on the inflow of FDI to Mexico. Finally, for China, Liu *et al* (1997) examines the determinants of FDI into China from 22 source countries over the period 1983-94. In this case, the relative real wage rate, exchange rate and bilateral trade influence FDI inflows to China. However, they find no support for the effect of relative borrowing costs, for the country risk or for geographical distance.

3.4.6.4 Middle East and North Africa (MENA) Countries

Finally, given the nature of the data used in this thesis, it is useful to consider those studies for the Middle East and North Africa (MENA) countries. For these, there are a limited number of empirical studies, but which have considered various aspects of the determinants of FDI flows into these countries. While Moosa (2007) argues that, "there is no widely accepted set of explanatory variables that can be regarded as the 'true' determinants of FDI into these countries" (p. 1), Onyeiwu (2003) tries to identify these features, and whether they differ from the determinants for developing countries.

Onyeiwu's data covers 51 developing countries, 10 of which are from the MENA region over the period 1975-99. Using a fixed effects panel regression to control for country and time-specific factors, the results indicate that some of the determinants in the developing countries appear not to be important in the MENA countries. These include the rate of return on investment, infrastructure and economic fundamentals, such as the real growth rate in GDP, the inflation rate, tax rate and external debt. The significant determinants that explain the relatively low levels of FDI to the MENA are corruption / bureaucracy and the lack of openness to trade.

Chan *et al* (2004) assert that "the need to account for stability in investment risk is particularly important for countries in the MENA region, which historically have a higher level of instability associated with investment risk than developed countries" (p. 14). They studied the pattern of FDI in 19 countries in the MENA region and the role of risk, using both fixed and random effects dynamic panel models. They conclude that the degree of instability associated with investment risk is the most important contributory factor to the low level of

FDI flows in the MENA region. The location drivers of FDI inflows to the MENA region are also investigated by Hisarciklilar *et al* (2006), who use a panel data for 18 countries over the period 1980-2001. Applying a fixed effect model and Maximum Likelihood estimation, they find that FDI in the MENA region is driven by the market size of the host country and the ability to export to other MENA countries, which may give some explanation to the role of risk.

Moosa (2007) uses cross-section analysis to examine the determinants of FDI inflows to 18 MENA countries. He applied extreme bounds analysis to test a number of explanatory variables that include the real level and growth rate of GDP, real GDP per capita, exports, telephone lines per 1000 inhabitants (measuring economic development), commercial energy use per capita, R&D expenditure, students in tertiary education (measuring human capital), country risk and domestic gross fixed capital formation. The results are perhaps unsurprising, and indicate that FDI flows more to countries that have growing economies, better education and research, low risk and a higher return on capital.

The only research I am able to find regarding the determinants of FDI in Saudi Arabia is by Abdel-Rahman (2002) who investigated the determinants of FDI inflows in the Kingdom of Saudi Arabia over the period 1970-2000. By applying pair-wise Granger techniques to the independent variables that include market size (GDP), 'openness', international trade, wage rates and country risk, this study concludes that the level of GDP appears to have a significant positive effect on FDI flows, while international trade has a negative effect. In terms of the country risk, the results show, like the other studies for the MENA region, that it has a significant negative effect on the overall flow of FDI.

3.4.7 Summary of the Empirical Literature

This section has presented the empirical evidence on the theoretical determinants of FDI. Overall, it is clear that the main focus of the empirical work is on FDI flowing between developed countries, but that researchers initially sought to explain it through differences in the characteristics of countries. This was not wholly successful, and it was only after Hymer's theory that the focus of the empirical work shifted to focus on the characteristics of MNCs themselves. Subsequently, empirical work has largely been based on the widely accepted eclectic paradigm framework, examining the determinants of FDI in developed and developing countries. This paradigm draws attention to the location determinants of FDI, and research has been conducted for many different countries and regions, including the Middle East and North Africa (MENA) countries. From the vast literature, and which can sometimes produce contradictory results, it is possible to conclude that some of the main determinants of FDI flows include a whole array of factors, such as market size, labour costs, managerial resources, cultural and geographical distance, infrastructure, previous experience such as through bilateral trade and technological and marketing intensity. These potentially give support to many of the above theories. It is also worth pointing that country risk is included in many studies, and has a negative effect on FDI flows.

3.5 Conclusions

To conclude, this chapter has reviewed the theoretical and empirical literature on the determinants of foreign direct investment. In the era before 1960, the pattern of trade was discussed largely on the basis of comparative advantage, and it was argued that it was the pattern of specialization between countries that was pushing the movement of capital. The

cornerstone to a new theory first emerged in the 1960, when Hymer introduced his own theoretical insight to the theory of international investment. Since then, the literature has taken many new directions to understand and describe the pattern of FDI flows.

One new direction was the consideration of transaction costs, representing an extension to Hymer's theory, although it still left something of a gap in understanding. Latterly, this has been filled by Dunning's so-called eclectic paradigm, incorporating ownership, internalization and location advantages into a single strand of FDI theory. While this framework is widely accepted for its comprehensiveness, recent insights have realized the need to add further motives, such as strategic, social and ecological aspects. With these developments, the Dunning framework has proved its flexibility, although it is something of a collection of ideas within a single framework, but which has yet to be fully unified. Nevertheless, it draws attention to the main features, including location, for which new theoretical developments attempt to explain the spatial concentration of FDI activity.

The discussion of empirical literature on FDI determinants in this chapter has served to highlight that the factors that explain the pattern of FDI flows related to a range of factors in the economic, political, cultural, technological and financial spheres, so that there are many different factors that impinge of the decision to invest and locate internationally. While the results are derived primarily for developed countries, they have implications for Saudi Arabia. In relation to the Middle East and North Africa (MENA) countries they show that the return on capital, 'openness', market size and market growth, as well as risk, are the most important factors that explain inward FDI flows. Nevertheless, within MENA there are relatively few wealthy and developed countries like Saudi Arabia, so that an analysis of FDI for this country might produce fresh insights. However, before we go on to describe FDI in

Saudi Arabia in detail in chapter 5, we focus in the next chapter on the choice of ownership structure that confronts foreign direct investors when they make their decision to invest overseas.

Table 3.2: Summary of the Literature Review on Theories of FDI

Theory	Author	Contribution
International trade theory	Eli Heckscher and Bertil Ohlin	These develop a general equilibrium model that determines a country's comparative advantage, assuming that there are two countries (home and foreign) and two commodities requiring two factors of production (capital and labour), in addition to the use of land. It further assumes identical production technologies between the two countries and perfectly competitive commodity markets, but differences in the factor intensity of constant-returns-to-scale production functions and differences in the factor endowments of the two countries.
Heckscher-Ohlin-Samuelson (HOS) model	Samuelson (1953)	The basic logic of the HOS model is that under free trade, factor prices will be equalized across countries regardless of the difference in factor endowments.
Heckscher-Ohlin-Vanek (HOV) model	Vanek (1968)	This generalizes the Heckscher-Ohlin model to a multi-factor, multi-good and multi-country model and shows the patterns of trade between countries.
The theory of firm-specific ownership advantages	Hymer, S. H (1960)	Hymer asserts that in order for a firm to overcome international barriers to production a firm must possess firm-specific ownership advantages.
Product life cycle theories	Vernon (1966)	Vernon develops the product life cycle model to explain FDI, conceptualizing it in terms of two factors: the nature of the product; and the development level of the country. He suggests three stages of a 'product life cycle': the new product, the mature product and the standardized product stages.
	Krugman (1979)	Krugman develops a general equilibrium model of product cycle trade that highlights the importance of 'technological gaps' and 'innovation circles' to explain their role in the trade between the industrialized country or region, "the North" and the less developed country or region, "the South".
Uppsala School theory of FDI	Johanson and Wiedersheim (1975)	These observe the gradual development of small incremental change in firm behavior in the multinational dimension, which they summarize in four stages: from no exporting; to exporting via foreign agents; establishing a subsidiary; and finally transferring the production to foreign market.
	Johanson and Vahlne (1977)	These give more insight to Johanson and Wiedersheim's work by asserting that firms take steps by using foreign market intelligence that serves to push their level of commitment to investing abroad.

Table 3.2: (continued)

Theory	Author	Contribution
Behavioural theory of FDI	Aharoni (1966)	Aharoni identifies four stages through which the foreign investment decision is made: the decision to target the foreign market; the investigation process; the reviewing process; and finally the foreign investment process.
Internalization theory	Buckley and Casson, 1976	Buckley and Casson's theory is an extension of the firm-specific theory of Hymer, as they emphasize that it is not just firm-specific theories that are important for foreign investment, but that the investment decision depends on internalizing the firm-specific advantage within the firm.
The eclectic paradigm (OLI)	Dunning (1977, 1979, 1981, 1988)	Dunning utilizes international trade theory with other relevant economic theories to create a comprehensive explanation of FDI, which is known as the 'eclectic paradigm of FDI' or the Ownership-Location-Internalization (OLI) theory.
Classical location factors	Dunning (1993)	This gives an insight into the location dimension of FDI by reflecting on the motivations for MNCs to utilize their ownership advantages to invest in foreign markets. The motives are classified as: market-seeking, resource-seeking, efficiency-seeking and strategic-asset-seeking.
(MAR) externalities	Marshall (1890) - Arrow (1962) - Romer (1986)	This type of externality takes into account the benefits of accumulated knowledge among firms in the same industry. Marshall (1890) observes three main reasons for spatially-concentrated industries, which are: labour market pooling, intermediate goods supply, and demand and knowledge spillovers.
Jacobs externalities	Jacobs (1969)	Firms cluster across industries due to technological spillovers that arise between diversified industrial structures.
The new growth theory	Romer (1983, 1986, 1990)	Romer attributes the sustained increase in growth rates to technological change. Further, profit maximizing firms engage in costly research and development activities in order to produce innovative products, which will efficiently allow them to undertake investments in foreign markets, and thus, will lead to transfer the knowledge to local economies.
The new economic geography	Krugman (1991)	Krugman develops a general equilibrium model to explain the spatial concentration of economic activities by focusing on three factors: increasing returns, transport costs and the demand for manufacturing goods

Chapter 4

The Ownership Structure of Foreign Investment

4.1 Introduction

An important decision that a multinational corporation (MNC) faces when expanding abroad is to choose the optimal equity, ownership structure, and this issue has received considerable attention in the literature (see Benito, 1996). The expansion into a foreign market through foreign direct investment (FDI) is a strategic decision that in addition to the level of resources that are committed is related to the control that the MNC exercises over the assets. Ownership is defined by Grossman and Hart (1986) as “the power to exercise control” (p. 694), and foreign ownership can imply different degrees of control.⁹ In general, the higher the degree of ownership, the higher is the level of control over the assets, so that control is normally higher in a wholly-owned subsidiary than in a joint venture.

By exercising control, Benito (1996) points out that a firm can gain higher shares of the profits generated in operating in foreign market in the short-term, as well as protecting and developing their assets more securely in the long-term. Thus, if an MNC has superior assets, such as new technological equipment, an innovative product or superior skills and resources, it might prefer to have a high level of control to gain more economic rents and protect its firm-specific advantages. However, there is clearly a dilemma facing the MNC. By insisting on a high level of control it might face difficulties in carrying out any operations beyond its capabilities, e.g. if the MNC needs to exploit financial, natural or human resources that are

⁹The definition of FDI implies the concept of control that MNCs intends to have through acquiring a certain level of ownership of the firm when locating its production in another economy (see Chapter 3).

local. However, while a low level of control might allow it to gain access to the foreign market through local partners, it also entails the risk of its specific advantages spilling-over to local partners, as well as the risk of opportunistic behaviour by these partners.¹⁰

The same considerations apply to the choice between whole ownership and a joint venture, where a joint venture can be with domestic partners or between MNCs. Benito (1996) explains that if an MNC decides to set-up a wholly-owned foreign enterprise then it bears all the costs and risks alone. These may include the cost of establishing a new plant or operating costly equipment in foreign markets, which may be characterized by high barriers to exit. If they choose to form a joint venture they potentially reduce or share these costs and risks. Asiedu and Esfahani (2001) summarize the reasons behind the importance of the ownership structure in FDI projects. The structure may affect the extent to which their resources can be applied, the cost of capital, the level of investment, degree of technology transfer, distribution of the gains from FDI and the degree of control and protection of the assets.

The reason for looking at the ownership structure is that in Chapter 6 we analyze the effect of country political risk on the joint venture equity share, so that to understand the factors that influence the choice of the foreign ownership structure this chapter reviews the theories and evidence. The former is based on the international business literature that was considered in the last chapter, and the motivations for the optimal equity share are discussed in Section 4.2. Following this, the empirical evidence is reviewed, which falls into two broad categories. In Section 4.3 the studies that measure ownership in a categorical fashion are considered. This is usually as a binary choice between full ownership and a joint venture, but occasionally for majority, equal or minority stakes. A distinction is made between studies that examine FDI

¹⁰ Williamson (1973) defines opportunistic behaviour as 'an effort to realize individual gains through a lack of candour or honesty in transactions' (p. 317).

into many host economies and those that examine it into a single country, as the latter tend to be more recent and have richer data on the ownership. In Section 4.4 the smaller literature on the equity share is reviewed, which is measured continuously. The implications for risk are then summarised in Section 4.5, while Section 4.6 concludes.

4.2 Theories of the Ownership Structure of FDI

To examine the motivation for the ownership structure, four mainstream perspectives that have a bearing on the choice of foreign ownership preferences are considered in this section. These are: the *transaction cost theory* (see Anderson and Gatignon, 1986; Gatignon and Anderson, 1988; Gomes-Casseres, 1989; Hennart, 1991; Erramilli and Rao, 1993; Agarwal, 1994; Cleeve, 1997; Hennart and Larimo, 1998; and Pan and Tse, 2000); the *eclectic model* of international production (Agarwal and Ramaswami, 1992; Kim and Hwang, 1992; Bell, 1996; and Pan, 1996); *bargaining power theory* (Gomes-Casseres, 1990; and Ramamurti, 2001); and the *organizational capability theory* (Madhok, 1997, 1998; and Tatoglu *et al*, 2003). These different explanations are discussed in turn in this section.

4.2.1 Transaction Cost Theory

The transaction cost theory of Williamson (1985) appears to be the most accepted framework to explain the choice of ownership structure. According to Brouthers and Hennart (2007), “in the late 1980s and early 1990s, several scholars began using transaction cost theory to both theoretically and empirically look at the mode-choice decision” (p. 396). The choice between full ownership and a joint venture depends on the benefits and costs from sharing equity. According to Hennart and Larimo (1998), “sharing equity is useful in combining the services

of assets (know-how, raw materials, parts and components etc.) held by two or more separate firms when (i) the services of the assets held by each firm are subject to high market transaction costs, and hence their purchase on markets or through contracts is costly; and (ii) replicating the assets yielding those services is more expensive than obtaining a right to their use through a shared-equity venture” (p. 520-1).

The transaction cost framework of Williamson (1985) stresses that there are three key dimensions that determine the level of the transaction cost: the asset specificity, uncertainty, and the frequency of transactions. Each of these has implications for the equity share. First, the theory predicts that in order to control its assets the MNC will invest in full ownership if the asset specificity is high, e.g. in specialised equipment, superior technology and working relationships. However, if the asset specificity is low, this allows the MNC to benefit from the market place, which means that the transaction costs from retaining the control over the assets is low compared with the benefits of sharing these assets with domestic partners.

Second, uncertainty plays a very specific role in the Williamson model, since a lack of information about particular markets or how to operate business functions in an unfamiliar setting creates uncertainty and heightens the perceived risk (Brouthers and Hennart, 2007). Lack of knowledge about the financial, economic and political climate in a foreign country may make a joint venture likely, but the internal risk of such ventures exposes the MNC to the opportunistic behaviour of domestic partners. Sharing with domestic partners is chosen if the cost of setting-up full ownership investment is more costly or less efficient.

The third dimension to the Williamson framework is the frequency of transactions, as this will affect the investor’s choice of whether to internalize the transaction within the firm or to

contract it. For example, if an MNC engages in transactions in foreign markets on a recurrent basis then this will increase its familiarity with these markets and decrease its exposure to opportunistic behaviour. It will reduce the transaction costs of setting-up an operation in these markets and increase the likelihood of choosing higher share.

4.2.2 The Eclectic Model

The second paradigm that has implications for the equity share is the eclectic theory of international production, in which Dunning gives a comprehensive explanation for FDI, involving three specific advantages: ownership, location and internalization (see Chapter 3). In the case of the first of these, Tatoglu *et al* (2003) point out that “a firm will be more prone to adopt a wholly owned operation or a majority ownership in an overseas subsidiary in order to protect and fully exploit its ownership advantages” (p. 10). Firm-specific ownership advantages include intangible assets such as superior technology, trademarks, patents and so on. In the case of the locational-specific advantages, these stem from the attractiveness of the host country compared with the home country in terms of the availability of the raw materials and skilled labours, and factors such as the host government’s incentives for or restrictions on FDI. These may also be expected to influence an MNC’s choice of ownership structure.

Finally, the internalization advantage explains the decision of an MNC to internalize its operations in foreign markets instead of contracting part of its activities with other firms. Although it is crucial to decide the degree to which an MNC will internalize its operations, the location advantages of a foreign market play an important role in this choice. This is because uncertainty in the host market might encourage the MNC to internalize its operations instead of contracting them out. Thus, Pan (1996) concludes that a certain level of both

location and internalization factors will motivate a firm to choose a higher degree of ownership, while other factors may discourage it.

4.2.3 Bargaining Power Theory

Another perspective on foreign ownership arises as a result of the bargaining power between an MNC and its local partners or host governments. According to Asiedu and Esfahani (2001), this bargaining approach was pioneered by Vernon (1971) but extended in a more rigorous form by Svejnar and Smith (1984). The theory supposes that “the ownership level chosen in an affiliate hinges on the bargaining power of the two sides, which, in turn, depends on their respective strengths” (Tatoglu *et al*, 2003; p. 11). Various sources for the strengths of both sides determine their bargaining power, which according to Tatoglu *et al* (2003) stems from their “proprietary technology, product differentiation, ability to contribute to export earnings of the host country and product diversity” (p. 11).

Pan (1996) believes that the strength of local partners and host governments arises from location-specific factors, such the availability of raw materials and skilled labours and any incentives for or restrictions on FDI in the host economy. These strengths are the source of bargaining power, as they play an important role in the negotiations between the MNC and the host country agents for determining the MNC share in the enterprise. Hence, the level of foreign ownership is determined by the relative degrees of power, such that Pan (1996) points out that it is the ability of the foreign partners to contribute more to the initial capital that gives them the power to strongly negotiate for higher shares.

4.2.4 Organizational Capability Theory

The final paradigm that may explain the foreign ownership equity share is the organizational capability theory. According to Tatoglu *et al* (2003), this was developed by Madhok (1997, 1998) as an alternative to the transaction cost approach. It is concerned with the efficient mechanism for developing and exploiting a firm's capabilities so as to compete successfully in foreign markets. It shifts attention away from the characteristics of the transaction to the capabilities of firms, so that according to Madhok (1997) the entry mode is related to the ability of the MNC to develop or exploit its capabilities. Thus, the choice of full ownership would be preferable if MNC has a strong capabilities such as knowledge, which can be internalized, in low cost, within the firm to undertake activity in other market, while choosing a joint venture might be seen as a way to further develop these capabilities with partners.

4.3 The Discrete Measurement of Ownership

Overall, the above four perspectives provide us with a theoretical understanding to the issues surrounding the choice of the foreign ownership structure. The empirical evidence is now reviewed. In so doing, existing studies inevitably focus on the characteristics of both the source and host countries. For example, differences in the political stability of countries will be reflected in the level of risk, and given the importance of uncertainty to several of the above theories this is likely to affect their ownership preference.

Early studies typically focus on the US and Japan as source countries for FDI that takes place in many different countries. This has advantages, as the US is the world's largest economy, but it may be difficult to generalize since "the size of the US market and the vast financial,

managerial, and technological resources available to many US multinationals, it is far from clear as to whether the insights gained from these studies can readily be transferred to contexts that deviate strongly from the US” (Benito, 1996, p. 159). Scholars have more recently considered the ownership choice of MNCs from different source countries that invest in a single host country such as in Japan (Hennart and Larimo, 1998); Greece (Louri *et al*, 2002); Turkey (Tatoglu *et al*, 2003); Vietnam (Tsang, 2005); and even Mongolia (Kaynak *et al*, 2007). These studies are now reviewed, where a distinction is made between those studies for a single source country and those studies for a single host country.

4.3.1 FDI into Many Host Countries

The first study of interest is Gatignon and Anderson (1988) who use the transaction theory to explore the determinants of the degree of foreign control over investments. The study utilises a sample of 180 US firms, which between 1960 and 1975 established 19,000 foreign affiliates in 87 countries. To construct the dependent variable the ownership structure of the affiliates was divided into four organizational forms: wholly owned subsidiaries (the MNC has 100 per cent of equity), dominant partnerships (the MNC has a dominant share of equity, i.e. more than any other partner), balanced-roughly equal-partnerships (the same as that of the largest partner); and minority partnerships (less than the largest partner). The explanatory variables include R&D, proprietary content, advertising intensity, legal restrictiveness, country risk, cumulative company experience, socio-cultural distance and size of operation. A binomial model was used to estimate the choice of entry between full ownership or joint venture. The study also utilises the multinomial logit model to test the choice among the three remaining options, i.e. majority ownership, balanced equity and minority ownership.

Gatignon and Anderson (1988) find that the transaction cost theory is useful to explore the determinants of foreign ownership, but that the findings do not support country risk, socio-cultural distance and R&D as influences on the degree of ownership. If the MNC gained previous experience abroad, they tend to choose full ownership, whereas an MNC might choose low control on entry even if it has a brand name. This is because advertising can generate brand loyalty instead of it requiring more ownership control.

Gomes-Casseres (1989) investigates the role of the transaction costs in explaining MNC ownership preferences by utilising a sample of 20,000 manufacturing subsidiaries from the 187 largest US MNCs in 1975. In this case the dependent variable is measured as full ownership or a joint venture, depending on whether the ownership was either at least 95 per cent or less than this. The explanatory variables include experience, familiarity with the host country, and host country industrial growth, sales expenditure, marketing expenses and the industry R&D. The study finds that restrictive host-government policies strongly encourage joint ventures, while previous MNC experience and familiarity with the host country has a negative effect on this, which is taken as support for the transaction cost theory. High sales, marketing and R&D-intensive factors all encourage full ownership.

In a further study, Gomes-Casseres (1990) argues that an MNC prefers the structure that minimizes the transaction costs of investing in a foreign market, but that the bargaining power of the firm is crucial in its negotiations, so that these jointly determine the ownership structure of an MNC. It utilized the same data and binary choice of ownership structure, but now tries to separate the effects of transaction cost and bargaining power on ownership choice, which can share many explanatory variables, by making a distinction between restrictive and open countries by separating them into two groups and then controls for

differences in firm and country characteristics for each group. The study finds that an attractive market gives a power to the local government. It also found that there is no support to the R&D and marketing variables in determining the ownership structure preferences, but it concludes that large firms with high sales deter more than others.

A further examination of the transaction cost theory was undertaken by Erramilli and Rao (1993), but this time for the entry into the service industry by 114 US MNCs engaged in 381 international investments. Again, the choice is between full or joint ownership, where these were explained in terms of capital intensity, cultural distance, the country risk and firm size. The results showed that the MNC will prefer to share risk in a risky environment through a joint venture. A similar approach was adopted by Benito (1996), but this time for 174 Norwegian manufacturing subsidiaries in the 1970s and 1980s.¹¹ The explanatory terms were classified into three groups: country terms, including political risk; industry factors, such as proprietary assets and R&D; and firm-level factors, including experience. It finds that greater political risk in the host country made a joint venture more likely. Padmanabhan and Cho (1996) also investigate the same choice of ownership structure, but this time for 839 foreign investments by Japanese MNCs in 36 host countries over 1969-91. They include as explanatory variables, firm size, firm size relative to parent, experience, familiarity with host country, cultural distance, host policy, parent establishment mode and R&D intensity. In this case familiarity with the host country, R&D intensity and cultural distance all have a positive effect on full ownership, whereas a restrictive host policy has a negative effect.

¹¹ Like the Padmanabhan and Cho (1996) study below, this measures full ownership if the Japanese firms own more than 95 per cent and joint venture if equal or less than 95 per cent and equal or above 10 per cent.

4.3.2 FDI into One Host Country

The above studies examine FDI from a single source country into a range of host economies, but several studies look at FDI between a single source and host country. Hennart (1991) looks at ownership structure between full and joint ownership for a sample of 224 Japanese manufacturing subsidiaries established in the US in 1985.¹² A good range of variables are included, such as industrial diversification, the parent experience of FDI, the relative size of affiliate to the parent, the age of affiliate, concentration ratio, growth of shipments, R&D and advertising. The study finds that R&D and advertising are insignificant, while the experience of a Japanese investor is significant and increases the probability of full ownership. On the other hand, diversification makes a joint venture more likely. The growth rate of the host country industry that is entered by the affiliate encourages the choice of full ownership.

A similar study of bilateral FDI is analyzed by Bontempi and Prodi (2008), but this time for the choice between full ownership and joint ventures for 100 Italian MNCs investing in China. The factors influencing this decision were classified into three groups: country-specific factors: such as cultural distance, investment year and risk; industry-specific factors, including innovation and intermediate goods industry; and firm-specific factors, including R&D, firm size and experience. The study finds that the greater is the cultural distance or risk the more likely is a joint venture, but that innovation has the opposite effect, which supports the transactions costs theory, suggesting that the MNC seeks to control specific assets.

More recently, researchers have turned their attention to FDI occurring in a single host country, possibly because of the more detailed data that this possibly affords. In an early

¹² Again, wholly-owned is defined when the Japanese parent owns more than 95 per cent of the equity, and a joint venture is if it owns between 5 and less than 95 per cent of the equity.

study, Saunders (1982) examines foreign ownership in Canadian manufacturing over 1960-70, but owing to data limitations the average value of shipments per firm was used as a proxy for foreign ownership, covering the largest firms. This was regressed on factors such as advertising expenditures, unit labour costs, tariff protection, exports, managerial personnel and R&D. Using two-stage-least-squares to tackle endogeneity in the model, the study finds that the managerial resources and labour costs influence the pattern of foreign ownership. It supports the view that the ability of foreign firms to exploit intangible assets by producing in Canada determines the foreign ownership preference.

Hennart and Larimo (1998) explore the determinants of the ownership choice of 266 Japanese and 135 Finnish MNCs investing in the US over 1977-93, representing two distinct cultures. The dependent variable is binary, where full ownership is considered if MNC owns more than 95 per cent and joint venture if it has a share between more than 95 per cent but more than 10 per cent. The explanatory variables include cultural distance, diversification, experience, know-how, parent size at entry, growth of shipments and industry concentration ratio. Cultural distance is found to be crucial in determining the ownership choice, such that Japanese parents are more likely to have a joint venture with a US affiliate.

Nakamura and Xie (1998) explore the importance of intangible assets in determining the ownership choice of 231 foreign manufacturing MNCs investing in Japan. Again, the choice is between full and joint ownership, which is explained in terms of variables such as R&D, price-earnings ratios, brand name and firm size. It finds that a firm will choose full ownership if its intangible assets are very important for its operations, but that this is not necessary when it requires intangible assets from a local partner. In the later case, the study confirmed the importance of the bargaining power explanation in determining the ownership level, so that

the bargaining power of MNC is more likely to increase with the importance of its intangible assets relative to its local partners.

This gives support for the bargaining power theory, while Barbosa and Louri (2002) examine this alongside the transaction cost argument using a sample of 469 foreign affiliates in Portugal and 363 foreign affiliates in Greece. The dependent variable is now three-fold – full ownership, majority and minority ownership – and explained in terms of the transaction cost measured by affiliate size, industry profitability, industry growth, industry R&D intensity, labour costs, origin of foreign investment as a measure of geographical and cultural distance, industry oligopolistic structure and industry marketing intensity variables, and in terms of the bargaining power measured by industry capital intensity, intensity of foreign firms in the industry and resource intensity variables. In Portugal, the ownership structure depends on the firm size and labour costs, but in Greece, profitability, industry growth and the concentration of FDI are found to influence the ownership structure, while R&D has no support. In a further study, Louri *et al* (2002) use a similar framework, but for a smaller sample of 216 MNCs located in Greece over 1997-98. The choice of full ownership is positively related to resource intensity and profitability, but negatively influenced by cultural distance. Majority ownership is negatively related to capital intensity, and conversely for minority ownership, since large project encourages the sharing of risk, but projects in R&D intensive industries are associated with higher ownership, which again supports the transaction cost approach.

Some other studies examine the ownership structure for investors from a large number of countries. Tatoglu *et al* (2003) examine the choice of ownership structure for 659 MNCs investing in the manufacturing sector of Turkey in 1997 from 43 different countries. In this case, full ownership occurs at shares over 90 per cent and joint venture if it owns a share in

the range from 10 to 90 per cent. They find a strong negative effect on full ownership from cultural distance, the diversification of the parent-affiliate and concentration ratios.

Tsang (2005) explores the ownership structure of FDI in Vietnam arising from 64 countries since 1988. Like elsewhere, the explanatory variables are classified into three groups: country-specific factors, which includes the country risk and the cultural distance between the host and source countries; industry-specific factors including advertising intensity and competitive intensity; and firm-specific factors such as the investment amount, duration, partner alignment and location. The result of country risk is significant and has a complicated impact on ownership level. Contradicting to the study's hypothesis, foreign partners tended to acquire less equity ownership as Vietnam becomes less risky, but the majority share is found to be more preferable than 50 per cent when Vietnam was perceived as a safer country. On the entry mode choice, as expected, foreign partner tended to prefer full ownership over joint venture when Vietnam is perceived less risky. In terms of investment amount, the results on entry mode also indicate that when investment amount increases, foreign firms prefer joint venture over full ownership, and the study also found that the percentage of foreign equity is negatively related with the investment amount. The study also found that foreign partners are less likely to own a 50 per cent or majority share when the number of local partners increases, and at the same impact, the percentage of foreign equity is negatively related with the number of local partners. However, foreign partners have no support on ownership preferences.

Finally, Kaynak *et al* (2007) examine the choice between a wholly-owned subsidiary and a joint venture for 1,033 foreign affiliates investing in Mongolia over the period 1990-03, using the same definition as Tsang (2005), except that joint ventures are classified as majority,

equal and minority foreign-owned. The study is based broadly on the transaction cost theory and institutional model. The explanatory variables include the nationality of foreign investors, the normative distance between host and home countries, concentration ratios, industry natural resource intensity, location and the capital size of the affiliate and controlling for the period of formation pre and after the year 1998, when the legislations were revised to relax equity ownership of foreign investors and allow them to have full ownership. It also finds that the greater the importance of an industry for foreign investors and the more developed the region in which MNCs are located are both associated with full ownership or higher equity share preference. The results suggest that relaxing the restriction on foreign ownership in 1998 encouraged full ownership.

4.4 The Continuous Measurement of Ownership

The above studies define foreign ownership structure either as a binary variable between full ownership or a joint venture (generally, greater than and less than a 95 per cent equity share) or occasionally distinguishing between majority and minority ownership (greater or less than 50 per cent for joint ventures). This discrete measurement of the equity share may arise from a lack of sufficient data at the investment project level, but could produce unreliable results on how foreign investors decide the degree of equity ownership. There are a very limited studies that use the actual equity shares, although usually just for joint ventures only, with most relevant to the US or China, either as the source or the host country.

Shan (1991) analyzes the equity share for 141 US MNCs investing in joint ventures in China over 1980-87. Several explanatory variables are used to explain the effect of risk on the equity share such as the location of operation in China, the investment amount and the

duration of the negotiated joint-venture agreement, plus business scope or area including resource-related ventures, manufacturing operations, service industries and construction business. The results show that the investment amount and the contractual duration are significant and as expected foreign firms prefer lower share when the investment amount increases and when the contractual duration decreases, reflecting the effects of the level of uncertainty for foreign partners. It also shows that the location factor has a significant and positive impact on ownership decisions, as a foreign firm is likely to commit a large share of equity for investment ventures located in more developed and liberalised regions. In terms of the business areas, the resource-related sector has a significant and positive impact, indicating that foreign firms tend to prefer a larger share of ownership, while in manufacturing, services and construction areas, foreign firms tend to prefer smaller share of ownership.

Some of these variables are tested by Zhao and Zhu (1998) who investigate the equity ownership of 818 international joint ventures in China in 1993. The dependent variable is the foreign equity share, ranging between 25 and 99 per cent, which is explained in terms of industry-specific factors, such as scale, contractual duration and location, and host country contextual factors, such as market concentration, R&D intensity, skill intensity, productivity, cultural distance, foreign agglomeration and market potential. The results of Zhao and Zhu have interest, as they find foreign investors tend to have large equity shares in large joint ventures with long contractual periods. In terms of host country factors, the agglomeration of foreign business represents a favourable environment, as does market concentration and skills, each having a positive effect on foreign equity preferences, but productivity and R&D intensity have a negative influence. Finally, location and cultural distance are insignificant.

Perhaps the best-known study of foreign equity shares is Asiedu and Esfahani (2001), who consider 2,658 non-bank US parents and 21,300 affiliates investing in a number of host countries in 1997. Their study tests the bargaining power and transaction cost theories. The explanatory variables comprise firm characteristics, including non-contractible assets, size, public trading and international experience; industry characteristics, such as technology intensity, resource intensity and vertical Integration; and country characteristics, including resources and institutions, local knowledge and connections, technological capabilities of domestic firms and FDI policy of the host government. Using probit and tobit regressions, they find that the ownership structure depends on the relative productivities of the MNC's assets, the local entrepreneurs' capabilities and the host country's physical infrastructure and institutional setting. Further, there is little effect of removing equity restrictions on the country's environment for foreign investment in terms of equity shares.

Recently, there are several studies that include more than a single country in their investigation of the determinants of foreign equity shares. Richards and Yang (2007) examine the impact of uncertainty and national culture on MNC equity share in international R&D joint-ventures using a sample of 543 international R&D joint-ventures of foreign enterprises from China, India, Japan and the US over 1985-04. The dependent variable is the share of each joint-venture partner, which is regressed on explanatory variables that include two uncertainty dimensions, environmental uncertainty in the host country (i.e. country risk) measured by the International Country Risk Guide (ICRG), available from the Political Risk Services (PRS) group, and behavioural (or strategic) uncertainty, which includes two factors. These are R&D for the local market, which is measured by a dummy variable that gives MNC the value of unity if it engages in marketing activities but zero otherwise, and the second factor is prior joint-venture collaboration with a local company.

Richards and Yang also include the national culture of the MNC dimension, which has two attributes, power distance, which refers to “the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally” (Hofstede, 1994: p. 28), and the uncertainty avoidance, which refers to the extent to which the members of a culture feel threatened by uncertain or unknown situations. Both of these were measured by scores derived from Hofstede (1980, 2001). There are also other control variables such as whether the MNC is a member of Global 500 or the foreign partner is a government or high-tech industry. They find that there is no support for the country risk, but the behavioural uncertainty is partially supported, as foreign partners prefer higher equity share in joint ventures that are oriented toward the local market. It was also found that national culture is related positively to the foreign equity ownership.

Finally, Indro and Richards (2007) analyze the relationship between ownership and uncertainty for 375 joint ventures between two partners (one local and one foreign) in six Southeast Asian countries over 1990-99. Explanatory variables include partner uncertainty (which is measured by cultural dissimilarity), prior joint-venture experience and four types of joint-venture, comprising site specificity, physical asset specificity, human asset specificity and dedicated assets. Control variables are included for the country risk, industry uncertainty, R&D intensity, advertising intensity, investment scale, operational alignment, involvement of the government as a partner and the relative bargaining power (which is measured by the size of the joint venture parents). Using ordinary least squares, they find that the relationship between the foreign partner’s equity ownership and partner uncertainty depends on the type of joint-venture activity. This implies that a foreign partner with greater cultural dissimilarity tends to prefer a higher level of equity share when engaging in marketing activity, while it tends to reduce its share when involved in manufacturing or R&D activity in Vietnam than in

the other Southeast Asian countries. Finally, the study finds that there is a positive relationship between the foreign partner's equity share and prior joint-venture collaboration.

4.5 The Implications for Risk

Tsang (2005) defines risk in relation to the host country as “the likelihood that changes in the business environment will reduce the profitability of doing business there” (p. 445), while Ahmed *et al* (2002) believe risk has two aspects: “the uncertainty associated with exposure to a loss caused by some unpredictable events and the variability in the possible outcomes of an event based on chance” (p. 805). Risk, which features in both the transaction cost and the eclectic theories, has received relatively little attention in the literature, often being included as one of several possible explanatory factors. Nevertheless, the general finding from these studies is that increased risk reduces the equity share by making full ownership less likely.

Cyert and March (1992) believe that the expansion of an MNC into a foreign market reflects their desire to have greater control over the investments in order to manage their exposure to risk. However, the general view is that greater risk in the host country leads an MNC to reduce its control over the investment and its degree of ownership. As Ahmed *et al* (2002) point out, “when the perception of risk is too high, management might no longer believe that it has control over the risk. At this point, the strategy change and the firm seeks to relieve itself of some portion of control by sharing responsibility and shifting the risk” (p. 806). Likewise, Tsang (2005) adds that, “when the host country is risky, foreign investors avoid committing large amounts of non-deployable assets in order to minimize their loss in case they need to withdraw from the country” (p. 445).

Country risk is measured in different ways in the literature. Gatignon and Anderson (1988) adopt the country risk cluster from Goodnow and Hansz (1972), who classify countries as 'safe', 'somewhat risky' or 'highly risky'. This measure of risk is also used by Erramilli and Rao (1993) and Benito (1996). Tsang (2005) uses the Vietnam *Institutional Investor*, which measures risk on an annual ratings basis using information provided by 75 to 100 of leading international banks. According to Tsang (2005) the ratings reflect changes in a country's economic and political situations. Of course, other risk indicators are available, such as the International Country Risk Guide (ICRG) that is available from the Political Risk Services group, but this has mainly been used to examine FDI flows.¹³ It is this measure of risk that we subsequently adopt in Chapter 6, where further discussion can be found.

In general, the view that risk decreases equity shares is a reasonably solid finding in the literature, being supported by Erramilli and Rao (1993), Tsang (2005) and Bontempi and Prodi (2008). However, all of these studies are for the choice between full or joint ownership, while in the recent study of equity shares by Richards and Yang (2007) the host country risk is found to be insignificant. It is also found by Gatignon and Anderson (1988), who use a four-fold classification of FDI, i.e. wholly-owned, dominant, equal and minority partnerships, while Agarwal (1994) finds that country risk actually encourages foreign ownership, indicating that MNCs tend to choose higher control in the case of higher uncertainty in the foreign markets, although this has been criticized.¹⁴

¹³ The ICRG data assesses the political stability of countries on a subjective and comparable basis according to twelve indicators. Studies using the ICRG data to investigate FDI or growth include Busse and Hefeker (2007) who use all twelve of the indicators, Harms and Ursprung (2002) who use aggregations of the indicators, and Glaeser *et al* (2004) and Egger and Winner (2005) who use selected indicators to examine specific issues.

¹⁴ Brouthers and Brouthers (2001) argue that Agarwal's sample was biased toward less risky countries, with only two per cent of observations involving truly high-risk countries.

4.6 Conclusions

Ownership brings control but also risk, and there are many explanations for the optimal entry mode by multinational corporations when undertaking foreign direct investment. In this chapter four main theories have been considered that derive from the international business literature. These comprise motivations arising from transaction costs (i.e. asset specificity, uncertainty and the frequency of transactions), the eclectic paradigm (e.g. the exploitation of ownership advantages from internalization), bargaining power and organizational capability. As we have seen, much of the empirical literature has examined the entry mode as a way of providing support and distinguishing between these different explanations, although they are not mutually exclusive. It is mainly as a choice between entry by either whole ownership or joint venture (with a host country firm), which seems to reflect data constraints, so that more recently some studies have looked at the actual equity share for joint ventures.

In terms of the effect of risk on the choice of entry mode, there is fairly good evidence that country political risk causes firms to enter as a joint venture rather than by whole ownership. This is principally as a means to reduce risk, and runs counter to the view that ownership brings control and that this can serve to mitigate the effect of risk. Nevertheless, it is difficult to conclude with confidence that risk unambiguously reduces the equity share in FDI joint ventures, as most of the studies are for the choice between whole and joint ownership, which may depend differently on risk. This issue is explored in Chapter 6, but before this the nature of the data is discussed in Chapter 5. This is the Investment Dataset for Saudi Arabia, which was constructed as a part of this thesis and records FDI projects and their equity shares.

Table 4.1: Summary of the Literature Review on Ownership Structure

Theory	Author	Contribution
The transaction cost theory	Williamson (1985)	Williamson points out that the choice between full ownership and a joint venture depends on the benefits and costs from sharing equity. He stresses that there are three key dimensions that determine the level of the transaction cost: the asset specificity, uncertainty, and the frequency of transactions.
The eclectic theory	Dunning (1977, 1979, 1981, 1988)	According to the eclectic theory, a firm will choose a wholly owned or a majority ownership when investing abroad in order to protect and fully exploit its ownership advantages. The locational-specific advantages may also be expected to influence an MNC's choice of ownership structure. The internalization advantage explains the decision of an MNC to internalize its operations in foreign markets instead of contracting part of its activities with other firms.
The bargaining power theory	Vernon (1971)	The bargaining power between an MNC and its local partners or host governments plays an important role in the MNC's choice of ownership structure.
The organizational capability theory	Madhok (1997, 1998)	The theory developed by Madhok as an alternative to the transaction cost approach. It shifts attention away from the characteristics of the transaction to the capabilities of firms. It is concerned with the efficient mechanism for developing and exploiting a firm's capabilities so as to compete successfully in foreign markets.

Part II

Chapter 5

Foreign Direct Investment in Saudi Arabia

5.1 Introduction

The purpose of this chapter is to outline the pattern of foreign direct investment (FDI) in Saudi Arabia over the period 1960-2005. This utilizes data that is collected by the Ministry of Commerce and Industry of Saudi Arabia, which since 1960 has collected information on all investment projects for the purpose of granting investment licenses. These data cover both domestic and foreign-owned projects, although the focus is on the latter. They mainly comprise start-ups, i.e. new ventures, but also potentially include some reinvestments, and mergers and acquisitions, while investments may be in the form of either a joint venture or whole investment. It is the first time these data have been released for academic study, providing a unique opportunity to explore the pattern of FDI in a rapidly developing economy over a long time period.

The data comprise about 19,000 investment projects over 1960-2005, of which about 14,000 are domestic projects and 5,000 involve foreign ownership in some form. These data were referred to in Chapter 2 when describing broad trends in FDI in Saudi Arabia, but here much more detail is presented, representing an important contribution of the thesis. These data are used in the main empirical work in Chapters 6 and 7. The chapter begins by outlining the investment dataset in Section 5.2. This includes the way in which the data were collected by and obtained from the Saudi Arabian Ministry of Commerce and Industry. Section 5.3 compares the investment between foreign and domestic projects, looking at differences in the

number of projects, investment size and amount, and the sector, region and number of jobs. Attention then focuses on examining the data for foreign investment only. In Section 5.4 the pattern according to projects is again considered, but in more detail, while in Section 5.5 the analysis is according to the individual investor. Section 5.6 looks at the total number of investors arising from different countries. Finally, Section 5.7 concludes this chapter.

5.2 The Investment Dataset

5.2.1 Data Collection

Research that has been conducted on Saudi Arabia has encountered the fact that detailed data on Saudi Arabia is rare and difficult to obtain. Bhuian (1997) states that, “it is important to note that Saudi Arabia is a country where collecting empirical data from primary sources is extremely difficult as has been experienced by several authors” (p. 319). Since this thesis is about foreign direct investment in Saudi Arabia, it was realized from an early stage that this is a difficulty that needs to be overcome. Thus, contact was made with a number of sources to inquire about the availability of data on individual foreign investment projects. In some cases this involved asking for help from my contacts, including relatives and friends, in order to obtain the required information. The extensive contacts also included sources at the Ministry of Finance, the Ministry of Commerce and Industry, the Saudi Arabia General Investment Authority (SAGIA), the Ministry of Economy and Planning and the Central Department of Statistics and Information.

After making many calls and visits, I was informed that the required data are collected by the Ministry of Commerce and Industry. This Ministry is the authority that is in charge of

regulating and promoting business activities in the country, although the Saudi Arabia General Investment Authority has become the specialized authority for organizing business activity with respect to foreign investment since its foundation in 2000. All domestic and foreign companies are required to register with the Ministry of Commerce and Industry in order to gain licenses to establish their companies. Therefore, I had to make regular contact and visits to this Ministry asking them for access to these data. I was invited to meet the Director of the Companies General Department, who informed me that they have a database of all domestic and foreign companies in Saudi Arabia over the years 1960 to 2005, but that this had not been released before to any study. After informing the Director that the reason for obtaining this data was solely for the purpose of academic research, and assuring him that we are committed to maintaining data confidentiality, he agreed to release the data, but conditional on the non-disclosure of the names of listed companies, which were replaced by a project number.

Subsequent to this, a meeting was arranged with the Manager of the Information Technology Centre in the Ministry of Commerce and Industry, where the database is located. This was in order to discuss the nature of the required data and the type of variables available in the database. I was eventually provided with a copy of the database containing all their recorded data, but only after deletion of the names of companies. I refer to this as the Investment Dataset. All companies have to register with the Ministry of Commerce and Industry, and the database comprises all licensed companies in Saudi Arabia dating back to the year 1960.¹⁵ It includes projects that are undertaken by foreign investors.

¹⁵ Under 1965 Company Law a minimum capital is Saudi Riyals (SRs) 500 thousand (about £80,000) is required for the issuing of a license, but there have been a number of amendments since that time in relation to Foreign Direct Investment. Under the old 1979 Foreign Direct Investment Act (see Chapter 2) there was no minimum threshold to gain a licence from the Ministry of Commerce and Industry, which lasted until the year 2000 when the Executive Rules of the 2000 Foreign Investment Act raised the minimum threshold: to SRs 25 million (about £4,000,000) for agriculture projects; to SRs 5 million (£800,000) for industrial projects; and to SRs 2

5.2.2 The Nature of the Investment Dataset

The data in the Investment Dataset are organized on a project basis, and include details of 18,911 projects over the period 1960-2005. A project may be carried out by single or many investors, and from one or more countries, including the host economy Saudi Arabia. Of the total, there are 13,913 domestic projects and 4,998 foreign projects, where the former do not have any foreign involvement, and the latter have one or more foreign investors, which might include domestic investors (or possibly none at all). Of the 4,998 foreign projects, these involve a total of 6,566 foreign investors, while if foreign investments from the same source country are aggregated together then there are 5,432 foreign investments from different countries. Generally, we shall use these three ways to analyze the data, for which the number of observations is summarized in Table 5.1.

Table 5.1: Foreign Investments in Dataset

Categorization of FDI	Number of Observations
By project	4,998
By investor	6,566
By investors from different countries	5,432

Each project is associated with the year in which the investors commit to the project, at which time each investor must give detailed information to the Ministry of Commerce and Industry to meet the requirements to gain a license. The data records successful applicants only. The information recorded at this time helps define the project characteristics that are used in the descriptive analysis. These project-level characteristics are now considered, for which details

million (£325,000) for other industries. It also stated that the Board of Directors of SAGIA is entitled to reduce the minimum threshold for any project, and in July 2005 the Board of Directors of SAGIA decided to amend this article by removing the restrictions on the minimum threshold on FDI in any industry. However, for most of the period 1960-2005 there has been little exemption for the foreign projects required to obtain licenses, through minimum thresholds, although stronger over 2000-05.

are shown in Table 5.2. The data are mainly categorical in nature (e.g. region and sector), which may be binary (e.g. project type). For a few variables the data is held continuously (e.g. investment scale). The variables define the characteristics of each project, for which data are available in virtually every case, and the nature of these variables are now discussed.

Table 5.2: Descriptive Statistics on Project Characteristics

Characteristics	Obs.	Min.	Max.	Mean	Std. Dev.
Identification number	18,911	1	18,911	-	-
Year	18,911	1960	2005	1996	-
Project type	18,911	1	2	1.26	0.44
Number of investors	18,911	1	27	1.08	0.49
Foreign share	18,911	0.98	100	-	-
Country of origin	18,911	1	91	-	-
Investment scale (SR millions)	18,853	0.00002	30,223	42.91	457.68
Industrial sector	18,908	1	7	-	-
Region of location	18,911	1	5	-	-
Province of location	18,911	1	13	-	-
Number of jobs	16,083	1	4,000	60.2	126.7

Note: The characteristics are described below.

Project identification: The Ministry of Commerce and Industry redacted the company names, so that each project has a unique number to identify it. These numbers range from 1 to 18,911.

Year of project: The calendar year in which the firm commits to the project and gains a licence that entitles it to start production. The years cover 1960 through to 2005.

Project type: The project type is determined according to the degree of ownership. Based on the Saudi definition of FDI, a project is domestic if it is 100 per cent owned by domestic

investors, but if there is any international involvement it is considered a foreign project. It was mentioned in Chapter 3 that this is not wholly consistent with the definitions of FDI used by the IMF and OECD, which require a threshold of international involvement of 10 per cent, but there are only a small number of projects with foreign involvement below this level (that is 97 of the 4,998 projects, which is just 1.9 per cent).

Number of investors: Within a given project there could be single or multiple investors, and in the latter case from one or more foreign countries. In the Investment Dataset, the number of investors in each project ranges from 1 to 27 investors, but the mean number of investors is 1.08 (see Table 5.2).

Share of foreign investors: This defines the share of the firm's capital paid in by all foreign investors. It enables the ownership structure of FDI in Saudi Arabia to be analyzed since it potentially takes values from just above zero to 100 per cent.

Country of origin: This defines the country of ownership, which is either Saudi Arabia for a domestic investment, or for a foreign investment it is the foreign country with the largest investment share.¹⁶ In total there are investors from 90 different countries, excluding Saudi Arabia, that have invested in the Kingdom.

Investment scale: This variable gives the total amount of money in Saudi Riyals (SRs) to be invested in the project at the date of commitment. All prices are measured at constant year 2000 prices, using a GDP deflator. As Table 5.2 shows, the investment scale ranges between SRs 20 and SRs 30.2 billion, such that the mean is SRs 42.9 million. The scale is not

¹⁶ In 73 projects the largest foreign investors have an equal share, which represents 1.5% of the 4,998 projects. For these cases we treat the project source as not classified.

available for 58 cases, but which only 7 are foreign projects. The distribution is skewed, so that the median investment scale is SRs 4.7 million.

Industrial sector: The industrial classification used in Saudi Arabia is that of the United Nation Statistics Division (ISIC Rev. 2). According to this 2-digit classification, industries fall into seven sectors: 1= agriculture, 2= manufacturing, 3= construction, 4= wholesale and retail, 5= transport and communication, 6= financing and real estate and 7= social services. Around 85% of projects are in manufacturing and much of the remainder is in construction and services (8.4 and 6 per cent respectively). It is not known for three projects.

Regional location: The spatial distribution of projects represents the firms choice of regional location in which they decide to locate their operations. There are five regions in Saudi Arabia: 1= Middle, 2= Western, 3= Eastern, 4= Southern and 5= Northern. Around half of the projects are concentrated in the Middle region, around the capital city of Riyadh (see Figure 2.1), followed by the Western and Eastern regions which account for a third and a quarter of total projects respectively.

Province of location: Each region consists of one or more province, of which there are thirteen provinces in Saudi Arabia: 1= Riyadh, 2= AlQassim, 3= Makka, 4= Almadinah, 5= Eastern, 6= Asir, 7= Jazan, 8= Albaha, 9= Najran, 10= Tabuk, 11= Aljawf, 12= Hail and 13= The Northern frontier. Around 86% of all projects are concentrated in only three provinces, these being, Riyadh, Makka and Eastern. The majority of these projects take place in Riyadh, which received up to 41 per cent of all projects, while around 25 and 20 per cent were located in the Makka and Eastern provinces respectively.

Number of jobs: These are the prospective jobs outlined in the license. There are 2,828 projects where the number of jobs is not known, representing around 15 per cent of all projects, of which 2,779 (55.6%) are foreign projects and 49 (0.35%) are domestic projects. Of those that are known, domestic projects account for around 80 per cent of jobs, but of course these are much more likely to be known.

5.3 Comparison of Foreign and Domestic Projects

The purpose of this section is to compare the nature of the foreign investment with that of the domestic projects (i.e. where there is an absence of foreign involvement) according to the above criteria that are given by the variables.

5.3.1 The Temporal Pattern of Projects

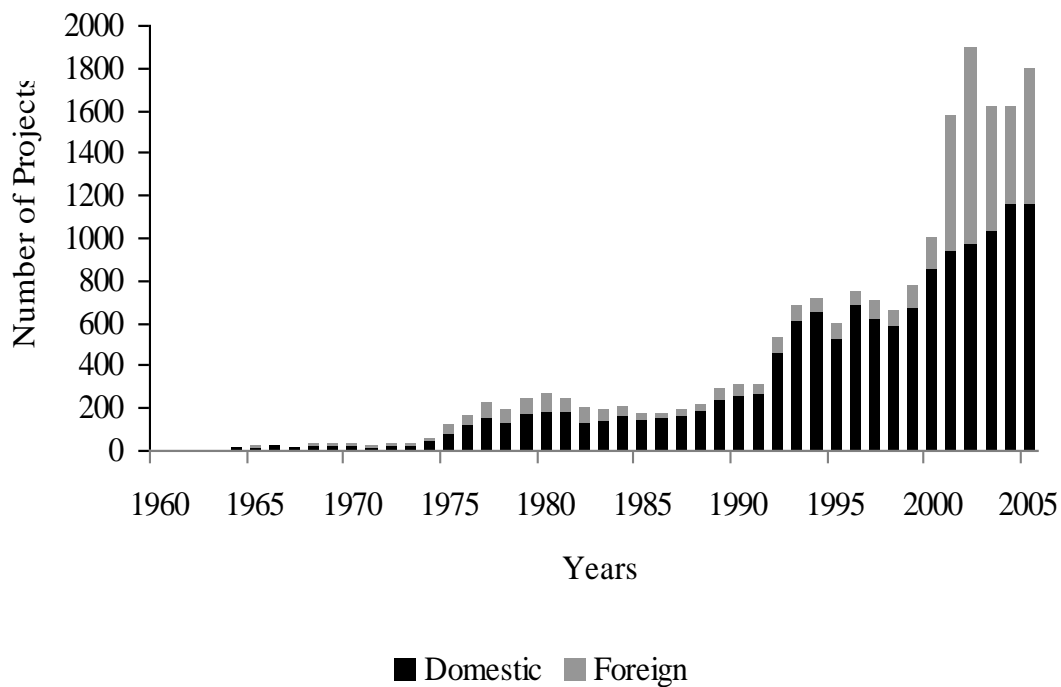
Figure 5.1 shows that it was not until the second half of the 1970s that the number of both domestic and foreign projects in Saudi Arabia began to increase. This was mainly as a result of the sharp increase in the oil prices worldwide and reflects the global trends of FDI (see Chapter 2). The nature of the growth of the projects over time can be described as follows.

At the beginning of the 1960s there were only a small number of inward FDI projects in Saudi Arabia, but through to the middle of the 1970s the number began to rise, with FDI projects increasing by about five-fold by 1980. The worldwide recession and the decrease in oil prices in the early 1980s led to a pronounced business cycle in Saudi Arabia, (since its economy is driven by oil revenues), and to a slight fall in the number of projects in the early 1980s. However, the number of projects recovered in the late 1980s and increased rapidly,

such that by 1994 domestic and foreign projects stood at about 650 and 65 respectively, and by 2000 the total number of projects had increased by more than double on 1990.

Since 2000 there has been an unprecedented increase in the number of projects, which is driven by foreign projects, increasing by more than four-fold over 2000-05, and which compares with an increase in domestic projects of 36 per cent over the same period. The number of foreign projects reached a high of over 900 foreign projects in 2002, and continues to be at a high level since then, highlighting the importance of FDI to Saudi Arabia.

Figure 5.1: Number of Domestic and Foreign Projects, 1960-2005



Source: Investment Database, Saudi Ministry of Commerce and Industry.

5.3.2 Investment Size

There are a total of 18,911 projects over the period 1960-2005, and Table 5.3 shows that these are associated with investment of over SRs 800 billion. The vast majority of the total projects are domestic (73.6 per cent), and the table shows that these account for investment of SRs 457,488 million, but which is a much smaller share of total investment (56.6 per cent). This is reflected in the larger investment scales of foreign projects, which is more than double that of domestic projects on average (SRs 70 million compared to SRs 33 million), and which further highlights the importance of foreign investors to the Saudi economy.

Table 5.3: Total Foreign and Domestic Projects, 1960-2005

Project Type	No. of Projects	Total Investment Amount (SR m)	Share Investment Amount (%)	Average Investment Scale (SR m)
Foreign	4,991	351,456	43.4	70.42
Domestic	13,862	457,488	56.6	33.00
Total	18,853	808,944	(100.0)	42.91

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Note: Investments measured at constant year 2000 prices. There are 58 missing cases.

The comparison of the number of projects and the amount of investment is made in Table 5.4 between foreign and domestic projects for different sub-periods. A visual representation of the same data is given over the page in Figures 5.2 and 5.3. These show that it was not until the sub-period 1976-80 that investment increased both for foreign and domestic investors. However, a different pattern pursued thereafter, since whereas domestic investment broadly increased after that time, for foreign projects it was not until the final period that investment took-off, no doubt related to the 2000 Foreign Investment Act. Indeed, the sub-period 2001-05 accounts for 65 per cent of foreign projects and about half of all investment over 1960-05.

It illustrates the much more recent nature of FDI in Saudi Arabia, although the average scale of investment has if anything fallen over time, especially since the mid-1970s.

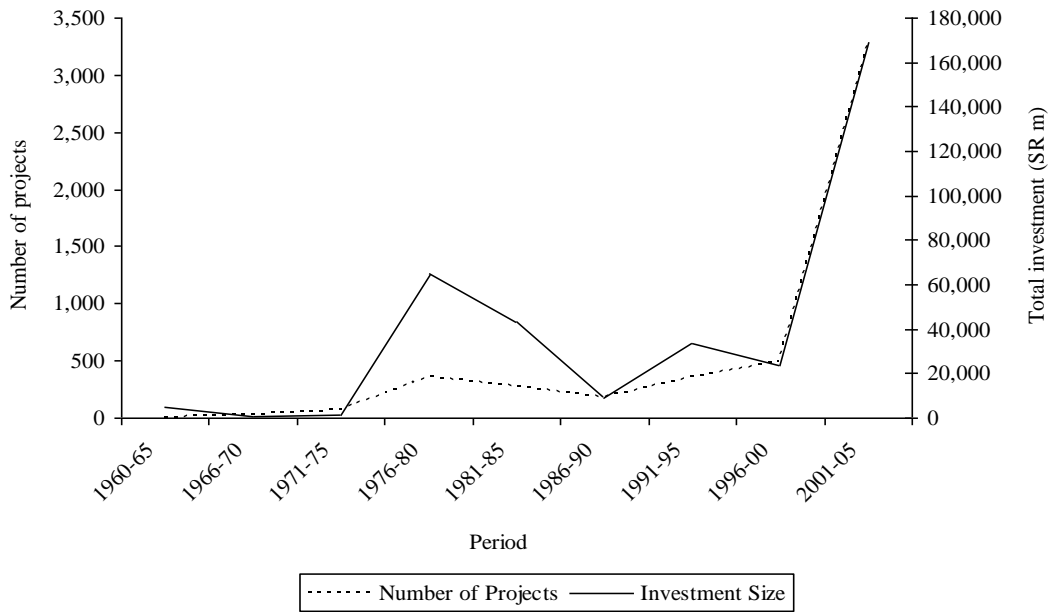
Table 5.4: Foreign and Domestic Projects by Investment Amount, 1960-2005

Period	Foreign				Domestic			
	No. of Projects	%	Total Investment Amount (SR m)	Average Investment Scale (SR m)	No. of Projects	%	Total Investment Amount (SR m)	Average Investment Scale (SR m)
1960-65	6	0.1	5,189	864.83	27	0.2	500	18.52
1966-70	23	0.5	917	43.67	103	0.7	700	7.07
1971-75	68	1.4	1,428	21.64	175	1.3	6,291	36.16
1976-80	353	7.1	64,997	184.13	738	5.3	30,765	42.38
1981-85	267	5.3	42,987	161.00	753	5.4	53,558	71.89
1986-90	181	3.6	9,225	50.97	982	7.1	30,230	31.39
1991-95	346	6.9	33,392	96.79	2,491	17.9	73,493	29.52
1996-00	492	9.8	23,705	48.28	3,395	24.4	84,691	24.99
2001-05	3262	65.3	169,616	52.01	5,249	37.7	177,260	33.77
Total	4,998	100.0	351,456	70.32	13,913	100.0	457,488	32.88

Source: Investment Database, Saudi Ministry of Commerce and Industry.

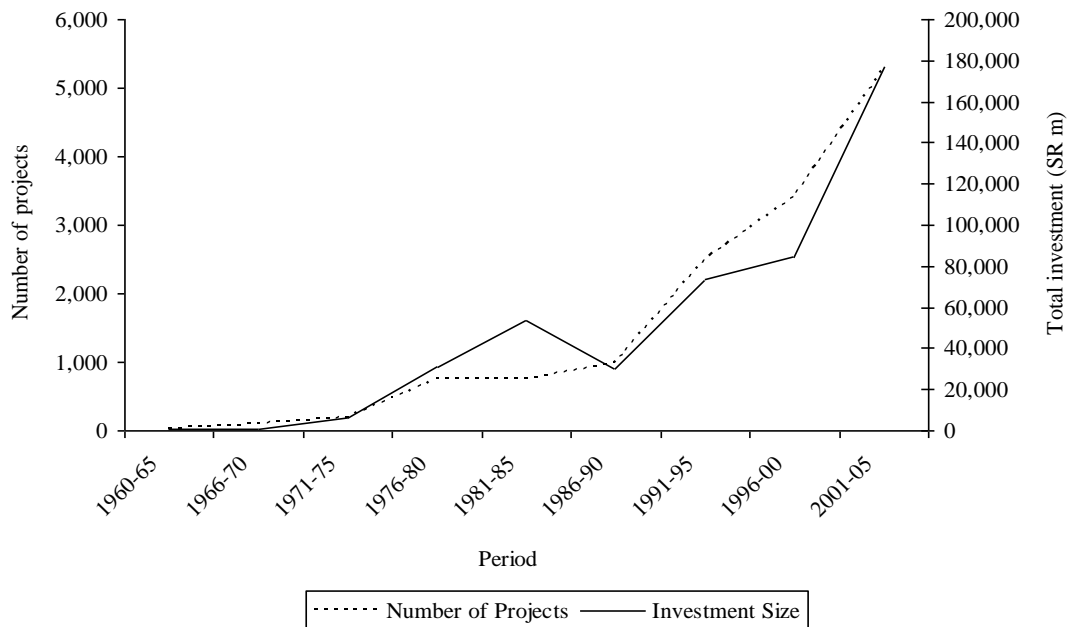
Note: Investments measured at constant 2000 prices. Table shows total investment amount, including domestic contribution. Average scale is calculated for projects only where investment size is known.

Figure 5.2: Temporal Pattern of Foreign Investment, 1960-2005



Source: Investment Database, Saudi Ministry of Commerce and Industry.

Figure 5.3: Temporal Pattern of Domestic Investment, 1960-2005



Source: Investment Database, Saudi Ministry of Commerce and Industry.

5.3.3 Industrial Sector

The distribution of investment across the seven major activities (agriculture, manufacturing, construction, wholesale and retail trade, transport and communication, financing and real estate and social services) is shown in Table 5.5 for both foreign and domestic projects. The dominance of manufacturing can be seen, with practically all of domestic investment in this sector, but about 45 per cent of foreign projects and 80% of the investment amount. The average investment scale of foreign manufacturing projects is nearly four times greater than that for domestic projects. Construction and financing also received a relatively large number of foreign projects, representing 32 and 13 per cent of foreign projects, but combined only about 16% per cent of the foreign investment amount. It is reflected in the investment scale of projects, with manufacturing having by far the largest mean scale of projects. The emphasis of FDI on the manufacturing sector only partly reflect the importance of the oil sector (see Table 5.11 below), but primarily it reflects the nature of investment in an economy that is relatively under-developed and still developing.

Table 5.5: Foreign and Domestic Projects by Sector, 1960-2005

ISIC Code	Sector	Foreign				Domestic			
		No. of Projects	Share of Projects (%)	Total Investment Amount (SR m)	Average Investment Scale (SR m)	No. of Projects	Share of Projects (%)	Total Investment Amount (SR m)	Average Investment Scale (SR m)
1	Agriculture	21	(0.42)	145	6.90	0	-	-	-
3	Manufacturing	2,227	(44.44)	283,058	127.45	13,881	(99.41)	457,036	33.04
5	Construction	1,589	(31.79)	23,760	14.95	4	(0.03)	10	2.50
6	Wholesale and Retail Trade	192	(3.84)	747	3.89	1	(0.01)	2	2.00
7	Transport and Communication	68	(1.36)	5,450	80.15	25	(0.17)	438	18.21
8	Financing and Real Estate	637	(12.73)	32,962	51.83	1	(0.01)	1	1.00
9	Social Services	261	(5.22)	1,696	6.50	1	(0.01)	2	2.00
-	Missing	3	(0.06)	3,638	1,212.67	0	-	-	-
-	Total	4,998	(100.00)	351,456	70.32	13,913	(100.00)	457,488	32.88

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Note: Investments measured at constant 2000 prices. ISIC = International Standard Industrial Classification of economic activities, Revision 2, United Nations, New York. Table shows total investment amount, including domestic contribution. Average scale is calculated for projects only where investment size is known.

5.3.4 Regional Location

The geographical distribution of projects between the five regions of Saudi Arabia is given in Table 5.6. It shows that the pattern of both foreign and domestic projects in these regions is similar, in that they are mainly clustered in the Middle, Eastern and Western regions. This is due to the fact that these are the centres of population and industry. The table shows that by number of projects, around half of foreign and domestic projects are located in the Middle

region, but they have a much lower share of total investment, at 20 to 23 per cent. It shows that these regions attract relatively smaller projects.

Table 5.6: Foreign and Domestic Projects by Location, 1960-2005

Region	Foreign				Domestic			
	No. of Projects	%	Total Investment Amount* (SR m)	Average Investment Scale (SR m)	No. of Projects	%	Total Investment Amount* (SR m)	Average Investment Scale (SR m)
Middle	2,258	45.2	71,220	31.54	6,278	45.1	105,111	16.74
Western	1,630	32.6	122,517	75.16	3,684	26.5	125,930	34.18
Eastern	1,043	20.9	153,644	147.31	2,782	20.0	189,375	68.07
Southern	42	0.8	761	18.12	581	4.2	11,363	19.56
Northern	25	0.5	3,314	132.56	588	4.2	25,710	43.72
Total	4,998	100.0	351,456	70.32	13,913	100.0	457,488	32.88

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Note: Investments measured at constant 2000 prices. Table shows total investment amount, including domestic contribution. Average scale is calculated for projects only where investment size is known.

The Western region, which is ranked second in terms of number of projects, has 1,630 foreign and 3,684 domestic projects, representing around 33 and 27 per cent respectively of the total number of projects. The investment amount is higher in this region compared with the Middle region, as it accounts for around 35% of foreign investment and 28% of domestic investment. The Eastern region accounts for a fifth of both foreign and domestic projects, but this region has the largest amount of investment, accounting for 44% of foreign and 41% of domestic investment. This is related to the location of the oil fields (see Chapter 2) and it is reflected in the largest average investment scale of all of the regions. Finally, the distribution of investments into the remaining regions is very small, especially for FDI, although foreign projects in the Northern region are large in scale. Both regions are relatively undeveloped.

5.3.5 Prospective Jobs

The pattern of jobs in the foreign and domestic projects is now considered, although details are known for only half of the foreign projects (see above). These are the jobs that investors plan to have in their projects. In total, there are 967,781 jobs in the 16,083 projects, as shown in Table 5.7. Notwithstanding the missing cases, most jobs are in domestic projects.

Table 5.7 shows that there is an increasing number of jobs over time, with the majority of jobs created after 1991. The period 1991-05 accounts for two-thirds of foreign and domestic project jobs, and which are created by 80 per cent of projects. The period 2001-05 is perhaps more striking, where one-third of the foreign jobs come from 57% of the projects (likewise one-third of domestic jobs from 38% of domestic projects). These suggest two things: first, foreign projects tend to produce more jobs on average (Table 5.7 shows that foreign projects have 86 jobs on average, whereas domestic projects have only 56 jobs); and second, that as the number of projects has increased over time the average size of project has diminished.

Table 5.7: Foreign and Domestic Projects by Jobs, 1960-2005

Period	Foreign			Domestic		
	No. of Projects (where jobs known)	No. of Jobs		No. of Projects (where jobs known)	No. of Jobs	
		Total	Average		Total	Average
1960-65	3	103	34	27	3,201	119
1966-70	16	1,954	122	100	10,119	101
1971-75	43	7,917	184	170	32,542	191
1976-80	124	22,406	181	726	67,861	93
1981-85	107	12,906	121	748	66,752	89
1986-90	122	20,368	167	963	63,447	66
1991-95	218	29,769	137	2,491	149,259	60
1996-00	322	27,532	86	3,395	156,599	46
2001-05	1,264	67,089	53	5,244	227,957	43
Missing	2,779	-	-	49	-	-
Total Non-missing	2,219	190,044	86	13,864	777,737	56

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Note: Table shows total project jobs. Average scale is calculated for projects where job size is known.

5.3.6 Summary

The section used the Investment Dataset to compare foreign and domestic projects. The analysis considers the differences in terms of number of projects, the investment size and amount, and the sector, region and number of jobs. It was not until the year 2000 that Saudi Arabia witnessed a remarkable growth of foreign investment, with these foreign projects also being larger in scale compared to domestic projects. Both foreign and domestic investment is heavily concentrated in the manufacturing sector, as well as in specific regions of the country. We now examine the characteristics of the foreign projects in greater detail.

5.4 Characteristics of Foreign Projects

It was mentioned in Section 5.2 that the foreign investment in the Investment Dataset can be analyzed in each of three ways: (i) *by project*, that is, if there is any foreign involvement in a project, (ii) *by investor*, since each foreign project has one or more foreign investors, and (iii) *by investment*, whereby investors from the same country are aggregated together for each project. In this section the data are analyzed by at the project level, before considering foreign investment at the level of the investor and for investors from different countries

5.4.1 Projects by Investment Size

We begin by examining the distribution of foreign investment according to the number of projects and investment scale. This is for the 4,998 foreign projects over the period 1960-05, where the investments scale is known for 4,991 projects. The distribution of the investment is shown in Table 5.8 according to the number of projects in each size band.

The table shows that 4,166 projects were undertaken with an initial investment below SRs 10 million (about £1.6 million), representing 83 per cent of total foreign projects, and indicating the skewed nature of the investment data. Indeed, there is a striking degree of concentration in projects with investment scales between SRs 1 and 5 million (i.e. £160,000 and £800,000), which account for 2,871 (or 58%) of projects. A further 27 per cent of projects have a scale between SRs 5 and 50 million, such that 93 per cent of total projects have an investment scale below SRs 50 million. Of course, the other seven per cent of projects can be very large, so that 7 projects have a scale above SRs 10 billion, and 18 are above SRs 5 billion.

Table 5.8: Distribution of Foreign Projects by Investment Scale, 1960-2005

Band of Investment Scale (SR m)	No. of Projects	%
0 - 0.5	151	3.0
0.5 - 1	286	5.7
1 - 5	2,871	57.4
5 - 10	858	17.2
10 - 50	487	9.7
50 - 100	113	2.3
100 - 500	141	2.8
500 - 1,000	31	0.6
1,000 - 5,000	35	0.7
5,000 - 10,000	11	0.2
> 10,000	7	0.1
Missing	7	0.1
Total	4,998	100.0

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Note: Investment data at constant 2000 prices. '0.5 – 1' means investment scales greater than 0.5 but no greater than 1, and so on.

5.4.2 Projects by Foreign Share

The distribution of the foreign projects according to the degree of foreign ownership is shown in Table 5.9. The ownership structure is determined at the time of establishment, since a firm is required by law to articulate the share of every partner in the project.

The table shows that 2,523 projects are under full foreign ownership (50.4 per cent). Of the remainder, only 1.1 per cent has less than a 10 per cent foreign ownership share, while 1,272 (25.4% of 4,998) are in minority ownership. Another 11.1% have equal ownership, while 13.1% are in majority foreign ownership. Overall, this suggests that foreign investors either invest fully or as minority holder in a joint venture.

Table 5.9: Projects by Foreign Share, 1960–2005

Share Range (%)	No. of Projects	Cum. %
0 - 10	56	1.1
10 - 25	222	5.6
25	107	7.7
25 - 50	887	25.5
50	558	36.6
50 - 75	311	42.8
75	172	46.3
75 - 90	74	47.8
90 - 100	88	49.5
100	2,523	100.0
Total	4,998	-

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Note: '10 – 25' means greater than 10 and less than 25, and so on.

5.4.3 Projects by Country of Origin

The distribution of foreign projects according to the country of origin of owner is shown in Table 5.10. Around half of the projects originate from the West Asia part of the MENA region, which indicates the cultural proximity and ties with Saudi Arabia. This is followed by Western Europe, but with a much smaller number of projects, representing 15 per cent of the total. However, by investment size, North America accounts for around one-third of total investment, which arises from only 545 projects (11 per cent of projects). Investment from the Far East is striking since it represents the smallest number of projects (4 per cent), but with a large amount of investment, SRs 73,336 million (21 per cent of total investment), so that projects from this region have the largest average project scale.

Table 5.10 also gives a breakdown of each source region according to the leading countries within each region. It reveals some further high concentration of FDI in certain countries,

such that four countries account for more than half of all investment: the US (SRs 68,157 million, or 19.4 per cent of investment), Japan (SRs 64,694 million, or 18.4 per cent), France (SRs 31,099 million, or 8.9 per cent) and Kuwait (SRs 29,476 million, or 8.4 per cent).¹⁷ This large share of investment (55.1 per cent) comes from only 10 per cent of foreign projects.¹⁸ It shows that the four countries (US, Japan, France and Kuwait) account for most of investment amount within their regions. Kuwait accounts for around 43 per cent of investment from the West Asia part of the MENA region, but only 54 projects (2.3 per cent). Jordan lies in second place in the West Asia region accounting for around 12 per cent of total investment, from 519 projects (22 per cent). The vast majority of the projects and investment from the North Africa part of the MENA region comes from Egypt (91 and 93 per cent respectively).

¹⁷ By adding a further country (Bermuda) this rises to 61.7 per cent of total investment, although Bermuda is potentially a source for offshore holding companies, which may ultimately arise from other countries.

¹⁸ A further breakdown according to all countries within each region is shown in Appendix Table 5.1.

Table 5.10: Foreign Projects by Country of Origin, 1960-2005

Source Region / Country	No. of Projects	Total Investment Amount (SR m)	(%)	Average Investment Scale (SR m)
MENA (West Asia)	2,356	68,578	19.51	29.17
Kuwait	(54)	(29,476)	(8.39)	(556.15)
Jordan	(519)	(8,366)	(2.38)	(16.15)
Bahrain	(52)	(8,027)	(2.28)	(154.37)
MENA (North Africa)	487	3,947	1.12	8.1
Egypt	(442)	(3,666)	(1.04)	(8.29)
Western Europe	774	78,269	22.27	101.38
France	(108)	(31,099)	(8.85)	(287.95)
Netherlands	(64)	(10,008)	(2.85)	(156.38)
North America	545	96,948	27.58	177.89
US	(404)	(68,157)	(19.39)	(168.71)
Bermuda	(17)	(23,988)	(6.83)	(1,411.06)
Far East	216	73,336	20.87	339.52
Japan	(57)	(64,694)	(18.41)	(1,134.98)
Rest of the world	547	22,060	6.28	40.33
Panama	(28)	(8,677)	(2.47)	(309.89)
Not classified	73	8,318	2.37	113.95
Total	4,998	351,456	100	70.32

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Note: Investments measured at constant 2000 prices. Not classified where projects from different countries have equal largest shares. Average investment scale calculated where investment size known.

5.4.4 Projects by Sector

A breakdown of foreign projects by 2-digit industry sector is shown over the page in Table 5.11. Around 45 per cent of projects and 81 per cent of total investment is concentrated in the manufacturing sector. This is followed by the construction sector in terms of the number of projects, at around 32 per cent, and the financial and real estate sector in terms of the total investment, but with only 9 per cent. A comparison between industries within the sectors indicates that most of the foreign investment went to the chemicals and petroleum products

industry (68.6 per cent of total investment size), followed by the construction and financial institutions industries (6.8 and 5.6 per cent). However, in terms of the number of projects the chemicals and petroleum products industry accounts for only 11 per cent of projects, and is ranked in third place behind the construction and real estate industries, which account for 31.8 and 11.7 per cent of total projects respectively. Thus, while investment is oil-related, most projects are outside this industry.

The average project investment scale is SRs 70.3 million (£11.25 m), but much higher for the chemicals and financial institutions industries, at SRs 441 million, which reflects the much larger scales in this industry. The financial institutions industry is on average larger, with an average investment scale of SRs 679 million, but this is because of 30 very large investment projects undertaken with a total investment amount of SRs 19,690 million.

Table 5.11: Foreign Projects by Sector, 1960-2005

ISIC	Sector	No. of Projects	Total Investment Amount (SR m)	Average Investment Scale (SR m)
1	Agriculture	21	145	6.90
11	Agriculture	(21)	(145)	(6.90)
3	Manufacturing	2,227	283,058	127.45
31	Food and Beverages	(224)	(7,445)	(33.24)
32	Textile, Wearing Apparel and Leather	(142)	(2,029)	(14.29)
33	Wood and Wood Products	(125)	(947)	(7.58)
34	Paper and Paper Products and Printing	(62)	(3,210)	(52.62)
35	Chemicals and Petroleum Products	(546)	(240,993)	(441.38)
36	Non-Metallic Mineral Products	(226)	(9,962)	(44.47)
37	Basic Metal	(430)	(10,132)	(23.56)
38	Fabricated Metal Products	(381)	(7,604)	(20.01)
39	Other Manufacturing	(89)	(737)	(8.28)
5	Construction	1,589	23,760	14.95
50	Construction	(1,589)	(23,760)	(14.95)
6	Wholesale and Retail Trade	192	747	3.89
63	Restaurants and Hotels	(192)	(747)	(3.89)
7	Transport and Communication	68	5,450	80.15
71	Transport and Storage	(68)	(5,450)	(80.15)
8	Financial and Real Estate	636	32,962	51.83
81	Financial Institutions	(30)	(19,690)	(678.97)
82	Insurance	(23)	(4,302)	(187.04)
83	Real estate and Business Services	(584)	(8,970)	(15.36)
9	Social Services	261	1,696	6.50
92	Sanitary and Similar Services	(33)	(117)	(3.55)
93	Social and Related Community	(108)	(1,338)	(12.39)
94	Recreational and Cultural Services	(6)	(15)	(2.50)
95	Personal and Household Services	(114)	(226)	(1.98)
	Missing	3	3,638	1212.67
	Total	4,998	351,456	70.32

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Note: Investments measured at constant 2000 prices. ISIC = International Standard Industrial Classification, Rev. 2. Average investment scale is calculated for projects where investment size is known.

5.4.5 Projects by Sector and Source

The cross-tabulation of industrial activity by supra-national source is shown in Table 5.12. This is for the number of projects and investment amount. It reveals that most projects from the West Asia part of MENA are in manufacturing, and which is the case for the total investment from other sources. Appendix Table 5.2 gives a breakdown for the manufacturing industry, showing the importance of the oil sector for FDI from outside of the MENA region.

Table 5.12: Sector by Supra-national Origin

Sector	MENA (West Asia)	MENA (North Africa)	Western Europe	North America	Far East	Rest of the world	Total
(a) Number of Projects							
Agriculture	15	1	1	2	1	1	21
Manufacturing	1,273	158	288	186	57	265	2,227
Construction	695	204	263	165	121	141	1,589
Wholesale and Retail Trade	94	30	19	15	8	26	192
Transport and Communication	8	5	28	12	2	13	68
Financing and Real Estate	198	64	145	136	27	67	637
Social Services	106	30	41	43	3	38	261
Missing	-	1	2	-	-	-	3
Total	2,389	493	787	559	219	551	4,998
(b) Investment Scale (SR m)							
Agriculture	94	2	2	2	43	2	145
Manufacturing	56,015	1,995	53,972	79,323	72,677	19,076	283,058
Construction	6,345	441	1,580	13,516	493	1,385	23,760
Wholesale and Retail Trade	552	64	26	30	17	58	747
Transport and Communication	45	6	5,303	60	5	31	5,450
Financing and Real Estate	9,878	1,389	16,954	3,616	347	778	32,962
Social Services	313	63	119	447	6	748	1,696
Missing	-	2	3,636	-	-	-	3,638
Total	73,242	3,963	81,591	96,993	73,589	22,078	351,456

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Note: Investments measured at constant 2000 prices.

5.4.6 Projects by Region and Province

The distribution of inward investment is given in Table 5.13 according to location across the five regions in Saudi Arabia, and its thirteen provinces.¹⁹

Table 5.13: Foreign Projects by Region and Provinces, 1960-2005

Region / Province	No. of Projects	Total Investment Amount (SR m)	Average Investment Scale (SR m)
Middle	2,258	71,220	31.58
Riyadh	(2,237)	(71,114)	(31.83)
AlQassim	(21)	(106)	(5.05)
Western	1,630	122,517	75.30
Makka	(1,505)	(68,539)	(45.60)
Almadinah	(125)	(53,978)	(435.31)
Eastern	1,043	153,644	147.31
Eastern	(1,043)	(153,644)	(147.31)
Southern	42	761	18.56
Asir	(26)	(119)	(4.76)
Jazan	(11)	(396)	(36.00)
Albaha	(3)	(14)	(4.67)
Najran	(2)	(232)	(116.00)
Northern	25	3,314	132.56
Tabuk	(15)	(567)	(37.80)
Aljawf	(4)	(19)	(4.75)
Hail	(3)	(2,031)	(677.00)
Northern frontier	(3)	(697)	(232.33)
Total	4,998	351,456	70.32

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Note: Investments measured at constant 2000 prices. Average investment scale is calculated for projects where investment size is known.

¹⁹ Analysis by region and the supra-nations source is shown in Appendix Table 5.3.

It shows that the projects and investment were unequally distributed between provinces over 1960-05. Around half of the projects are located in the Middle region, of which Riyadh has the majority of projects (44.8 per cent of the total projects), followed by the Makka and the Eastern provinces (30.1 and 20.9 per cent respectively). However, around 44 per cent of the total investment is concentrated in the Eastern province within the Eastern region. This is not surprising since the oil related projects, which require huge capital, are mainly located in this province, and which is reflected in the average investment scale per project, at SRs 147.3 million. The Riyadh province has the second highest amount of total investment, receiving 20.2 per cent of total investment, followed by the Makka and the Almadinah provinces (19.5 and 15.4 per cent respectively).

Overall, across the thirteen provinces, there is a very high concentration of projects and investment, with around 96.0 per cent of projects and 83.5 per cent of the investment amount occurring in Riyadh, Makka and the Eastern provinces. When Almadinah province is added, these reach 98.3 and 98.8 per cent respectively, showing that little FDI occurs elsewhere in Saudi Arabia outside of these provinces.²⁰

5.4.7 Single and Multiple Investors

The foreign ownership of projects can be considered according to whether there is a single or multiple foreign investors involved, i.e. whether the foreign investors work in partnership or not. A breakdown of the distribution of projects between single and multiple investors is shown in Table 5.14. It reveals that the vast majority of foreign investments involve a single foreign investor (i.e. 4,021 of 4,998, or 80.5%). Further, in each case, half the projects are in

²⁰ Although the Hail and the Northern Frontier provinces have very large average investment scales, there are only three projects in each of these provinces.

whole foreign ownership (i.e. either through a single investor or foreign investors combined), but on average these appear to be fairly small projects, representing only 12.5 and 17.2 per cent respectively of the total investment amount. In terms of projects with less than 100 per cent ownership, the table shows that there is a similar distribution for both kinds of project, with a concentration of ownership in the number of projects that have a total foreign investor share between 26 and 75 per cent. However, while the investment for the single investors is concentrated in projects with 50 per cent ownership, for multiple investors the investment is concentrated in projects with less than a 10 per cent share. This is reflected in the average project investment scales, which are much larger for the multiple investors.

Table 5.14: Foreign Projects by Single and Multiple Investors

Share Range	Single Investor			Multiple Investors		
	No. Of Projects	Total Investment Amount (SR m)	Average Investment Scale (SR m)	No. Of Projects	Total Investment Amount (SR m)	Average Investment Scale (SR m)
0 - 10	44	8,114	184.4	12	27,776	2,314.7
10 - 25	179	9,033	50.5	43	19,824	461.0
25	97	20,647	207.4	10	102	10.2
25 - 50	737	40,210	54.4	150	10,954	73.0
50	457	138,406	303.3	101	1,587	15.7
50 - 75	209	4,571	21.1	102	2,745	26.9
75	136	1,271	9.4	36	11,033	307.5
75 - 90	47	290	13.3	27	4,704	174.2
90 - 100	56	1,470	35.1	32	344	10.7
100	2,059	31,960	15.5	464	16,417	35.4
Total	4,021	255,972	63.7	977	95,486	97.7

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Note: Investments measured at constant 2000 prices. Average investment scale is calculated for projects where investment size is known. '10 – 25' means greater than 10 and less than 25, and so on.

5.4.8 Summary

This section has given a greater emphasis to analyzing the pattern of foreign investment at the project level over the period 1960-05, examining this according to the number of projects, investment scale, sector, region and jobs. It reveals many interesting things about the nature and pattern of inward FDI, but highlighting a concentrated pattern of investment in terms of its scale, activity and location within Saudi Arabia. In particular, this section finds that there is a relatively large number of smaller projects (i.e. below SRs 10 million), that most projects are in manufacturing, especially the chemicals and petroleum products industry, and located in the Middle region, especially around the capital city of Riyadh. However, reflecting the location of the oilfields, and some extremely large investment scales, the Eastern region is the largest recipient of FDI by the amount of investment.

5.5 Characteristics of Foreign Investors

The above analysis finds that about a fifth of the foreign investment projects have more than one foreign investor, such that the 4,998 projects in the Investment Dataset were carried out by a total of 6,566 foreign investors. The characteristics of the investors are now considered. It is these foreign investors that form the basis for the analysis of Chapter 6.

5.5.1 Investors by Supra-national Origin

The distribution of the number of foreign investors according to the supra-national region of origin is shown in Table 5.15. It indicates that most investors over the period 1960-05 come from the West Asia part of MENA region, followed by Western Europe, North America,

North Africa part of the MENA and finally the Far East. The total number of investors from of the MENA region is 3,992 investors, representing more than 60 per cent of the total. This indicates a striking degree of involvement, although perhaps it is not surprising as it reflects the role of the cultural and geographical proximity as a determinant of FDI in Saudi Arabia.

By investment size, which is measured as the amount invested by foreign investors, almost one-third of the total investment comes from the North America region, totalling SRs 52,749 million, followed by Western Europe and the Far East. Total investment from MENA in fact represents only 15 per cent of the total investment, at SRs 25,443 million. It indicates that while there are a large number of investors from the MENA, they engage in generally small projects. This can be seen in the average investment scale per investor from the MENA region, which is SRs 10.3 million, the lowest of all the reported regions.

Table 5.15: Foreign Investors by Supra-national Origin, 1960-2005

Supra-national Origin	No. of Investors	Total Investment Amount (SR m)	Average Investment Scale (SR m)
MENA (West Asia)	3,329	23,253	7.00
MENA (North Africa)	663	2,190	3.30
Western Europe	912	41,561	45.72
North America	683	52,749	77.92
Far East	257	38,214	148.69
Rest of the World	722	12,120	16.79
Total	6,566	170,087	25.90

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Note: Investments measured at constant 2000 prices. MENA excludes Saudi Arabia. Total investment is the foreign investment only. Average investment is calculated for projects where the scale is known.

5.5.2 Investors by Sector

The distribution of foreign investors by industrial activity is shown in Table 5.16. It is clear that manufacturing is the dominant sector both in terms of the number of investors and in terms of the investment amount. Looking at the motivations for FDI from Chapter 3 this is perhaps because Saudi Arabia is rich in natural resources, which consolidates and attracts more investors to natural-resource industries. It can be seen that around half of the investors are in the manufacturing sector, and that it is 73 per cent of investment amount. This is followed by the construction sector, with around one-third of investors, but 11 per cent of the investment. Financing and real estate sector received less than half the number of investors of the construction sector, but it accounts for almost the same investment amount (10%). Of course, within manufacturing, Table 5.16 shows that the largest in terms of the number of investors and investment amount is chemicals and petroleum products. This attracted 11.6 per cent of investors, but a staggering 61 per cent of the total investment. Overall, the pattern follows the distribution of the foreign projects in Section 5.4.

Table 5.16: Foreign Investors by Industrial Activity, 1960-2005

ISIC Code	Sector	No. of Investors	Total Investment Amount (SR m)	Average Investment Scale (SR m)
1	Agriculture	24	100	4.16
11	Agriculture	(24)	(100)	(4.16)
3	Manufacturing	3,126	124,147	39.70
31	Food and Beverages	(306)	(3,525)	(11.52)
32	Textile, Wearing Apparel and Leather	(191)	(1,197)	(6.27)
33	Wood and Wood Products	(181)	(717)	(3.96)
34	Paper and Paper Products and Printing	(83)	(1,718)	(21.21)
35	Chemicals and Petroleum Products	(762)	(103,642)	(136.01)
36	Non-Metallic Mineral Products	(297)	(4,368)	(14.86)
37	Basic Metal	(626)	(4,849)	(7.75)
38	Fabricated Metal Products	(536)	(3,666)	(7.04)
39	Other Manufacturing	(144)	(466)	(3.24)
5	Construction	1,938	18,523	9.56
50	Construction	(1,938)	(18,523)	(9.56)
6	Wholesale and Retail Trade	263	527	2.00
63	Restaurants and Hotels	(263)	(527)	(2.00)
7	Transport and Communication	88	5,317	60.43
71	Transport and Storage	(88)	(5,317)	(60.43)
8	Financing and Real Estate	794	17,073	21.47
81	Financial Institutions	(52)	(7,055)	(138.33)
82	Insurance	(41)	(1,404)	(34.25)
83	Real estate and Business Services	(702)	(8,613)	(12.27)
9	Social Services	329	765	2.32
92	Sanitary and Similar Services	(39)	(68)	(1.74)
93	Social and Related Community	(138)	(512)	(3.71)
94	Recreational and Cultural Services	(6)	(12)	(1.97)
95	Personal and Household Services	(146)	(174)	(1.19)
	Missing	3	3,635	1,211.71
Total		6,566	170,087	25.90

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Note: Investment measured at constant 2000 prices. ISIC = International Standard Industrial Classification, Rev. 2. Total investment is the foreign investment only. Average investment is calculated for projects where the scale is known.

5.5.3 Investors by Location

The distribution of foreign investors according to location by regions and provinces is shown in Table 5.17. Overall, and again, the most attractive area to investors is the Middle region, with 45.7 per cent of investors locating their investments in this region. It is followed by the Western and Eastern regions (32.8 and 20.3 per cent respectively). In total these three regions cover 98.9 per cent of total investors. Of course, when the investment amount is considered, the Eastern region ranked as the largest recipient of the total investment, like before, reaching 42.6 per cent. This is followed by the Western and Middle regions (29.4 and 27.4 per cent respectively). In total, around 99.4 per cent of total foreign investment goes to these three regions when analyzed at the individual investor level.

Again, a further breakdown by province shows a very high concentration of investors in the Riyadh, Makka and Eastern provinces, representing 95.6 per cent of the total investors. The Riyadh province accounts for more than 45 per cent of total investors, followed by the Makka and Eastern provinces. However, the Eastern province is the largest recipient of investment, with around 43 per cent of the total investment concentrated in this province. This indicates that investing in the Eastern province requires larger investment scale.

Table 5.17: Foreign Investors by Region and Province, 1960-2005

Region and Province	No. of Investors	Total Investment Amount (SR m)	Average Investment Scale (SR m)
Middle	3,003	46,560	15.55
Riyadh	(2,979)	(46,504)	(15.65)
AlQassim	(24)	(56)	(2.33)
Western	2,155	49,941	23.26
Makka	(1,964)	(35,189)	(17.94)
Almadinah	(191)	(14,753)	(79.32)
Eastern	1,333	72,534	54.41
Eastern	(1,333)	(72,534)	(54.41)
Southern	48	403	9.37
Asir	(31)	(75)	(2.88)
Jazan	(12)	(201)	(16.75)
Albaha	(3)	(9)	(3.00)
Najran	(2)	(118)	(59.00)
Northern	27	648	24.00
Tabuk	(17)	(353)	(20.76)
Aljawf	(4)	(14)	(3.50)
Hail	(3)	(106)	(35.33)
The Northern frontier	(3)	(175)	(58.33)
Total	6,566	170,087	25.90

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Note: Investments measured at constant 2000 prices. Total investment is the foreign investment only. Average investment is calculated for projects where the scale is known.

5.5.4 Summary

This section has described the pattern of FDI in Saudi Arabia at the investor level over the period 1960-05. The analysis again considers different characteristics associated with foreign investors, including the number of projects, investment size, sector, region and origin. The section finds that most investors come from the MENA region, particularly West Asia, but that the majority of investment amount comes from North America and Western Europe. It

finds that the most investors tend to invest in the manufacturing sector and choose to locate in the Middle region, although the Eastern region is the most attractive region according to the scale of investment, again reflecting the location of the oilfields.

5.6 Source Country Characteristics

In this section we complete the analysis of the Investment Database. Initially, we examined the pattern of FDI according to the characteristics of projects. This gave a good picture of the pattern of investment, although in analyzing the source country there is a potentially difficulty as projects may involve many foreign investors from different countries, so that these were attributed to the largest investor. In this section the pattern of FDI is analyzed according to total investment arising from each source country. This is useful for Chapter 7 that analyzes the data by the source country characteristics. It gives 5,432 observations on 4,998 projects. Of course, since multiple investor projects account for only a fifth of total projects (see Table 5.14), the overall pattern is not too dissimilar to that found previously analyzed, so that the focus of this section is on the extent to which projects are multiply funded from the same source country, but also the extent to which they rely on funding from elsewhere.

5.6.1 By Supra-national Origin

The analysis of foreign investment according to its source is important in order to understand its nature. The distribution of investment, aggregating investors from the same country in each project, is shown in Table 5.18 according to supra-national region of origin. It gives the number of investments (i.e. from the same source region in different projects), and shows the

average number of investors and the mean share of investments from each region. Again, about half of investments come from the West Asia part of the MENA region, while the table shows that a greater number of investors from this region tend to participate in a project, so that the mean share is relatively high at 74 per cent. It was shown above that these projects tend to be smaller in scale (Table 5.15), so that this is not so much a risk sharing strategy (i.e. for larger projects), but rather it may reflect the more limited resources of the investors and the greater reluctance of other investors to get involved, including from the host.

Table 5.18: Investment by Supra-national Origin, 1960-2005

Supra-national Region	No. of Investments	Average No. of Investors*	Mean Investments Share (%) **
MENA (West Asia)	2,609	1.28	74
MENA (North Africa)	523	1.27	76
Western Europe	849	1.07	56
North America	623	1.10	60
Far East	225	1.14	61
Rest of the world	603	1.20	70
Total	5,432	1.21	59

Source: Investment Database, Saudi Ministry of Commerce and Industry.

* = This is the ratio of total number of investors from each supra-national region divided by total number of investments. ** = Mean investments share by supra-national region of origin.

The table shows that investors from the Western Europe, North America and the Far East regions tend not to engage in projects with many partners from the same source country (the investors per project are 1.07, 1.10 and 1.14 respectively), but they rely more on investors from other countries, and presumably Saudi Arabia itself (the mean investment shares are 56, 61 and 62 per cent respectively). In a sense these projects are intrinsically ‘international’, involving investors from many different countries. It may reflect the greater scale of these projects, which tend to be larger in size (Table 5.15)

A further breakdown by countries within each region is reported in Appendix Table 5.4. It can be seen that 37 per cent of investments came from only four countries, of which three are Arab countries, comprising Jordan, Syria, Egypt and the US respectively. Jordan accounts for around 22 per cent of total investments from the West Asia part of the MENA region, and Syria accounts for 21 per cent, while Egypt represents the source of the vast majority of total investments from the North Africa part of the MENA region (88.5 per cent). Furthermore, a fairly a large number of investors from the MENA region tends to participate together in one investment, and combined invest at a higher share compared to other source countries.

5.6.2 By Sector

The distribution of foreign investments between sectors is shown in Table 5.19. Again, it reveals that the manufacturing sector is dominant, with 45 per cent of total investment going to this sector, followed by the construction sector. Compared to other sectors, a large number of investors tends to share in one investment when entering the manufacturing and wholesale sectors, although in the case of manufacturing they tend to do so at smaller shares. At the 2-digit industry, chemicals and petroleum industries, construction and real estate account for more than half of investments. The overall pattern for manufacturing is reflected in its 2-digit industries, while in construction a small number of source country investors are involved and they to own higher share, no doubt due to the absence of local partners.

Table 5.19: Investment by Sector, 1960-2005

ISIC	Sector	No. of Investments	Average No. of Investors*	Mean Investments Share (%) **
1	Agriculture	22	1.09	66
11	Agriculture	(22)	(1.09)	(66)
3	Manufacturing	2,464	1.27	64
31	Food and Beverages	(243)	(1.26)	(63)
32	Textile, Wearing Apparel and Leather	(149)	(1.28)	(76)
33	Wood and Wood Products	(139)	(1.30)	(75)
34	Paper and Paper Products and Printing	(68)	(1.22)	(57)
35	Chemicals and Petroleum Products	(633)	(1.20)	(52)
36	Non-Metallic Mineral Products	(244)	(1.22)	(69)
37	Basic Metal	(459)	(1.36)	(70)
38	Fabricated Metal Products	(435)	(1.23)	(60)
39	Other Manufacturing	(94)	(1.53)	(80)
5	Construction	1,679	1.15	75
50	Construction	(1,679)	(1.15)	(75)
6	Wholesale and Retail Trade	207	1.27	78
63	Restaurants and Hotels	(207)	(1.27)	(78)
7	Transport and Communication	76	1.16	55
71	Transport and Storage	(76)	(1.16)	(55)
8	Financing and Real Estate	708	1.12	70
81	Financial Institutions	(37)	(1.41)	(54)
82	Insurance	(33)	(1.24)	(22)
83	Real estate and Business Services	(638)	(1.10)	(73)
9	Social Services	273	1.21	73
92	Sanitary and Similar Services	(35)	(1.11)	(70)
93	Social and Related Community	(116)	(1.19)	(68)
94	Recreational and Cultural Services	(6)	(1.00)	(86)
95	Personal and Household Services	(116)	(1.26)	(79)
	Missing	3	1.00	60
	Total	5,432	1.21	69

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Note: Investments measured at constant 2000 prices. ISIC = International Standard Industrial Classification, Rev. 2. * = Ratio of total number of investors from each industry divided by total number of investments. ** = Mean investment share by industry.

5.6.3 By Location

Finally, the spatial distribution of investment from the same country is now considered. Table 5.20 shows the distribution of foreign investments between the regions and provinces within Saudi Arabia over the period 1960-05. The Middle region ranks as the most attractive region, accounting for 45 per cent of total investments, followed by the Western and Eastern regions (32.3 and 21.5 per cent), which is like before. The table shows that investors tend to share much more in a project when locating in the Middle and Western regions, and take a greater share. However, investors in the Eastern region collaborate less with partners from the same country and have smallest share, reflecting the scale of these projects.

In terms of the provinces, again, Riyadh, Makka and Eastern attract more investments (45, 30 and 21 per cent of total investment). By aggregating investors, Almadinah province has, on average, the largest number of investors sharing one project (1.33 investors), but this is not reflected in a higher share (63 per cent). By comparison, Riyadh and Makka are second in terms of number of investors (1.23 and 1.22 respectively), but they have a fairly higher share per investment (71 and 72 per cent), and so appear to be less reliant on partners from outside the source country. Investors in provinces in the Southern and Northern regions tend to have less partners, although these areas are not important as locations for investment, as they have only one per cent of total investment locating in these areas.

Table 5.20: Investment by Region and Province, 1960-2005

Region and Province	No. of Investments	Average No. of Investors*	Mean Investments Share (%) **
Middle	2,440	1.23	72
Riyadh	(2,419)	(1.23)	(71)
AlQassim	(21)	(1.14)	(79)
Western	1,754	1.23	72
Makka	(1,610)	(1.22)	(72)
Almadinah	(144)	(1.33)	(63)
Eastern	1,167	1.14	58
Eastern	(1,167)	(1.14)	(58)
Southern	46	1.04	74
Asir	(29)	(1.07)	(81)
Jazan	(12)	(1.00)	(56)
Albaha	(3)	(1.00)	(77)
Najran	(2)	(1.00)	(75)
Northern	25	1.08	80
Tabuk	(15)	(1.13)	(90)
Aljawf	(4)	(1.00)	(88)
Hail	(3)	(1.00)	(42)
The Northern frontier	(3)	(1.00)	(55)
Total	5,432	1.21	69

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Note: Investments measured at constant 2000 prices. * = Ratio of total number of investors from each province divided by total number of investments. ** = Mean investments share by province.

5.6.4 Summary

This section has analyzed the inward investment projects according to the number of partners and share of total project investment arising from different source countries. Generally, it finds that the West Asia part of MENA is the main source of investment when analyzed in this way, while the dominant sector is manufacturing and the most attractive location is the Middle region. It shows that some kinds of investment appear to require more partners from

the same source country, while other kinds require a greater funding from outside the source economy, including the host country. In particular, projects from MENA, in manufacturing and locating in the Middle region tend to have more source country partners, and those from MENA and in manufacturing are funded at a greater extent from the source country. In the case of MENA these tend to be smaller projects, so that it may just reflect the characteristics of investors, while for manufacturing they are larger projects and it may reflect risk sharing.

5.7 Conclusions

This chapter has outlined the nature of the data available to this study in the form of the Investment Database, and has analyzed the nature of both domestic and foreign investments in Saudi Arabia over the period 1960-05. The dataset identifies around 18,911 projects of which 4,998 (26.4 per cent) are foreign projects (i.e. involve some foreign ownership) and the rest are domestic. These foreign projects are important, as they account for approximately 44 per cent of the total investment in Saudi Arabia since 1960. The chapter describes the nature of the foreign projects relative to domestic projects, and then focuses on the pattern of foreign investment. This is analyzed at the project and investor levels, but also for source country by aggregating investments within a project from the source country. In total, Saudi Arabia has received investment from 90 different countries since 1960.

The analysis reveals significant facts about the nature and pattern of investment. First, it reveals that FDI has increased dramatically, so that about two-thirds of projects over 1960-05 have occurred since the year 2000, and accounting for about half the total foreign investment of SRs 350 billion (about £56 billion; all at year 2000 prices) in Saudi Arabia. It compares with about SRs 460 billion in domestic investment over the same period. On average, foreign

investments tend to be twice the size of domestic investments, at SRs 70 million, but the distribution of investment scales is highly skewed, so that seven projects over 1960-05 had a scale in excess of SRs 10 billion, and eighteen at more than SRs 5 billion. In its nature and location pattern the FDI is highly concentrated. Thus, like domestic investment, the FDI is mainly in the manufacturing sector and located in the Middle region in Saudi Arabia, around Riyadh, although there is significant investment around the Eastern oilfields, which in terms of the amount of foreign investment is the largest recipient. Chemicals and petroleum-related projects account for around 11 per cent of foreign projects, but nearly 70 per cent of total foreign investment, related to some very large foreign investments.

Interestingly, the main source of investment by number of projects is the Middle East and North Africa (MENA) region, and in particular the West Asia part. Combined these account for over half of the projects, but about 20 per cent of investment. Jordan and Syria account for 43 per cent of investment from the West Asia part of MENA, while Egypt represents the vast majority of total investment from the North Africa part (89 per cent), indicating the importance of proximity and cultural similarity. These tend to be smaller investments that involve a relatively large number of investors from the same source country and account for a large share of the project cost. It contrasts with the FDI from elsewhere, such that the largest investment flows arise from North America, followed by the Western Europe. It indicates the different nature of the investment flowing from the different sources, but which overall tends to be highly concentrated in its activity and by its location.

Appendix Table 5.1: Foreign Projects by Origin, 1960-2005

Country	No. of Projects	Total Investment Amount (SR m)	%	Average Investment Scale (SR m)
MENA (West Asia)	2,356	68,578	19.51	29.2
Kuwait	(54)	(29,476)	(8.39)	(556.2)
Jordan	(519)	(8,366)	(2.38)	(16.2)
Bahrain	(52)	(8,027)	(2.28)	(154.4)
United Arab Emirates	(76)	(7,310)	(2.08)	(96.2)
Lebanon	(363)	(6,812)	(1.94)	(18.8)
Syria	(515)	(3,692)	(1.05)	(7.2)
Palestine	(376)	(1,536)	(0.44)	(4.1)
Yemen	(258)	(1,292)	(0.37)	(5.0)
Iran	(26)	(844)	(0.24)	(36.7)
Turkey	(80)	(632)	(0.18)	(7.9)
Iraq	(14)	(346)	(0.10)	(24.7)
Cyprus	(18)	(176)	(0.05)	(9.8)
Qatar	(4)	(66)	(0.02)	(16.4)
Oman	(1)	(2)	(0.001)	(2.0)
MENA (North Africa)	487	3,947	1.12	8.1
Egypt	(442)	(3,666)	(1.04)	(8.3)
Sudan	(26)	(187)	(0.05)	(7.2)
Morocco	(11)	(48)	(0.01)	(4.3)
Algeria	(3)	(32)	(0.01)	(10.6)
Tunisia	(5)	(14)	(0.004)	(2.8)
Western Europe	774	78,269	22.27	101.4
France	(108)	(31,099)	(8.85)	(288.0)
Netherlands	(64)	(10,008)	(2.85)	(156.4)
Italy	(55)	(8,991)	(2.56)	(163.5)
Germany	(121)	(8,821)	(2.51)	(73.5)
Sweden	(23)	(8,405)	(2.39)	(365.4)
United Kingdom	(210)	(6,088)	(1.73)	(29.0)
Switzerland	(72)	(3,035)	(0.86)	(42.8)
Denmark	(12)	(732)	(0.21)	(61.0)
Norway	(13)	(355)	(0.10)	(27.3)
Belgium	(11)	(163)	(0.05)	(14.8)

Appendix Table 5.1 (continued)

Country	No. of Projects	Total Investment Amount (SR m)	%	Average Investment Scale (SR m)
Spain	(12)	(102)	(0.03)	(8.5)
Finland	(12)	(94)	(0.03)	(7.8)
UK (Jersey)	(9)	(93)	(0.03)	(10.3)
Luxembourg	(6)	(80)	(0.02)	(13.3)
Austria	(13)	(63)	(0.02)	(4.8)
Greece	(6)	(36)	(0.01)	(6.1)
Liechtenstein	(5)	(33)	(0.01)	(6.5)
Ireland	(6)	(29)	(0.01)	(4.8)
Portugal	(2)	(12)	(0.004)	(6.2)
Poland	(4)	(8)	(0.002)	(2.0)
UK (Channel Islands)	(4)	(8)	(0.002)	(2.0)
UK (Isle Of Man)	(2)	(8)	(0.002)	(3.8)
Romania	(2)	(2)	(0.001)	(1.2)
Hungary	(1)	(2)	(0.001)	(2.0)
Slovakia	(1)	(0.1)	(0.00003)	(0.1)
North America	545	96,948	27.58	177.9
US	(404)	(68,157)	(19.39)	(168.7)
Bermuda	(17)	(23,988)	(6.83)	(1,411.1)
Canada	(124)	(4,803)	(1.37)	(38.7)
Far East	216	73,336	20.87	339.5
Japan	(57)	(64,694)	(18.41)	(1,135.0)
Korea Republic of	(60)	(2,531)	(0.72)	(42.2)
Taiwan	(7)	(2,529)	(0.72)	(361.4)
China	(36)	(1,909)	(0.54)	(53.0)
Malaysia	(21)	(1,465)	(0.42)	(69.8)
Singapore	(12)	(126)	(0.04)	(10.5)
Philippines	(11)	(52)	(0.01)	(4.7)
Russia	(4)	(16)	(0.005)	(4.1)
Hong Kong	(5)	(9)	(0.002)	(1.7)
Indonesia	(2)	(3)	(0.001)	(1.5)
Thailand	(1)	(2)	(0.001)	(2.0)
Rest of the world	547	22,060	6.28	40.3
Panama	(28)	(8,677)	(2.47)	(309.9)
Cayman Islands	(43)	(4,145)	(1.18)	(96.4)

Appendix Table 5.1 (continued)

Country	No. of Projects	Total Investment Amount (SR m)	%	Average Investment Scale (SR m)
South Africa	(12)	(2,612)	(0.74)	(217.7)
Pakistan	(223)	(2,033)	(0.58)	(9.1)
India	(129)	(1,870)	(0.53)	(14.5)
British Virgin Islands	(25)	(1,191)	(0.34)	(47.6)
Australia	(19)	(1,018)	(0.29)	(53.6)
Afghanistan	(13)	(80)	(0.02)	(6.2)
New Zealand	(1)	(77)	(0.02)	(76.7)
Nepal	(1)	(63)	(0.02)	(63.1)
Bangladesh	(10)	(55)	(0.02)	(5.5)
Ethiopia	(3)	(46)	(0.01)	(15.3)
Croatia	(1)	(34)	(0.01)	(33.7)
Liberia	(3)	(27)	(0.01)	(9.0)
Trinidad And Tobago	(1)	(20)	(0.01)	(19.9)
Venezuela	(2)	(20)	(0.01)	(9.8)
Bahamas	(7)	(17)	(0.005)	(2.4)
Brazil	(2)	(16)	(0.004)	(7.8)
Sri Lanka	(3)	(12)	(0.003)	(4.0)
Nigeria	(2)	(6)	(0.002)	(3.0)
Tanzania	(3)	(6)	(0.002)	(2.0)
Somalia	(2)	(6)	(0.002)	(2.9)
Mauritius	(3)	(6)	(0.002)	(1.8)
Kenya	(1)	(5)	(0.001)	(5.1)
Barbados	(1)	(5)	(0.001)	(5.1)
Dominican Republic of	(1)	(5)	(0.001)	(5.0)
Eritrea	(2)	(4)	(0.001)	(2.0)
Ukraine	(2)	(3)	(0.001)	(1.3)
Netherlands Antilles	(1)	(2)	(0.001)	(2.0)
Bosnia And Herzegovina	(1)	(2)	(0.001)	(2.0)
Belize	(1)	(1)	(0.0001)	(0.5)
Turkmenistan	(1)	(0.2)	(0.0001)	(0.2)
Not classified*	73	8,318	2.37	113.9
Total	4,998	351,456	100.00	70.3

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Note: Investments measured at constant 2000 prices. Not classified is where several countries have equal largest shares. Average investment scale is calculated for projects where investment size is known.

Appendix Table 5.2: Manufacturing Sector by Supra-national Source

Industry	MENA (West Asia)	MENA (North Africa)	Western Europe	North America	Far East	Rest of the world	Total
(a) Number of Projects							
Food and Beverages	124	20	36	12	4	28	224
Textiles, clothes and leather	86	12	7	4	2	31	142
Wood and wood products	93	15	4	4	1	8	125
Paper and printing	41	7	5	6	2	1	62
Chemicals and petroleum	234	34	109	70	21	78	546
Non-metallic minerals	144	16	29	15	6	16	226
Basic metal	284	26	33	28	10	49	430
Fabricated metal products	208	23	64	43	10	35	383
Other Manufacturing	59	5	1	4	1	19	89
Total	1,273	158	288	186	57	265	2,227
(b) Investment Scale (SR m)							
Food and Beverages	2,960	459	2,227	958	25	817	7,445
Textiles, clothes and leather	871	112	284	153	195	414	2,029
Wood and wood products	752	75	35	28	10	47	947
Paper and printing	1,861	45	678	94	515	17	3,210
Chemicals and petroleum	36,731	338	44,246	74,484	68,965	16,229	240,993
Non-metallic minerals	4,886	557	2,073	175	2,001	269	9,962
Basic metal	4,920	182	2,137	1,717	648	527	10,132
Fabricated metal products	2,616	200	2,141	1,679	312	655	7,604
Other Manufacturing	418	27	150	36	5	102	737
Total	56,015	1,995	53,972	79,323	72,677	19,076	283,058

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Note: Investments measured at constant 2000 prices.

Appendix Table 5.3: Regional Location by Supra-national Source

Region	MENA (West Asia)	MENA (North Africa)	Western Europe	North America	Far East	Rest of the world	Total
(a) Number of Projects							
Middle	1,078	228	333	269	93	257	2,258
Eastern	426	112	195	128	57	125	1,043
Western	852	143	244	160	67	164	1,630
Southern	18	8	10	1	2	3	42
Northern	15	2	5	1	-	2	25
Total	2,389	493	787	559	219	551	4,998
(b) Investment Scale (SR m)							
Middle	22,946	2,696	60,054	36,907	67,661	7,989	198,254
Eastern	11,240	426	8,585	3,018	681	3,008	26,957
Western	38,885	795	12,558	56,355	5,243	10,945	124,782
Southern	92	42	303	362	4	125	928
Northern	79	4	90	350	-	11	535
Total	73,242	3,963	81,591	96,993	73,589	22,078	351,456

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Note: Investments measured at constant 2000 prices.

Appendix Table 5.4: Foreign Investments by Origin, 1960-2005

Country	No. of Investments	Average No. of Investors*	Mean Investment Share (%) **
MENA (West Asia)	2,609	1.28	74
Jordan	(568)	(1.27)	(74)
Syria	(551)	(1.28)	(83)
Lebanon	(397)	(1.32)	(65)
Palestine	(396)	(1.27)	(85)
Yemen	(270)	(1.24)	(84)
United Arab Emirates	(93)	(1.13)	(56)
Turkey	(89)	(1.15)	(69)
Kuwait	(78)	(1.67)	(42)
Bahrain	(74)	(1.12)	(48)
Iran	(27)	(1.67)	(74)
Cyprus	(20)	(1.1)	(63)
Iraq	(18)	(1.06)	(51)
Qatar	(18)	(1.11)	(20)
Oman	(10)	(1.1)	(15)
MENA (North Africa)	523	1.27	76
Egypt	(463)	(1.28)	(77)
Sudan	(29)	(1.1)	(71)
Morocco	(13)	(1.38)	(69)
Tunisia	(11)	(1.09)	(52)
Algeria	(4)	(1.25)	(44)
Libyan Arab Jamahiriya	(3)	(1.33)	(02)
Western Europe	849	1.07	56
United Kingdom	(225)	(1.08)	(62)
Germany	(134)	(1.13)	(48)
France	(121)	(1.07)	(61)
Netherlands	(75)	(1.03)	(55)
Switzerland	(75)	(1.01)	(50)
Italy	(58)	(1.14)	(52)
Sweden	(23)	(1.09)	(58)
Spain	(17)	(1.12)	(50)
Belgium	(16)	(1.13)	(34)
Austria	(14)	(1)	(55)
Norway	(14)	(1)	(62)
Denmark	(13)	(1.08)	(64)

Appendix Table 5.4 (continued)

Country	No. of Investments	Average No. of Investors*	Mean Investment Share (%) **
Finland	(13)	(1)	(45)
UK (Jersey)	(9)	(1)	(52)
Greece	(8)	(1.13)	(47)
Ireland	(6)	(1)	(58)
Liechtenstein	(6)	(1)	(44)
Luxembourg	(6)	(1)	(57)
Poland	(4)	(1)	(45)
UK (Channel Islands)	(4)	(1)	(66)
Portugal	(2)	(1)	(63)
Romania	(2)	(1)	(100)
UK (Isle Of Man)	(2)	(1)	(98)
Hungary	(1)	(1)	(30)
Slovakia	(1)	(1)	(100)
North America	623	1.10	60
US	(452)	(1.09)	(59)
Canada	(153)	(1.11)	(63)
Bermuda	(18)	(1.19)	(62)
Far East	225	1.14	61
Korea Republic of	(61)	(1.03)	(68)
Japan	(59)	(1.41)	(52)
China	(37)	(1.08)	(72)
Malaysia	(22)	(1.05)	(59)
Singapore	(14)	(1.07)	(61)
Philippines	(11)	(1)	(45)
Taiwan	(8)	(1)	(55)
Hong Kong	(6)	(1.17)	(56)
Russia	(4)	(1)	(85)
Indonesia	(2)	(1)	(75)
Thailand	(1)	(1)	(50)
Rest of the world	603	1.20	70
Pakistan	(238)	(1.27)	(80)
India	(137)	(1.23)	(68)
Cayman Islands	(48)	(1.06)	(53)
British Virgin Islands	(34)	(1.03)	(59)
Panama	(30)	(1.07)	(51)

Appendix Table 5.4 (continued)

Country	No. of Investments	Average No. of Investors*	Mean Investment Share (%) **
Australia	(22)	(1.05)	(54)
Afghanistan	(15)	(1.4)	(78)
South Africa	(13)	(1)	(49)
Bangladesh	(11)	(1.55)	(92)
Bahamas	(8)	(1)	(63)
Mauritius	(5)	(1)	(64)
Brazil	(4)	(1)	(45)
Sri Lanka	(4)	(1)	(54)
Tanzania	(4)	(1)	(87)
Eritrea	(3)	(1)	(72)
Ethiopia	(3)	(1)	(71)
Liberia	(3)	(1)	(62)
Venezuela	(3)	(1)	(55)
Nigeria	(2)	(1)	(70)
Somalia	(2)	(2)	(74)
Ukraine	(2)	(1)	(75)
Argentina	(1)	(1)	(17)
Barbados	(1)	(1)	(100)
Belize	(1)	(1)	(50)
Bosnia And Herzegovina	(1)	(1)	(30)
Croatia	(1)	(1)	(38)
Dominican Republic	(1)	(1)	(75)
Kenya	(1)	(1)	(40)
Nepal	(1)	(1)	(03)
Netherlands Antilles	(1)	(1)	(49)
New Zealand	(1)	(1)	(48)
Trinidad And Tobago	(1)	(1)	(80)
Turkmenistan	(1)	(1)	(50)
Total	5,432	1.21	59

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Notes: * = Ratio of total number of investors from each country divided by total number of investments.

** = Mean investments share by country.

Chapter 6

Political Risk and the Foreign Ownership Structure of Equity Joint Venture Projects

6.1 Introduction

There is an incentive to internalize ownership when undertaking foreign direct investment (FDI) in order to protect firm-specific advantages, and this has featured prominently as a motive for FDI (see chapter 3). However, greater ownership brings with it greater risk, and a result in the empirical literature is that increased country risk will cause firms to relinquish their equity stake in projects (see Tsang, 2005), and to enter as a joint venture rather than by whole ownership (e.g. Erramilli and Rao, 1993; Benito, 1996; Bontempi and Prodi, 2008). However, risk may also cause joint ventures to enter at lower equity shares (see Shan, 1991), but as we have seen in chapter 4 this relationship is little explored, and where mixed results have been obtained (Asiedu and Esfahani, 2001; Indro and Richards, 2007).²¹

Ownership also brings with it greater control over the assets (Grossman and Hart, 1986), as it equips an investor with the means to combat opportunistic behaviour by firms, partners and

²¹ In the international business literature the motive for FDI has been explored through the entry mode, but nearly always as a choice between a joint or whole venture (e.g. Gomes-Casseres, 1990; Hennart, 1991; Pan, 1996; Tatoglu *et al*, 2003; Tsang, 2005). Occasionally, the discrete choice between majority, equal and minority partnerships is considered, such as in Gatignon and Anderson (1988) and Barbosa and Louri (2002). This literature pays relatively little attention to different kinds of risk, which are measured in a single composite form and sometimes quite crudely. Traditionally, this is as a simple binary or categorical measure of risk is used, such as in Erramilli and Rao (1993) and Benito (1996), but more recently risk is measured either for a single country over time, such as Tsang (2005) and Bontempi and Prodi (2008), or using a more detailed index but for a relatively small number of countries, such as in Richards and Yang (2007) and Indro and Richards (2007). Elsewhere, more attention is paid to risk, such as in literature on political economy (Busse and Hefeker, 2007) and international economics (Ali *et al*, 2010), but it is explored in relation to the net FDI inflows.

even governments (Anderson and Gatignon, 1986; Hill and Hellriegel, 1994), enabling it to better respond or to anticipate events (Cyert and March, 1992). This raises the possibility that as a response to political risk an investor may increase its project equity stake in a project to take control. This has not been considered in the literature, as the presumption is that the sunk nature of investment causes foreign firms to take a smaller equity stake (Richards and Yang, 2007). However, if ownership brings control then it is plausible that a higher stake will actually facilitate exit as a response to an adverse event.

The purpose of this chapter is to examine the effect of country political risk on the foreign-owned equity share in joint venture projects. Two hypotheses are derived from a model of the optimal equity share under risk, in which ownership brings control and mitigates the effect of a bad state. The first is that a foreign investor will reduce its equity stake in response to risk, which is the standard result, but that for more serious risks it will increase its equity share to secure project control. In this case, under low levels of risk the foreign multinational corporation (MNC) is assumed to cut its share in a project in order to not expose to such risk, but in the case of high levels of risk cutting the share will not prevent its exposure to risk, and instead the MNC might choose to increase its share in order to control the project. The second hypothesis is that these responses are stronger for equity shares that are relatively high but imply low control. So, by choosing a large share, the MNC will control the project and hence become more able to prevent the reduction in the profits in the event of bad state.

The hypotheses are examined with the Investment Dataset that was outlined in chapter 5. This is for Saudi Arabia on equity joint venture projects in the Kingdom involving foreign investment. The advantage of Saudi Arabia in this context is that FDI requires a government license, so that there is good data on the projects and their equity shares. The data that are

considered in this chapter is for foreign investment over 1985-2005, which arises from 59 source countries. The political risk data are taken from the country-level data from the *International Country Risk Guide* (ICRG), which has found recent widespread application in the literature.²² The ICRG distinguishes between different kinds of political risk, which in this chapter are classified in terms of their level of seriousness in order to test the hypotheses. In general, political risks are events in the formal and informal rules that govern economic activity that adversely affects business profits (see Henisz, 2000; Ali *et al*, 2010).²³ The risk is measured in relative terms as the difference between the source and host countries.²⁴ The results of this chapter support the two main hypotheses, but indicate that what is important is majority ownership, as this brings control.

The next section sets out the two hypotheses to be tested. This is based on a model that was developed jointly with my supervisors and is set out in detail in Appendix 6.1. As far as I am aware, for the first time, this model analyses the relationship between the optimal project equity share and country political risk. The empirical specification is set out in section 6.3, and section 6.4 describes the data and variables. The results are presented in section 6.5, and section 6.6 concludes. To keep the focus of the main text on the key points, this chapter includes a large number of appendix tables.

²² The ICRG index is used in composite form by Agarwal (1994), Chan and Gemayal (2004) and Richards and Yang (2007). Elsewhere, the indicators making up the aggregate ICRG index are used by Asiedu and Eshfahani (2001), Harms and Ursprung (2002), Glaeser *et al* (2004), Egger and Winner (2005), Busse and Hefeker (2007), Mishra and Daly (2007) and Ali *et al* (2010), among others.

²³ These are sometimes called country, institutional or environmental risks.

²⁴ The data cover 3,330 foreign joint venture equity shares in 2,156 projects over 1985-2005. Investment arises from a further 31 countries and territories, but these observations are omitted for the reasons given below. The vast majority of foreign investment projects in Saudi Arabia are non-oil related. The measurement of risk in relative terms is discussed below, where it is argued that it brings certain advantages.

6.2 The Hypotheses

Appendix 6.1 sets out the model, which provides the proofs to the two hypotheses that are examined in this chapter. This model is original and was developed jointly with my supervisors. Basically, it considers the optimal equity share s^* for a foreign investor in the presence of risk, which is some positive probability p that a bad state will occur, in which case the overall project return is lower. The novelty of the model is that while an increased equity share will increase the exposure of the foreign investor to this risk, it also brings greater control over the project, which is denoted by $\beta(s)$. This is because the foreign investor has some specific knowledge invested in the assets, so that it is able to mitigate the loss in the event of the bad state occurring, bringing a greater project return. Greater control means that for more severe risks (i.e. bad events that have a higher probability of occurrence) it may be optimal for the investor to actually increase its equity share in the project as this brings it greater control. The two hypotheses are derived in Appendix 6.1, where the exact conditions are set out (involving s^* , p and $\beta(s)$), but basically they are as follows.

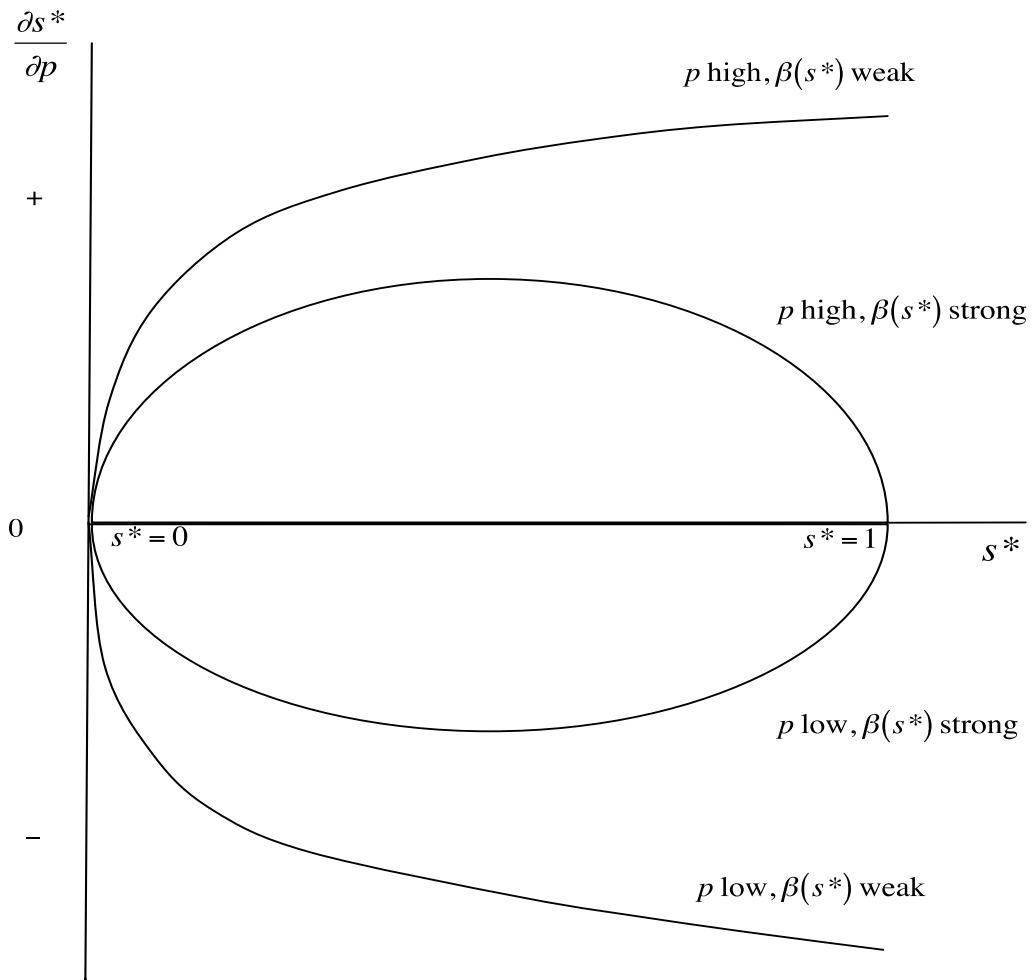
Proposition 1: *The optimal equity share is negatively related to political risk for low levels of risk, but positively related for sufficiently high-risk levels.*

Proposition 2: *The optimal equity share is less responsive to risk for both small and large equity shares, but in the latter case provided the MNC ownership implies a sufficiently strong effect on the project return in the adverse state.*

Figure 6.1 illustrates the effects of political risk on the MNC equity share when the project return depends on this share. First, if the risk p is relatively low [high] the MNC will cut

[increase] its share to reduce its loss (Proposition 1). This gives the lines below [above] the horizontal axis in figure 6.1. Second, if greater control implied by a higher share $\beta(s)$ has a strong effect on the project return then the equity share is also unresponsive to risk at the higher equity stakes (Proposition 2). In this case the relationships in figure 6.1 bend back towards the horizontal axis, whether from above or below this axis. The rationale for Proposition 2 is that an ownership share that is relatively high but which does not offer control, is most vulnerable to the bad state and therefore the most responsive to risk. This explains the two outer curves in the figure, which are labelled ' $\beta(s)$ weak'.

Figure 6.1: The Relationship between the Equity Share and its Responsiveness to Risk



Note: The figure shows the relationship between the optimal foreign joint venture equity share (s^*) and the effect that the risk (the probability of a bad state p) has on this equity share (ds^*/dp).

6.3 Empirical Specification

The MNC joint venture equity share is the outcome of a three-stage investment decision:

- (i) Whether to invest or not;
- (ii) Given (i), the entry mode either as a whole or joint venture; and

(iii) Given (i) and (ii), the optimal joint venture equity share.

It has been shown in chapter 4 that the international business literature focuses on decision (ii), whereas attention in this chapter is on (iii). The share is measured continuously, and denoted by $EQUITY$ ($0 < EQUITY < 1$). In practice, the project investment scale, $SCALE$, and number of other project investors, $INVTOT$, are determined jointly with the equity share, so that the empirical model is specified in a simultaneous equations form as:

$$EQUITY = a_0 + a_1 POL + a_2 FIN + a_3 SCALE + a_4 INVTOT + e_a. \quad (6.1)$$

$$SCALE = b_0 + b_1 ECON + \text{dummies} + e_b. \quad (6.2)$$

$$INVTOT = g_0 + g_1 ECON + \text{dummies} + e_g. \quad (6.3)$$

The POL , $ECON$ and FIN are vectors of variables for the political risk and for economic and financial factors, where these are measured at the country level and described in section 6.4. The dummies are at the investor level and control for factors affecting the scale and number of investors, while the ϵ are error terms. The endogenous variables are the three left-hand side terms, and the other terms are treated as pre-determined. Interest is in the first of these three equations, where estimation is at the individual foreign investor level. This is in two stages, with (6.2) and (6.3) used to instrument for $SCALE$ and $INVTOT$ in (6.1).

As motivation for this specification, the financial terms are included in (6.1) to control for financial factors affecting the equity stake, but the economic terms and the dummies are excluded to help identify the instruments. There is strong support for economic factors affecting FDI flows (Roberts and Almahmood, 2009), which is consistent with larger scales, while those factors that generate a larger scale may make it more attractive for other firms to

participate in the project. Asiedu and Esfahani (2001) find that economic factors have little or no effect on the equity share. The specification is tested below, including the possibility that political risks could affect the investment scale and the number of other investors.

The model is regressed for investors from 59 source countries investing in the single host country of Saudi Arabia. This has advantages as it permits the data to be collected on the project characteristics, including the investment scale and equity share for each investor arising from different countries, which appears to have inhibited previous work in this area. It also means that various unmeasured host-country effects can be held constant, such as the fiscal, legal and cultural environment, as well as restrictions on FDI that have been shown to influence the entry mode (Gomes-Casseres, 1989; Cho and Padmanabhan, 2005). However, it means the risk must be measured in relative terms as the difference in risks between the host and source countries. Elsewhere, risk is typically measured in absolute terms for the host country (Harms and Ursprung, 2002; Jensen, 2003; Busse, 2004), and only occasionally for the source country (Mishra and Daly, 2007), but it is consistent with a growing literature that examines the source country characteristics of FDI, in which the determinants mirror those that are found in the cross-country location studies.²⁵

As support for the notion of relative risk, it is plausible that the host-country risk will be perceived differently according to whether the MNC investor is itself from a high- or low-risk country. Further, assuming that the investor may otherwise invest in its source country then it is reasonable that the relative risk is relevant. This is consistent with the motive for FDI arising from firm-specific ownership advantages (e.g. superior technology, management or working methods), but supposing that the advantages that are embodied in the investor can

²⁵ FDI location studies traditionally use cross-country data (Bloningen, 2005), but those using source country characteristics include Grosse and Trevino (1996) on US inward FDI; Thomas and Grosse (2001) on Mexico; Driffield (2002) on the UK; Pan (2003) on China; and Roberts and Almahmood (2009) on Saudi Arabia.

be exploited in the source country. Like elsewhere, the assets do not have application outside the host and source countries.²⁶ Of course, ultimately, it is an empirical matter whether it is the relative or absolute risk that is relevant. The approach taken holds the latter constant, while research that examines the absolute risk ignores the relative risk.

6.4 The Data and Variables

The FDI project data are for the host country of Saudi Arabia. All investments have to be licensed by the government in the Kingdom, while prior to the year 2000 FDI had to be in sectors not reserved for the government or domestic firms, involve foreign technical expertise and could be wholly foreign-owned in exceptional circumstances only. Since then, there has been a relaxation of these restrictions, while the issuing of licenses to foreign investors has been fast tracked in order to liberalize the economy and promote private investment (see chapter 2).²⁷ When coupled with tax reforms it has led to a three-fold increase in FDI, such that Saudi Arabia is now the largest recipient of FDI in the Middle East and North Africa (MENA) region, exceeding that of Turkey (UNCTAD, 2008).

The data used in this chapter derive from two main sources: the investor data from the Investment Dataset that was described in chapter 5, except that the analysis is for the period 1985-2005 only; and country-level data from the International Country Risk Guide (ICRG) of the Political Risk Services (PRS) group. These are now described.

²⁶ Reflecting this, the literature tends to use a logistic regression (Benito, 1996), although Louri *et al* (2002) use a multinomial logit model, but to discriminate between full, majority and minority ownership.

²⁷ Some restrictions were retained such as in oil exploration and military equipment (Khyeda, 2007). Saudi Arabia acceded to the World Trade Organization, but towards the end of November 2005.

6.4.1 Investor Level Data

The Saudi investor data were derived from the Investment Dataset, which was obtained from the Saudi Ministry of Commerce and Industry, and described in detail in chapter 5. As the chapter makes clear, the data on investors go back to 1960, but since political data are available from 1984 only, it is sensible to restrict the analysis in this chapter to the period 1985-2005. This comprises information on 3,860 projects either wholly or partly in foreign ownership. They include some reinvestments and acquisitions, but the vast majority of projects are new ventures. As mentioned in chapter 3, the definition of FDI is like that used by the IMF and OECD, although 3 per cent of projects have less than a 10% foreign equity share (see table 6.2 below). The data omit observations on investors where there either are a small number of investors from a single source, where they are likely to be a holding company or where there are no country data.²⁸ Of the 3,860 projects, 1,704 (44%) are whole investments by a single foreign investor, and the other 2,156 projects are joint ventures that involve 3,330 foreign investors from 59 different countries. Like elsewhere, a joint venture may involve foreign investors only, while a host country partner is a firm or individual. Summary statistics on the joint venture projects are given in table 6.1 at the investor level.

²⁸ The dropped cases are: 40 investors from a total of 25 countries; 76 investors from four territories that are likely to be holding companies (Bermuda, British Virgin Islands, Cayman Islands and the UK Channel Islands); and 477 investors from Palestine (456 investors) and Afghanistan (21), for which there are no country data. The former are problematic as the risks are at the country level, which could give these a disproportionate effect.

Table 6.1: Summary Statistics for Joint Venture Investors

	Mean	Standard Deviation	Minimum	Maximum
<u>Variables:</u>				
Equity share (<i>EQUITY</i>)	0.372	0.226	0.0001	0.99
Investment scale (<i>SCALE</i>) (natural log, SR, year 2000 prices)	18.699	1.693	11.24	24.13
Number of other investors (<i>INVTOT</i>)	2.450	2.713	1	26
<u>Control variables:</u>				
Distance from source to host country (<i>DIST</i>) (000's km)	3.79	3.7	0.41	13.35
Foreign Investment Act (<i>FIA</i>)	0.631	-	0	1
Host country involvement (<i>DOM</i>)	0.717	-	0	1
Share of other project investors from:				
Same source country (<i>PARTS</i>)	0.315	0.415	0	1
Other non-host country (<i>PARTO</i>)	0.117	0.272	0	1
<u>Other dummies:</u>				
Industry (<i>IND</i>) ^a	-	-	0	13
Saudi Arabia location (<i>REGION</i>) ^b	-	-	0	4
Supranational source (<i>SOURCE</i>) ^c	-	-	0	5

Source: Investment Database, Saudi Ministry of Commerce and Industry, 1985-2005.

Notes: SR = Saudi Riyal. Dummy variables in binary form, as follows:

- Six 1-digit industries, codes 1, 5 – 9, and nine 2-digit manufacturing industries, codes 31- 39, under United Nations ISIC, rev. 2. Base case in regressions is other manufacturing.
- Western, Eastern, Southern, Northern and Middle regions.
- Middle East, North Africa, Western Europe, North America, Far East and elsewhere.

The mean equity share is 37% and the mean project scale is Saudi Riyal 132.1 million, but ranging from about SR 75,000 to SR 30 billion (at 2000 prices; 1 US dollar = SR 3.75). The mean number of other project investors is 2.45 (3.45 including the investor), of which on average 31.5% originate from the same source country, 56.8% from the host and 11.7% from elsewhere. A host country investor is involved with 72% of foreign investors.

The distribution of foreign equity shares is shown for the joint ventures in table 6.2, at both the investor and project levels. Two-thirds of investors have a minority stake, but only 43.2% of projects are in minority foreign ownership. A further one-sixth of investors have a fifty per cent stake, while 18.5% of projects are equally owned by foreign and host investors. Table 6.2 shows that 16.1% (347 projects) of joint ventures do not involve any host investor.

Table 6.2: Foreign Equity Shares in Joint Ventures

Equity Share (<i>EQUITY</i>)	Investor		Project	
	Cum. (%)	Diff. (%)	Cum. (%)	Diff. (%)
≤ 10%	16.5	16.5	3.4	3.4
≤ 20%	29.1	12.6	8.9	5.5
≤ 30%	44.6	15.5	18.2	9.3
≤ 40%	56.6	12.0	28.4	10.2
< 50%	66.6	10.0	43.2	14.8
≤ 50%	83.3	16.7	61.7	18.5
≤ 60%	87.9	4.6	67.7	6.0
≤ 70%	90.3	2.4	71.8	4.1
≤ 80%	95.8	5.5	79.8	8.0
≤ 90%	98.6	2.8	83.0	3.2
<100%	100.0	1.4	83.9	0.9
≤ 100%	100.0	0.0	100.0	16.1

Source: Investment Database, Saudi Ministry of Commerce and Industry, 1985-05.

Notes: For 3,330 investors and 2,156 projects. Diff. gives difference in the cumulative percentage, Cum.

Overall, 66% of joint venture projects have a single foreign investor, 24% have two foreign investors, 5% have three and a further 5% have more than this (all the way up to 14 foreign investors in a single project). The mean number of foreign investors per project is 1.54.

6.4.2 Political Risk Variables

The ICRG index assesses the political stability of countries on a subjective but comparable basis, and is recognized as a high-quality measure of country risk (Hoti and McAleer, 2004). This is according to twelve indicators, which form the political risk variables, *POL*, and are described in table 6.3. The twelve indicators were collected for 60 countries (including Saudi Arabia) on an annual basis for more recent years but at a greater interval prior to this time.²⁹ About half of the indicators are reported on a 24-point scale (including half points), but otherwise on a 12 or 8-point scale in one case. Each is scaled to lie on the unit interval, and the respective Saudi value is deducted in order to make the coefficients comparable. A higher value of a *POL* risk variable indicates a lower relative risk. The indicators represent the probability of an adverse event, so that by Proposition 1 positive [negative] signs are to be expected for lower [higher] risks, and by Proposition 2 the magnitude of these coefficients should be higher for equity shares that are neither too small nor too high.

²⁹ The ICRG data are generally available from 1984 but on a commercial basis, and since 79% of the 3,860 projects relate to the 2000-05, they were collected for each year over 2000-04, but at four-yearly intervals prior to this time, i.e. 1996, 1992, 1988 and 1984. In the regressions they are lagged one year, or to the preceding value of the variable where this is not known. There are some missing values, mainly for 1984, but these are assigned using the next value, as the indicators change little from year to year. More detailed descriptions of the ICRG indicators can be found at www.prsgroup.com.

Table 6.3: Country-Level Variables

Variable and Label	Description
<u>Political variables (POL):</u>	
Government stability (<i>GOVST</i>)	Ability of government to carry out its policies and stay in office. Subcomponents: government unity, legislative strength and popular support.
Bureaucratic quality (<i>BUREAU</i>)	Institutional strength and quality of bureaucracy.
Corruption (<i>CORR</i>)	Actual and potential corruption.
Socioeconomic conditions (<i>SOCIO</i>)	Pressures that might elevate social dissatisfaction or restrain government action. Subcomponents: unemployment, consumer confidence and poverty.
Religious tensions (<i>RELIG</i>)	Stemming from domination of society and / or governance by single religious group seeking to exclude other religions from political process.
Ethnic tensions (<i>ETHNIC</i>)	Due to racial, nationality or language divisions.
Investment profile (<i>INVEST</i>)	Other investment risk factors. Subcomponents: contract viability / expropriation, profits repatriation and payment delays.
Law and order (<i>LAW</i>)	Strength and impartiality of legal system.
Democratic accountability (<i>DEMOC</i>)	Responsiveness of government to citizens, and to civil liberties and political rights.
Military (<i>MILIT</i>)	Military influence in government.
Internal conflict (<i>INTCON</i>)	Actual or potential internal conflicts impacting on governance. Subcomponents: terrorism / political violence, civil war / coup threat and civil disorder.
External conflict (<i>EXTCON</i>)	Risk to incumbent government. Subcomponents: foreign / diplomatic pressure / trade sanctions, cross-border conflicts and all-out war.
<u>Economic Variables (ECON):</u>	
Output (<i>GDP</i>)	Gross domestic product in US dollars, 2000 prices.
Per capita output (<i>GDPHD</i>)	GDP per head of population.
Growth rate (<i>GROWTH</i>)	Real annual growth rate in GDP.
Inflation rate (<i>INFL</i>)	Annual rate based on consumer price index.
Budget balance (<i>BUDGET</i>)	Government budget balance as % of GDP.
Current account (<i>TRADE</i>)	Current account balance as % of GDP.
<u>Financial Variables (FIN):</u>	
International capital (<i>FUNDS</i>)	Foreign debt as a percentage of GDP.
Exchange rate stability (<i>EXCH</i>)	Variability of currency against US dollar.
Export propensity (<i>EXPORT</i>)	Current account as percentage of exports of goods and services.

Source: ICRG, PRS group (www.prsgroup.com).

The political risk terms are included separately in the regressions, which is supported by the analysis below. However, in so doing it is necessary to form expectations about which of the political risk indicators form more serious threats to the business environment in order to examine the above two hypotheses and the different patterns of response exhibited in figure 6.1. The literature is not very helpful in this respect, as studies differ in their coverage of kinds of country (e.g. developed, emerging, transition, etc) and in the measurement of risk. Further, many studies consider a single risk, while when risks are considered together it tends to be for aggregate FDI inflows rather than for equity shares.³⁰ Nevertheless, it is possible to form hypotheses about which risks are likely to be more serious.

In his book, North (1990) distinguishes between two main kinds of institutional risk: those that affect transaction costs and economic exchange, and those that are due to factors that affect production costs (see Ali *et al*, 2010). From the point of a foreign investor, the former may be seen as a less serious risk as they primarily affect the legal system and the rules for enforcing contracts. These may include such things as bureaucratic adequacy and corruption. They may also include government stability, which will affect the regulatory environment. In the case of the factors that affect production costs these potentially pose a more serious risk to the investor, although they range between those that are moderate and those risks that are serious. The former include those things that affect the conditions under which an investment is carried out, e.g. law and order, investment profile and social tensions (societal, religious and ethnic), while other risks may affect the constitution itself and the appropriation of the

³⁰ Studies focusing on a single risk include Henisz (2000) on expropriation, Harms and Ursprung (2002) on repression, Egger and Winner (2005) on corruption and Jensen (2008) on democratic institutions. Busse and Hefeker (2007) consider all twelve of the ICRG indicators, of which eight have a significant positive effect on FDI inflows. Of these, *GOVST*, *INTCON*, *EXTCON* and *LAW* are each significant at the one per cent level (see Appendix 6.1). Ali *et al* (2010) aggregate eleven of the ICRG indicators into five measures of risk to examine FDI inflows, but only institutional quality (an average of investment profile and law and order) is significant.

assets (see Henisz, 2000; Busse, 2004), either by government or other agents. These include democratic accountability, the military in government and internal and external conflict.

The political risk variables are set out in table 6.4, which groups these variables according to whether they are believed to constitute low, moderate or high risks. Given the nature of the existing evidence outlined above, this categorization may not be definitive, but it represents the *a priori* view on the likely seriousness of different political risks. The expected signs are also given in table 6.4, which shows that positive signs are expected for the less serious risks, negative signs for more serious ones, while risks that are intermediate are insignificant. In the case of corruption, the expected effect may be ambiguous, as while some studies find a positive effect on FDI inflows (Busse and Hefeker, 2007), others argue that corruption makes a country more attractive in the presence of excessive regulatory controls (Egger and Winner, 2005). Overall, given the paucity of existing evidence this is reasonable categorization.

Table 6.4: Expected Signs of the Political Risk Variables

Risk Category	List of Variables	Expected Sign
Low	Government stability Bureaucratic quality Corruption	Positive
Moderate	Law and order Investment profile Socioeconomic conditions Religious tensions Ethnic tensions	Insignificant
High	Democratic accountability Military Internal conflict External conflict	Negative

6.4.3 Economic and Financial Variables

The ICRG also produces objective indicators on the economic and financial risks for the 60 countries, and these are used to form the *ECON* and *FIN* variables in (6.1) to (6.3). These data have found application elsewhere (Harms, 2002; Chan and Gemayel, 2004), and they are shown in table 6.3. The economic terms comprise GDP, per capita output, the growth rate, inflation rate, current account (as a percentage of GDP) and government budget balance. The first two are often found to have a strong effect on FDI flows, and it is reasonable that these will be associated with larger scales. They are generally recorded on a 20-point scale, but scaled to lie on the unit interval. A higher value indicates better economic conditions, which is expected to increase both the investment scale and number of other investors.

The data on financial risks assesses a country's 'ability to pay its way' according to its official, commercial and trade debt obligations (PRS Group, 2010). These are included to capture financial factors that affect an investor's ability or willingness to engage in FDI given that the scale and number of other investors are controlled for in (6.1). There are three terms (table 6.3), which are measured in a similar way to the economic variables (a further two terms are always insignificant and are dropped). They include terms to measure a country's access to international capital markets, which is given by the amount of foreign debt relative to GDP (*FUNDS*), for which a negative sign is expected. Exchange rate stability (*EXCH*) makes trade more attractive relative to FDI, so that a negative sign is expected. It may also reduce the repatriation risk from FDI, but this is captured by the *INVEST* political risk term (see table 6.3). Finally, they include a term to measure a country's export propensity, which is measured by the current account relative to export (*EXPORT*). At the country level trade

is seen as a necessary for step FDI (Johanson and Wiedersheim, 1975) and is viewed as complementary, so that a positive sign is expected on this term.

6.4.4 Dummies and Other Controls

The political, economic and financial variables are measured at the country level, so investor-level dummies are included in (6.2) and (6.3) to improve the instruments. These are binary terms for the industry (*IND*) and location (*REGION*) of a project, and for the source country of the investor (*SOURCE*).³¹ These characteristics of investors were described in chapter 5 over a longer time period, whereas to aid interpretation broad classifications of these are now adopted, and given in the note to table 6.1. The chemicals and petroleum industry accounts for 70% of investment, but 14% of investors, so that the majority of observations are non-oil related. Saudi Arabia has five regions, with about the half the FDI taking place in the Middle region around Riyadh. These projects are smaller than for the Eastern region, in which the oilfields are mainly located (SR 62m against SR 244m), while the nature of agglomeration economies may differ between these. Six supranational source regions are identified to capture ‘cultural distance’, which features as a motive for FDI (see Kogut and Singh, 1988).³²

Ideally, I would have liked other firm, project and investor-level data, but these are not available for a large dataset.³³ Nevertheless, I am able to construct other variables for inclusion in (6.1) to (6.3), and that find support in the literature. Distance makes FDI less

³¹ They are in addition to yearly time dummies, but which when included in (6.1) tend to wash-out other effects, possibly due to correlation with the instruments, so that all these dummies are omitted from (6.1).

³² These separately identify the Middle East and North African countries of the MENA region. Just over half the investors are from MENA, of which 82% are from the Middle East. MENA projects are smaller than that from elsewhere (means of SR 101m and SR 172m). Outside of MENA, 16% of investors are from Western Europe (mean scale of SR 101m), 11% from North America (SR 275m) and 5% from the Far East (SR 441m).

³³ Using a smaller sample Asiedu and Esfahani (2001) include a range of firm characteristics, but only a few are significant in explaining the joint venture equity share. Stopford and Wells (1972) find that larger MNCs take larger equity shares, but firm size is likely to be positively correlated with the investment scale.

attractive, which is attributed to management and transport issues (Thomas and Grosse, 2001; Gao, 2005), so that the distance between Saudi Arabia and the source country capital city (*DIST*) is included, which is expected to have a negative sign. The mean distance is 3,800 km (see table 6.1), so that investments are not purely 'local'. With the inclusion of output it gives (6.2) and (6.3) the form of a gravity-type model. A dummy is also included for the period after the 2000 Foreign Investment Act (*FIA*), which made foreign investment more attractive (see chapter 2).

Finally, it is necessary to control for risk factors associated with the project, which are different from the political risk and not captured by the number of other investors. Brouthers and Hennart (2007) point to the importance of host-country involvement for reducing risk, so that a dummy (*DOM*) is included for this. This is the case for 72% of foreign investors (see table 6.1) and 84% of projects. Irrespective of the Saudi involvement risk may be reduced by the number of partners from outside of the host country, so that terms are included for the proportion of these from the same source (*PARTS*) and other non-host countries (*PARTO*). Since the proportion of other investors from the same source country is correlated with the overall number of other investors they are included in the investment scale equation only. The results are robust to the exclusion of these two terms.

6.5 Estimation Results

The result from regressing equations (6.2) and (6.3) is presented in table 6.5. The first column is that for the investment scale, *SCALE*, and the second column for the total number of other investors, *INVTOT*, which is estimated using the Poisson distribution. To help interpret the results the latter is also presented with the dependent variable measured as the number of

other investors from either the same source country or from Saudi Arabia. The goodness-of-fit for *SCALE* suggests that it may well serve as a good instrument, but it is on the low side for *INVTOT*, so that further instruments for this are considered below.

Table 6.5 shows that where significant, the economic variables have a positive effect on the scale and total number of other investors, as expected. The GDP and per capita output are significant throughout, although the latter is negative for the other source country investors, but which suggests that higher per capita output creates less need for partners from the same country. This is also the case for the growth rate and current account surplus, so that faster-growing economies or with a greater propensity to export have less need for co-investors from the same source. The government budget surplus generally comes through as positive and significant, and this possibly reflects better economic conditions and lower interest rates. Its insignificance for the number of host-country investors supports this interpretation.

The geographic distance (*DIST*) has a consistently negative effect, while the new policy regime (*FIA*) appears to have led to smaller investment scales, but possibly because the larger investments were undertaken as whole investments after the liberalization. There is a larger investment scale if a host country investor involved (*DOM*) or more partners from either the same source (*PARTS*) or other non-host countries (*PARTO*), suggesting that these reduce risk. The involvement of a Saudi investor increases the total number of investors, but reduces those from the source country. Finally, the industry, region and source dummies add further plausibility to the results. Larger scales are in chemicals and petroleum, while those outside of manufacturing are generally smaller. The Eastern and Western regions attract larger projects, while conditional on the other factors larger projects come from the culturally similar MENA countries, although without conditioning these are smaller.

Table 6.5: Results for the Scale and Number of Other Investors

Dependent Variable:	SCALE	Number of Other Investors		
		INVTOT	Source Only	Host Only
Constant	15.57***	-0.018	3.668***	-1.420**
Output (<i>GDP</i>)	0.094***	0.049***	0.056**	0.089***
Per capita output (<i>GDPHD</i>)	1.067***	0.247**	-0.679***	0.714***
Growth rate (<i>GROWTH</i>)	-0.451	0.002	-3.411***	1.409***
Inflation rate (<i>INFL</i>)	0.062	0.504*	1.349***	0.707
Budget balance (<i>BUDGET</i>)	0.830***	0.487**	1.605***	-0.135
Current account (<i>TRADE</i>)	-0.014	0.035	-0.622**	-0.004
Distance (<i>DIST</i>)	-0.061***	-0.068***	-0.308***	-0.074***
Foreign Investment Act (<i>FIA</i>)	-0.987***	0.106	0.139	-0.222
Host country involvement (<i>DOM</i>)	0.805***	0.338***	-0.905***	-
Same source country (<i>PARTS</i>)	0.638***	-	-	-
Other non-host country (<i>PARTO</i>)	0.917***	-	-	-
<u>Industry (<i>IND</i>):</u>				
Agriculture	-0.406	-0.527***	-0.863**	0.088
Food and beverages	0.674***	0.020	0.002	0.340**
Textiles, clothes and leather	0.550***	-0.230**	-0.111	-0.062
Wood and wood products	0.314**	-0.283**	-1.008***	-0.166
Paper and printing	1.315***	0.009	-0.449*	0.665***
Chemicals and petroleum	1.258***	0.099	-0.102	0.477***
Non-metallic minerals	0.576***	-0.326***	-0.501***	0.060
Basic metal	0.514***	-0.006	0.100	-0.148
Fabricated metal products	0.454***	-0.138*	-0.217	0.180
Construction	-0.688***	-0.261***	-0.392***	0.014
Wholesale and retail	-0.608***	0.068	0.117	-0.028
Transport and communications	-0.764***	-0.137	-0.208	0.001
Financing and real estate	-0.405***	0.153*	-0.576***	0.553***
Social services	-0.924***	-0.093	-0.017	0.176
<u>Saudi Arabia location (<i>REGION</i>):</u>				
Eastern	0.148**	-0.091*	-0.545***	-0.001
Western	0.286***	-0.025	-0.116**	0.030
Southern	0.763	0.141	-1.399**	0.858*
Northern	0.720	-0.195	-0.985***	0.358*
<u>Supranational source (<i>SOURCE</i>):</u>				
MENA, Middle East	-0.169*	0.073	-0.495***	-0.179
MENA, North Africa	-0.071	0.186	0.226**	-0.118
Western Europe	-0.795***	-0.557***	-1.907***	-0.232
North America	-1.206***	-0.244*	-0.082	0.032
Far East	-0.143	-0.308***	0.008	-0.017
Number of observations	3,330	3,330	3,330	3,330
R-squared [pseudo R-squared]	0.404	[0.094]	[0.204]	[0.109]
F-value [Wald value]	44.18***	[629***]	[1604***]	[599***]

Notes: OLS estimation of (6.2) with robust standard errors and Poisson estimation of (6.3). Variables described in tables 1 and 3. Time dummies added in each case. Final two columns measure dependent variable as number of investors from source country and Saudi Arabia. Base cases are ‘Other manufacturing’ for industry, ‘Middle’ for region and ‘Other’ for source. Significant at *** = 1%, ** = 5% and * = 10% levels.

In addition to the above results for equation (6.2) and (6.3), we made other attempts to test alternative specifications. The investment scale was re-estimated excluding some terms and control dummies, and the results are presented in Appendix Table 6.1. These show that there are changes in the magnitude and significance of coefficients, but that including instruments for the number of host investors, source investors and investors from non-Saudi and non-source countries, as well as excluding the control dummies, produces a less good fit.

The equation for the number of investors was also specified in other ways. Some terms and control dummies were excluded in turn to examine the robustness, and the results are shown in Appendix Table 6.2. It shows that including instruments for the partners from the source countries and the host country, as well as excluding control dummies lead to less significant results, but it was much weaker when including instruments for the number of host investors and source investors.

Equation (6.3) was re-estimated using investors from non-Saudi and non-source countries and non-host investors as dependent variables, and the results are presented in Appendix Table 6.3. These show that there are changes in the magnitude and significance of coefficients, but overall they are smaller in size and less significant in comparison with using source investors or host investors as dependent variables. Another attempt was made to test alternative specifications using the number of investors according to their source as dependent variables, but including only country dummies as explanatory variables. The results are presented in Appendix Table 6.4, and show that the magnitudes of their coefficients vary according to countries, confirming the relevance of the number of investors according to their sources in equation (6.3).

In Appendix Table 6.5 and 6.6 the regressions in Appendix Table 6.3 and 6.4 are re-estimated, but using the traditional Ordinary Least Squares method rather than the Poisson regression. The results are weaker, although this is not surprising since this method is not suitable when the dependent variable is in the form of a count variable.

6.5.1 Equity Share

The result from regressing (6.1) for the equity share is reported in table 6.6, where (6.2) and (6.3) are used to instrument for the project scale and total number of other investors. The first set gives the result for the model, while the second set of results adds the economic and financial variables to each of (6.1) to (6.3) to examine the specification. The equations are estimated as a generalized linear model (GLM) using a logit link function (Liao, 1994), which is like a logistic regression. The marginal effects are evaluated at the means. The exogeneity of *SCALE* and *INVTOT* is rejected, which supports the use of instruments.³⁴

The equity share is negatively related to the scale and number of investors.

The estimates on the financial terms for the model conform to prior expectations in table 6.6, but when the economic terms are included in the second set of results, these and the financial terms are generally insignificant. Further, when the political risk terms are added to (6.2) and (6.3), none of these is significant at the 5 per cent in explaining the investment scale, while only ethnic tension is significant for the number of other investors.³⁵ These provide good support for the model, so that the first set of results in table 6.6 is now the focus.

³⁴ This is a Hausman-type test that involves estimating (6.1) without instruments, then adding the instruments and testing for their significance. It gives an LR test statistic of $\chi^2(2) = 19.93$, against $\chi^2(2)_{0.01} = 9.21$.

³⁵ Including the twelve political risk terms in (6.2) and (6.3), the signs on the risk terms are more or less identical for the first set of results in table 6.5, but only three of these terms are significant at the 5 per cent level.

Table 6.6: Results for the Equity Share

Dependent Variable: <i>EQUITY</i>	Model		With economic terms	
	Estimate	Marg. Effect	Estimate	Marg. Effect
Constant	2.665***	-	2.321***	-
<u>Political risk terms:</u>				
Government stability (<i>GOVST</i>)	0.344**	0.080	0.318*	0.074
Bureaucratic quality (<i>BUREAU</i>)	0.322**	0.075	0.290*	0.067
Corruption (<i>CORR</i>)	0.343**	0.080	0.360**	0.083
Socioeconomic conditions (<i>SOCIO</i>)	-0.040	-0.009	-0.019	-0.004
Religious tensions (<i>RELIG</i>)	0.109	0.025	0.155	0.036
Ethnic tensions (<i>ETHNIC</i>)	0.058	0.013	0.237*	0.055
Investment profile (<i>INVEST</i>)	0.290*	0.067	0.205	0.048
Law and order (<i>LAW</i>)	0.088	0.020	0.034	0.008
Democratic Account. (<i>DEMOC</i>)	-0.281***	-0.065	-0.212**	-0.049
Military (<i>MILIT</i>)	-0.257**	-0.060	-0.316**	-0.073
Internal conflict (<i>INTCON</i>)	-0.447**	-0.104	-0.499***	-0.116
External conflict (<i>EXTCON</i>)	0.219	0.051	0.212	0.049
<u>Financial terms:</u>				
International capital (<i>FUNDS</i>)	-0.810***	-0.188	-0.622***	-0.144
Exchange rate stability (<i>EXCH</i>)	-0.407***	-0.095	-0.182	-0.042
Export propensity (<i>EXPORT</i>)	0.810***	0.188	0.371	0.086
<u>Other terms:</u>				
Distance (<i>DIST</i>)	-0.001	-0.002	-0.018*	-0.004
Foreign Investment Act (<i>FIA</i>)	0.046	0.011	0.037	0.008
Host country involvement (<i>DOM</i>)	0.041	0.009	0.065	0.015
<u>Instruments:</u>				
Investment scale (<i>SCALE</i>)	-0.161***	-0.037	-0.177***	-0.041
Number of other investors (<i>INVTOT</i>)	-0.406***	-0.094	-0.477***	-0.111
<u>Economic terms:</u>				
Output (<i>GDP</i>)	-	-	0.018	0.004
Per capita output (<i>GDPHD</i>)	-	-	0.011	0.003
Growth rate (<i>GROWTH</i>)	-	-	0.344	0.080
Inflation rate (<i>INFL</i>)	-	-	0.073	0.017
Budget balance (<i>BUDGET</i>)	-	-	0.675***	0.156
Current account (<i>TRADE</i>)	-	-	-0.176	-0.041
Number of observations	3,330		3,330	
Log-likelihood	364.7		371.9	
Akaike Information Criterion (AIC)	-0.206		-0.207	

Notes: The first set of results estimates (6.1) using GLM with logit link function and instruments *SCALE* and *INVTOT* using (6.2) and (6.3). The second set adds all economic and financial variables to (6.1) to (6.3). The marginal effects evaluated at means. Significant at *** = 1%, ** = 5% and * = 10% levels.

The interest is in the political risk terms *POL*, of which half are significant at the 5% level or higher in table 6.6. They offer good support for Proposition 1 since risks that are expected to be less serious (government stability, bureaucratic quality and corruption) have a significant positive effect on the equity share (see table 6.4), while risks that are of a more serious nature (democratic accountability, military in government and internal conflict) have a significant negative effect (table 6.4). Further, risks that are intermediate (socio-economic conditions, ethnic and religious tensions) are insignificant. If anything, the source dummies in table 6.5 suggest that cultural differences are more important for the scale and number of investors.

The other political risk terms in table 6.6 are either insignificant or do not conform to prior expectation (these are investment profile, law and order and external conflict, where the former is significant at the 10% level but positive). Of course, the risks tend to be positively correlated with one another, although the partial correlation coefficients are not excessive.³⁶ To examine this issue, the risks were excluded one at a time, but making little difference to the results (see above). Further, those risks that are broadly measuring the same thing were aggregated into six terms by taking simple averages, following Ali *et al* (2010). The result from estimating the model with these is given as column 1 in table 6.7. The positive [negative] signs are again obtained for the less [more] serious risks, although the estimate on internal conflict is now insignificant once aggregated with external conflict. The positive but insignificant estimate found for this last term was often found, and which perhaps suggests that control carries little or no meaning for firms investing in this circumstance.

³⁶ No partial coefficient is greater than 0.75, while those with correlations above 0.60 are *LAW*, (with 3 other risk terms), *BUREAU* (2), *MILIT* (4) and *RELIG* (4). To save space the correlation matrix is not reported. Omitting *LAW* and *BUREAU* and *RELIG* in turn makes virtually no difference to the sign and significance of the estimates, while excluding *MILIT* reduces the significance of investment profile and corruption terms.

Table 6.7: Robustness Tests

Dependent Variable: <i>EQUITY</i>	Aggregation of Risks	Additional Instruments	Tobit Regression	Period 2000-05	Data Truncation
Column:	1	2	3	4	5
Constant	2.628***	2.967***	0.575***	1.980***	1.456***
<u>Political risk terms:</u>					
Government stability (<i>GOVST</i>)	0.425***	0.436***	0.141**	0.523*	0.116**
Bureaucratic quality (<i>BUREAU</i>)	} 0.528***	0.154	-0.083	0.380*	0.117**
Corruption (<i>CORR</i>)		0.370**	0.119**	0.118	0.129**
Socioeconomic conditions (<i>SOCIO</i>)	} 0.057	-0.058	0.077	-0.078	-0.022
Religious tensions (<i>RELIG</i>)		0.093	-0.015	0.191	0.050
Ethnic tensions (<i>ETHNIC</i>)		0.024	-0.056	-0.053	0.017
Investment profile (<i>INVEST</i>)	} 0.324*	0.217	-0.097*	0.570***	0.115**
Law and order (<i>LAW</i>)		0.079	-0.003	-0.046	0.024
Democratic Account. (<i>DEMOC</i>)	} -0.377***	-0.210**	0.046	-0.507***	-0.097***
Military (<i>MILIT</i>)		-0.365**	-0.043	-0.148	-0.109***
Internal conflict (<i>INTCON</i>)		-1.440**	-0.122*	-0.449**	-0.153**
External conflict (<i>EXTCON</i>)	} -0.217	-0.174	-0.048	0.185	0.089*
<u>Financial terms:</u>					
International capital (<i>FUNDS</i>)	-0.798***	-0.706***	-0.270***	-0.827***	-0.277***
Exchange rate stability (<i>EXCH</i>)	-0.426***	-0.308***	-0.007	-0.505***	-0.133***
Export propensity (<i>EXPORT</i>)	0.892***	0.773***	0.452***	0.739**	0.262***
<u>Other terms:</u>					
Distance (<i>DIST</i>)	-0.010*	-0.014*	-0.001***	-0.001	-0.003
Foreign Investment Act (<i>FIA</i>)	-0.038	0.067	0.045**	-	0.019
Host country involvement (<i>DOM</i>)	0.050	0.137***	-	0.038	0.012
<u>Instruments:</u>					
Investment scale (<i>SCALE</i>)	-0.159***	-0.172***	-0.001***	-0.088***	-0.059***
Number of other investors (<i>INVTOT</i>)	-0.417***	-0.758***	-0.397***	-0.469***	-0.143***
Host investors (<i>INVH</i>)	-	0.269***	-	-	-
Other investors (<i>INV0</i>)	-	0.062**	-	-	-
Number of observations	3,330	3,330	5,034	2,315	3,330
Log-likelihood [pseudo]	358.0	376.3	-2,797	163.8	[657.2]
Wald [LR]	-	-	[2,469***]	-	313.3***
Pseudo R-squared	-	-	0.306	-	-

Notes: Columns 1, 2 and 4 re-estimate (6.1) under glm with logit link function, 3 as a tobit including 100 per cent equity shares and 5 using the TRUNC routine in *Stata*. All regressions instrument for *SCALE* and *INVTOT* using (6.2) and (6.3), with 2 adding further instruments and 4 for 2000-05 only. *DOM* is zero for whole investments and omitted from column 3. Significant at *** = 1%, ** = 5% and * = 10% levels.

Rather than include the twelve political risk terms separately, these were aggregated into a single risk measure of risk (*RISK*), which is like elsewhere. This was done in either of two ways. First, by taking a simple average, and second using the weights that are assumed in the ICRG composite index.³⁷ In each case, these were included *RISK* in a quadratic form to allow for a possibly non-linear effect. Of course, the model above suggests that the risk terms should be signed differently, but this is a test how well the usual measure of risk is likely to perform in such a framework. What we find is that the *RISK* term is levels is insignificant whatever approach is used: on the first measure the estimate is 0.005 (z value = 0.40) and on the second it is -0.296 (z value = 1.46). This suggests that the usual risk measure does not perform very well.³⁸ However, in either case, the quadratic *RISK* term was significant and positively signed, indicating that there is negative relationship between risk and the equity share for sufficiently high risks, so that only for these relatively extreme cases does it seem to perform at all, while it suggests that the ‘bad’ risks may dominate the ‘good’ risks.³⁹

Finally, it was mentioned above that the goodness-of-fit for the total number of other investors *INVTOT* in table 6.5 is on the low side, while in the remainder of this table some of the explanatory variables have different effects on the number of investors according to their source. Column 2 of table 6.7 reports the result from regressing equation (6.1) with additional instruments for the number of other investors from the host (*INVH*) and non-source, non-host (*INVO*) countries. A broadly similar pattern of estimates is obtained for the risk terms.

³⁷ Five of the indicators (*GOVST*, *INVEST*, *INTCON*, *EXTCON* and *SOCIO*) have a weight of 0.12 in the ICRG composite index, six have a weight of 0.06, and the other term (*DEMOC*) has a weight of 0.04.

³⁸ The results are not reported, but much the same estimates are obtained for the other terms. The log-likelihood for the first measure of risk is 349.5 and for the ICRG weighting it is 349.8. The AIC is -0.203 for each of these, but the log-likelihoods are much smaller. Adding a quadratic to each of the twelve risk terms individually is heavily rejected by the data, with an LR statistic of $\chi^2(12) = 3.94$, against $\chi^2(12)_{0.10} = 18.55$.

³⁹ The estimates on the quadratic risk term were 0.013 (z value = 3.20) and 1.126 (3.18) respectively.

In addition to the above results for equation (6.1), we made other attempts to test alternative specifications. The equity share was re-estimated using different estimations for the investment scale term derived from Appendix Table 6.1. The results are presented in columns (2) and (3) of Appendix Table 6.7, and it shows that the coefficients differ in the magnitude and significance, but In general less significant results were found.

The equation for the equity share was also specified in other ways. Different estimates for the number of other investors term, derived from the Appendix Table 6.2, were used in turn in the regressions, and the results are shown in columns (2) and (3) of Appendix Table 6.8. In general, it produces smaller magnitude and less significant coefficients. In the case of including different instruments, in turn, for the number of investors according to their source derived form Appendix Table 6.3. The results are weaker as shown in columns (2) and (3) of Appendix Table 6.9. Finally, the results given in columns (2) and (3) of Appendix Table 6.10 show that the number of other investors according to the source, which was derived from Appendix Table 6.4, produce different estimates, but in general they are less significant and weaker goodness of fit test than those reported above.

6.5.2 Robustness of the Estimates

These regressions provide support for Proposition 1, although it was mentioned at the start of section 6.3 that the joint venture equity share can be viewed as the final stage of a three-stage investment decision, so that the estimates are conditional on this. The choice at the second stage is between a joint venture and whole ownership, and this is examined in column 3 of table 6.7. It estimates (6.1) as a tobit model, including the censored observations for foreign equity shares of 100 per cent. The estimates on the risk terms are now quite poor, and such

that a clear pattern in the signs on the risk terms is no longer discernible. This may reflect the inadequacies of the tobit model, which we are unable to address here.⁴⁰ Equally, a consistent finding in the literature is that risk makes a joint venture more likely than a whole investment (e.g. Erramilli and Rao, 1993; Benito, 1996; Bontempi and Prodi, 2008), whereas for more serious risks we find that it may actually increase the equity share. It is consistent with the GLM regression in column 4 of table 6.7, which estimates the model for the period 2000-05 only, when the more liberal regime was in force. FDI was much more likely to be through whole ownership, but much poorer results are again obtained for the risk terms.⁴¹

This suggests that different factors explain the FDI entry mode at stages (ii) and (iii) between whether to enter as a joint venture or under whole ownership. Column 5 of table 6.7 allows for the decision at the first stage (i.e. whether to invest at all) by regressing the model using the TRUNC routine in *Stata*. This allows for the data truncation that arises from the unobserved zero equity shares, and the estimates, which can be compared to the marginal effects for the model in table 6.6, offer further support for Proposition 1.

6.5.3 Quantile Regression

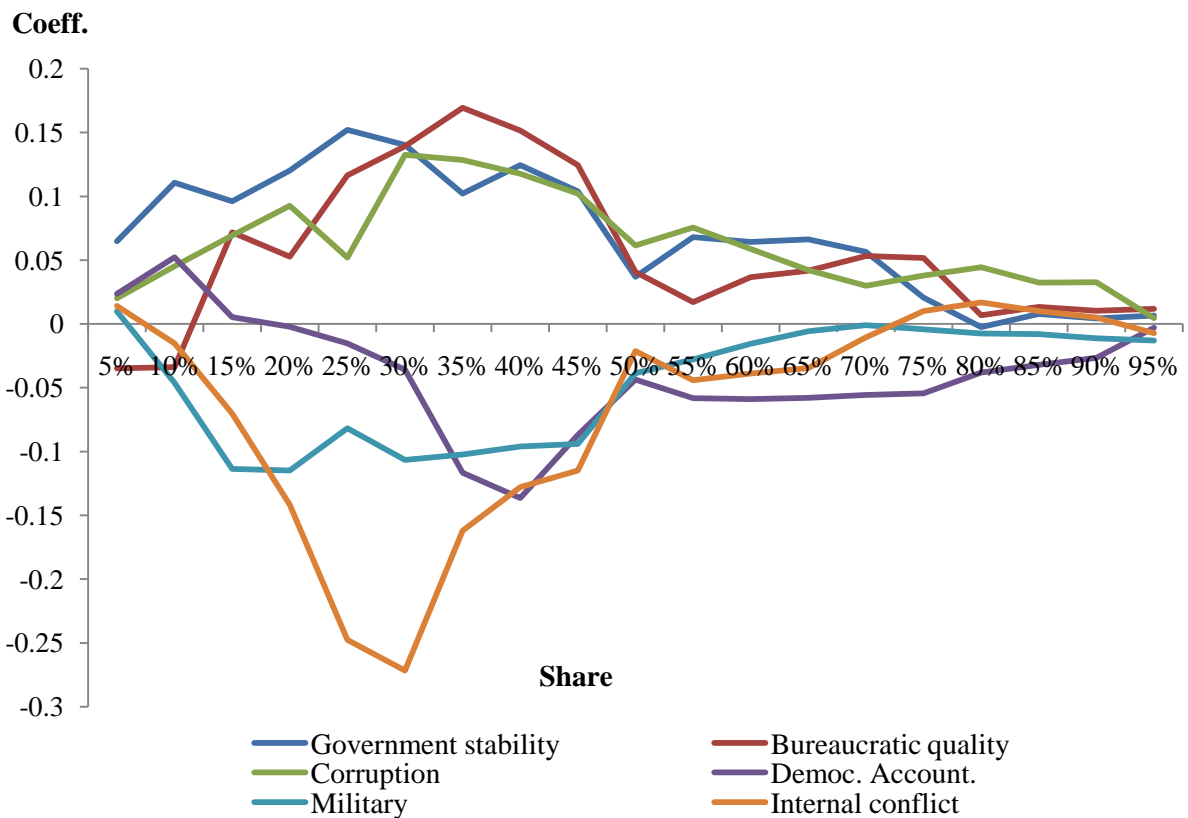
Finally, Proposition 2 is that the coefficients on the risk terms should be larger in magnitude for equity shares that are neither too small nor too large. The model was estimated using a generalized quantile regression, with a total of nineteen quantiles selected corresponding to

⁴⁰ The tobit supposes that the factors determining the whole or joint ownership decision are identical in nature, sign and in magnitude. The Heckman two-step procedure relaxes these assumptions, but in a probit selection model for the choice between a whole and joint venture using the full set of pre-determined variables (excluding *DOM*, *PARTS* and *PARTO*), none of the *POL*, *ECON* and *FIN* variables is significant at the 5% level (even the policy term *FIA* is picked-up by year dummies), so that our model does not capture this decision at all.

⁴¹ Just over a half of projects over 2000-05 are wholly owned by a single foreign investor, compared with 15% of projects prior to 2000. In addition, a joint venture project may have no host-country investor. The weaker results over 2000-005 could also reflect reduced variation in the risk terms over shorter time horizons.

investor equity shares of 5%, 10%, 15%, ..., 95%.⁴² The full results are given in Appendix Table 6.11. This involves transforming the dependent variable using the logistic function, and evaluating the marginal effects at the respective quantiles. The coefficients for the marginal effects are reported in Appendix Table 6.12, and graphed in figure 6.2 for the six risk terms that are significant at the 5 per cent level in table 6.6. The graphs for all twelve of the risk terms are given in Appendix Figure 6.1.⁴³

Figure 6.2: Quantile Regression Results



⁴² This is the SQREG routine in *Stata*. Table 6.2 gives the number of observations in each of these quantiles. In total it has 380 regressors, with pseudo R-squared lying between 0.01 and 0.15 for the different quantiles.

⁴³ The corresponding results for the quantiles of 5%, 10%, 15%, and so on are reported in Appendix Tables 6.14 and 6.15. Appendix Figure 6.2 graphs the results for the twelve risk terms. This is just the same as Appendix Figure 6.1 in fact, except that the horizontal axis has been rescaled.

The graphs in figure 6.2 conform to the pattern sketched in figure 6.1, although they suggest that it is not whole ownership that matters for control, but majority ownership at an equity stake at 50% (the model in the appendix can easily be reworked to give control at a majority stake). Within this range support is found for Proposition 2, with greater responses to risk for project equity shares that are neither too small nor too large.

6.6 Conclusions

Increased foreign ownership in a project enables the investor to protect its specific advantage, but also to control the assets themselves, leading to the possibility that increased political risk will cause a foreign investor to enter at a higher equity share. This issue is explored in this chapter using data from Saudi Arabia on foreign-owned equity shares in joint venture projects over 1985-2005. To my knowledge, this is the first time that these techniques have been utilized to explore the risk-ownership relationship, and also this has been considered in the context of Saudi Arabia. The central result is that for more serious risks firms will increase their equity share on entry, but that for less serious risks they will reduce it. Since these responses are greater for equity shares at less than majority ownership, the former response supports the contention that the increase in ownership is in order to exercise control.

The results appear to be at odds with the existing literature, which finds that firms will reduce their equity share in response to country political risk, although this is for the choice of entry mode between whole and joint ownership. The chapter finds that the determinants for entry choice by either whole or joint ownership appear to differ from that of the joint venture equity share, so that the results are consistent with the literature. Conditional on entry as a joint venture it suggests that the investor will vary its equity share according to the risk. Of

course, risk is measured in relative terms, reflecting the availability of data. As detailed data become available on foreign investments in many different countries it will be interesting to see whether the results can be replicated. Certainly, the evidence to date in the studies that examine the source-country determinants of FDI suggests that this will be the case.

Appendix 6.1: The Model

To model the relationship between the joint venture equity share and risk it is supposed that there is a single investment project of fixed scale I and two investors: a foreign multinational corporations (MNCs) that freely varies its project equity share, s ($0 \leq s \leq 1$), and a home investor that acts passively in supplying the remaining share.⁴⁴ Project returns are divided according to these shares. Investment is subject to political risk, which is modelled as the exogenous probability of a bad state, p ($0 \leq p \leq 1$). To keep matters simple, the MNC ownership share has no effect on the overall project return in a good state, but increasing its share mitigates the reduction in this return in the bad state. This does not occur for the home investor due to the specificity of the MNC knowledge required to ensure the integrity of the assets.⁴⁵

Formally, the (present value) return on the investment is denoted $R(> I)$, but in a bad state this is $b(s)R$, where $b(s)$ captures the relationship between the MNC equity share and the return, such that $0 < b(s) \leq 1$ and $b'(s) \geq 0$. At the extremes, it is supposed $b(0) = b > 0$, so that the project makes a non-zero return if the MNC does not invest (i.e. $s = 0$), and that $b(1) = 1$, so that the project makes R with certainty if the MNC has whole ownership ($s = 1$). Physical assets I , which represent the project cost, are available from competitive markets, so that the project investment scale is independent of the MNC equity share.

⁴⁴ More generally, the equity share results from bargaining between the MNC and other investors, but the focus is on what Richards and Yang (2007) refer to as environmental rather than behavioural risks, i.e. risks external to the joint venture contract. Bargaining may affect the number of other investors and investment scale, which are controlled for in the empirical work. Bargaining is analyzed by Asiedu and Esfahani (2000) and considered empirically by Gomes-Casseres (1990) and Pan (1996). For ease of analysis, the expression allows for zero and unity equity shares s , but of course interest is in shares that are interior to the unit interval.

⁴⁵ In practice, political risks may act differently on the integrity of the assets, e.g. bureaucratic inadequacy may affect production efficiency, while a lack of democratic accountability may pose a risk to property rights and asset repatriation. The risks modelled here affect the present value return on the assets.

The home investor is assumed to be risk neutral, so that it makes non-negative profits, $\{p b(s) + (1 - p)\}R \geq I$, but the MNC operates in a foreign environment and it is risk averse. The MNC utility function is $u(w) = w^{1-a}/1 - a$, where a is constant relative risk aversion and $0 < a < 1$.⁴⁶ The MNC maximises its expected utility, EU, which is:

$$EU = p u[s b(s) R] + (1 - p) u(s R) - s I. \quad (A1)$$

First of all, consider the special case in which ownership has no effect on the project return, so that $b'(s) = 0$ and $b(s) = b(0) = b$. Substituting this for $b(s)$ in (A1), then with the above utility function, the MNC expected utility is maximised at an equity share of:

$$s^* = \frac{\hat{e} \{p b^{1-a} + (1-p)\} R^{1-a} \hat{u}^{1/a}}{\hat{e} I \hat{u}}. \quad (A2)$$

This lies in the range $0 < s^* < 1$, and it is consistent with the home investor participation constraint given above. It increases with R , decreases with I , while b has a positive effect, which are each plausible. Differentiating this with respect to p gives:

$$\frac{\partial s^*}{\partial p} = \frac{-(1 - b^{1-a}) (s^* R)^{1-a}}{a I} < 0. \quad (A3)$$

⁴⁶ If there are many risk-neutral home investors in the project the same inequality holds for each. In the case of the MNC, risk aversion is when $\alpha > 0$ ($\alpha \neq 1$), but a negative relationship exists between s^* and R when $\alpha > 1$. It arises because as the project return R increases the firm can cut its equity share and still get a higher return, $s R$. If the MNC is sufficiently risk averse the latter effect dominates, but this is ruled out as implausible.

An increase in the political risk, i.e. the probability of a bad state, reduces the optimal MNC equity share, which gives the standard result. Since $\frac{\partial s^*}{\partial \beta} \frac{\partial \beta}{\partial p} < 0$ and $\frac{\partial s^*}{\partial \beta} \frac{\partial \beta}{\partial p} > 0$ it increases at a decreasing rate with s^* , so that higher shares are more responsive to risk.

Reverting to the more general case, $b'(s) > 0$, then substituting $b(s^*)$ directly for b in (A2), and differentiating this implicitly with respect to p gives:⁴⁷

$$\frac{\partial s^*}{\partial p} = \frac{1 - b(s^*)^{1-a}}{(1-a) b'(s^*) p b(s^*)^{-a} - a I (s^* R)^{a-1}}. \quad (\text{A4})$$

The numerator is positive, so that (A4) is signed according to $(0 < s^* < 1)$:

$$\frac{\partial s^*}{\partial p} < [>] 0 \quad \text{iff} \quad a I b(s^*)^a > [<] (1-a) b'(s^*) p (s^* R)^{1-a}. \quad (\text{A5})$$

Two propositions follow, which form the hypotheses for the empirical work.

Proposition 1: *The optimal equity share is negatively related to political risk for low levels of risk, but positively related for sufficiently high-risk levels such that:*

$$p > \frac{a I b(s^*)^a}{(1-a) b'(s^*) (s^* R)^{1-a}}. \quad (\text{A6})$$

Proof: This follows directly from (A5), where rearrangement gives the condition. ■

⁴⁷ For tractability the substitution is made into (2) rather than (1), so that the indirect effect of s on EU through its effect on $\beta(s)$ is ignored. A full working of this solution for this is available from the authors.

The intuition behind the result is straightforward. Small levels of risk cause the MNC to cut its equity share to reduce its exposure, but for higher risk levels this is not worthwhile as its exposure remains high. In this case it increases its equity share to take a greater control of the project, which serves to limit the reduction in profits in an adverse state.

To consider the responsiveness of the equity share to risk it is necessary to give $b(s)$ a more explicit form. This is necessary, since otherwise asymptotes are always present, but which are not observed in the data.⁴⁸ It is specified as $b(s) = b + (1 - b) s^a$, which satisfies the above conditions, $0 < b(s) \leq 1$, $b'(s) \geq 0$, $b(0) = b$ and $b(1) = 1$. Hence, $b'(s) s^{1-a} = a(1 - b)$ in (A6), such that asymptotic behaviour is no longer inevitable, and (A4) becomes:

$$\frac{\partial s^*}{\partial p} = \frac{\{1 - b(s^*)^{1-a}\} s^{*1-a}}{a(1-a)(1-b) p b(s^*)^{-a} - a I R^{a-1}}. \quad (A7)$$

Proposition 2: *The optimal equity share is less responsive to risk for both small and large equity shares, but in the latter case provided the MNC ownership implies a sufficiently strong effect on the project return in an adverse state.*

Proof: Differentiating (A7) with respect to s^* , where $X \geq a(1-a)(1-b)b(s^*)^{-a}$, gives:

$$\begin{aligned} \frac{\partial^2 s^*}{\partial s^* \partial p} [pX - a I R^{a-1}]^2 &= [pX - a I R^{a-1}] \cdot \left[\{1 - b(s^*)^{-a}\} (1-a) s^{-a} - X \right] \\ &\quad + \left[\{b(s^*)^{-1} - b(s^*)^{-a}\} p X a^2 (1-b) \right]. \quad (A8) \end{aligned}$$

⁴⁸ This can be seen by noting that if $\beta'(0)$ is finite and (A6) is satisfied when $s^* = 1$, then as s^* tends to zero the sign on the inequality in (A6) is always reversed, which implies (4) has an asymptote.

This is not defined when $pX = aIR^{a-1}$, so attention is restricted to the cases where either $pX < aIR^{a-1}$ or $pX > aIR^{a-1}$ for all s^* .⁴⁹ The derivative in (A8) is signed according to the three right-hand side terms in square brackets of (A1), where the function $b(s)$ changes smoothly in s and has the properties $0 < b(s) \leq 1$, $b'(s) > 0$, $b(0) = b > 0$ and $b(1) = 1$.

(i) $pX < aIR^{a-1}$: Then $\partial s^* / \partial p < 0$ from (A7). As $s^* \rightarrow 0$ then $\partial^2 s^* / \partial s^* \partial p \rightarrow -\infty$ (the second term in square brackets tends to plus infinity, while the first term is negative), and as $s^* \rightarrow 1$ then $\partial^2 s^* / \partial s^* \partial p \rightarrow a \in R^+$ (the first two terms in square brackets are negative, while the third term tends to zero). It follows that there exists $s^* \hat{=} (0, 1)$ such that $\partial^2 s^* / \partial s^* \partial p = 0$. Further, since $\partial^3 s^* / \partial s^{*2} \partial p > 0$, it follows that this is a minimum.

(ii) $pX > aIR^{a-1}$: Now, $\partial s^* / \partial p > 0$ from (A7). As $s^* \rightarrow 0$ then $\partial^2 s^* / \partial s^* \partial p \rightarrow +\infty$ (the first term is now positive), while as $s^* \rightarrow 1$ then $\partial^2 s^* / \partial s^* \partial p \rightarrow b \in R^-$ (where again, the first term is now positive). It again follows that there exists $s^* \hat{=} (0, 1)$ such that $\partial^2 s^* / \partial s^* \partial p = 0$. Further, since $\partial^3 s^* / \partial s^{*2} \partial p < 0$ then it is now a maximum.

This shows that there is at most a single turning point, which is a maximum or minimum depending on whether (A6) is satisfied or not. Further, $\partial s^* / \partial p$ tends to zero in (A7) as s^* tends to zero or unity, since $b(0) = b$ and $b(1) = 1$. The turning point may not exist if the share does not have a strong effect on the return, i.e. $b(1) < 1$, since $\partial s^* / \partial p$ no longer tends to zero as s^* tends to unity in (A7).⁵⁰ ■

⁴⁹ The first of these means (A6) does not hold when $s^* = 0$, so that $(1 - \alpha)(1 - \beta)R^{1-\alpha} < \beta I$ by (A7), while the second means (A6) holds when $s^* = 1$, which gives $(1 - \alpha)(1 - \beta)R^{1-\alpha} > I$. For intermediate values, $\beta I < (1 - \alpha)(1 - \beta)R^{1-\alpha} < I$, $\partial s^* / \partial p$ will change sign, but this is ruled out as it implies an asymptote.

⁵⁰ A function with this property and satisfying the above conditions is $\beta(s) = \beta + (\gamma - \beta)s^\alpha$, where $\beta < \gamma < 1$.

Appendix Table 6.1: Alternative Specifications for the Investment Scale

Dependent Variable: SCALE	(1)	(2)	(3)	(4)
Constant	15.57***	15.371***	12.673***	14.038***
Output (<i>GDP</i>)	0.094***	0.064***	0.132***	0.079***
Per capita output (<i>GDPHD</i>)	1.067***	0.847***	0.468***	0.201
Growth rate (<i>GROWTH</i>)	-0.451	-0.694	1.094***	0.345
Inflation rate (<i>INFL</i>)	0.062	-0.269	0.491	0.408
Budget balance (<i>BUDGET</i>)	0.830***	0.539*	1.597***	1.396***
Current account (<i>CURRENT</i>)	-0.014	-0.043	0.087	0.051
Distance (<i>DIST</i>)	-0.061***	-0.028	-0.013***	-0.087***
Host country involvement (<i>DOM</i>)	0.805***	0.040	1.050***	0.134**
Foreign Investment Act (<i>FIA</i>)	-0.987***	0.285	-0.050	0.014
Other investors (<i>INV^o</i>)	-	0.287***	-	0.282***
Source investors (<i>INV^s</i>)	-	0.144***	-	0.171***
Host investors (<i>INV^h</i>)	-	0.221***	-	0.231***
Same source country (<i>PARTS</i>)	0.638***	-	0.863***	-
Other non-host country (<i>PARTO</i>)	0.917***	-	1.065***	-
Industry (<i>IND</i>):				
Agriculture	-0.406	-0.214	-	-
Food and beverages	0.674***	0.636***	-	-
Textiles, clothes and leather	0.550***	0.626***	-	-
Wood and wood products	0.314***	0.324***	-	-
Paper and printing	1.315***	1.237***	-	-
Chemicals and petroleum	1.258***	1.132***	-	-
Non-metallic minerals	0.576***	0.650***	-	-
Basic metal	0.514***	0.515***	-	-
Fabricated metal products	0.454***	0.458***	-	-
Construction	-0.688***	-0.666***	-	-
Wholesale and retail	-0.608***	-0.666***	-	-
Transport and communications	-0.764***	-0.823***	-	-
Financing and real estate	-0.405***	-0.628***	-	-
Social services	-0.924***	-0.941***	-	-
Saudi Arabia location (<i>REGION</i>):				
Eastern	0.148**	0.147***	-	-
Western	0.286***	0.258***	-	-
Southern	0.763	0.548	-	-
Northern	0.720	0.695	-	-
Supranational source (<i>SOURCE</i>):				
MENA, West Asia	-0.169*	-0.208**	-	-
MENA, North Africa	-0.071	-0.143	-	-
Western Europe	-0.795***	-0.553***	-	-
North America	-1.206***	-1.086***	-	-
Far East	-0.143	0.019	-	-
Number of observations	3,330	3,330	3,330	3,330
R-squared [pseudo R-squared]	0.404	0.510	0.211	0.325
F-value [Wald value]	44.18***	62.59***	28.10***	46.44***

Notes: OLS estimation with robust standard errors. Time dummies are added in each case. Significant at *** = 1%, ** = 5% and * = 10% levels.

Appendix Table 6.2: Alternative Specifications for the Number of Investors

Dependent Variable: <i>INVTOT</i>	(1)	(2)	(3)	(4)
Constant	-0.018	-0.117	-0.403	-0.655**
Output (<i>GDP</i>)	0.049***	0.047***	0.019**	0.111***
Per capita output (<i>GDPHD</i>)	0.247**	0.211**	0.174	0.273***
Growth rate (<i>GROWTH</i>)	0.002	0.320	0.318	1.171***
Inflation rate (<i>INFL</i>)	0.504*	0.539**	0.050	0.064
Budget balance (<i>BUDGET</i>)	0.487**	0.229	0.196	0.336**
Current account (<i>CURRENT</i>)	0.035	0.111	-0.115	0.069
Distance (<i>DIST</i>)	-0.068***	-0.049***	0.098	-0.090***
Host country involvement (<i>DOM</i>)	0.338***	1.192***	0.263***	0.339***
Foreign Investment Act (<i>FIA</i>)	0.106	-0.123	-0.061	0.069
Source investors (<i>INV\hat{S}</i>)	-	-	0.258***	-
Host investors (<i>INV\hat{H}</i>)	-	-	0.141***	-
Same source country (<i>PARTS</i>)	-	-0.077	-	-
Host country (<i>PARTH</i>)	-	-1.307***	-	-
<u>Industry (<i>IND</i>):</u>				
Agriculture	-0.527***	-0.460***	-0.065	-
Food and beverages	0.020	0.046	0.056	-
Textiles, clothes and leather	-0.230**	-0.177**	-0.075	-
Wood and wood products	-0.283**	-0.194*	0.110	-
Paper and printing	0.009	0.122	0.009	-
Chemicals and petroleum	0.099	0.136**	0.021	-
Non-metallic minerals	-0.326***	-0.196**	-0.085*	-
Basic metal	-0.006	-0.054	0.002	-
Fabricated metal products	-0.138*	-0.085	-0.041	-
Construction	-0.261***	-0.134**	-0.067*	-
Wholesale and retail	0.068	0.080	0.128**	-
Transport and communications	-0.137	0.052	0.079	-
Financing and real estate	0.153*	0.249***	0.118**	-
Social services	-0.093	-0.003	0.032	-
<u>Saudi Arabia location (<i>REGION</i>):</u>				
Eastern	-0.091*	-0.014	-0.026	-
Western	-0.025	0.055	0.049**	-
Southern	0.142	0.433	0.109	-
Northern	-0.195	0.044	0.088	-
<u>Supranational source (<i>SOURCE</i>):</u>				
MENA, West Asia	0.073	0.077	0.171***	-
MENA, North Africa	0.186	0.095	0.298***	-
Western Europe	-0.557***	-0.286**	-0.066	-
North America	-0.244*	-0.107	-0.181*	-
Far East	-0.308***	-0.228**	-0.065	-
Number of observations	3,330	3,330	3,330	3,330
R-squared [pseudo R-squared]	0.094	0.153	0.292	0.070
F-value [Wald value]	629***	2639***	7365***	415***

Notes: Poisson regression with robust standard errors. Time dummies are added in each case. Significant at *** = 1%, ** = 5% and * = 10% levels.

Appendix Table 6.3: Number of Investors by Source: Poisson

Dependent Variable:	<i>INVTOT</i>			
	Source Only	Host Only	Others ⁺	Non-host
Constant	3.668***	-1.420**	-6.990***	0.443
Output (<i>GDP</i>)	0.056*	0.089***	0.053	0.039**
Per capita output (<i>GDPHD</i>)	-0.679***	0.714***	0.837***	-0.053
Growth rate (<i>GROWTH</i>)	-3.411***	1.409***	1.945**	-0.996*
Inflation rate (<i>INFL</i>)	1.349***	0.707	0.324	0.536
Budget balance (<i>BUDGET</i>)	1.605***	-0.135	2.007***	1.440***
Current account (<i>CURRENT</i>)	-0.622**	-0.004	-0.932	-0.263
Distance (<i>DIST</i>)	-0.308***	-0.074***	0.011**	0.021***
Host country involvement (<i>DOM</i>)	-0.905***	-	0.078	-0.631***
Foreign Investment Act (<i>FIA</i>)	0.139	-0.222	1.373***	0.488*
Industry (<i>IND</i>):				
Agriculture	-0.863**	0.088	0.047	-0.696**
Food and beverages	0.002	0.340**	0.386	0.026
Textiles, clothes and leather	-0.111	-0.062	-0.308	-0.216
Wood and wood products	-1.008***	-0.166	0.869**	-0.377*
Paper and printing	-0.449*	0.665***	-0.319	-0.523***
Chemicals and petroleum	-0.102	0.477***	0.343	-0.052
Non-metallic minerals	-0.501***	0.060	-0.483	-0.567***
Basic metal	0.100	-0.148	0.396	0.115
Fabricated metal products	-0.217	0.180	0.161	-0.242**
Construction	-0.392***	0.014	-0.206	-0.409***
Wholesale and retail	0.117	-0.028	0.677**	0.190
Transport and communications	-0.208	0.001	0.323	-0.166
Financing and real estate	-0.576***	0.553***	0.848***	-0.110
Social services	-0.017	0.176	-0.568*	-0.173
Saudi Arabia location (<i>REGION</i>):				
Eastern	-0.545***	-0.001	0.170	-0.230***
Western	-0.116**	0.030	-0.063	-0.089*
Southern	-1.399**	0.858*	-1.122*	-1.325***
Northern	-0.985***	0.358*	-13.730***	-1.271***
Supranational source (<i>SOURCE</i>):				
MENA, West Asia	-0.495***	-0.179	1.208***	0.147
MENA, North Africa	0.226*	-0.118	1.696***	0.539***
Western Europe	-1.907***	-0.232	0.262	-1.163***
North America	-0.082	0.032	-0.352	-0.704***
Far East	0.008	-0.017	-0.353	-0.638***
Number of observations	3,330	3,330	3,330	3,330
R-squared [pseudo R-squared]	0.204	0.109	0.188	0.144
F-value [Wald value]	1604***	599***	1458***	1105***

Notes: Poisson regression with robust standard errors. Time dummies are added in each case. Significant at *** = 1%, ** = 5% and * = 10% levels. ⁺ other investors, i.e. both non-Saudi and non-source investors.

Appendix Table 6.4: Number of Investors by Source Country: Poisson

Dependent Variable:	<i>INVTOT</i>			
	All Others	Source Only	Host Only	Others ⁺
Constant	0.994***	0.623***	-0.334***	-2.107***
Algeria	0.564	-1.316***	0.739***	3.118***
Australia	-0.563***	-18.487***	0.408**	1.334**
Austria	-0.013	-18.487***	1.081***	1.519
Bahamas	-0.483	-18.487***	0.334***	1.701*
Bahrain	0.754***	-1.771***	1.740***	2.406***
Bangladesh	-0.161	0.070	-1.276**	-0.196
Belgium	0.467	-1.604***	1.493***	1.819***
Brazil	-0.183	-18.487***	-1.053	2.800***
Canada	-0.422***	-1.660***	0.343***	1.213***
China	-0.529***	-1.840***	0.534***	-0.496
Cyprus	-0.039	-2.233**	0.516***	2.289***
Denmark	-0.589***	-2.009***	0.557**	-14.095***
Egypt	-0.086	-0.417***	0.380***	0.512
Ethiopia	1.714***	-18.487***	3.042***	-14.095***
Finland	-0.771***	-18.487***	0.334***	0.721
France	-0.340***	-2.495***	0.602***	1.334***
Germany	-0.149	-2.009***	0.893***	0.997**
Greece	-0.388***	-1.722***	0.621***	0.315
Hong Kong	-0.994***	-1.029**	-0.765	-14.095***
India	-0.08	-0.483**	0.541***	-0.056
Iran	-0.004	-0.097	0.334***	-14.095***
Iraq	0.526	-18.487***	0.334	3.380***
Ireland	-0.707***	-18.487***	0.621***	-14.095***
Italy	-0.605***	-2.281***	0.310**	0.934
Japan	0.071	-0.810***	0.938***	0.696
Jordan	-0.115	-0.584***	0.384***	0.963***
Korea, republic of	-0.444***	-1.945***	0.596***	0.315
Kuwait	0.693***	0.213	1.010***	2.231***
Lebanon	-0.076	-0.605***	0.536***	0.773**
Liberia	0.259**	-1.316*	0.739	2.512***
Luxembourg	-0.994***	-18.487***	0.334***	-14.095***
Malaysia	-0.355	-2.874***	0.757**	0.772
Morocco	0.578**	-0.131	-0.455	3.110***
Netherlands	-0.478***	-3.456***	0.569***	1.065***
Norway	-0.707***	-18.487***	0.439**	0.603
Oman	0.760***	-2.127***	0.909***	3.436***
Pakistan	-0.251**	-0.581***	0.220	0.315
Panama	-0.783***	-2.763***	0.334**	-0.033
Philippines	-0.388**	-18.487***	0.488	1.701***

Appendix Table 6.4 (Continued)

Dependent Variable:	<i>INVTOT</i>			
	All Others	Source Only	Host Only	Others ⁺
Poland	-0.771***	-18.487***	0.557***	-14.095***
Qatar	1.131***	-2.702***	1.838***	3.429***
Russia	-0.301***	-18.487***	0.334***	2.107***
Singapore	-0.615***	-2.495***	0.408	0.641
South Africa	-0.684***	-18.487***	0.421***	0.808
Spain	-0.370**	-1.945***	0.191	1.797***
Sri Lanka	0.104	-18.487***	1.181***	1.701***
Sudan	0.279	-2.164***	0.467***	2.902***
Sweden	-0.524***	-1.134**	0.334	-14.095***
Switzerland	-0.511***	-18.487***	0.766***	-0.406
Syria	-0.195**	-0.418***	-0.002	0.842**
Taiwan	-0.994***	-18.487***	0.046	0.721
Tanzania	-0.994***	-18.487***	-12.361***	2.107***
Tunisia	0.51	-18.487***	0.334	3.360***
Turkey	-0.618***	-1.120***	-0.061	0.358
United Arab Emirates	0.360**	-1.374***	1.061***	2.394***
United Kingdom	-0.390***	-2.025***	0.648***	0.572
United States	-0.230**	-1.843***	0.745***	1.037***
Venezuela	-0.301***	-18.487***	0.334***	2.107***
Number of observations	3,330	3,330	3,330	3,330
R-squared [pseudo R-squared]	0.068	0.136	0.067	0.164
F-value [Wald value]	-	3880***	-	1200***

Notes: Poisson regression with robust standard errors. Time dummies are added in each case. Significant at *** = 1%, ** = 5% and * = 10% levels. ⁺ = other investors (non-Saudi and non-source).

Appendix Table 6.5: Number of Investors by Source: OLS

Dependent Variable:	<i>INVTOT</i>			
	Source Only	Host Only	Others ⁺	Non-host
Constant	3.816***	-1.099	-1.528**	2.288***
Output (<i>GDP</i>)	0.003	0.122***	0.034**	0.037**
Per capita output (<i>GDPHD</i>)	-0.468***	0.917***	0.503**	0.034
Growth rate (<i>GROWTH</i>)	-2.171***	1.776***	0.597	-1.574**
Inflation rate (<i>INFL</i>)	0.454	1.067	0.269	0.723
Budget balance (<i>BUDGET</i>)	0.965***	0.109	1.305***	2.271***
Current account (<i>CURRENT</i>)	-0.115	0.242	-0.375	-0.489
Distance (<i>DIST</i>)	-0.011***	0.000***	0.000	0.000***
Host country involvement (<i>DOM</i>)	-0.897***		0.027	-0.870***
Foreign Investment Act (<i>FIA</i>)	-0.207	-0.340	0.225**	0.017
<i>Industry (IND):</i>				
Agriculture	-0.851***	-0.013	0.059	-0.791***
Food and beverages	-0.173	0.356**	0.116	-0.057
Textiles, clothes and leather	-0.325	-0.088	-0.069	-0.393**
Wood and wood products	-1.034***	-0.144	0.405*	-0.629**
Paper and printing	-0.587***	0.916**	-0.107	-0.694***
Chemicals and petroleum	-0.269	0.611***	0.135**	-0.134
Non-metallic minerals	-0.626***	0.036	-0.144**	-0.769***
Basic metal	0.030	-0.211*	0.177***	0.207
Fabricated metal products	-0.393**	0.144	0.028	-0.365**
Construction	-0.498***	0.011	-0.034	-0.532***
Wholesale and retail	-0.042	-0.029	0.263**	0.221
Transport and communications	-0.434**	-0.035	0.098	-0.336
Financing and real estate	-0.622***	0.778***	0.414***	-0.208
Social services	-0.212	0.159	-0.068	-0.280*
<i>Saudi Arabia location (REGION):</i>				
Eastern	-0.281***	0.032	0.068	-0.213***
Western	-0.101*	0.059	-0.023	-0.124**
Southern	-0.685***	1.550	-0.300***	-0.985***
Northern	-0.732***	0.535	-0.315**	-1.047***
<i>Supranational source (SOURCE):</i>				
MENA, West Asia	-0.120	-0.135	0.305***	0.185
MENA, North Africa	0.229**	-0.182	0.577***	0.805***
Western Europe	-0.967***	-0.442	-0.356**	-1.323***
North America	-0.433***	-0.016	-0.403**	-0.836***
Far East	-0.298***	-0.109	-0.319**	-0.617***
Number of observations	3,330	3,330	3,330	3,330
R-squared [pseudo R-squared]	0.247	0.117	0.115	0.194
F-value [Wald value]	26.22***	7.65***	3.69***	22.44***

Notes: OLS estimation with robust standard errors. Time dummies are added in each case. Significant at *** = 1%, ** = 5% and * = 10% levels. ⁺ = other investors (non-Saudi and non-source).

Appendix Table 6.6: Number of Investors by Source Country: OLS

Dependent variable:	<i>INVTOT</i>			
	All others	Source only	Host only	Others ⁺
Constant	2.703***	1.865***	0.716***	0.122***
Algeria	2.047	-1.365***	0.784***	2.628
Australia	-1.164***	-1.865***	0.361**	0.340
Austria	-0.036	-1.865***	1.395*	0.434
Bahamas	-1.036*	-1.865***	0.284***	0.545
Bahrain	3.043***	-1.547***	3.363***	1.228***
Bangladesh	-0.403	0.135	-0.516***	-0.022
Belgium	1.610	-1.490***	2.471*	0.628**
Brazil	-0.453	-1.865***	-0.466**	1.878
Canada	-0.930***	-1.510***	0.293**	0.287***
China	-1.110***	-1.569***	0.506***	-0.048
Cyprus	-0.103	-1.665***	0.484**	1.078***
Denmark	-1.203***	-1.615***	0.534*	-0.122***
Egypt	-0.223	-0.635***	0.331***	0.081
Ethiopia	12.297***	-1.865***	14.284***	-0.122***
Finland	-1.453***	-1.865***	0.284***	0.128
France	-0.780***	-1.711***	0.591***	0.340***
Germany	-0.373	-1.615***	1.034***	0.208**
Greece	-0.869***	-1.532***	0.617***	0.045
Hong Kong	-1.703***	-1.198***	-0.383	-0.122***
India	-0.207	-0.714***	0.514***	-0.007
Iran	-0.010	-0.173	0.284***	-0.122***
Iraq	1.869	-1.865***	0.284	3.450*
Ireland	-1.369***	-1.865***	0.617**	-0.122***
Italy	-1.227***	-1.674***	0.260**	0.188
Japan	0.200	-1.036***	1.113***	0.122
Jordan	-0.293	-0.825***	0.335***	0.197***
Korea, republic of	-0.969***	-1.598***	0.584***	0.045
Kuwait	2.704***	0.443	1.251***	1.010***
Lebanon	-0.197	-0.847***	0.508***	0.142**
Liberia	0.797**	-1.365***	0.784	1.378
Luxembourg	-1.703***	-1.865***	0.284***	-0.122***
Malaysia	-0.808	-1.760***	0.810	0.142
Morocco	2.115	-0.229	-0.262	2.606**
Netherlands	-1.026***	-1.806***	0.548**	0.231**
Norway	-1.369***	-1.865***	0.395**	0.101
Oman	3.075**	-1.643***	1.062**	3.656***
Pakistan	-0.601**	-0.822***	0.176	0.045
Panama	-1.467***	-1.747***	0.284**	-0.004
Philippines	-0.869***	-1.865***	0.450	0.545

Appendix Table 6.6 (Continued)

Dependent Variable:	<i>INVTOT</i>			
	All Others	Source Only	Host Only	Others ⁺
Poland	-1.453***	-1.865***	0.534**	-0.122***
Qatar	5.672***	-1.740***	3.784**	3.628***
Russia	-0.703***	-1.865***	0.284***	0.878***
Singapore	-1.241***	-1.711***	0.361	0.109
South Africa	-1.339***	-1.865***	0.375**	0.151
Spain	-0.836***	-1.598***	0.150	0.612***
Sri Lanka	0.297	-1.865***	1.617**	0.545**
Sudan	0.869	-1.651***	0.427***	2.093
Sweden	-1.103***	-1.265***	0.284	-0.122***
Switzerland	-1.081***	-1.865***	0.824***	-0.041
Syria	-0.478**	-0.637***	-0.002	0.161**
Taiwan	-1.703***	-1.865***	0.034	0.128
Tanzania	-1.703***	-1.865***	-0.716***	0.878***
Tunisia	1.797	-1.865***	0.284	3.378*
Turkey	-1.246***	-1.256***	-0.042	0.052
United Arab Emirates	1.172**	-1.393***	1.353***	1.212***
United Kingdom	-0.872***	-1.619***	0.653***	0.094
United States	-0.555**	-1.570***	0.793***	0.222***
Venezuela	-0.703***	-1.865***	0.284***	0.878***
Number of observations	3,330	3,330	3,330	3,330
R-squared [pseudo R-squared]	0.129	0.157	0.091	0.151
F-value [Wald value]	-	-	-	-

Notes: OLS estimation with robust standard errors. Time dummies are added in each case. Significant at *** = 1%, ** = 5% and * = 10% levels. ⁺ = other investors (non-Saudi and non-source).

Appendix Table 6.7: Equity Share with Different Scale Instruments

Dependent Variable: <i>EQUITY</i>	Specification					
	(1)		(2)		(3)	
	Estimate	Marg. Effect	Estimate	Marg. Effect	Estimate	Marg. Effect
Constant	2.665***	-	4.328***	-	7.282***	-
<u>Political risk terms:</u>						
Government stability (<i>GOVST</i>)	0.344**	0.080	0.305*	0.071	0.342**	0.079
Bureaucratic quality (<i>BUREAU</i>)	0.322**	0.075	0.410***	0.095	0.626***	0.145
Corruption (<i>CORR</i>)	0.343**	0.080	0.357**	0.083	0.296	0.069
Socioeconomic conditions (<i>SOCIO</i>)	-0.040	-0.009	-0.064	-0.015	-0.090	-0.021
Religious tensions (<i>RELIG</i>)	0.109	0.025	0.138	0.032	0.164	0.038
Ethnic tensions (<i>ETHNIC</i>)	0.058	0.013	0.042	0.010	-0.173	-0.040
Investment profile (<i>INVEST</i>)	0.290*	0.067	0.347**	0.080	0.345**	0.080
Law and order (<i>LAW</i>)	0.088	0.020	0.140	0.032	0.314*	0.073
Democ. Account. (<i>DEMOC</i>)	-0.281***	-0.065	-0.355***	-0.082	-0.467***	-0.108
Military (<i>MILIT</i>)	-0.257**	-0.060	-0.290**	-0.067	-0.198	-0.046
Internal conflict (<i>INTCON</i>)	-0.447**	-0.104	-0.474***	-0.110	-0.599***	-0.139
External conflict (<i>EXTCON</i>)	0.219	0.051	0.215	0.050	0.304**	0.071
<u>Financial terms:</u>						
International capital (<i>FUNDS</i>)	-0.810***	-0.188	-0.918***	-0.212	-1.115***	-0.258
Exchange rate stability (<i>EXCH</i>)	-0.407***	-0.095	-0.464***	-0.107	-0.392***	-0.091
Export propensity (<i>EXPORT</i>)	0.810***	0.188	1.000***	0.231	1.340***	0.310
<u>Other terms:</u>						
Distance (<i>DIST</i>)	-0.001	-0.021	-0.010	-0.024	-0.025***	-0.058
Foreign Investment Act (<i>FIA</i>)	0.046	0.009	0.033	0.008	0.126***	0.029
Host country involvement (<i>DOM</i>)	0.041	0.011	-0.020	-0.005	-0.135**	-0.031
<u>Instruments:</u>						
Investment scale (<i>SCÂLE</i>)	-0.161***	-0.037	-0.270***	-0.062	-0.460***	-0.107
Number of other investors (<i>INVTOT</i>)	-0.406***	-0.094	-0.276***	-0.064	-0.275***	-0.064
Number of observations	3,330	-	3,330	-	3,330	-
Log-likelihood [pseudo]	364.7	-	443.6	-	405.2	-
Akaike Information Criterion (AIC)	-0.206	-	-0.256	-	-0.191	-

Notes: Estimation using glm with a logit link function. Significant at *** = 1%, ** = 5% and * = 10% levels. Column (1) instruments scale using result in column (1) of Appendix Table 6.1, column (2) uses column (2) of Appendix Table 6.1, and column (3) uses column (3) of Appendix Table 6.1.

Appendix Table 6.8: Equity Share with Different Number of Investors

Dependent Variable: <i>EQUITY</i>	Specification					
	(1)		(2)		(3)	
	Estimate	Marg. Effect	Estimate	Marg. Effect	Estimate	Marg. Effect
Constant	2.665***	-	0.616*	-	2.376***	-
<u>Political risk terms:</u>						
Government stability (<i>GOVST</i>)	0.344**	0.080	0.527***	0.122	0.461***	0.105
Bureaucratic quality (<i>BUREAU</i>)	0.322**	0.075	0.201	0.046	0.145	0.033
Corruption (<i>CORR</i>)	0.343**	0.080	0.243	0.056	0.293**	0.067
Socioeconomic conditions (<i>SOCIO</i>)	-0.040	-0.009	0.245*	0.057	-0.134	-0.031
Religious tensions (<i>RELIG</i>)	0.109	0.025	-0.068	-0.016	-0.151	-0.034
Ethnic tensions (<i>ETHNIC</i>)	0.058	0.013	-0.234**	-0.054	0.184*	0.042
Investment profile (<i>INVEST</i>)	0.290*	0.067	-0.053	-0.012	0.292**	0.067
Law and order (<i>LAW</i>)	0.088	0.020	0.301*	0.069	0.232	0.053
Democ. Account. (<i>DEMOC</i>)	-0.281***	-0.065	-0.227**	-0.052	-0.202**	-0.046
Military (<i>MILIT</i>)	-0.257**	-0.060	-0.076	-0.018	-0.142	-0.032
Internal conflict (<i>INTCON</i>)	-0.447**	-0.104	-0.509***	-0.118	-0.686***	-0.156
External conflict (<i>EXTCON</i>)	0.219	0.051	0.252*	0.058	0.237*	0.054
<u>Financial terms:</u>						
International capital (<i>FUNDS</i>)	-0.810***	-0.188	-0.878***	-0.203	-0.885***	-0.202
Exchange rate stability (<i>EXCH</i>)	-0.407***	-0.095	-0.125	-0.029	-0.174	-0.040
Export propensity (<i>EXPORT</i>)	0.810***	0.188	0.852***	0.197	1.121***	0.256
<u>Other terms:</u>						
Distance (<i>DIST</i>)	-0.001	-0.021	-0.016**	-0.036	-0.011	-0.025
Foreign Investment Act (<i>FIA</i>)	0.046	0.009	0.076	0.017	-0.040	0.038
Host country involvement (<i>DOM</i>)	0.041	0.011	0.110***	0.025	0.169***	-0.009
<u>Instruments:</u>						
Investment scale (<i>SCÂLE</i>)	-0.161***	-0.037	-0.014***	-0.003	-0.128***	-0.029
Number of other investors (<i>INV[^]TOT</i>)	-0.406***	-0.094	-1.064*	-0.246	-1.317***	-0.300
Number of observations	3,330	-	3,330	-	3,330	-
Log-likelihood [pseudo]	364.7	-	590.8	-	693.5	-
Akaike Information Criterion (AIC)	-0.206	-	-0.342	-	-0.403	-

Notes: Estimation using glm with a logit link function. Significant at *** = 1%, ** = 5% and * = 10% levels. Column (1) instruments number of other investors using result in column (1) of Appendix Table 6.2, column (2) uses column (2) of Appendix Table 6.2, and column (3) uses column (3) of Appendix Table 6.2.

Appendix Table 6.9: Share Estimates with Varying Number of Investors

Dependent Variable: <i>EQUITY</i>	Basic Specification					
	(1)		(2)		(3)	
	Estimate	Marg. Eff.	Estimate	Marg. Eff.	Estimate	Marg. Eff.
Constant	2.665***	-	2.350***	-	2.347***	-
<u>Political risk terms:</u>						
Government stability (<i>GOVST</i>)	0.344**	0.080	0.368**	0.085	0.371	0.085
Bureaucratic quality (<i>BUREAU</i>)	0.322**	0.075	-0.128	-0.030	-0.131	-0.030
Corruption (<i>CORR</i>)	0.343**	0.080	0.402***	0.093	0.398***	0.092
Socioeconomic conditions (<i>SOCIO</i>)	-0.040	-0.009	-0.011	-0.003	0.011	0.003
Religious tensions (<i>RELIG</i>)	0.109	0.025	-0.305***	-0.070	-0.307***	-0.071
Ethnic tensions (<i>ETHNIC</i>)	0.058	0.013	0.311***	0.072	0.299***	0.069
Investment profile (<i>INVEST</i>)	0.290*	0.067	0.091	0.021	0.063	0.015
Law and order (<i>LAW</i>)	0.088	0.020	-0.125	-0.029	-0.129	-0.030
Democ. Account. (<i>DEMOC</i>)	-0.281***	-0.065	-0.249**	-0.057	-0.241**	-0.055
Military (<i>MILIT</i>)	-0.257**	-0.060	-0.043	-0.010	-0.044	-0.010
Internal conflict (<i>INTCON</i>)	-0.447**	-0.104	-0.064	-0.015	-0.051	-0.012
External conflict (<i>EXTCON</i>)	0.219	0.051	0.007	0.002	0.007	0.002
<u>Financial terms:</u>						
International capital (<i>FUNDS</i>)	-0.810***	-0.188	-0.455***	-0.105	-0.453***	-0.104
Exchange rate stability (<i>EXCH</i>)	-0.407***	-0.095	-0.196*	-0.045	-0.188*	-0.043
Export propensity (<i>EXPORT</i>)	0.810***	0.188	0.143	0.033	0.136	0.031
<u>Other terms:</u>						
Distance (<i>DIST</i>)	-0.001	-0.021	-0.039	-0.026	-0.011	-0.027
Foreign Investment Act (<i>FIA</i>)	0.046	0.009	0.083	-0.146	0.076	0.017
Host country involvement (<i>DOM</i>)	0.041	0.011	-0.618***	0.019	-0.602***	-0.142
<u>Instruments:</u>						
Investment scale (<i>SCÂLE</i>):	-0.161***	-0.037	-0.166***	-0.038	-0.164***	-0.038
Number of other investors (<i>INV^{TOT}</i>)	-0.406***	-0.094	-	-	-0.035	-0.008
Other investors (<i>INV^O</i>)	-	-	-0.641***	-0.148	-	-
Source investors (<i>INV^S</i>)	-	-	-0.360***	-0.083	-0.352***	-0.081
Host investors (<i>INV^H</i>)	-	-	-0.010	-0.002	-0.633***	-0.146
Number of observations	3,330	-	3,330	-	3,330	-
Log-likelihood [pseudo]	364.7	-	615.9	-	615.8	-
Akaike Information Criterion (AIC)	-0.206	-	-0.210	-	-0.212	-

Notes: Estimation using glm with a logit link function. Significant at *** = 1%, ** = 5% and * = 10% levels. Column (1) instruments number of other investors using result in column (1) of Appendix Table 6.2. Column (2) instruments other investors, source investors and host investors using result in column (3), (1) and (2) of Appendix Table 6.3. Column (3) instruments number of other investors using result in column (1) of Appendix Table 6.2, and source investors and host investors using result in column (1) and (2) of Appendix Table 6.3.

Appendix Table 6.10: Share Estimates with Varying Number of Investors

Dependent Variable: <i>EQUITY</i>	Basic Specification					
	(1)		(2)		(3)	
	Estimate	Marg. Eff.	Estimate	Marg. Eff.	Estimate	Marg. Eff.
Constant	2.665***	-	3.216***	-	3.366***	-
<u>Political risk terms:</u>						
Government stability (<i>GOVST</i>)	0.344**	0.080	0.361**	0.084	0.240	0.056
Bureaucratic quality (<i>BUREAU</i>)	0.322**	0.075	0.389**	0.090	0.378**	0.088
Corruption (<i>CORR</i>)	0.343**	0.080	0.255	0.059	0.373**	0.087
Socioeconomic conditions (<i>SOCIO</i>)	-0.040	-0.009	-0.189	-0.044	-0.184	-0.043
Religious tensions (<i>RELIG</i>)	0.109	0.025	0.060	0.014	0.199	0.046
Ethnic tensions (<i>ETHNIC</i>)	0.058	0.013	0.029	0.007	0.128	0.030
Investment profile (<i>INVEST</i>)	0.290*	0.067	0.456***	0.106	0.435***	0.101
Law and order (<i>LAW</i>)	0.088	0.020	0.222	0.051	0.063	0.015
Democ. Account. (<i>DEMOC</i>)	-0.281***	-0.065	-0.351***	-0.081	-0.319***	-0.074
Military (<i>MILIT</i>)	-0.257**	-0.060	-0.209**	-0.048	-0.272**	-0.063
Internal conflict (<i>INTCON</i>)	-0.447**	-0.104	-0.512***	-0.119	-0.432**	-0.100
External conflict (<i>EXTCON</i>)	0.219	0.051	0.144	0.033	0.158	0.037
<u>Financial terms:</u>						
International capital (<i>FUNDS</i>)	-0.810***	-0.188	-0.854***	-0.198	-0.611***	-0.142
Exchange rate stability (<i>EXCH</i>)	-0.407***	-0.095	-0.355***	-0.082	-0.467***	-0.108
Export propensity (<i>EXPORT</i>)	0.810***	0.188	0.998***	0.231	0.542***	0.126
<u>Other terms:</u>						
Distance (<i>DIST</i>)	-0.001	-0.021	-0.080	-0.019	-0.013**	-0.031
Foreign Investment Act (<i>FIA</i>)	0.046	0.009	0.053	0.012	0.058	-0.021
Host country involvement (<i>DOM</i>)	0.041	0.011	-0.090**	-0.021	-0.088**	0.013
<u>Instruments:</u>						
Investment scale (<i>SCÂLE</i>):	-0.161***	-0.037	-0.190***	-0.044	-0.218***	-0.051
Number of other investors (<i>INVÂTOT</i>)	-0.406***	-0.094	-0.491***	-0.114	-	-
Other investors (<i>INVÂO</i>)	-	-	-	-	-0.010**	-0.002
Source investors (<i>INVÂS</i>)	-	-	-	-	-0.019	-0.004
Host investors (<i>INVÂH</i>)	-	-	-	-	-0.017*	-0.004
Number of observations	3,330	-	3,330	-	3,330	-
Log-likelihood [pseudo]	364.7	-	363.4	-	351.2	-
Akaike Information Criterion (AIC)	-0.206	-	-0.205	-	-0.197	-

Notes: Estimation using glm with a logit link function. Significant at *** = 1%, ** = 5% and * = 10% levels. Column (1) instruments number of other investors using result in column (1) of Appendix Table 6.2, column (2) uses column (1) of Appendix Table 6.4, and Column (3) instruments other investors, source investors and host investors using result in column (4), (2) and (3) in Appendix Table 6.4.

Appendix Table 6.11: Quantile Regression Results for Investor Equity Share

SHARELOGIT	Bootstrap				[95% Conf.	Interval]
	Coef.	Std. Err.	t	P>t		
q5						
Government stability	1.366	0.385	3.550	0.000	0.612	2.120
Socioeconomic conditions	-0.088	0.453	-0.200	0.845	-0.976	0.799
Investment profile	-1.111	0.495	-2.240	0.025	-2.082	-0.139
Internal conflict	0.299	0.735	0.410	0.684	-1.142	1.740
External conflict	-0.088	0.481	-0.180	0.855	-1.032	0.855
Corruption	0.425	0.356	1.190	0.234	-0.274	1.124
Military	0.208	0.327	0.640	0.523	-0.432	0.849
Religious tensions	0.383	0.235	1.630	0.103	-0.077	0.844
Law and order	-1.166	0.610	-1.910	0.056	-2.361	0.029
Ethnic tensions	-0.046	0.448	-0.100	0.917	-0.924	0.831
Democ. Account.	0.497	0.458	1.090	0.277	-0.400	1.394
Bureaucratic quality	-0.736	0.633	-1.160	0.245	-1.977	0.505
Foreign debt	0.022	0.343	0.060	0.949	-0.651	0.695
Current account	-0.431	0.442	-0.980	0.330	-1.298	0.436
Exchange rate stability	-1.088	0.548	-1.990	0.047	-2.162	-0.015
Distance	-0.018	0.000	-1.360	0.175	0.000	0.000
Foreign Investment Act	-0.363	0.247	-1.470	0.141	-0.848	0.121
Host country involvement	0.197	0.122	1.620	0.105	-0.041	0.436
Number of other investors	-1.048	0.215	-4.880	0.000	-1.469	-0.627
Investment scale	-0.140	0.056	-2.500	0.013	-0.250	-0.030
Constant	1.284	1.039	1.240	0.217	-0.753	3.321
q13						
Government stability	0.979	0.550	1.780	0.075	-0.100	2.058
Socioeconomic conditions	-0.398	0.367	-1.080	0.279	-1.118	0.322
Investment profile	-0.146	0.352	-0.410	0.678	-0.837	0.545
Internal conflict	-0.134	0.511	-0.260	0.793	-1.135	0.867
External conflict	-0.155	0.436	-0.360	0.722	-1.010	0.700
Corruption	0.399	0.349	1.140	0.253	-0.286	1.084
Military	-0.409	0.239	-1.710	0.087	-0.878	0.060
Religious tensions	0.272	0.299	0.910	0.364	-0.315	0.859
Law and order	-0.414	0.345	-1.200	0.230	-1.089	0.262
Ethnic tensions	0.166	0.317	0.520	0.601	-0.456	0.788
Democ. Account.	0.462	0.261	1.770	0.077	-0.050	0.974
Bureaucratic quality	-0.300	0.444	-0.680	0.499	-1.171	0.571
Foreign debt	-0.467	0.341	-1.370	0.171	-1.135	0.201
Current account	0.343	0.527	0.650	0.515	-0.690	1.377
Exchange rate stability	-1.101	0.232	-4.760	0.000	-1.555	-0.647
Distance	-0.029	0.000	-0.990	0.324	0.000	0.000
Foreign Investment Act	-0.229	0.164	-1.400	0.162	-0.550	0.092
Host country involvement	0.291	0.066	4.420	0.000	0.162	0.420
Number of other investors	-0.891	0.136	-6.530	0.000	-1.158	-0.623
Investment scale	-0.079	0.071	-1.110	0.266	-0.217	0.060
Constant	0.426	1.196	0.360	0.722	-1.920	2.771

Appendix Table 6.11 (continued)

SHARELOGIT	Bootstrap				[95% Conf.	Interval]
	Coef.	Std. Err.	t	P>t		
q21						
Government stability	0.579	0.346	1.670	0.094	-0.099	1.256
Socioeconomic conditions	-0.531	0.292	-1.810	0.070	-1.104	0.043
Investment profile	0.519	0.424	1.230	0.220	-0.311	1.350
Internal conflict	-0.424	0.370	-1.150	0.252	-1.149	0.302
External conflict	0.138	0.378	0.360	0.716	-0.603	0.878
Corruption	0.417	0.442	0.940	0.346	-0.450	1.284
Military	-0.686	0.365	-1.880	0.061	-1.402	0.031
Religious tensions	0.423	0.345	1.230	0.220	-0.253	1.099
Law and order	-0.272	0.348	-0.780	0.435	-0.955	0.411
Ethnic tensions	0.225	0.288	0.780	0.434	-0.339	0.790
Democ. Account.	0.032	0.276	0.120	0.907	-0.509	0.574
Bureaucratic quality	0.433	0.381	1.140	0.255	-0.313	1.179
Foreign debt	-0.751	0.251	-3.000	0.003	-1.242	-0.259
Current account	0.747	0.411	1.820	0.069	-0.059	1.553
Exchange rate stability	-0.829	0.178	-4.670	0.000	-1.177	-0.481
Distance	-0.029	0.000	-2.590	0.010	0.000	0.000
Foreign Investment Act	-0.043	0.160	-0.270	0.788	-0.357	0.271
Host country involvement	0.326	0.105	3.120	0.002	0.121	0.531
Number of other investors	-0.892	0.172	-5.200	0.000	-1.229	-0.556
Investment scale	-0.154	0.045	-3.420	0.001	-0.243	-0.066
Constant	1.860	0.748	2.490	0.013	0.393	3.326
q27						
Government stability	0.610	0.237	2.570	0.010	0.145	1.074
Socioeconomic conditions	-0.539	0.273	-1.980	0.048	-1.074	-0.004
Investment profile	0.584	0.338	1.730	0.084	-0.079	1.246
Internal conflict	-0.720	0.329	-2.190	0.029	-1.365	-0.074
External conflict	0.231	0.307	0.750	0.452	-0.371	0.834
Corruption	0.470	0.337	1.400	0.163	-0.190	1.131
Military	-0.582	0.331	-1.760	0.079	-1.232	0.067
Religious tensions	0.529	0.306	1.730	0.084	-0.071	1.128
Law and order	-0.158	0.310	-0.510	0.610	-0.766	0.450
Ethnic tensions	0.586	0.257	2.280	0.023	0.083	1.089
Democ. Account.	-0.011	0.195	-0.060	0.956	-0.393	0.371
Bureaucratic quality	0.267	0.259	1.030	0.304	-0.242	0.776
Foreign debt	-0.794	0.146	-5.430	0.000	-1.081	-0.507
Current account	0.747	0.345	2.170	0.030	0.071	1.422
Exchange rate stability	-0.983	0.192	-5.120	0.000	-1.359	-0.606
Distance	-0.022	0.000	-2.010	0.044	0.000	0.000
Foreign Investment Act	0.049	0.096	0.510	0.612	-0.140	0.237
Host country involvement	0.267	0.085	3.130	0.002	0.099	0.434
Number of other investors	-0.821	0.138	-5.940	0.000	-1.092	-0.550
Investment scale	-0.173	0.050	-3.470	0.001	-0.271	-0.075
Constant	2.547	0.776	3.280	0.001	1.026	4.069

Appendix Table 6.11 (continued)

SHARELOGIT	Bootstrap				[95% Conf.	Interval]
	Coef.	Std. Err.	t	P>t		
q35						
Government stability	0.668	0.170	3.930	0.000	0.335	1.002
Socioeconomic conditions	-0.218	0.209	-1.040	0.297	-0.629	0.192
Investment profile	0.088	0.217	0.400	0.686	-0.339	0.514
Internal conflict	-1.088	0.316	-3.440	0.001	-1.709	-0.468
External conflict	0.384	0.219	1.750	0.080	-0.045	0.814
Corruption	0.228	0.302	0.750	0.451	-0.365	0.820
Military	-0.360	0.260	-1.380	0.167	-0.870	0.151
Religious tensions	0.485	0.251	1.940	0.053	-0.006	0.977
Law and order	0.000	0.231	0.000	0.999	-0.453	0.452
Ethnic tensions	0.477	0.167	2.870	0.004	0.151	0.804
Democ. Account.	-0.067	0.158	-0.420	0.671	-0.377	0.243
Bureaucratic quality	0.512	0.259	1.980	0.048	0.004	1.019
Foreign debt	-0.691	0.215	-3.210	0.001	-1.113	-0.269
Current account	0.633	0.330	1.920	0.055	-0.015	1.281
Exchange rate stability	-0.552	0.181	-3.040	0.002	-0.908	-0.196
Distance	-0.012	0.000	-1.230	0.220	0.000	0.000
Foreign Investment Act	-0.013	0.102	-0.130	0.897	-0.213	0.186
Host country involvement	0.262	0.082	3.200	0.001	0.101	0.423
Number of other investors	-0.741	0.134	-5.530	0.000	-1.004	-0.479
Investment scale	-0.223	0.043	-5.130	0.000	-0.309	-0.138
Constant	3.258	0.623	5.230	0.000	2.036	4.479
q42						
Government stability	0.576	0.254	2.260	0.024	0.077	1.075
Socioeconomic conditions	-0.211	0.187	-1.130	0.258	-0.577	0.155
Investment profile	0.128	0.243	0.530	0.599	-0.349	0.604
Internal conflict	-1.115	0.255	-4.370	0.000	-1.615	-0.615
External conflict	0.296	0.225	1.320	0.187	-0.144	0.737
Corruption	0.544	0.256	2.130	0.034	0.042	1.046
Military	-0.437	0.275	-1.590	0.112	-0.977	0.102
Religious tensions	0.552	0.255	2.170	0.030	0.053	1.051
Law and order	-0.065	0.284	-0.230	0.819	-0.623	0.493
Ethnic tensions	0.388	0.146	2.660	0.008	0.102	0.674
Democ. Account.	-0.147	0.148	-0.990	0.322	-0.438	0.144
Bureaucratic quality	0.572	0.235	2.430	0.015	0.111	1.033
Foreign debt	-0.833	0.242	-3.450	0.001	-1.307	-0.360
Current account	0.718	0.368	1.950	0.051	-0.003	1.438
Exchange rate stability	-0.298	0.180	-1.650	0.099	-0.652	0.056
Distance	-0.054	0.000	-0.470	0.639	0.000	0.000
Foreign Investment Act	-0.005	0.086	-0.060	0.951	-0.175	0.164
Host country involvement	0.132	0.084	1.580	0.115	-0.032	0.297
Number of other investors	-0.539	0.099	-5.420	0.000	-0.734	-0.344
Investment scale	-0.219	0.035	-6.260	0.000	-0.287	-0.150
Constant	3.086	0.585	5.280	0.000	1.939	4.232

Appendix Table 6.11 (continued)

SHARELOGIT	Bootstrap				[95% Conf.	Interval]
	Coef.	Std. Err.	t	P>t		
q49						
Government stability	0.409	0.246	1.660	0.097	-0.074	0.892
Socioeconomic conditions	-0.202	0.148	-1.360	0.173	-0.492	0.088
Investment profile	0.367	0.215	1.710	0.087	-0.054	0.789
Internal conflict	-0.648	0.231	-2.810	0.005	-1.101	-0.196
External conflict	0.385	0.182	2.110	0.035	0.027	0.742
Corruption	0.514	0.250	2.050	0.040	0.023	1.005
Military	-0.409	0.211	-1.940	0.053	-0.823	0.005
Religious tensions	0.305	0.255	1.200	0.231	-0.194	0.805
Law and order	-0.042	0.296	-0.140	0.888	-0.622	0.538
Ethnic tensions	0.147	0.191	0.770	0.442	-0.227	0.520
Democ. Account.	-0.467	0.122	-3.830	0.000	-0.706	-0.228
Bureaucratic quality	0.678	0.270	2.510	0.012	0.148	1.208
Foreign debt	-0.957	0.219	-4.370	0.000	-1.386	-0.528
Current account	0.769	0.309	2.490	0.013	0.163	1.374
Exchange rate stability	-0.388	0.153	-2.540	0.011	-0.687	-0.088
Distance	-0.017	0.000	-0.160	0.874	0.000	0.000
Foreign Investment Act	0.045	0.087	0.510	0.609	-0.126	0.215
Host country involvement	0.101	0.095	1.060	0.287	-0.085	0.288
Number of other investors	-0.465	0.098	-4.730	0.000	-0.658	-0.272
Investment scale	-0.237	0.032	-7.390	0.000	-0.300	-0.174
Constant	3.848	0.567	6.790	0.000	2.736	4.959
q54						
Government stability	0.501	0.216	2.320	0.020	0.078	0.925
Socioeconomic conditions	-0.349	0.171	-2.040	0.041	-0.685	-0.014
Investment profile	0.505	0.217	2.320	0.020	0.079	0.932
Internal conflict	-0.515	0.243	-2.120	0.034	-0.992	-0.038
External conflict	0.301	0.196	1.540	0.124	-0.083	0.684
Corruption	0.474	0.218	2.170	0.030	0.046	0.901
Military	-0.387	0.178	-2.170	0.030	-0.736	-0.038
Religious tensions	0.278	0.233	1.200	0.232	-0.178	0.735
Law and order	0.157	0.243	0.640	0.519	-0.319	0.633
Ethnic tensions	0.095	0.156	0.610	0.540	-0.210	0.401
Democ. Account.	-0.550	0.118	-4.680	0.000	-0.780	-0.319
Bureaucratic quality	0.610	0.202	3.020	0.003	0.214	1.007
Foreign debt	-0.941	0.217	-4.330	0.000	-1.367	-0.515
Current account	0.811	0.298	2.730	0.006	0.228	1.395
Exchange rate stability	-0.403	0.155	-2.590	0.010	-0.707	-0.098
Distance	-0.061	0.000	-0.720	0.469	0.000	0.000
Foreign Investment Act	0.120	0.105	1.140	0.253	-0.086	0.325
Host country involvement	0.017	0.099	0.170	0.863	-0.177	0.211
Number of other investors	-0.391	0.087	-4.480	0.000	-0.563	-0.220
Investment scale	-0.237	0.025	-9.660	0.000	-0.286	-0.189
Constant	4.025	0.412	9.770	0.000	3.218	4.833

Appendix Table 6.11 (continued)

SHARELOGIT	Bootstrap				[95% Conf.	Interval]
	Coef.	Std. Err.	t	P>t		
q59						
Government stability	0.429	0.155	2.770	0.006	0.126	0.732
Socioeconomic conditions	-0.210	0.145	-1.450	0.148	-0.493	0.074
Investment profile	0.375	0.204	1.840	0.066	-0.025	0.776
Internal conflict	-0.475	0.247	-1.930	0.054	-0.958	0.009
External conflict	0.298	0.162	1.840	0.066	-0.020	0.616
Corruption	0.423	0.204	2.070	0.039	0.022	0.823
Military	-0.389	0.142	-2.740	0.006	-0.668	-0.111
Religious tensions	0.270	0.183	1.470	0.141	-0.089	0.629
Law and order	0.010	0.224	0.040	0.966	-0.430	0.449
Ethnic tensions	0.089	0.151	0.590	0.557	-0.208	0.385
Democ. Account.	-0.360	0.128	-2.810	0.005	-0.611	-0.109
Bureaucratic quality	0.514	0.179	2.870	0.004	0.163	0.865
Foreign debt	-0.827	0.221	-3.740	0.000	-1.260	-0.394
Current account	0.747	0.289	2.590	0.010	0.181	1.314
Exchange rate stability	-0.347	0.133	-2.600	0.009	-0.609	-0.086
Distance	-0.023	0.000	-0.310	0.760	0.000	0.000
Foreign Investment Act	0.062	0.106	0.580	0.560	-0.146	0.270
Host country involvement	-0.017	0.098	-0.170	0.863	-0.209	0.175
Number of other investors	-0.299	0.096	-3.120	0.002	-0.486	-0.111
Investment scale	-0.209	0.029	-7.190	0.000	-0.266	-0.152
Constant	3.505	0.443	7.910	0.000	2.636	4.375
q75						
Government stability	0.197	0.143	1.380	0.168	-0.083	0.478
Socioeconomic conditions	0.082	0.126	0.660	0.512	-0.164	0.329
Investment profile	0.158	0.170	0.930	0.351	-0.174	0.491
Internal conflict	-0.113	0.165	-0.690	0.493	-0.436	0.210
External conflict	0.260	0.180	1.440	0.150	-0.094	0.613
Corruption	0.328	0.215	1.520	0.128	-0.094	0.751
Military	-0.206	0.115	-1.800	0.072	-0.431	0.019
Religious tensions	-0.017	0.126	-0.130	0.893	-0.263	0.229
Law and order	-0.001	0.134	-0.010	0.995	-0.263	0.261
Ethnic tensions	-0.165	0.101	-1.640	0.102	-0.362	0.033
Democ. Account.	-0.233	0.118	-1.970	0.049	-0.465	-0.001
Bureaucratic quality	0.217	0.165	1.320	0.188	-0.106	0.541
Foreign debt	-0.477	0.198	-2.410	0.016	-0.865	-0.089
Current account	0.333	0.217	1.540	0.125	-0.092	0.759
Exchange rate stability	-0.108	0.087	-1.250	0.213	-0.278	0.062
Distance	-0.039	0.000	-0.610	0.543	0.000	0.000
Foreign Investment Act	0.025	0.050	0.510	0.613	-0.072	0.122
Host country involvement	0.021	0.045	0.470	0.637	-0.067	0.109
Number of other investors	-0.249	0.096	-2.600	0.009	-0.437	-0.062
Investment scale	-0.092	0.038	-2.400	0.016	-0.167	-0.017
Constant	1.841	0.782	2.360	0.019	0.308	3.373

Appendix Table 6.11 (continued)

SHARELOGIT	Bootstrap				[95% Conf.	Interval]
	Coef.	Std. Err.	t	P>t		
q85						
Government stability	0.533	0.346	1.540	0.124	-0.146	1.213
Socioeconomic conditions	0.287	0.262	1.100	0.273	-0.226	0.800
Investment profile	0.491	0.223	2.200	0.028	0.054	0.929
Internal conflict	-0.346	0.136	-2.540	0.011	-0.614	-0.079
External conflict	0.200	0.370	0.540	0.590	-0.526	0.925
Corruption	0.592	0.351	1.690	0.092	-0.096	1.281
Military	-0.218	0.186	-1.170	0.242	-0.583	0.147
Religious tensions	-0.157	0.228	-0.690	0.491	-0.605	0.290
Law and order	0.452	0.299	1.510	0.131	-0.134	1.038
Ethnic tensions	-0.428	0.219	-1.950	0.051	-0.857	0.002
Democ. Account.	-0.456	0.104	-4.390	0.000	-0.659	-0.252
Bureaucratic quality	0.134	0.263	0.510	0.610	-0.381	0.649
Foreign debt	-1.212	0.296	-4.090	0.000	-1.793	-0.631
Current account	1.073	0.472	2.270	0.023	0.147	1.999
Exchange rate stability	-0.716	0.237	-3.020	0.003	-1.180	-0.251
Distance	0.044	0.000	0.310	0.755	0.000	0.000
Foreign Investment Act	0.116	0.108	1.080	0.282	-0.095	0.328
Host country involvement	-0.253	0.137	-1.850	0.064	-0.521	0.015
Number of other investors	-0.559	0.182	-3.080	0.002	-0.915	-0.203
Investment scale	-0.215	0.038	-5.640	0.000	-0.290	-0.141
Constant	5.258	0.661	7.950	0.000	3.962	6.555
q87						
Government stability	0.569	0.340	1.670	0.095	-0.098	1.236
Socioeconomic conditions	0.274	0.228	1.200	0.230	-0.174	0.722
Investment profile	0.596	0.203	2.940	0.003	0.198	0.994
Internal conflict	-0.343	0.187	-1.830	0.067	-0.710	0.025
External conflict	0.080	0.402	0.200	0.842	-0.708	0.868
Corruption	0.518	0.323	1.600	0.109	-0.116	1.152
Military	-0.138	0.202	-0.680	0.495	-0.534	0.258
Religious tensions	-0.084	0.247	-0.340	0.734	-0.568	0.400
Law and order	0.245	0.310	0.790	0.429	-0.363	0.853
Ethnic tensions	-0.343	0.192	-1.780	0.075	-0.720	0.034
Democ. Account.	-0.522	0.138	-3.780	0.000	-0.792	-0.251
Bureaucratic quality	0.325	0.322	1.010	0.313	-0.306	0.956
Foreign debt	-1.305	0.258	-5.060	0.000	-1.811	-0.800
Current account	1.159	0.443	2.620	0.009	0.290	2.029
Exchange rate stability	-0.745	0.210	-3.540	0.000	-1.157	-0.333
Distance	0.033	0.000	0.250	0.800	0.000	0.000
Foreign Investment Act	0.119	0.102	1.160	0.245	-0.081	0.319
Host country involvement	-0.331	0.110	-3.010	0.003	-0.546	-0.115
Number of other investors	-0.563	0.176	-3.200	0.001	-0.908	-0.217
Investment scale	-0.267	0.047	-5.700	0.000	-0.359	-0.175
Constant	6.307	0.641	9.840	0.000	5.050	7.563

Appendix Table 6.11 (continued)

SHARELOGIT	Bootstrap				[95% Conf.	Interval]
	Coef.	Std. Err.	t	P>t		
q88						
Government stability	0.628	0.314	2.000	0.045	0.013	1.244
Socioeconomic conditions	0.235	0.250	0.940	0.348	-0.256	0.726
Investment profile	0.691	0.233	2.970	0.003	0.236	1.147
Internal conflict	-0.327	0.233	-1.400	0.160	-0.784	0.129
External conflict	-0.042	0.414	-0.100	0.919	-0.854	0.770
Corruption	0.401	0.330	1.210	0.225	-0.247	1.048
Military	-0.055	0.221	-0.250	0.804	-0.488	0.379
Religious tensions	-0.063	0.265	-0.240	0.812	-0.583	0.457
Law and order	0.266	0.351	0.760	0.448	-0.421	0.954
Ethnic tensions	-0.330	0.216	-1.530	0.126	-0.752	0.093
Democ. Account.	-0.547	0.144	-3.790	0.000	-0.830	-0.264
Bureaucratic quality	0.394	0.315	1.250	0.211	-0.223	1.011
Foreign debt	-1.383	0.282	-4.900	0.000	-1.937	-0.829
Current account	1.308	0.484	2.700	0.007	0.360	2.256
Exchange rate stability	-0.721	0.234	-3.080	0.002	-1.179	-0.262
Distance	0.022	0.000	0.160	0.872	0.000	0.000
Foreign Investment Act	0.060	0.119	0.500	0.615	-0.174	0.294
Host country involvement	-0.378	0.120	-3.140	0.002	-0.614	-0.142
Number of other investors	-0.534	0.194	-2.750	0.006	-0.915	-0.153
Investment scale	-0.325	0.047	-6.840	0.000	-0.418	-0.232
Constant	7.314	0.624	11.720	0.000	6.091	8.537
q90						
Government stability	0.628	0.395	1.590	0.112	-0.147	1.403
Socioeconomic conditions	0.180	0.318	0.570	0.571	-0.444	0.805
Investment profile	0.744	0.342	2.170	0.030	0.072	1.415
Internal conflict	-0.117	0.265	-0.440	0.658	-0.637	0.402
External conflict	0.032	0.368	0.090	0.930	-0.690	0.754
Corruption	0.331	0.372	0.890	0.373	-0.397	1.060
Military	-0.010	0.285	-0.040	0.971	-0.569	0.548
Religious tensions	0.030	0.265	0.110	0.911	-0.489	0.548
Law and order	0.020	0.356	0.060	0.955	-0.678	0.718
Ethnic tensions	-0.315	0.225	-1.400	0.161	-0.756	0.125
Democ. Account.	-0.618	0.163	-3.790	0.000	-0.938	-0.299
Bureaucratic quality	0.592	0.322	1.840	0.066	-0.040	1.225
Foreign debt	-1.368	0.324	-4.220	0.000	-2.004	-0.732
Current account	1.115	0.465	2.400	0.017	0.203	2.027
Exchange rate stability	-0.750	0.244	-3.070	0.002	-1.229	-0.271
Distance	-0.023	0.000	-0.150	0.880	0.000	0.000
Foreign Investment Act	0.122	0.137	0.890	0.373	-0.147	0.391
Host country involvement	-0.524	0.128	-4.090	0.000	-0.775	-0.272
Number of other investors	-0.393	0.230	-1.710	0.087	-0.843	0.057
Investment scale	-0.358	0.060	-5.950	0.000	-0.476	-0.240
Constant	8.103	0.746	10.870	0.000	6.641	9.565

Appendix Table 6.11 (continued)

SHARELOGIT	Bootstrap				[95% Conf.	Interval]
	Coef.	Std. Err.	t	P>t		
q92						
Government stability	0.279	0.404	0.690	0.490	-0.514	1.072
Socioeconomic conditions	0.190	0.309	0.610	0.540	-0.417	0.796
Investment profile	0.803	0.423	1.900	0.058	-0.027	1.633
Internal conflict	0.135	0.398	0.340	0.734	-0.645	0.916
External conflict	-0.057	0.452	-0.130	0.899	-0.944	0.829
Corruption	0.515	0.468	1.100	0.272	-0.403	1.432
Military	-0.057	0.353	-0.160	0.871	-0.749	0.635
Religious tensions	0.051	0.316	0.160	0.873	-0.570	0.671
Law and order	0.079	0.402	0.200	0.844	-0.708	0.867
Ethnic tensions	-0.283	0.296	-0.960	0.339	-0.862	0.297
Democ. Account.	-0.738	0.195	-3.790	0.000	-1.120	-0.356
Bureaucratic quality	0.702	0.329	2.140	0.033	0.058	1.346
Foreign debt	-1.650	0.264	-6.240	0.000	-2.168	-1.131
Current account	1.606	0.484	3.320	0.001	0.656	2.556
Exchange rate stability	-0.793	0.236	-3.360	0.001	-1.256	-0.330
Distance	-0.016	0.000	-1.040	0.301	0.000	0.000
Foreign Investment Act	0.212	0.145	1.460	0.144	-0.072	0.495
Host country involvement	-0.591	0.132	-4.460	0.000	-0.851	-0.332
Number of other investors	-0.240	0.221	-1.080	0.278	-0.673	0.194
Investment scale	-0.414	0.069	-6.040	0.000	-0.549	-0.280
Constant	8.928	0.961	9.290	0.000	7.043	10.812
q95						
Government stability	-0.050	0.553	-0.090	0.928	-1.135	1.035
Socioeconomic conditions	0.634	0.324	1.960	0.050	0.000	1.269
Investment profile	0.987	0.472	2.090	0.037	0.061	1.913
Internal conflict	0.355	0.511	0.690	0.487	-0.647	1.358
External conflict	0.230	0.487	0.470	0.636	-0.725	1.186
Corruption	0.933	0.526	1.780	0.076	-0.097	1.964
Military	-0.156	0.374	-0.420	0.676	-0.890	0.577
Religious tensions	0.023	0.414	0.050	0.956	-0.789	0.834
Law and order	0.300	0.547	0.550	0.584	-0.773	1.373
Ethnic tensions	-0.803	0.465	-1.730	0.084	-1.715	0.109
Democ. Account.	-0.805	0.241	-3.340	0.001	-1.277	-0.332
Bureaucratic quality	0.145	0.445	0.330	0.744	-0.726	1.017
Foreign debt	-1.427	0.404	-3.530	0.000	-2.219	-0.635
Current account	0.911	0.595	1.530	0.126	-0.255	2.077
Exchange rate stability	-0.640	0.296	-2.160	0.031	-1.220	-0.060
Distance	-0.025	0.000	-1.340	0.179	0.000	0.000
Foreign Investment Act	0.329	0.202	1.630	0.103	-0.067	0.725
Host country involvement	-0.788	0.109	-7.210	0.000	-1.003	-0.574
Number of other investors	-0.072	0.223	-0.320	0.746	-0.510	0.365
Investment scale	-0.449	0.060	-7.440	0.000	-0.567	-0.330
Constant	10.062	0.920	10.930	0.000	8.257	11.866

Appendix Table 6.11 (continued)

SHARELOGIT	Bootstrap				[95% Conf.	Interval]
	Coef.	Std. Err.	t	P>t		
q96						
Government stability	0.203	0.627	0.320	0.746	-1.026	1.433
Socioeconomic conditions	0.461	0.350	1.320	0.187	-0.224	1.147
Investment profile	1.367	0.529	2.590	0.010	0.330	2.404
Internal conflict	0.259	0.473	0.550	0.584	-0.668	1.187
External conflict	0.173	0.548	0.320	0.752	-0.901	1.248
Corruption	0.843	0.509	1.650	0.098	-0.156	1.841
Military	-0.209	0.443	-0.470	0.637	-1.078	0.660
Religious tensions	0.215	0.459	0.470	0.640	-0.686	1.115
Law and order	0.287	0.529	0.540	0.587	-0.750	1.324
Ethnic tensions	-0.761	0.428	-1.780	0.075	-1.601	0.078
Democ. Account.	-0.835	0.253	-3.300	0.001	-1.330	-0.340
Bureaucratic quality	0.349	0.509	0.680	0.494	-0.650	1.348
Foreign debt	-1.354	0.410	-3.300	0.001	-2.158	-0.549
Current account	0.778	0.572	1.360	0.174	-0.344	1.900
Exchange rate stability	-0.491	0.388	-1.270	0.206	-1.253	0.270
Distance	-0.035	0.000	-1.630	0.103	0.000	0.000
Foreign Investment Act	0.313	0.221	1.420	0.156	-0.119	0.746
Host country involvement	-0.755	0.110	-6.850	0.000	-0.971	-0.539
Number of other investors	-0.046	0.223	-0.210	0.837	-0.483	0.391
Investment scale	-0.496	0.066	-7.530	0.000	-0.625	-0.367
Constant	10.882	1.162	9.370	0.000	8.604	13.160
q97						
Government stability	0.147	0.600	0.250	0.806	-1.029	1.323
Socioeconomic conditions	0.128	0.434	0.290	0.769	-0.724	0.979
Investment profile	1.556	0.596	2.610	0.009	0.387	2.725
Internal conflict	0.176	0.526	0.330	0.738	-0.855	1.207
External conflict	0.262	0.497	0.530	0.599	-0.713	1.236
Corruption	1.124	0.610	1.840	0.066	-0.072	2.320
Military	-0.385	0.415	-0.930	0.353	-1.199	0.428
Religious tensions	0.029	0.436	0.070	0.947	-0.827	0.885
Law and order	0.242	0.694	0.350	0.727	-1.119	1.603
Ethnic tensions	-0.473	0.398	-1.190	0.234	-1.253	0.307
Democ. Account.	-0.917	0.373	-2.460	0.014	-1.649	-0.186
Bureaucratic quality	0.353	0.478	0.740	0.461	-0.585	1.290
Foreign debt	-1.283	0.455	-2.820	0.005	-2.174	-0.391
Current account	1.031	0.601	1.710	0.086	-0.148	2.210
Exchange rate stability	-0.574	0.381	-1.510	0.132	-1.321	0.173
Distance	-0.042	0.000	-1.650	0.099	0.000	0.000
Foreign Investment Act	0.431	0.205	2.110	0.035	0.030	0.832
Host country involvement	-0.793	0.120	-6.600	0.000	-1.029	-0.558
Number of other investors	-0.006	0.247	-0.020	0.980	-0.490	0.478
Investment scale	-0.538	0.084	-6.380	0.000	-0.703	-0.372
Constant	11.566	1.440	8.030	0.000	8.741	14.390

Appendix Table 6.11 (continued)

SHARELOGIT	Bootstrap				[95% Conf.	Interval]
	Coef.	Std. Err.	t	P>t		
q99						
Government stability	0.650	0.619	1.050	0.294	-0.564	1.863
Socioeconomic conditions	0.824	0.644	1.280	0.201	-0.438	2.086
Investment profile	1.805	0.759	2.380	0.017	0.317	3.292
Internal conflict	-0.736	0.880	-0.840	0.403	-2.461	0.988
External conflict	-0.213	0.723	-0.290	0.768	-1.631	1.204
Corruption	0.471	0.746	0.630	0.528	-0.992	1.934
Military	-1.325	0.758	-1.750	0.080	-2.811	0.160
Religious tensions	0.924	0.859	1.080	0.282	-0.761	2.608
Law and order	0.320	0.881	0.360	0.717	-1.407	2.047
Ethnic tensions	-0.595	0.448	-1.330	0.184	-1.473	0.283
Democ. Account.	-0.301	0.472	-0.640	0.524	-1.227	0.624
Bureaucratic quality	1.197	0.910	1.320	0.188	-0.586	2.980
Foreign debt	-0.601	0.653	-0.920	0.357	-1.881	0.678
Current account	-0.113	1.189	-0.100	0.924	-2.444	2.218
Exchange rate stability	-0.322	0.525	-0.610	0.540	-1.352	0.708
Distance	-0.065	0.000	-1.480	0.138	0.000	0.000
Foreign Investment Act	-0.136	0.241	-0.560	0.573	-0.608	0.336
Host country involvement	-0.740	0.151	-4.900	0.000	-1.036	-0.443
Number of other investors	0.244	0.281	0.870	0.385	-0.306	0.795
Investment scale	-0.418	0.146	-2.860	0.004	-0.704	-0.132
Constant	10.191	2.060	4.950	0.000	6.152	14.229
Number of observations	3,330					
R-squared	.05 Pseudo R2=		0.0896			
	.13 Pseudo R2=		0.0500			
	.21 Pseudo R2=		0.0620			
	.27 Pseudo R2=		0.0582			
	.35 Pseudo R2=		0.0508			
	.42 Pseudo R2=		0.0574			
	.49 Pseudo R2=		0.0590			
	.54 Pseudo R2=		0.0555			
	.59 Pseudo R2=		0.0493			
	.75 Pseudo R2=		0.0061			
	.85 Pseudo R2=		0.0554			
	.87 Pseudo R2=		0.0733			
	.88 Pseudo R2=		0.0833			
	.90 Pseudo R2=		0.0908			
	.92 Pseudo R2=		0.0886			
	.95 Pseudo R2=		0.1170			
	.96 Pseudo R2=		0.1350			
	.97 Pseudo R2=		0.1264			
	.99 Pseudo R2=		0.1454			

Note: Quantile regression results, where quantiles q5, q13, q21 correspond to investor equity shares of 5% 10%, 15% and so on.

Appendix Table 6.12: Marginal Effects from Regressions in Appendix Table 6.11

	5%	10%	15%	20%	25%	30%	35%
Government stability	0.065	0.111	0.096	0.120	0.152	0.140	0.102
Investment profile	-0.053	-0.017	0.086	0.115	0.020	0.031	0.092
Law and order	-0.055	-0.047	-0.045	-0.031	-0.0001	-0.016	-0.010
Bureaucratic quality	-0.035	-0.034	0.072	0.053	0.116	0.139	0.169
Corruption	0.020	0.045	0.069	0.093	0.052	0.133	0.129
Democ. Account.	0.024	0.052	0.005	-0.002	-0.015	-0.036	-0.117
Military	0.010	-0.046	-0.114	-0.115	-0.082	-0.107	-0.102
Internal conflict	0.014	-0.015	-0.070	-0.142	-0.248	-0.272	-0.162
External conflict	-0.004	-0.018	0.023	0.046	0.087	0.072	0.096
Socioeconomic conditions	-0.004	-0.045	-0.088	-0.106	-0.050	-0.051	-0.050
Religious tensions	0.018	0.031	0.070	0.104	0.110	0.134	0.076
Ethnic tensions	-0.002	0.019	0.037	0.116	0.109	0.094	0.037

	40%	45%	50%	55%	60%	65%	70%
Government stability	0.124	0.104	0.037	0.068	0.064	0.066	0.057
Investment profile	0.126	0.091	0.030	0.063	0.067	0.073	0.067
Law and order	0.039	0.002	-0.0001	0.058	0.028	0.028	0.002
Bureaucratic quality	0.152	0.124	0.041	0.017	0.037	0.042	0.053
Corruption	0.118	0.102	0.062	0.076	0.059	0.042	0.030
Democ. Account.	-0.137	-0.087	-0.044	-0.058	-0.059	-0.058	-0.056
Military	-0.096	-0.094	-0.039	-0.028	-0.016	-0.006	-0.001
Internal conflict	-0.128	-0.115	-0.021	-0.044	-0.039	-0.035	-0.011
External conflict	0.075	0.072	0.049	0.025	0.009	-0.004	0.003
Socioeconomic conditions	-0.087	-0.051	0.015	0.037	0.031	0.025	0.016
Religious tensions	0.069	0.065	-0.003	-0.020	-0.009	-0.007	0.003
Ethnic tensions	0.024	0.022	-0.031	-0.055	-0.039	-0.035	-0.028

	75%	80%	85%	90%	95%
Government stability	0.021	-0.002	0.008	0.004	0.006
Investment profile	0.059	0.047	0.052	0.045	0.018
Law and order	0.006	0.014	0.011	0.007	0.003
Bureaucratic quality	0.052	0.007	0.013	0.010	0.012
Corruption	0.038	0.044	0.032	0.033	0.005
Democ. Account.	-0.054	-0.038	-0.032	-0.027	-0.003
Military	-0.004	-0.007	-0.008	-0.011	-0.013
Internal conflict	0.010	0.017	0.010	0.005	-0.007
External conflict	-0.004	0.011	0.007	0.008	-0.002
Socioeconomic conditions	0.014	0.030	0.018	0.004	0.008
Religious tensions	0.004	0.001	0.008	0.001	0.009
Ethnic tensions	-0.021	-0.038	-0.029	-0.014	-0.006

Appendix Table 6.13: Quantile Regression Results for Investors Equity Share by Percent

SHARELOGIT	Bootstrap				[95% Conf.	Interval]
	Coef.	Std. Err.	t	P>t		
q5						
Government stability	1.366	0.495	2.760	0.006	0.394	2.337
Socioeconomic conditions	-0.088	0.328	-0.270	0.788	-0.732	0.555
Investment profile	-1.111	0.461	-2.410	0.016	-2.015	-0.207
Internal conflict	0.299	0.447	0.670	0.504	-0.578	1.176
External conflict	-0.088	0.477	-0.180	0.853	-1.023	0.847
Corruption	0.425	0.501	0.850	0.397	-0.558	1.408
Military	0.208	0.483	0.430	0.666	-0.739	1.156
Religious tensions	0.383	0.304	1.260	0.207	-0.213	0.979
Law and order	-1.166	0.568	-2.050	0.040	-2.279	-0.052
Ethnic tensions	-0.046	0.450	-0.100	0.918	-0.930	0.837
Democ. Account.	0.497	0.349	1.420	0.155	-0.188	1.182
Bureaucratic quality	-0.736	0.515	-1.430	0.153	-1.745	0.273
Foreign debt	0.022	0.554	0.040	0.968	-1.064	1.108
Current account	-0.431	0.702	-0.610	0.539	-1.808	0.946
Exchange rate stability	-1.088	0.411	-2.650	0.008	-1.894	-0.283
Distance	-0.029	0.000	-1.420	0.157	0.000	0.000
Foreign Investment Act	-0.363	0.181	-2.000	0.045	-0.719	-0.008
Host country involvement	0.197	0.146	1.350	0.177	-0.089	0.484
Number of other investors	-1.048	0.221	-4.750	0.000	-1.480	-0.616
Investment scale	-0.140	0.060	-2.320	0.020	-0.258	-0.022
Constant	1.284	1.187	1.080	0.279	-1.043	3.611
q10						
Government stability	0.794	0.522	1.520	0.128	-0.230	1.817
Socioeconomic conditions	-0.154	0.408	-0.380	0.706	-0.953	0.646
Investment profile	-0.131	0.544	-0.240	0.810	-1.198	0.936
Internal conflict	0.252	0.393	0.640	0.522	-0.519	1.022
External conflict	0.019	0.288	0.070	0.946	-0.545	0.584
Corruption	0.463	0.318	1.460	0.145	-0.160	1.086
Military	-0.226	0.281	-0.810	0.421	-0.777	0.325
Religious tensions	0.093	0.210	0.440	0.657	-0.318	0.505
Law and order	-0.557	0.509	-1.090	0.274	-1.556	0.442
Ethnic tensions	0.007	0.427	0.020	0.986	-0.831	0.845
Democ. Account.	0.401	0.273	1.470	0.142	-0.134	0.937
Bureaucratic quality	-0.698	0.230	-3.040	0.002	-1.148	-0.248
Foreign debt	-0.430	0.388	-1.110	0.268	-1.192	0.332
Current account	0.312	0.502	0.620	0.535	-0.672	1.295
Exchange rate stability	-1.351	0.418	-3.230	0.001	-2.171	-0.531
Distance	-0.018	0.000	-0.820	0.410	0.000	0.000
Foreign Investment Act	-0.255	0.273	-0.930	0.351	-0.790	0.280
Host country involvement	0.273	0.132	2.060	0.039	0.014	0.531
Number of other investors	-0.815	0.208	-3.920	0.000	-1.223	-0.408
Investment scale	-0.119	0.047	-2.510	0.012	-0.211	-0.026
Constant	1.170	0.980	1.190	0.233	-0.752	3.092

Appendix Table 6.13 (continued)

SHARELOGIT	Bootstrap				[95% Conf.	Interval]
	Coef.	Std. Err.	t	P>t		
q15						
Government stability	0.862	0.516	1.670	0.095	-0.150	1.875
Socioeconomic conditions	-0.605	0.386	-1.570	0.117	-1.362	0.152
Investment profile	0.071	0.451	0.160	0.875	-0.814	0.956
Internal conflict	-0.501	0.304	-1.650	0.100	-1.096	0.095
External conflict	-0.119	0.401	-0.300	0.767	-0.906	0.668
Corruption	0.284	0.456	0.620	0.534	-0.610	1.178
Military	-0.318	0.279	-1.140	0.255	-0.864	0.229
Religious tensions	0.298	0.226	1.320	0.188	-0.146	0.742
Law and order	-0.338	0.462	-0.730	0.465	-1.244	0.568
Ethnic tensions	0.148	0.281	0.530	0.598	-0.403	0.698
Democ. Account.	0.146	0.297	0.490	0.623	-0.436	0.728
Bureaucratic quality	0.119	0.417	0.290	0.775	-0.698	0.936
Foreign debt	-0.576	0.285	-2.020	0.043	-1.134	-0.018
Current account	0.626	0.380	1.650	0.100	-0.120	1.371
Exchange rate stability	-1.033	0.335	-3.090	0.002	-1.689	-0.377
Distance	-0.029	0.000	-1.360	0.175	0.000	0.000
Foreign Investment Act	-0.158	0.225	-0.700	0.481	-0.598	0.282
Host country involvement	0.397	0.144	2.750	0.006	0.114	0.680
Number of other investors	-0.956	0.211	-4.530	0.000	-1.369	-0.542
Investment scale	-0.146	0.054	-2.710	0.007	-0.252	-0.041
Constant	1.627	0.965	1.690	0.092	-0.265	3.518
q20						
Government stability	0.635	0.456	1.390	0.164	-0.260	1.530
Socioeconomic conditions	-0.445	0.398	-1.120	0.264	-1.225	0.336
Investment profile	0.487	0.491	0.990	0.321	-0.476	1.449
Internal conflict	-0.293	0.395	-0.740	0.458	-1.068	0.482
External conflict	0.092	0.351	0.260	0.793	-0.596	0.780
Corruption	0.235	0.418	0.560	0.574	-0.584	1.053
Military	-0.647	0.247	-2.620	0.009	-1.132	-0.162
Religious tensions	0.424	0.303	1.400	0.162	-0.171	1.018
Law and order	-0.207	0.325	-0.640	0.523	-0.844	0.429
Ethnic tensions	0.035	0.241	0.150	0.883	-0.436	0.507
Democ. Account.	-0.003	0.242	-0.010	0.990	-0.478	0.472
Bureaucratic quality	0.401	0.359	1.120	0.264	-0.303	1.105
Foreign debt	-0.750	0.241	-3.120	0.002	-1.222	-0.278
Current account	0.656	0.373	1.760	0.079	-0.075	1.387
Exchange rate stability	-0.825	0.254	-3.250	0.001	-1.323	-0.328
Distance	-0.026	0.000	-1.480	0.138	0.000	0.000
Foreign Investment Act	-0.072	0.207	-0.350	0.730	-0.478	0.335
Host country involvement	0.338	0.127	2.660	0.008	0.089	0.587
Number of other investors	-0.944	0.196	-4.820	0.000	-1.328	-0.560
Investment scale	-0.138	0.049	-2.820	0.005	-0.233	-0.042
Constant	1.699	0.784	2.170	0.030	0.163	3.236

Appendix Table 6.13 (continued)

SHARELOGIT	Bootstrap				[95% Conf.	Interval]
	Coef.	Std. Err.	t	P>t		
q25						
Government stability	0.619	0.433	1.430	0.153	-0.230	1.467
Socioeconomic conditions	-0.566	0.387	-1.460	0.144	-1.326	0.193
Investment profile	0.727	0.459	1.590	0.113	-0.172	1.626
Internal conflict	-0.468	0.390	-1.200	0.231	-1.233	0.297
External conflict	0.251	0.307	0.820	0.413	-0.350	0.852
Corruption	0.377	0.291	1.300	0.195	-0.194	0.947
Military	-0.628	0.221	-2.850	0.004	-1.061	-0.196
Religious tensions	0.434	0.279	1.560	0.120	-0.113	0.980
Law and order	-0.257	0.351	-0.730	0.464	-0.945	0.431
Ethnic tensions	0.433	0.272	1.590	0.112	-0.101	0.967
Democ. Account.	0.090	0.180	0.500	0.615	-0.262	0.443
Bureaucratic quality	0.215	0.278	0.770	0.440	-0.330	0.760
Foreign debt	-0.715	0.206	-3.480	0.001	-1.118	-0.312
Current account	0.795	0.420	1.890	0.059	-0.029	1.619
Exchange rate stability	-0.802	0.251	-3.200	0.001	-1.294	-0.310
Distance	-0.020	0.000	-1.210	0.228	0.000	0.000
Foreign Investment Act	0.026	0.158	0.160	0.872	-0.285	0.336
Host country involvement	0.309	0.091	3.400	0.001	0.131	0.488
Number of other investors	-0.865	0.169	-5.130	0.000	-1.196	-0.534
Investment scale	-0.167	0.034	-4.850	0.000	-0.235	-0.100
Constant	2.101	0.617	3.400	0.001	0.891	3.312
q30						
Government stability	0.522	0.300	1.740	0.082	-0.066	1.110
Socioeconomic conditions	-0.271	0.275	-0.990	0.324	-0.810	0.268
Investment profile	0.382	0.280	1.360	0.173	-0.167	0.931
Internal conflict	-0.893	0.313	-2.850	0.004	-1.507	-0.279
External conflict	0.309	0.272	1.140	0.256	-0.224	0.841
Corruption	0.389	0.322	1.210	0.227	-0.243	1.022
Military	-0.488	0.225	-2.170	0.030	-0.930	-0.047
Religious tensions	0.369	0.252	1.470	0.143	-0.125	0.863
Law and order	-0.085	0.251	-0.340	0.734	-0.577	0.406
Ethnic tensions	0.585	0.198	2.960	0.003	0.197	0.972
Democ. Account.	0.017	0.172	0.100	0.921	-0.321	0.355
Bureaucratic quality	0.285	0.205	1.390	0.165	-0.117	0.687
Foreign debt	-0.737	0.231	-3.190	0.001	-1.190	-0.284
Current account	0.783	0.390	2.000	0.045	0.017	1.548
Exchange rate stability	-0.823	0.243	-3.390	0.001	-1.299	-0.346
Distance	-0.021	0.000	-1.230	0.217	0.000	0.000
Foreign Investment Act	-0.014	0.106	-0.140	0.892	-0.223	0.194
Host country involvement	0.267	0.068	3.950	0.000	0.134	0.399
Number of other investors	-0.761	0.143	-5.330	0.000	-1.041	-0.481
Investment scale	-0.225	0.041	-5.500	0.000	-0.306	-0.145
Constant	3.299	0.620	5.320	0.000	2.084	4.513

Appendix Table 6.13 (continued)

SHARELOGIT	Bootstrap				[95% Conf.	Interval]
	Coef.	Std. Err.	t	P>t		
q35						
Government stability	0.668	0.267	2.500	0.012	0.144	1.193
Socioeconomic conditions	-0.218	0.229	-0.950	0.340	-0.667	0.230
Investment profile	0.088	0.213	0.410	0.680	-0.330	0.506
Internal conflict	-1.088	0.223	-4.880	0.000	-1.526	-0.651
External conflict	0.384	0.187	2.060	0.040	0.018	0.750
Corruption	0.228	0.331	0.690	0.491	-0.421	0.877
Military	-0.360	0.186	-1.930	0.054	-0.725	0.006
Religious tensions	0.485	0.220	2.210	0.028	0.054	0.917
Law and order	0.000	0.217	0.000	0.999	-0.426	0.425
Ethnic tensions	0.477	0.166	2.880	0.004	0.153	0.802
Democ. Account.	-0.067	0.191	-0.350	0.726	-0.442	0.308
Bureaucratic quality	0.512	0.252	2.030	0.042	0.018	1.006
Foreign debt	-0.691	0.281	-2.460	0.014	-1.242	-0.140
Current account	0.633	0.410	1.540	0.123	-0.172	1.438
Exchange rate stability	-0.552	0.179	-3.080	0.002	-0.904	-0.200
Distance	-0.012	0.000	-0.790	0.428	0.000	0.000
Foreign Investment Act	-0.013	0.104	-0.130	0.899	-0.216	0.190
Host country involvement	0.262	0.056	4.670	0.000	0.152	0.372
Number of other investors	-0.741	0.097	-7.650	0.000	-0.931	-0.551
Investment scale	-0.223	0.031	-7.300	0.000	-0.283	-0.163
Constant	3.258	0.477	6.830	0.000	2.322	4.193
q40						
Government stability	0.690	0.247	2.790	0.005	0.204	1.175
Socioeconomic conditions	-0.183	0.201	-0.910	0.362	-0.578	0.211
Investment profile	0.067	0.188	0.360	0.721	-0.301	0.435
Internal conflict	-1.005	0.237	-4.230	0.000	-1.471	-0.540
External conflict	0.257	0.223	1.150	0.250	-0.180	0.694
Corruption	0.532	0.346	1.540	0.124	-0.146	1.209
Military	-0.385	0.232	-1.660	0.097	-0.840	0.070
Religious tensions	0.486	0.211	2.310	0.021	0.074	0.899
Law and order	-0.160	0.254	-0.630	0.528	-0.659	0.338
Ethnic tensions	0.373	0.176	2.110	0.035	0.027	0.718
Democ. Account.	-0.147	0.198	-0.740	0.457	-0.534	0.240
Bureaucratic quality	0.561	0.252	2.220	0.026	0.066	1.056
Foreign debt	-0.885	0.251	-3.530	0.000	-1.377	-0.393
Current account	0.826	0.470	1.760	0.079	-0.095	1.747
Exchange rate stability	-0.421	0.196	-2.140	0.032	-0.807	-0.036
Distance	-0.090	0.000	-0.790	0.430	0.000	0.000
Foreign Investment Act	-0.046	0.086	-0.530	0.597	-0.215	0.124
Host country involvement	0.173	0.048	3.640	0.000	0.080	0.267
Number of other investors	-0.630	0.101	-6.210	0.000	-0.829	-0.431
Investment scale	-0.217	0.034	-6.370	0.000	-0.283	-0.150
Constant	3.146	0.580	5.420	0.000	2.009	4.283

Appendix Table 6.13 (continued)

SHARELOGIT	Bootstrap				[95% Conf.	Interval]
	Coef.	Std. Err.	t	P>t		
q45						
Government stability	0.521	0.271	1.920	0.054	-0.010	1.051
Socioeconomic conditions	-0.235	0.152	-1.550	0.122	-0.533	0.063
Investment profile	0.361	0.225	1.600	0.109	-0.080	0.803
Internal conflict	-0.855	0.227	-3.760	0.000	-1.300	-0.409
External conflict	0.270	0.219	1.230	0.218	-0.160	0.700
Corruption	0.656	0.296	2.220	0.027	0.076	1.237
Military	-0.560	0.217	-2.580	0.010	-0.985	-0.134
Religious tensions	0.473	0.199	2.380	0.017	0.083	0.863
Law and order	-0.071	0.186	-0.380	0.702	-0.437	0.294
Ethnic tensions	0.280	0.196	1.430	0.153	-0.104	0.663
Democ. Account.	-0.257	0.166	-1.550	0.122	-0.582	0.069
Bureaucratic quality	0.574	0.192	2.990	0.003	0.197	0.951
Foreign debt	-0.963	0.243	-3.970	0.000	-1.439	-0.487
Current account	0.808	0.356	2.270	0.023	0.110	1.506
Exchange rate stability	-0.392	0.170	-2.310	0.021	-0.725	-0.059
Distance	-0.034	0.000	-0.330	0.742	0.000	0.000
Foreign Investment Act	-0.024	0.109	-0.220	0.827	-0.236	0.189
Host country involvement	0.112	0.046	2.430	0.015	0.021	0.203
Number of other investors	-0.453	0.109	-4.170	0.000	-0.667	-0.240
Investment scale	-0.235	0.038	-6.260	0.000	-0.308	-0.161
Constant	3.523	0.570	6.180	0.000	2.405	4.640
q50						
Government stability	0.459	0.271	1.690	0.091	-0.074	0.991
Socioeconomic conditions	-0.212	0.204	-1.040	0.300	-0.613	0.189
Investment profile	0.343	0.234	1.460	0.144	-0.117	0.803
Internal conflict	-0.569	0.252	-2.260	0.024	-1.063	-0.075
External conflict	0.410	0.207	1.980	0.048	0.004	0.816
Corruption	0.489	0.270	1.810	0.070	-0.040	1.019
Military	-0.421	0.159	-2.640	0.008	-0.733	-0.108
Religious tensions	0.284	0.216	1.310	0.189	-0.140	0.707
Law and order	0.008	0.198	0.040	0.969	-0.380	0.395
Ethnic tensions	0.049	0.162	0.300	0.761	-0.269	0.368
Democ. Account.	-0.428	0.190	-2.250	0.024	-0.800	-0.055
Bureaucratic quality	0.620	0.217	2.850	0.004	0.194	1.046
Foreign debt	-0.932	0.217	-4.310	0.000	-1.357	-0.508
Current account	0.733	0.303	2.420	0.016	0.138	1.328
Exchange rate stability	-0.400	0.189	-2.110	0.035	-0.771	-0.029
Distance	-0.058	0.000	-0.060	0.950	0.000	0.000
Foreign Investment Act	0.035	0.115	0.300	0.763	-0.191	0.261
Host country involvement	0.082	0.067	1.230	0.219	-0.049	0.213
Number of other investors	-0.462	0.109	-4.220	0.000	-0.676	-0.247
Investment scale	-0.230	0.040	-5.820	0.000	-0.308	-0.153
Constant	3.793	0.573	6.620	0.000	2.670	4.917

Appendix Table 6.13 (continued)

SHARELOGIT	Bootstrap				[95% Conf.	Interval]
	Coef.	Std. Err.	t	P>t		
q55						
Government stability	0.519	0.266	1.950	0.051	-0.002	1.040
Socioeconomic conditions	-0.336	0.206	-1.630	0.103	-0.739	0.068
Investment profile	0.484	0.225	2.150	0.031	0.044	0.925
Internal conflict	-0.546	0.281	-1.950	0.052	-1.096	0.004
External conflict	0.291	0.170	1.710	0.087	-0.042	0.624
Corruption	0.428	0.255	1.680	0.094	-0.072	0.928
Military	-0.382	0.166	-2.300	0.021	-0.708	-0.056
Religious tensions	0.248	0.203	1.220	0.222	-0.150	0.647
Law and order	0.227	0.243	0.940	0.349	-0.248	0.703
Ethnic tensions	0.041	0.167	0.250	0.805	-0.286	0.368
Democ. Account.	-0.501	0.176	-2.850	0.004	-0.846	-0.157
Bureaucratic quality	0.553	0.212	2.600	0.009	0.137	0.969
Foreign debt	-0.976	0.181	-5.400	0.000	-1.330	-0.622
Current account	0.917	0.275	3.330	0.001	0.377	1.456
Exchange rate stability	-0.435	0.157	-2.780	0.006	-0.742	-0.128
Distance	-0.049	0.000	-0.510	0.610	0.000	0.000
Foreign Investment Act	0.093	0.124	0.750	0.452	-0.150	0.336
Host country involvement	0.014	0.049	0.280	0.777	-0.082	0.109
Number of other investors	-0.372	0.105	-3.540	0.000	-0.579	-0.166
Investment scale	-0.238	0.037	-6.510	0.000	-0.309	-0.166
Constant	4.032	0.545	7.400	0.000	2.964	5.100
q60						
Government stability	0.451	0.277	1.630	0.104	-0.093	0.995
Socioeconomic conditions	-0.188	0.193	-0.970	0.331	-0.566	0.191
Investment profile	0.330	0.254	1.300	0.193	-0.168	0.828
Internal conflict	-0.475	0.264	-1.800	0.072	-0.993	0.042
External conflict	0.283	0.119	2.370	0.018	0.049	0.517
Corruption	0.354	0.201	1.760	0.078	-0.039	0.748
Military	-0.400	0.153	-2.620	0.009	-0.699	-0.101
Religious tensions	0.214	0.141	1.510	0.131	-0.064	0.491
Law and order	0.086	0.255	0.340	0.736	-0.415	0.587
Ethnic tensions	0.033	0.167	0.190	0.846	-0.295	0.361
Democ. Account.	-0.284	0.189	-1.500	0.133	-0.654	0.087
Bureaucratic quality	0.465	0.191	2.440	0.015	0.091	0.839
Foreign debt	-0.813	0.215	-3.780	0.000	-1.235	-0.391
Current account	0.813	0.300	2.710	0.007	0.225	1.402
Exchange rate stability	-0.332	0.136	-2.440	0.015	-0.599	-0.065
Distance	-0.014	0.000	-0.130	0.894	0.000	0.000
Foreign Investment Act	0.011	0.095	0.120	0.906	-0.175	0.197
Host country involvement	-0.019	0.053	-0.370	0.712	-0.123	0.084
Number of other investors	-0.299	0.095	-3.140	0.002	-0.485	-0.112
Investment scale	-0.205	0.027	-7.460	0.000	-0.259	-0.151
Constant	3.421	0.491	6.960	0.000	2.457	4.384

Appendix Table 6.13 (continued)

SHARELOGIT	Bootstrap				[95% Conf.	Interval]
	Coef.	Std. Err.	t	P>t		
q65						
Government stability	0.294	0.221	1.330	0.183	-0.139	0.727
Socioeconomic conditions	-0.208	0.170	-1.220	0.222	-0.542	0.126
Investment profile	0.362	0.256	1.410	0.157	-0.140	0.865
Internal conflict	-0.293	0.236	-1.240	0.216	-0.756	0.171
External conflict	0.291	0.093	3.140	0.002	0.109	0.473
Corruption	0.222	0.139	1.590	0.111	-0.051	0.495
Military	-0.370	0.144	-2.570	0.010	-0.653	-0.087
Religious tensions	0.195	0.158	1.230	0.217	-0.115	0.505
Law and order	0.027	0.195	0.140	0.892	-0.356	0.410
Ethnic tensions	-0.053	0.112	-0.470	0.636	-0.272	0.166
Democ. Account.	-0.272	0.137	-1.990	0.046	-0.540	-0.005
Bureaucratic quality	0.531	0.173	3.070	0.002	0.192	0.870
Foreign debt	-0.568	0.194	-2.930	0.003	-0.949	-0.188
Current account	0.547	0.273	2.000	0.045	0.012	1.081
Exchange rate stability	-0.207	0.114	-1.820	0.069	-0.429	0.016
Distance	-0.077	0.000	-0.880	0.377	0.000	0.000
Foreign Investment Act	0.030	0.070	0.430	0.666	-0.106	0.166
Host country involvement	-0.043	0.039	-1.090	0.275	-0.121	0.034
Number of other investors	-0.225	0.086	-2.600	0.009	-0.394	-0.055
Investment scale	-0.160	0.026	-6.090	0.000	-0.212	-0.109
Constant	2.738	0.463	5.910	0.000	1.829	3.646
q70						
Government stability	0.112	0.190	0.590	0.556	-0.260	0.483
Socioeconomic conditions	0.010	0.144	0.070	0.946	-0.272	0.292
Investment profile	0.188	0.176	1.070	0.287	-0.158	0.533
Internal conflict	-0.228	0.180	-1.270	0.204	-0.580	0.124
External conflict	0.277	0.102	2.710	0.007	0.076	0.478
Corruption	0.318	0.117	2.700	0.007	0.087	0.548
Military	-0.350	0.094	-3.720	0.000	-0.534	-0.165
Religious tensions	0.118	0.108	1.090	0.274	-0.094	0.331
Law and order	-0.002	0.190	-0.010	0.993	-0.374	0.370
Ethnic tensions	-0.073	0.099	-0.740	0.460	-0.268	0.121
Democ. Account.	-0.205	0.100	-2.050	0.040	-0.400	-0.009
Bureaucratic quality	0.341	0.159	2.150	0.032	0.030	0.652
Foreign debt	-0.484	0.176	-2.740	0.006	-0.829	-0.138
Current account	0.460	0.238	1.930	0.053	-0.006	0.926
Exchange rate stability	-0.087	0.108	-0.810	0.416	-0.298	0.123
Distance	-0.041	0.000	-0.530	0.596	0.000	0.000
Foreign Investment Act	0.051	0.048	1.060	0.288	-0.043	0.145
Host country involvement	-0.009	0.035	-0.270	0.787	-0.078	0.059
Number of other investors	-0.215	0.098	-2.200	0.028	-0.407	-0.023
Investment scale	-0.117	0.023	-5.190	0.000	-0.162	-0.073
Constant	1.974	0.404	4.880	0.000	1.181	2.767

Appendix Table 6.13 (continued)

SHARELOGIT	Bootstrap				[95% Conf.	Interval]
	Coef.	Std. Err.	t	P>t		
q75						
Government stability	0.197	0.168	1.170	0.240	-0.132	0.526
Socioeconomic conditions	0.082	0.139	0.590	0.553	-0.190	0.355
Investment profile	0.158	0.183	0.870	0.386	-0.200	0.517
Internal conflict	-0.113	0.192	-0.590	0.555	-0.489	0.263
External conflict	0.260	0.122	2.120	0.034	0.020	0.499
Corruption	0.328	0.156	2.100	0.036	0.022	0.635
Military	-0.206	0.103	-2.010	0.045	-0.408	-0.005
Religious tensions	-0.017	0.089	-0.190	0.849	-0.191	0.157
Law and order	-0.001	0.162	0.000	0.996	-0.319	0.317
Ethnic tensions	-0.165	0.109	-1.510	0.130	-0.378	0.049
Democ. Account.	-0.233	0.094	-2.480	0.013	-0.417	-0.049
Bureaucratic quality	0.217	0.135	1.610	0.107	-0.047	0.481
Foreign debt	-0.477	0.218	-2.180	0.029	-0.905	-0.049
Current account	0.333	0.265	1.260	0.208	-0.186	0.853
Exchange rate stability	-0.108	0.080	-1.350	0.179	-0.265	0.049
Distance	-0.039	0.000	-0.520	0.600	0.000	0.000
Foreign Investment Act	0.025	0.050	0.500	0.617	-0.073	0.123
Host country involvement	0.021	0.045	0.470	0.641	-0.068	0.110
Number of other investors	-0.249	0.123	-2.030	0.043	-0.491	-0.008
Investment scale	-0.092	0.031	-2.980	0.003	-0.152	-0.031
Constant	1.841	0.568	3.240	0.001	0.728	2.954
q80						
Government stability	0.306	0.221	1.380	0.167	-0.128	0.740
Socioeconomic conditions	0.136	0.203	0.670	0.503	-0.262	0.534
Investment profile	0.321	0.261	1.230	0.219	-0.191	0.833
Internal conflict	-0.281	0.303	-0.930	0.355	-0.875	0.314
External conflict	0.388	0.191	2.030	0.042	0.014	0.762
Corruption	0.428	0.270	1.590	0.112	-0.101	0.956
Military	-0.236	0.128	-1.840	0.065	-0.488	0.015
Religious tensions	-0.013	0.177	-0.070	0.940	-0.360	0.333
Law and order	0.162	0.296	0.550	0.584	-0.418	0.742
Ethnic tensions	-0.305	0.209	-1.460	0.145	-0.716	0.105
Democ. Account.	-0.376	0.133	-2.830	0.005	-0.636	-0.116
Bureaucratic quality	0.212	0.183	1.160	0.247	-0.147	0.571
Foreign debt	-0.668	0.269	-2.480	0.013	-1.195	-0.140
Current account	0.437	0.360	1.220	0.224	-0.268	1.142
Exchange rate stability	-0.180	0.149	-1.210	0.226	-0.471	0.112
Distance	-0.042	0.000	-0.430	0.664	0.000	0.000
Foreign Investment Act	0.097	0.074	1.310	0.191	-0.048	0.242
Host country involvement	-0.037	0.094	-0.390	0.695	-0.221	0.147
Number of other investors	-0.400	0.158	-2.530	0.012	-0.711	-0.090
Investment scale	-0.126	0.036	-3.440	0.001	-0.197	-0.054
Constant	2.833	0.691	4.100	0.000	1.479	4.188

Appendix Table 6.13 (continued)

SHARELOGIT	Bootstrap				[95% Conf.	Interval]
	Coef.	Std. Err.	t	P>t		
q85						
Government stability	0.533	0.385	1.390	0.166	-0.221	1.288
Socioeconomic conditions	0.287	0.254	1.130	0.258	-0.211	0.784
Investment profile	0.491	0.303	1.620	0.105	-0.103	1.086
Internal conflict	-0.346	0.362	-0.960	0.338	-1.055	0.363
External conflict	0.200	0.309	0.650	0.518	-0.406	0.805
Corruption	0.592	0.331	1.790	0.074	-0.057	1.242
Military	-0.218	0.161	-1.360	0.174	-0.533	0.097
Religious tensions	-0.157	0.203	-0.780	0.438	-0.554	0.240
Law and order	0.452	0.343	1.320	0.187	-0.220	1.124
Ethnic tensions	-0.428	0.249	-1.720	0.086	-0.916	0.061
Democ. Account.	-0.456	0.202	-2.260	0.024	-0.852	-0.060
Bureaucratic quality	0.134	0.309	0.430	0.665	-0.472	0.740
Foreign debt	-1.212	0.251	-4.830	0.000	-1.705	-0.720
Current account	1.073	0.372	2.880	0.004	0.344	1.802
Exchange rate stability	-0.716	0.219	-3.270	0.001	-1.145	-0.286
Distance	0.044	0.000	0.290	0.770	0.000	0.000
Foreign Investment Act	0.116	0.120	0.970	0.333	-0.119	0.352
Host country involvement	-0.253	0.144	-1.760	0.079	-0.536	0.030
Number of other investors	-0.559	0.139	-4.030	0.000	-0.831	-0.287
Investment scale	-0.215	0.066	-3.240	0.001	-0.346	-0.085
Constant	5.258	1.158	4.540	0.000	2.988	7.529
q90						
Government stability	0.628	0.437	1.440	0.151	-0.228	1.485
Socioeconomic conditions	0.180	0.266	0.680	0.498	-0.341	0.702
Investment profile	0.744	0.344	2.160	0.031	0.069	1.418
Internal conflict	-0.117	0.416	-0.280	0.778	-0.932	0.698
External conflict	0.032	0.354	0.090	0.927	-0.662	0.727
Corruption	0.331	0.428	0.770	0.439	-0.508	1.171
Military	-0.010	0.238	-0.040	0.965	-0.476	0.456
Religious tensions	0.030	0.305	0.100	0.923	-0.568	0.627
Law and order	0.020	0.346	0.060	0.954	-0.659	0.699
Ethnic tensions	-0.315	0.343	-0.920	0.359	-0.988	0.358
Democ. Account.	-0.618	0.237	-2.600	0.009	-1.084	-0.153
Bureaucratic quality	0.592	0.290	2.040	0.041	0.023	1.162
Foreign debt	-1.368	0.236	-5.790	0.000	-1.831	-0.905
Current account	1.115	0.305	3.660	0.000	0.518	1.713
Exchange rate stability	-0.750	0.193	-3.890	0.000	-1.128	-0.372
Distance	-0.023	0.000	-0.150	0.880	0.000	0.000
Foreign Investment Act	0.122	0.138	0.880	0.376	-0.149	0.393
Host country involvement	-0.524	0.164	-3.190	0.001	-0.845	-0.202
Number of other investors	-0.393	0.210	-1.870	0.062	-0.806	0.019
Investment scale	-0.358	0.064	-5.560	0.000	-0.484	-0.232
Constant	8.103	0.970	8.360	0.000	6.202	10.004

Appendix Table 6.13 (continued)

SHARELOGIT	Bootstrap				[95% Conf.	Interval]
	Coef.	Std. Err.	t	P>t		
q95						
Government stability	-0.050	0.620	-0.080	0.936	-1.265	1.165
Socioeconomic conditions	0.634	0.378	1.680	0.093	-0.106	1.375
Investment profile	0.987	0.584	1.690	0.091	-0.158	2.132
Internal conflict	0.355	0.434	0.820	0.413	-0.495	1.206
External conflict	0.230	0.450	0.510	0.608	-0.651	1.112
Corruption	0.933	0.636	1.470	0.143	-0.314	2.181
Military	-0.156	0.431	-0.360	0.716	-1.001	0.688
Religious tensions	0.023	0.444	0.050	0.959	-0.848	0.894
Law and order	0.300	0.513	0.580	0.559	-0.706	1.306
Ethnic tensions	-0.803	0.391	-2.050	0.040	-1.571	-0.036
Democ. Account.	-0.805	0.295	-2.730	0.006	-1.383	-0.226
Bureaucratic quality	0.145	0.500	0.290	0.772	-0.835	1.126
Foreign debt	-1.427	0.382	-3.730	0.000	-2.176	-0.677
Current account	0.911	0.424	2.150	0.032	0.079	1.742
Exchange rate stability	-0.640	0.290	-2.200	0.028	-1.209	-0.071
Distance	-0.025	0.000	-2.020	0.044	0.000	0.000
Foreign Investment Act	0.329	0.193	1.710	0.088	-0.049	0.707
Host country involvement	-0.788	0.178	-4.440	0.000	-1.136	-0.440
Number of other investors	-0.072	0.260	-0.280	0.780	-0.581	0.437
Investment scale	-0.449	0.091	-4.940	0.000	-0.626	-0.271
Constant	10.062	1.483	6.780	0.000	7.153	12.970
Number of observations	3,330					
R-squared	.05 Pseudo R2=		0.0896			
	.10 Pseudo R2=		0.0681			
	.15 Pseudo R2=		0.0512			
	.20 Pseudo R2=		0.0626			
	.25 Pseudo R2=		0.0622			
	.30 Pseudo R2=		0.0592			
	.35 Pseudo R2=		0.0508			
	.40 Pseudo R2=		0.0562			
	.45 Pseudo R2=		0.0577			
	.50 Pseudo R2=		0.0594			
	.55 Pseudo R2=		0.0541			
	.60 Pseudo R2=		0.0464			
	.65 Pseudo R2=		0.0254			
	.70 Pseudo R2=		0.0119			
	.75 Pseudo R2=		0.0061			
	.80 Pseudo R2=		0.0122			
	.85 Pseudo R2=		0.0554			
	.90 Pseudo R2=		0.0908			
	.95 Pseudo R2=		0.1170			

Note: Quantile regression results, where q5, q10, q15 correspond to the quantiles 5% 10%, 15% and so on.

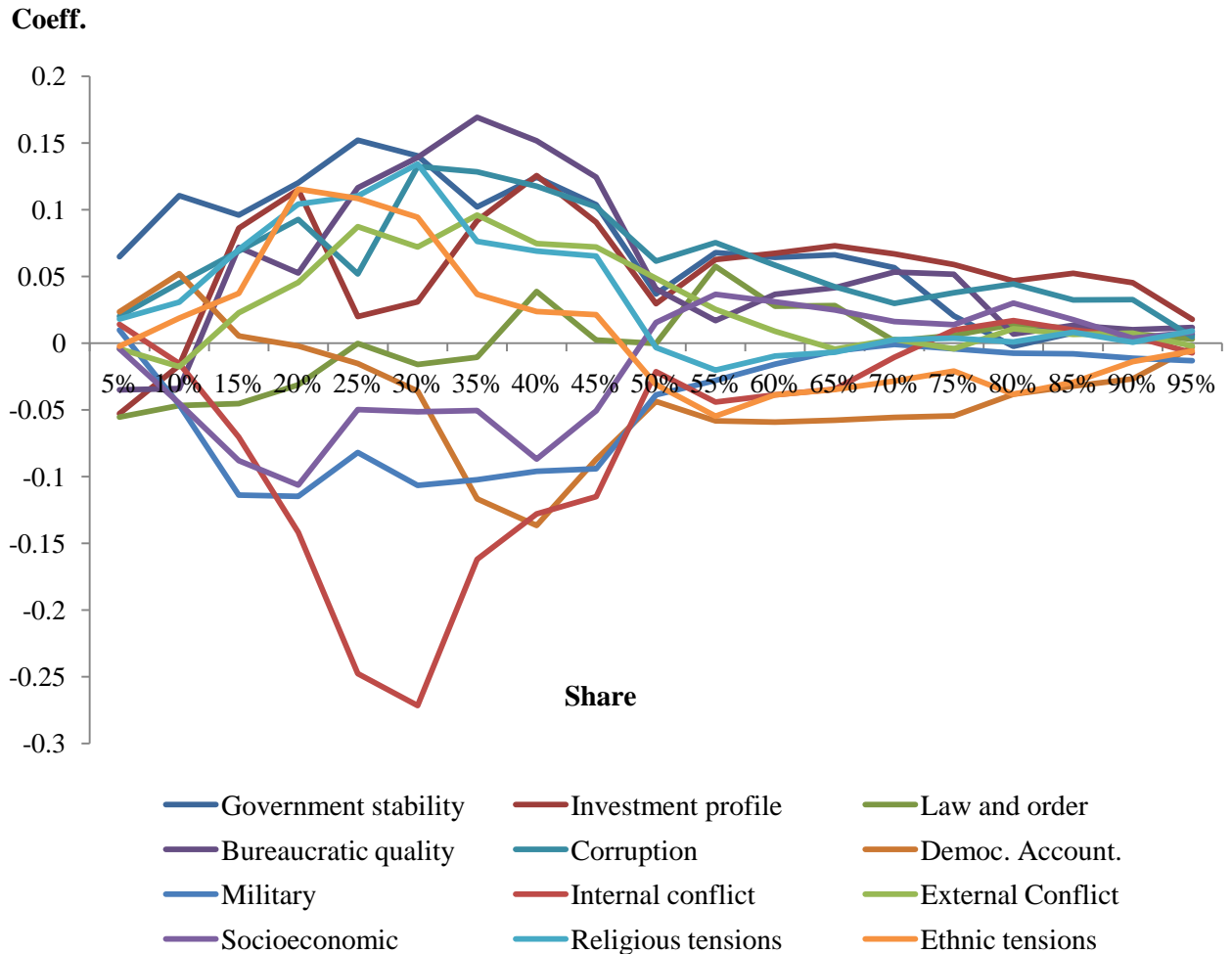
Appendix Table 6.14: Marginal Effects from Regressions in Appendix Table 6.13

	5%	10%	15%	20%	25%	30%	35%
Government stability	0.065	0.071	0.110	0.102	0.116	0.110	0.152
Investment profile	-0.053	-0.012	0.009	0.078	0.136	0.080	0.020
Law and order	-0.055	-0.050	-0.043	-0.033	-0.048	-0.018	-0.0001
Bureaucratic quality	-0.035	-0.063	0.015	0.064	0.040	0.060	0.116
Corruption	0.020	0.042	0.036	0.038	0.071	0.082	0.052
Democ. Account.	0.024	0.036	0.019	-0.0005	0.017	0.004	-0.015
Military	0.010	-0.020	-0.041	-0.104	-0.118	-0.103	-0.082
Internal conflict	0.014	0.023	-0.064	-0.047	-0.088	-0.188	-0.248
External conflict	-0.004	0.002	-0.015	0.015	0.047	0.065	0.087
Socioeconomic conditions	-0.004	-0.014	-0.077	-0.071	-0.106	-0.057	-0.050
Religious tensions	0.018	0.008	0.038	0.068	0.081	0.077	0.110
Ethnic tensions	-0.002	0.001	0.019	0.006	0.081	0.123	0.109

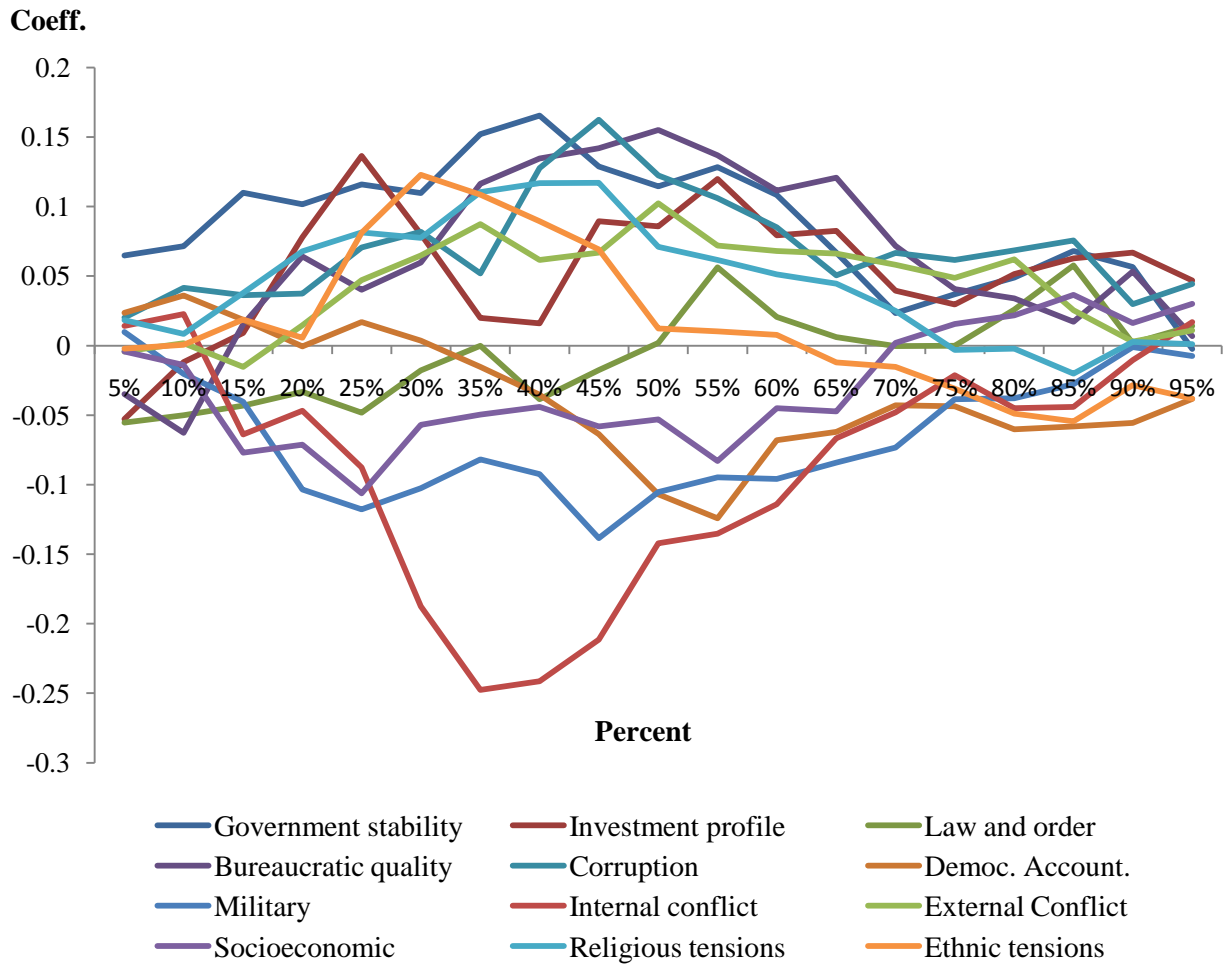
	40%	45%	50%	55%	60%	65%	70%
Government stability	0.165	0.129	0.115	0.128	0.108	0.067	0.023
Investment profile	0.016	0.089	0.086	0.120	0.079	0.082	0.039
Law and order	-0.039	-0.018	0.002	0.056	0.021	0.006	-0.0004
Bureaucratic quality	0.135	0.142	0.155	0.137	0.112	0.121	0.072
Corruption	0.128	0.162	0.122	0.106	0.085	0.051	0.067
Democ. Account.	-0.035	-0.064	-0.107	-0.124	-0.068	-0.062	-0.043
Military	-0.092	-0.139	-0.105	-0.095	-0.096	-0.084	-0.073
Internal conflict	-0.241	-0.212	-0.142	-0.135	-0.114	-0.067	-0.048
External conflict	0.062	0.067	0.102	0.072	0.068	0.066	0.058
Socioeconomic conditions	-0.044	-0.058	-0.053	-0.083	-0.045	-0.047	0.002
Religious tensions	0.117	0.117	0.071	0.061	0.051	0.044	0.025
Ethnic tensions	0.089	0.069	0.012	0.010	0.008	-0.012	-0.015

	75%	80%	85%	90%	95%
Government stability	0.037	0.049	0.068	0.057	-0.002
Investment profile	0.030	0.051	0.063	0.067	0.047
Law and order	-0.0001	0.026	0.058	0.002	0.014
Bureaucratic quality	0.041	0.034	0.017	0.053	0.007
Corruption	0.062	0.068	0.076	0.030	0.044
Democ. Account.	-0.044	-0.060	-0.058	-0.056	-0.038
Military	-0.039	-0.038	-0.028	-0.001	-0.007
Internal conflict	-0.021	-0.045	-0.044	-0.011	0.017
External conflict	0.049	0.062	0.025	0.003	0.011
Socioeconomic conditions	0.015	0.022	0.037	0.016	0.030
Religious tensions	-0.003	-0.002	-0.020	0.003	0.001
Ethnic tensions	-0.031	-0.049	-0.055	-0.028	-0.038

Appendix Figure 6.1: Quantile Regression Results for the Investor Equity Share



Appendix Figure 6.2: Quantile Regression Results for Equity Share by Percent



Chapter 7

Source Country Characteristics and FDI Inflows to Saudi Arabia

7.1 Introduction

As we have seen in Chapter 3 there has been growing interest in foreign direct investment (FDI) in Arab countries, partly driven by the concern about the relatively small amount of foreign investment in relation to the position of these countries in the world economy (Bolbol and Fatheldin, 2006). As possible explanations, Gemayel (2004) demonstrates that the investment risk associated with the instability of the Middle East and North Africa (MENA) countries is a critical factor in explaining the level of FDI into these areas, although there are doubtless other factors related to incomes and geographical and cultural proximity.

Thus, in a time-series analysis of the FDI inflows into Saudi Arabia, Abdel-Rahman (2002) investigates conventional factors for attracting inward FDI, such as market size, economic integration via international trade, wage rates and country risk. Using Granger causality tests, he finds that Saudi Arabia was successful in attracting FDI because of its overall economic performance, and that FDI inflows have impacted on growth. However, Sadik and Bolbol's (2001) find that FDI generated benefits have not yet materialized in Arab countries. It justifies more emphasis on the sources of FDI rather than a mere preoccupation with the factors affecting the location of FDI into particular countries or regions.

The purpose of this chapter is to analyze the source country determinants of incoming FDI to Saudi Arabia. It contributes to the existing FDI literature in a number of ways. First, it provides a comprehensive analysis of inward FDI for a country that falls in-between the traditional developed and developing countries. Second, it draws attention to the sensitivity of the results to the specification of the dependent variable. Using a count measure of foreign entries according to the number of projects produces results different from the ones obtained when FDI activity is measured by investment expenditure. This should perhaps not wholly surprise us given the pattern of projects and investment analyzed in Chapter 5. Finally, the results confirm the need to account for unobservable country-specific effects to identify the determinants of FDI and to link them to the characteristics of investing countries.

To analyze the determinants of incoming FDI, a gravity-type model is used, i.e. a model that includes the economic size and the geographical distance from Saudi Arabia to the investing country. This is based on the Investment Dataset that was described in Chapter 5, except that the data are aggregated at the country level, and the analysis is for the period 1980-2005 only. This is so we may collect other data on explanatory variables, but as we have seen it covers the period when most FDI has taken place in Saudi Arabia. The explanatory variables include a range of socio-economic and political variables for a total of 33 countries. As indicated above, two different measures of FDI are used: the number of investment projects incoming in each year from each country and the total amount of investment inflow. Techniques such as a negative binomial and Tobit regression are used to analyze the data. Overall, the chapter finds that a large number of factors affect the decision to invest in Saudi Arabia, but that relatively few of these explain the aggregate size of the investment amount.

In the next section, a rationale for the choice of explanatory variables is provided. The data sources and the empirical model are considered in Section 7.3, while the empirical results are presented in Section 7.4. Finally, Section 7.5 draws conclusions.

7.2 The Variables

The analysis is for 33 countries investing in Saudi Arabia over 1980-2005. This is so we can collect good source country data for each year over this period. We restrict the analysis in this chapter to 33 countries to rule out offshore financial centres (e.g. British Virgin Islands) since it is difficult to identify the ultimate country of origin for these projects (see UNCTAD 2006) and we also remove countries with small numbers of projects that lead to a lot of zero investments over time. In practice these countries account for a relatively small number of foreign investment projects in Saudi Arabia (details of these can be found in Appendix Table 5.4). Our choice of the explanatory variables is influenced by the literature review in Chapter 3, the use of the gravity model and also existing studies of source country characteristics. These variables are collected at the country level and are as follows. They include terms for the source country size, distance, 'economic freedom', bilateral trade and past investment and cover the variables that are identified in both the theoretical and empirical literature.

7.2.1 Source Country Size

Grosse and Trevino (1996) indicate that large economies contain a large number of firms that are capable of expanding their operations in foreign markets. Larger and implicitly more affluent economies, should have the capital and resources necessary for operating abroad,

such as technical knowledge and marketing expertise, and be able to meet different consumer demands in the host country. While occasionally, different signs are obtained (e.g. Thomas and Grosse, 2001, obtain a negative relationship for Mexico) in most of the earlier studies market size has been a major significant positive determinant of FDI (e.g. Grosse and Trevino, 1996, for the US; Kimino *et al.*, 2007, for Japan; and Gao, 2005, for China). Thus, we expect a positive relationship between source country size and FDI.

7.2.2 Distance

Greater distance between the source and host country (i.e. Saudi Arabia) may discourage the flow of FDI. In a trade context, the geographical distance refers to the cost of transportation and potential barriers to trade. In the case of FDI, greater distance implies not only transportation costs but the difficulties in obtaining information and managing the business, as well as differences in legal, institutional and other factors, which increase costs. Most studies find a negative relationship between distance and the flow of FDI to the country (e.g. Gao, 2005, for China). Some find a statistically insignificant effect for the effect of geographical distance on FDI, (e.g. Liu *et al.*, 1997), which is attributed to technological progress in transport and communications, while Thomas and Grosse (2001) find a positive relationship between distance and FDI, although we earlier noted a difficulty with this study. Thus, in general, we expect a negative relationship between distance and inward FDI.

It is not just geographical distance that is expected to reduce the flow of FDI between countries, but also cultural differences. Cultural similarities may be captured by a common language or by the existence of a common border (Gao, 2005), but in the case of Saudi

Arabia, all neighbouring and close-by countries are also Arab-speaking, so we do not include either a language or border dummy variable. Instead, we use the Hofstede (2001) index as a proxy for transaction costs arising from cultural differences.⁵¹ This index evaluates cultural values for individual countries according to four categories: ‘power distance’, ‘uncertainty avoidance’, ‘individualism/collectivism’ and ‘masculinity/femininity’.⁵² Cultural distance is measured by the sum of the absolute difference in these four categories between the home country and that for Saudi Arabia.

We also measure differences between Saudi Arabia and the countries from which the investment originates by the difference in per capita GDP. In the context of trade models, similarities in the per capita incomes of the trading partners leads to more trade in accordance with the Linder hypothesis (see McPherson *et al.*, 2001). Grosse and Trevino (1996) expect a similar link to hold for FDI, so that firms from more affluent countries should be more likely to invest in the US, and so on. We include the difference in the per capita incomes without a prior expectation about the sign, since, unlike other traditional developing and developed countries, per capita income in Saudi Arabia is reasonably high due to its oil revenues.

⁵¹ Forty countries are included in the Hofstede (2001) study but only a single score is given to Arab countries as they share the same faith and culture.

⁵² The power distance category relates to the degree to which power is distributed unequally in a particular society and to what extent this society accepts this distribution. The uncertainty avoidance is defined as the degree of acceptance of uncertainty and ambiguity in the society. Individualism/collectivism refers on the individualism side to the loose relationships between individuals within the society and the extent to which they look for their interest. At the opposite, collectivism relates to the extent that people are integrated into strong, cohesive in groups, where the interests of the group have the priority. Finally, masculinity/femininity refers to the degree the country tends to reinforce the role of masculine values that are very assertive and competitive or reinforce the feminine values that are more caring.

7.2.3 ‘Economic Freedom’

Studies on the determinants of FDI invariably come to the conclusion that the economic stability of the host country, the quality of its institutions and the general climate for foreign investment are important in attracting FDI (e.g. Gemayel, 2004; Me´on and Sekkat, 2004). The concept of ‘economic freedom’ is measured by the *Heritage Foundation Index* (2007), and embraces the removal of legislative obstacles as well as the creation of a general climate for stimulating investment, so that it can be used to measure these kinds of effect.⁵³ Many empirical studies confirm that ‘economic freedom’ has a positive effect on FDI inflows. For example, Quazi (2007) finds that ‘economic freedom’ increased FDI in East Asian countries. Similarly, Bengoa and Sanchez-Robles (2003) find a positive relationship between ‘economic freedom’ and FDI in Latin America.

While the ‘economic freedom’ of the host country plays an important role in attracting FDI, the significance of this in the case of the source country is not clear, but for which our data relate (e.g. we use the *Heritage Foundation Index* to measure the ‘economic freedom’ of the investing country rather than Saudi Arabia). On the one hand, a high value for the index of ‘economic freedom’ in the source country might indicate an environment conducive to entrepreneurship, which is necessary for foreign expansion, in which case a positive relationship between ‘economic freedom’ of the home country and FDI outflow is expected.

On the other hand, a good business climate in the source country may make firms less likely

⁵³ Details of the index can be found at www.heritage.org. The economic freedom index was created by the Heritage Foundation and the Wall Street Journal in 1995, and it measures the economic freedom according to an average of ten components, assigning a grade to each of these using a scale from 0 to 100, where 100 represents the maximum freedom. The ten components of economic freedom are: Business Freedom, Trade Freedom, Fiscal Freedom, Government Spending, Monetary freedom, Investment Freedom, Financial Freedom, Property rights, Freedom from Corruption and Labour Freedom.

to invest abroad, implying a negative relationship. Thus, including the term in this fashion suggests that we are measuring the relative effect, but which is like that of the political risk terms that were considered in Chapter 6.

The empirical evidence for sign on these is mixed. Kimino *et al.* (2007) conclude that a stable and favourable business climate in the home country increases FDI inflows from these countries to Japan. However, in their analysis of FDI in Mexico, Thomas and Grosse (2001) show that as political risk increases and business environment of the home country deteriorates firms are more likely to escape or diversify away from that political risk by investing abroad. Of course, this issue was investigated more fully in Chapter 6, and the index of economic freedom is included as a way of investigating the characteristics of the countries from where the investment arises.

7.2.4 Bilateral Trade

As well as the entry mode of FDI considered in Chapters 3 and 6, exports and FDI are two alternative modes for multinationals to enter foreign markets. At the firm level, trade and FDI are often substitutes, but at an aggregate level it is not clear whether these are substitutes or complements as there is empirical ambiguity regarding this issue. The view that trade and FDI complement each other rests on the assumption that engagement in international trade improves the ability of firms to undertake FDI. Exporting requires fewer up-front resources than FDI, and offers a way for a firm to obtain information about the market and business environment of the host country before making a commitment in the form of investment.

In practice, most studies confirm the positive and complementary effect of trade on FDI. Again, Thomas and Grosse (2001) find strong support for existing levels of trade being positively associated with FDI in Mexico, while Liu *et al.* (1997) identify a high degree of integration between a host and home country represented by exports and imports as an important determinant of FDI in China. More recent evidence for China in Zhao (2003) also confirms that FDI and bilateral trade complement each other. However, in contrast to this, Kimino *et al.* (2007) find a substitution rather than complementary effect between export performance and FDI, which they attribute to the nature of foreign investment in Japan as a recent phenomenon, as well as to the fact that FDI might occur while there is still no slow growth of exports. With such conflicting results, the substitutability or complementarity between FDI and trade is examined, but without any prior expectations about this.

7.2.5 Past Investment

Past inward investment can be a determinant of current investment. Agglomeration effects, as measured by the number of previous FDI entries into a particular location, have a very strong impact on attracting future investment, as shown by List (2001). Girma (2002) confirms the importance of agglomeration effects, where new investments cluster in the sectors already characterized by a strong foreign presence. Clearly, past investment might be an important consideration when choosing between different locations, be it different countries, regions or industries. With a single host country, and an emphasis on source country characteristics, the importance of past investment is best seen in the context of an approach that stresses the fixed set-up cost of FDI (Razin *et al.*, 2003). Previous FDI indicates that an investor has already

borne a cost in the past, and this may help to reduce the set-up cost of a new investment to the same country. Following this, a positive effect of past FDI on current investment is expected.

7.3 Data Description and the Model

In this chapter the focus is on the source country determinants of FDI flows, and the purpose is to identify the characteristics that lead countries to invest in Saudi Arabia. For this, the Investment Dataset is used, which was obtained from the Saudi Ministry of Commerce and Industry, and described in detail in Chapter 5. As this chapter makes clear, the data on investments go back to 1960, but that initially few investments took place (see Table 5.4). Since some of the data on source country characteristics is measured at a single point of time (and are reasonably time invariant), it is sensible to restrict the analysis in this chapter to the period 1980–2005. Further, in order to obtain consistent data on source country characteristics, and to rule out offshore financial centres (e.g. British Virgin Islands), for which it is difficult to identify the ultimate country of origin (UNCTAD, 2006), the focus here is on 33 countries.⁵⁴

A summary of foreign investment projects included in this chapter is shown in Table 7.1, which also indicates the number of excluded projects. In total, there are 4,998 projects, but the table shows that 365 of these occurred prior to 1980, while a further 657 projects are in the countries and offshore financial centres that are not included from this chapter. It gives a total of 3,976 foreign investment projects, which is about 80% of the total, and represents

⁵⁴ It means 57 countries are excluded, which are reported in full in Appendix Table 5.1 in Chapter 5.

82.4% of the total investment (Table 7.1). This is because the included investment projects tend to be slightly smaller on average after 1980 compared to earlier years.

Table 7.1: The Number and Investment Scale of Included Projects

Country	No. of Projects	Investment Amount (SR m)	(%)	Average Investment Scale (SR m)
33 countries, 1980-05	3,976	289,678	82.4	72.86
Other countries, 1980-05	657	35,914	10.2	54.66
(Sub-total)	(4,633)	(325,592)	(92.6)	(70.28)
All countries, 1960-79	365	25,864	7.4	70.86
Grand total	4,998	351,456	100.0	70.32

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Note: Investments measured at constant 2000 prices.

A breakdown of foreign projects according to the 33 source countries is shown in Appendix Table 7.1. It reveals that most projects arise from the neighbouring MENA countries, with 1,886 (47.4% of 3,976) from West Asia (principally Jordan, Syria and Lebanon) and 463 (11.6%) from North Africa (mainly Egypt), although combined these account for only 20% of FDI by value, so that these projects tend to be smaller in scale. Larger investments come from developed countries, with 20% of total investment from Far East, 20% from the North America and 18% from Western Europe. Outside of MENA, the major source countries by the number of projects are the US, UK and Canada, but substantial amounts of investment by value arises from France, Germany, Italy and Sweden. Outside these areas, the main other source of FDI is the Indian sub-continent.

7.3.1 Empirical Model and Variables

On the basis of the above discussion, the panel model is specified as:

$$FDI_{it} = \alpha + \beta_1 Size_{it} + \beta_2 Distance_i + \beta_3 Cultural\ Distance_i + \beta_4 Economic\ Distance_{it} + \beta_5 Economic\ Freedom_i + \beta_6 Bilateral\ Trade_{it} + \text{error term.} \quad (7.1)$$

where the right-hand side terms represent the explanatory variables, the country subscript is $i = 1, \dots, 33$ and the time subscript is $t = 0, \dots, 25$ for the years 1980–2005. The time subscripts in (7.1) indicate that some variables are measured for each year, but that others are measured across the 33 countries only. In some specifications, we include the effect of past FDI.

The definition and source of the variables used in this chapter are given in Table 7.2. The variables are included based on the earlier discussion of the theoretical and empirical literature on source country characteristics, and that point to the use of a gravity-type model (see for example Wei, 2000 and Tong, 2005). The size, geographical distance, exports and imports are expressed in logarithmic form. FDI inflows are assessed on the basis of the register of new investment projects maintained by the Saudi Ministry of Commerce and Industry (see Chapter 5). Table 7.2 shows that the bilateral trade flows come from the International Monetary Fund *Directory of Trade Statistics*. The Hofstede cultural indices and Heritage Economic Freedom indices are taken from the relevant websites. The remaining variables were obtained from the World Bank *World Development Indicators*.

Table 7.2: Variable Definitions and Sources

Variable	Description	Source
FDI	Inflow of FDI from a given source country, measured by: <ul style="list-style-type: none"> - number of projects. - total real investment. 	Saudi Ministry of Commerce and Industry
Size	Size of source country measured by its real GDP.	<i>World Development Indicators</i> , World Bank
Distance	Geographical distance in kilometers between Riyadh and capital city of each source country.	http://www.indo.com
Cultural distance	Sum of absolute differences in index between Saudi Arabia and source country according to each of four components ('power distance', 'uncertainty avoidance', 'individuality', and 'masculinity')	Hofstede cultural index
Economic distance	Difference between source country and Saudi real GDP per capita.	<i>World Development Indicators</i> , World Bank
Economic freedom	Heritage Index of Economic Freedom.	Heritage Economic Freedom indices
Bilateral trade	Measured by: <ul style="list-style-type: none"> - real exports from the source country to Saudi Arabia. - real imports from Saudi Arabia. 	<i>Directory of Trade Statistics</i> , International Monetary Fund
Past investment projects	Mean number of FDI projects in the past three years.	Saudi Ministry of Commerce and Industry

The correlation between the above variables is shown in Table 7.3. As nearby countries can be similar in their respective characteristics, then given that these account for a large number of the overall number of projects, the respective variables can be highly correlated.

Table 7.3: Correlation Matrix for the Variables

	1	2	3	4	5	6	7
1 <i>Size</i>	1						
2 <i>Distance</i>	0.62	1					
3 <i>Cultural distance</i>	0.71	0.75	1				
4 <i>Economic distance</i>	0.61	0.30	0.60	1			
5 <i>Economic freedom</i>	0.54	0.53	0.73	0.72	1		
6 <i>Exports from source country</i>	0.50	0.13	0.30	0.40	0.45	1	
7 <i>Imports from Saudi Arabia</i>	0.40	-0.06	0.11	0.25	0.24	0.56	1

In the case of the dependent variable in (7.1) this is measured for each source country i at year t in relation to Saudi Arabia, and in either of two ways: the number of projects and as the logarithm of the total real foreign investment. Apart from the traditional determinants of FDI used in the gravity model, we also investigate the impact of past investment. In the context of panel data with non-zero values of dependent variables, this leads to a dynamic panel data approach (see e.g. Driffield, 2002) with the possibility of investigating time lags. With our dependent variable being either count data or FDI flow data with a substantial number of zeros, we look for a consistent way of introducing past investment. Somewhat arbitrary, we measure past investment as the average number of investment projects in the previous three years (Table 7.2).⁵⁵ Past investment defined in this way enters the list of explanatory variables in the negative binomial regression and it is also used to test the hypothesis of the fixed set-up cost of FDI flows (Razin *et al.*, 2004).

⁵⁵ The inclusion of lagged dependent variables in the model can lead to errors in variable problem and a potential bias in the coefficients. A way to overcome this problem is to employ Arellano and Bond GMM dynamic panel estimation (see for example Driffield, 2002); however, this is for standard panel data analysis and not for the negative Binomial estimation technique, which we believe is the correct estimation technique given the nature of our data discussed above. The issue of lagged dependent variables also becomes irrelevant when we analyse the model for investment flows, since past investment is measured by the number of projects and not by inflows. In addition to this we also measure past investment projects as an average of the previous three years investment projects.

7.4 Empirical Results

7.4.1 The Number of Projects

The initial interest is in the number of foreign investments from each country in each year. The estimation results for equation (7.1) are presented in Table 7.4. We start with the simple pooled negative binomial regression, ignoring possible country-specific effects. We explore the panel nature of the data in the fixed and random effects negative binomial regressions. In the notes to Table 7.4 the results of several statistical tests are reported. First, a test of the over-dispersion parameter α is carried out. When α is zero, the negative binomial distribution is equivalent to a Poisson distribution. In this case, α is significantly different from zero confirming the negative binomial model. The second test favours the random effects model over a pooled regression with a single constant term. A pooled regression does not control for unobserved heterogeneity among countries and might lead to statistically meaningless results. Both the fixed and random effects versions produce similar results, but the Hausman statistic suggests that the random effects version is statistically justifiable.

With the inflow of FDI measured by the number of foreign projects, the main gravity-type variables, namely size and geographical distance, display the expected signs and are statistically significant in each case in Table 7.4. The coefficient on the cultural difference has the right sign but is significant only in the pooled regression, while once country-specific heterogeneity is controlled for, it is statistically insignificant. Economic distance, which is measured by the difference in per capita income, is negatively related to the number of foreign projects in all versions, suggesting that Saudi Arabia tends to receive investment from

the countries with lower levels of development. The index of economic freedom is always positive and significant, so that the investments also originate from countries characterized by an advanced business and investment environment. They confirm the above tabular analyses.

Table 7.4: Number of Foreign Investments: Negative Binomial Regressions

	Pooled		Fixed Effects		Random Effects	
Size of source country	0.2754***	(5.89)	0.3939***	(3.29)	0.4509***	(4.48)
Geographical distance	-0.4529***	(5.05)	-0.9145***	(3.11)	-0.7824***	(3.48)
Cultural distance	-0.0122***	(6.75)	0.0120	(0.31)	-0.0041	(0.88)
Economic distance	-0.0281***	(3.91)	-0.0704***	(3.69)	-0.0727***	(4.37)
Economic freedom	0.0614***	(6.28)	0.1230***	(5.71)	0.1123***	(6.07)
Exports from source country	0.0513***	(3.60)	0.0055	(0.27)	0.0064	(0.32)
Imports from Saudi Arabia	-0.0158	(1.00)	-0.0242	(1.17)	-0.0289	(1.44)
Past investment projects	0.0444***	(6.05)	0.0028	(1.49)	0.0035***	(2.00)
Log L	-1,517.13		-1,217.84		-1,408.55	

Notes: n = 693; year dummies included; t-statistics in parentheses; t-statistics based on robust standard errors in pooled regression; ***, **, * denote significance at the 1%, 5%, 10% levels, respectively.

Test statistics: Poisson vs negative binomial test of $\alpha = 0$: Chi-sq(1) = 2,379.98***;

Pooled vs random effects: Chi-sq(1) = 410.01***;

Fixed vs random effects Hausman test: Chi-sq(30) = 2.19.

Table 7.4 shows that there is an insignificant relationship between trade and FDI, as captured by exports and imports. Although there is a positive coefficient on exports from the source country to Saudi Arabia and that this suggests that the penetration by trade accompanies FDI, this is significant in the pooled regression only. Imports are insignificant in all three specifications, so the existence of some economic links between the countries, such as those involved in importing, does not seem to be important for investment in Saudi Arabia. However, familiarity of the source country with the host economy through past investment in

the preceding three years has a positive impact on FDI in the pooled regression and in the random effects version, so would seem to be a more important factor for determining FDI flows compared to trade links.

7.4.2 The Investment Inflow

We also analyze FDI in terms of investment inflows rather than the number of projects. The dependent variable is the value of investment inflow in equation (7.1). It is censored at zero, and we consider three alternative approaches to deal with these zero flows. First, we estimate investment by OLS using only positive observations on inflows. Second, a Tobit model is used to take into account the observations where no investment arises from a country in a particular year. Third, we pool all the year-country observations and as explore the panel nature of the data in the random effects model.⁵⁶ The Tobit model supposes that the same set of factors determines the value of uncensored observation (how much is invested) and if an observation is censored (whether a country invests at all). This assumption is relaxed in the Heckman (1979) sample selection approach. We use Heckman's two-step procedure to estimate the flow of FDI and to identify the factors affecting participation in FDI (i.e. a probit regression is run on whether each country invests in Saudi Arabia (= 1) or not (= 0) in each year, which forms the selection equation). The results are presented in Table 7.5, where the list of explanatory variables is the same as in Table 7.4.

⁵⁶ Only a random effects model is included in the following analysis as the standard econometric packages do not provide an adequate estimation method for the fixed effects version (Stata, 2005).

Table 7.5: Determinants of Foreign Investment Inflows

	OLS on Non-zero Values (n = 475)		Pooled Tobit		Random Effects Tobit		Heckman			
							FDI Inflow		Selection	
Size of source country	0.0102	(0.23)	0.1002**	(2.25)	0.1042*	(1.79)	-0.0079	(-0.26)	0.1200*	(1.76)
Geographical distance	0.1289	(1.35)	-0.0912	(-1.49)	-0.1172	(-0.99)	0.1610	(1.51)	-0.2803**	(-2.20)
Cultural distance	-0.0018	(-0.63)	-0.0045*	(-1.72)	-0.0047*	(-1.98)	-0.0013	(-0.56)	-0.0047*	(-1.97)
Economic distance	0.0243***	(2.15)	0.00212**	(2.17)	0.0213**	(2.27)	0.0233**	(2.08)	0.0251**	(2.37)
Economic freedom	-0.0126	(-1.35)	0.0094	(1.40)	0.0110	(1.06)	-0.0153**	(-1.96)	0.0231**	(2.22)
Exports from source country	0.0012	(0.14)	-0.0118	(-1.19)	-0.0140	(-0.83)	0.0051	(0.66)	-0.0779***	(-3.78)
Imports from Saudi Arabia	0.0116	(1.16)	0.0002	(0.02)	-0.0027	(-0.16)	0.0116	(1.23)	0.0142	(0.67)
Past investment projects	0.0024	(1.05)	0.0041*	(1.79)	-0.0001	(-0.01)			0.4468***	(4.05)
Rho							-0.1859 (-0.93)			
R-squared	0.1098									
Log L			-722.20		-717.05				-899.25	

Notes: n = 693; number of censored observations = 218; year dummies included; t-statistics based on robust standard errors in parentheses; ***, **, * denote significance at the 1%, 5%, 10% levels, respectively; likelihood-ratio test for pooled versus random effects for Tobit: Chi-sq(1) = 10.31***.

As regards the results in Table 7.5, the OLS estimation based only on non-zero flows provides relatively little insight into the determinants of FDI, as economic distance is the only significant variable. The Tobit results offer a range of explanations, with many significant variables displaying the expected signs. For the Heckman two-step procedure, the variables affecting selection must be identified from those affecting the size of the investment inflow.⁵⁷ In this respect it is posited that past investments affects selection only, with the remaining variables determining both the decision to invest in Saudi Arabia and the amount of FDI. Past investment, measured by the number of projects undertaken in the past rather than the overall size of investment, is intended to test the hypothesis of fixed set-up costs of FDI flows (Razin *et al.*, 2004). The discussion below is based on the Tobit and Heckman results.

Overall, when the value of investment inflow rather than the number of projects is analyzed, then a slightly different picture emerges. The size of the source economy remains significant and positive in most specifications, but the geographical distance is no longer an obstacle to FDI, although a cultural distance between the source and the recipient country is. In contrast to the results in Table 7.4, when the investment activity is measured by the size of FDI inflow it turns out that the coefficient on economic distance is consistently positive. Neither economic freedom nor trade links with the source countries are significant in the Tobit specifications. Past investment projects are a significant determinant only in the pooled Tobit regression but according to the likelihood-ratio test there are significant source-country effects, which make inference from the pooled regression inappropriate.

⁵⁷ Although the procedure can be carried out with the same set of variables, Wooldridge (2006) argues for an exclusion restriction to distinguish sample selection from a mis-specified functional form.

The results for the Heckman model deserve separate discussion. First, there are a large number of factors affecting selection compared with relatively few significant determinants of the size of the flow. Moreover, some of the factors work in the opposite direction. This gives support to the selection model as preferable the Tobit model, where the same factors affect censored and uncensored observations and the marginal effects display the same sign for both categories. The size of the source country and distance, both geographical and cultural, affect the selection into becoming an investor in Saudi Arabia, although they do not determine the size of the flow.

Countries characterized by a high index of economic freedom and high income per capita are more likely to become investors, but the size of investment inflow is positively related to economic distance and negatively to economic freedom. From the selection equation, there is some evidence that investing in Saudi Arabia does not coincide with exporting to this market. The negative coefficient indicates that source countries exporting to Saudi Arabia are less likely to establish production facilities there. A similar substitution rather than complementary effect was identified for Japan, which Kimino *et al.* (2007) attribute to the characteristics of the Japanese economy that make it an unlikely location for outsourcing or an export platform for the region. In the case of Saudi Arabia, more research is required to identify the sectors in which FDI occurs in order to provide satisfactory explanations.

The inclusion of past investment projects in the selection equation was dictated by identification of this equation (separate from (7.1)), and motivated by an attempt to verify the hypothesis of the existence of set-up costs of FDI. If set-up costs play an important role in determining whether a source country undertakes an investment, then there should be a negative correlation between the error terms of the flow and the participation equation (Razin

et al., 2004). For example, if a foreign investor has already undertaken a project in the host country, this implies a reduction in the setting-up of a new investment in the same country, which in turn will encourage increased flows of FDI, and hence a negative correlation between the equations. In Table 7.4, past investment projects are positive and significant in the selection equation. However, the coefficient of correlation between the flow and participation equations (ρ), although negative as expected, turns out to be insignificant. Table 7.5 shows that the past investment in the selection equation is found to be a positive and significant determinant.

7.5 Conclusions

The objective of this chapter is to investigate to what extent source country characteristics explain the inflow of FDI into Saudi Arabia. To my knowledge, this is the first time that this has been considered in the context of Saudi Arabia. The unique dataset that was obtained from the Saudi Ministry of Commerce and Industry, which lists all new investment projects involving foreign ownership, was used to construct a panel of 33 countries for the 1980–2005 period. The number of investment projects is estimated using negative binomial regression, and total investment inflow is modelled using the Tobit regression and Heckman selection procedure, in order to account for some country-year observations with zero FDI flows.

The conclusions drawn from the analysis employing panel-based techniques differ from the results obtained from pooled regression models. Once unobservable country-specific effects are taken into account some coefficients become statistically insignificant. The determinants of FDI also differ depending on whether foreign investment is measured in terms of the

number of individual foreign projects or the investment expenditure. When investigating total FDI inflows, it turns out that there are a large number of factors affecting the decision to invest in Saudi Arabia compared with few determinants of the actual size of the investment.

With Saudi Arabia being a developing country but with a relatively high income per capita due to oil exports one could expect the determinants of FDI to be different from those for traditional developing or developed countries. Standard gravity-type explanations hold to a great extent, with the size of the source economy positively related and the distance negatively related to the inflow of FDI. It is the geographical distance that hinders investment when FDI is measured in terms of the number of foreign projects, while cultural distance matters if FDI is measured by the total investment expenditure. In many specifications a positive impact of past investments is apparent, indicating that set-up costs may be lower for an investing country which has already acquired some familiarity with the Saudi economy.

Certain characteristics of the investing countries are also identified, making it possible to speculate about the scope for possible spillovers. It is reassuring that the coefficient on economic freedom is positive and significant in most specifications as it suggests that the investing countries are characterized by an advanced business environment. However, it is not clear whether the investment comes from more technologically advanced countries. The coefficient on economic distance is negative when FDI is measured by the number of investment projects. The size of investment is positively related to economic distance suggesting that volume-wise important investments come from countries characterized by high income per capita. The commonly acknowledged relationship between FDI and bilateral trade does not apply to Saudi Arabia and there is some evidence that the countries that export to Saudi Arabia do not invest there.

Compared with other regions and types of economies, there is a limited amount of research on FDI in Arab countries. This chapter is the first attempt to analyze the inflow of FDI into Saudi Arabia from the perspective of source country characteristics. Saudi Arabia receives FDI from a range of countries, including most advanced industrialized economies as well as neighbouring Arab countries. The analysis demonstrates that some determinants of inward FDI previously established for developed and developing countries as the target recipients of FDI do not necessarily hold for Saudi Arabia. With the increasing importance of South–South investment recognized by UNCTAD (2006), more research using disaggregate data is needed to identify factors affecting FDI and attribute them to the unique characteristics of Arab countries and oil-exporting countries.

Appendix Table 7.1: Number and Investment Scale of Projects by 33 Countries, 1980-05

Country	No. of Projects	Total Investment Amount (SR m)	(%)	Average Investment Scale (SR m)
MENA (West Asia)	1,886	67,579	19.23	35.83
Kuwait	(47)	(29,343)	(8.35)	(624.31)
Jordan	(511)	(8,194)	(2.33)	(16.04)
Bahrain	(52)	(8,561)	(2.44)	(164.63)
United Arab Emirates	(71)	(7,148)	(2.03)	(100.67)
Lebanon	(329)	(6,716)	(1.91)	(20.41)
Syria	(509)	(3,644)	(1.04)	(7.16)
Yemen	(257)	(1,286)	(0.37)	(5.00)
Iran	(20)	(1,790)	(0.51)	(89.48)
Turkey	(78)	(618)	(0.18)	(7.93)
Iraq	(12)	(279)	(0.08)	(23.28)
MENA (North Africa)	463	3,792	1.08	8.19
Egypt	(438)	(3,605)	(1.03)	(8.23)
Sudan	(25)	(187)	(0.05)	(7.49)
Western Europe	591	64,926	18.47	109.86
France	(98)	(26,063)	(7.42)	(265.95)
Netherlands	(52)	(1,744)	(0.50)	(33.53)
Italy	(49)	(10,490)	(2.98)	(214.08)
Germany	(102)	(8,197)	(2.33)	(80.36)
Sweden	(19)	(8,223)	(2.34)	(432.79)
United Kingdom	(182)	(7,247)	(2.06)	(39.82)
Switzerland	(54)	(2,463)	(0.70)	(45.61)
Belgium	(12)	(183)	(0.05)	(15.27)
Spain	(12)	(283)	(0.08)	(23.58)
Austria	(11)	(33)	(0.01)	(2.97)
Northern America	477	70,687	20.11	148.19
US	(352)	(65,904)	(18.75)	(187.23)
Canada	(125)	(4,783)	(1.36)	(38.26)
Far East	162	70,309	20.01	434.01
Japan	(49)	(64,442)	(18.34)	(1,315.15)
Korea Republic of	(55)	(2,488)	(0.71)	(45.24)
China	(37)	(1,914)	(0.54)	(51.74)
Malaysia	(21)	(1,465)	(0.42)	(69.75)

Appendix Table 7.1 (continued)

Country	No. of Projects	Total Investment Amount (SR m)	(%)	Average Investment Scale (SR m)
Rest of the world	397	12,384	3.52	31.19
Panama	(22)	(8,265)	(2.35)	(375.68)
Pakistan	(222)	(1,485)	(0.42)	(6.69)
India	(130)	(1,875)	(0.53)	(14.42)
Australia	(13)	(704)	(0.20)	(54.19)
Bangladesh	(10)	(55)	(0.02)	(5.51)
Total	3,976	289,678	82.42	72.86
Grand Total	4,998	351,456	100.0	70.32

Source: Investment Database, Saudi Ministry of Commerce and Industry.

Note: Investments measured at constant 2000 prices.

Chapter 8

Conclusions and Recommendations

8.1 Introduction

In Saudi Arabia, the encouragement of foreign direct investment (FDI) is viewed by policy-makers as a primary means for diversifying the economy and to improve the participation of the private sector in the economy. Currently, the private sector accounts for only about one-third of Saudi GDP, so that FDI is seen as an important way to reduce the heavy reliance on oil revenues. The attraction of foreign investment is achieved by focusing on those factors that affect the generation and location of FDI, which at the micro and macroeconomic levels include such things as the political risk of the host economy and the characteristics of the source countries from which the FDI arises. The purpose of this thesis is to explore these two factors, by examining the role of political risk in influencing foreign equity ownership level in joint ventures and in determining FDI inflows to Saudi Arabia. Ultimately, the aim is to help to enhance the level of (foreign) private sector investment in the Saudi economy.

Over the last few decades, research in developed and developing countries has shown that the relationship between country political risk and the foreign equity share is negative, implying that countries with low levels of risk will attract more FDI than countries with high levels of risk. In particular, countries with lower risk are more likely to attract whole investments than those with high risk, suggesting that policies that improve the stability of the country will potentially make the country more attractive. Specifically, in the international business

literature the motive for FDI has been explored through the entry mode, but nearly always as a choice between a joint or whole venture and occasionally, the discrete choice between majority, equal and minority partnerships is considered. This literature pays relatively little attention to different kinds of risk, which are measured in a single composite form and sometimes quite crudely. In this thesis attention is paid to the different types of political risk and the effect of this risk on investors equity shares, where to my knowledge, this is the first time this has been explored in the literature. Further, there have been an increasing number of studies for developed and developing countries looking at the source characteristics of FDI. These determinants tend to mirror those factors that are explored in the studies of host-country characteristics, and offer further clues on how to increase FDI. The thesis contributed in this issue by examining the importance of source-country characteristics to Saudi Arabia, which is a country that falls in-between the traditional developed and developing countries and drawing the attention to the sensitivity of the results to the specification of the dependent variable. To examine both of these issues the thesis has obtained a large micro dataset on foreign and domestic projects from the Saudi Ministry of Commerce and Industry. It is the first time these data have been released for academic study and in itself is a major contribution to the thesis. The three main contributions to the literature to be pursued:

- To examine the detailed pattern of FDI in Saudi Arabia from 1960 to 2005.
- To investigate the effect of risk on the foreign joint venture equity share.
- To explore the source country determinants of incoming FDI to Saudi Arabia.

In addition to the introduction and concluding chapters, the thesis has been organized in two Parts, containing six chapters. Chapter 2 discusses the general geographical, political, social

and economic background of Saudi Arabia, including the legislation in relation to FDI. The literature review on the determinants of FDI from both theoretical and empirical perspectives is discussed in Chapter 3, while the literature on the FDI ownership structure is considered in Chapter 4. Chapters 5 to 7, which make up the second Part of the thesis, are the empirical part of the study and represent its three main contributions. The detailed analysis of the pattern of FDI in Saudi Arabia is presented in Chapter 5. The other two chapters are for the examination of the effect of country political risk on the foreign joint venture equity share (Chapter 6) and the analysis of the source country determinants of incoming FDI (Chapter 7).

In this chapter the thesis is concluded. Section 8.2 summarizes and draws out the findings of three analyses, covering the pattern of FDI; country risk and the foreign joint venture equity share; and the source determinants of incoming FDI. Section 8.3 discusses some limitations of the study, including the data, and suggests possible area for future research. Finally, section 8.4 presents the overall conclusions, outlining policy implications and recommendations.

8.2 Main Findings

The main findings of the thesis are summarized according to each of the three objectives outlined above. The analyses were undertaken at different levels (i.e., the project, individual investor and country), and for different time periods.⁵⁸

⁵⁸ The first analysis was undertaken for the period from 1960 to 2005, the second between 1985 and 2005, and the third for the period 1980-2005. As we have seen, most FDI has in fact occurred over the period since the introduction of the 2000 Foreign Investment Act.

8.2.1 The Pattern of FDI

This analysis aimed to describe, in detail, the nature of FDI in Saudi Arabia, and in particular, the nature of foreign investment relative to domestic investment, but focusing mainly on the former. The results show that FDI has increased sharply, especially after the implementation of the 2000 Foreign Investment Act. It shows that the amount of foreign investment over the period 2001-2005 represents half of the total foreign investment since the year 1960. In addition, foreign investment is highly concentrated in its activity and by its location.

The nature and pattern of FDI can be described not only at the project and investor levels, but in terms of total investment from the same source country. This is analyzed according to the number of projects, investment size, industrial sector, regional location, country of origin and perspective jobs. It reveals that the distribution of investment is highly skewed, so that it is concentrated in certain activities and locations. Manufacturing is the main recipient of FDI, especially in the chemicals and petroleum industry, while by location FDI is mainly located in the Middle region in Saudi Arabia, around Riyadh. However, there is a significant amount investment in the Eastern oilfields, which in terms of the amount of foreign investment is the largest recipient of all activities, but much less so by the number of projects.

In terms of the number of projects, the main source of investment is the West Asia part of the Middle East and North Africa (MENA) region, indicating the role of proximity and cultural similarity, but these tend to be relatively smaller investments that involve a relatively large number of investors from the same source country and account for a large share of the project cost. In terms of the total amount of investment inflow, North America, followed by the

Western Europe are the main sources of FDI. In general, it indicates the different nature of the investments that arise from the different sources.

8.2.2 Risk on the Foreign Equity Share

The investor level analysis sought to examine the effect of country political risk on the foreign-owned equity share in joint venture projects. The main result of the chapter is that for more serious risks firms will increase their equity share on entry to take greater control of the investment project, but that for less serious risks they will reduce it to cut their exposure to risk and reduce their potential losses. This is a new finding that is in contrast with research elsewhere, which has typically analyzed the choice between whole and joint ventures. This other literature finds that risks causes firms to use the second entry mode, but the finding here is conditional on entry as joint venture firms may adopt different strategies in relation to their equity share according to the level of risk, and may actually increase their share.

Of course, high risk may cause some firms not to invest at all, and the determinants appear to differ between the choice of the entry mode (between a whole or joint venture) and the choice of the joint venture equity share, but where firms do enter as a joint venture it suggests that high risk may actually cause them to increase their share. The chapter finds that the equity share in joint ventures that induces control is majority ownership at an equity stake at 50%. Minority equity share are much more responsive to risk than shares above this level.

8.2.3 The Source Country Determinants of Incoming FDI

Given that political country risk affects the equity share in joint venture projects in Saudi Arabia, then this country-level analysis sought to investigate the extent to which source country characteristics explain the inflow of FDI into Saudi Arabia. In general, the results are consistent with the theories that explain the determinants of FDI inflows and with empirical work carried out elsewhere for both developed and developing countries. It was found that the determinants of FDI differ depending on whether foreign investment is measured in terms of the number of individual foreign projects or the investment expenditure. While the size of the source economy remains significant and has a positive effect in most specifications, it is the geographical distance that impedes investment when FDI is measured in terms of the number of foreign projects. However, when it is measured by the total amount of investment the cultural distance matters and is negatively related to FDI

In addition, past investment is found to have a positive effect on FDI, implying that the cost of setting-up a project will be lower if an investing country has acquired familiarity with the Saudi economy. In terms of ‘economic freedom’, a positive and significant relationship exists between this and total FDI inflows, suggesting that the investments originate from countries characterized by a more liberal business environment.

8.2.4 The Overall Picture

The overall results from the study of the nature and pattern of FDI show that FDI is described by important characteristics, whether considered at the project, investor or country level. The

results show that there is a skewed nature of investment, and indeed there is a striking degree of concentration in certain activities and locations. The sector for FDI is manufacturing, and especially the chemicals and petroleum products industry in terms of volume, but investments are mainly concentrated in the Middle region in Saudi Arabia, around Riyadh. It was also found that projects originate mainly from the West Asia part in the MENA region, although these are smaller investments involving number of investors from the same source country. The largest investment amount arises from the North America, followed by Western Europe.

The foreign equity share in joint venture projects is associated with the country political risk. This implies that for an increase in the political risk the investor may actually be encouraged to enter via greater stake in order to control the project and also protect the return. But, for less risk investor will cut his exposure to risk and reduce the loss. It also finds that it is not the whole ownership that matters for control but the majority ownership.

Finally, the results find that incoming FDI is associated with the characteristics of the source countries, but the effects of these characteristics differ when measuring foreign investment according to the number of individual foreign projects or the investment expenditure (as we have seen the oil sector accounts for a major share of total investment, but relatively small minority of total projects). It was found that the size of the source country has a positive and significant effect in most specifications. In addition, while the geographical distance hinders investment if FDI is measured in terms of the number of projects, when it is measured by investment expenditure, then the cultural distance is more important. It was also found that countries with past foreign investment experience are more likely to undertake FDI.

8.3 Limitations and Prospects for Future Research

The current study utilizes a unique, comprehensive and relatively large dataset relating to FDI in Saudi Arabia. This is the Investment Dataset of the Ministry of Commerce and Industry. Up until now, such a dataset has not been available for academic study, so that this is a major achievement of the thesis. However, perhaps inevitable, the data have some limitations. We now consider these limitations, and indicate some directions for future research.

8.3.1 Limitations of the Study

The limitations of our study mainly relate to the data. Firstly, although the data include all of the foreign projects over 1960-2005, they include some missing data on jobs, which are available for only around 44 per cent of total foreign projects in Saudi Arabia. However, the investment scale is known in each case, and this is a rarity, as often we find that the jobs can be more-easily measured and the scale is not known, representing an advantage of the data. A second issue is that the data on foreign projects comprise start-ups of either a joint venture or whole investment, but it does not include information related to whether the project is a reinvestment, merger or acquisition. In some respects, this may weaken the power of the results, especially in relation to the effect of country political risk and foreign equity share, although it is likely that most of the investments are the new ventures.

Third, although the data include the start date of all foreign projects, the information on whether these projects still operate or close is not known. Thus, it was not possible to track the investments, and to know if the changes in the political and economic environment have

effects on their status. Fourth, the information on the name of firms or investors was not supplied with the data, because these data are highly confidential. For this reason there is no way to know whether the past experience tends to encourage or deter an investor's ownership level. In the analysis of Chapter 6 it was necessary to include a large number of dummy variables to control for these potentially adverse effects.

Fifth, related to this last point, there are no information on some key variables, such as R&D intensity, marketing expenditure and industry growth, in order to explain FDI inflows or equity share in joint venture projects, as this kind of information is not collected by the Ministry of Commerce and Industry. Finally, the project-level data are not available on the profitability of firms, no doubt because the sensitivity of such information. Consequently, we are unable to analyze whether high profits leads to higher equity shares. Nevertheless, despite all these shortcomings, the Investment Dataset are the best available information for the study of FDI in Saudi Arabia, and, according to my knowledge, such data are not available for academic study in many if not most developing countries. Overall, what is important is that the general thrust of the results are comparable with the findings obtained elsewhere, including studies carried out in developed countries using large datasets and the relatively small number of studies in developing countries using much smaller samples of firms.

8.3.2 Prospects of Future Research

This thesis has made important inroads in examining the impact of country political risk on equity share in joint venture projects and the source country characteristics on incoming FDI, but many issues are left for future research. We now briefly consider some of these. Access to

more exhaustive firm-level data is perhaps one of the most important pre-requisites for future work. For some data, such as profitability of a firm, our aim is to inform the Ministry of Commerce and Industry of Saudi Arabia about the importance this variable for future work. For example, it will enable the effect of profitability to be considered, such as whether the equity share is related to a firm's profitability. Possible interactions between profitability and incoming FDI could also be examined, which would enable a more comprehensive study to be undertaken using a range of techniques.

Some other interesting and related topics for future research on the Saudi Arabian economy are as follows. First, it would be useful to analyze the relationship between the effect of risk and source country characteristics including the years after 2005 in order to study the impact of the 2000 Foreign Investment Act over a longer time period, including the recent global recession, which has affected some countries more than others. It would also be interesting to analyze the performance of firms over a long period of time to identify the possible effects of the changes in the business environment and the reform efforts. Second, with the increasing importance of South–South investment that is recognized by UNCTAD (2006), analyzing the factors that affect FDI and attribute them to the unique characteristics of Arab countries and oil-exporting countries will be an important topic for future research.

I hope these brief suggestions for future work will encourage others to conduct research in this broad area, in order to advance our knowledge about FDI, its determinants, and the effect of risk in equity share in a rapidly-developing country such as Saudi Arabia.

8.4 Conclusions and Policy Recommendations

The thesis attempts to provide a broad overview of the pattern of FDI in Saudi Arabia, and to understand the factors that contribute to determining the inflows of foreign investment in general, and the effect of country risk on equity stake of foreign investors in particular. This is for the period between 1980 and 2005. Generally, the empirical findings of this study show that the foreign ownership shares and FDI inflows exhibit systematic patterns, being the results of conscious decisions taken by many different investors. Based on a review of the relevant literature, along with the analysis of the data provided by the Ministry of Commerce and Industry of Saudi Arabia, this thesis has identified various factors at the country, project and individual investor levels that explain FDI. We also gain an understanding of the effect of the country risk on equity share of foreign investors, and identify the impact of the source country characteristics on FDI inflows into Saudi Arabia. The results of this study are broadly consistent with other empirical research conducted for developed and developing countries. The empirical evidence presented in this thesis suggests that the effect of risk on equity share and the impact of the source country characteristics in Saudi Arabia are shaped by country-, project- and investor-related characteristics. These factors have a considerable influence on incoming FDI, as well as on the foreign-owned equity share.

We believe that the thesis has some valuable implications for policymakers. For example, if the determinants of FDI are considered to be an important aim of public policy, then perhaps one of the most important conclusions of the thesis is that source country characteristics matter in determining FDI. According to the results, the size of the source country has a positive effect on FDI inflows, which implies that larger size of source country market can

play a relatively greater role in the inflows of FDI. Indeed, the effect of the geographical and cultural distance is significant in both measures of FDI. The past investment experience also plays a substantial role in incoming FDI in Saudi Arabia, as well as the economic freedom, which has a positive and significant impact on FDI inflows.

There are a number of other factors that are important for the inflows of FDI and the decision of foreign investors on the equity share in joint venture projects, which all have implications for policy. We find that factors having a consistent effect both at the country and investor level are some of the political variables. Government policy could encourage foreign investors to increase their equity stake in projects by providing foreign investors with incentives, such as government guarantees to encourage them to increase their investment stake, as well as implementing programmes that could improve the business environment. Further, since the size of the source country matters and has a positive and significant effect on FDI inflows at the country level, this may mean, for example, enhancing trade ties with such countries and implementing programmes that promote business opportunities, since investors from these countries are more likely to boost FDI levels in the country. Countries with past investments are also likely to set-up future investments, so that providing investors with more incentives would help to attract further investments in the future.

Apart from this, the thesis shows that the nature of FDI indicates a high concentration level in some activities and regions. The results show that FDI is concentrated mainly in the manufacturing sector, especially in the chemicals and petroleum-related projects, and located in the Middle region in Saudi Arabia, around Riyadh. This has important policy implications, as promoting investment in other regions and sectors is a main aim of Saudi policymakers.

Policy should support attracting FDI into these activities and locations to help diversify the Saudi economy.

Before ending, we would like to make three specific recommendations for policymakers that arise from the thesis. These are about the data, the organization for the study of FDI and programmes for improving the business environment and promoting FDI. While FDI can play a significant role in the economy, comprehensive data on projects characteristics are essential to produce good information on the nature and effects of FDI. Further, although in many developed countries there are organizations for the study of FDI, there is no such body for the study of FDI in Saudi Arabia, so that the creation of such an organization at the local and/or national level, as well as academic courses for the study of FDI, are recommended. Finally, the experience of other countries, especially those that have a good performance in attracting FDI is important. For example, the UK has initiated many schemes for improving the business environment and attracting FDI, and it is important to examine these.

Overall, it is reasonable to believe that FDI can make a strong contribution and that it can serve as a remedy for the dependence of the Saudi Arabian economy on oil revenues. Of course, this thesis cannot claim to offer a definitive judgment on the importance of FDI, but rather it should be viewed as a first step in this direction. The study suggests that more work is necessary to better understand the contribution of FDI in general and in particular to the process of attracting foreign investment to Saudi Arabia.

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