

**RELATIONSHIP BETWEEN POLITICAL RISK,  
CORRUPTION AND INFRASTRUCTURE AND FOREIGN DIRECT  
INVESTMENT INFLOWS TO YEMEN**

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**By**

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## **ABSTRACT**

Foreign Direct Investment (FDI) plays an important role in the growth and development of emerging economies. And it has been considered a powerful mechanism to achieve rapid economic growth in the developing countries. However Arab countries have been performing poorly in attracting FDI inflows relative to other developing countries since the early 1990s. This study examines the impacts of special host country factors namely political risk, corruption, and infrastructure on the inflow of foreign direct investment (FDI) into Yemen between 2003 and 2007. Results indicate that high levels of political risk and corruption lead to low levels of FDI inflows into Yemen. With political risk being significantly and negatively correlated to the FDI inflows. The findings also show that infrastructure variable with three proxies (road length, operating telephone line, and electric power generation capacity) are insignificantly and positively correlated with FDI.

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## **LIST OF ABBREVIATIONS**

|        |  |
|--------|--|
| FDI    | Foreign Direct Investment                            |
| MNCs   | Multinational Companies                              |
| UNCTAD | United Nations Conference on Trade and Development   |
| R&D    | Research and Development                             |
| WTO    | World Trade Organization                             |
| CBY    | Central Bank of Yemen                                |
| WB     | World Bank   |
| IFC    | International Finance Corporation                    |
| ODA    | Official Development Assistance                      |
| M&A    | Mergers and Acquisitions                             |
| IJV    | International Joint Venture                          |
| OLI    | Location and Internalization Advantage               |
| SSA    | Sub-Saharan Africa                                   |
| UN     | United Nation  |
| OECD   | Organization of Economic and Cooperation Development |
| PLOR   | Political Risk                                       |
| COR    | Corruption   |
| INFR   | Infrastructure                                       |

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background**

Many countries try to attract foreign investment in various ways in order to raise the production capacity of the national economy. Foreign investors are persuaded to engage in local production processes to raise production efficiency, then increase production through access to advanced technology, which often comes in or accompanies foreign investment.

Foreign borrowings result in debt obligations. The need to pay the loans and interests leads to many problems for developing countries. On the other hand, foreign investment, which is an alternative to foreign debt, provides a source of higher levels of employment, particularly in developing countries which suffer from high unemployment.

The flow of foreign direct investment (FDI) to developing countries has increased dramatically since the early 1990s and today constitutes the single most important source of foreign capital for much of the developing world (UNCTAD, 2006). FDI has been viewed as a major contributor to growth for developing countries. In helping bringing these foreign investments, multinational companies (MNCs) have been providing capital and employment opportunities that may not be available locally. They also transfer skills, technology, and management know-

how that increase productivity and enable domestic companies to compete on world markets (Lipsey, 2002)

.

One of the main continuing issues discussed in the FDI literature is the question of determinants of FDI. Some studies emphasize on economic variables as explanatory factors of FDI (Abdel-Rahman, 2002; Abdul Karim et al, 2003; Alan & Saul, 2000; Barbaros & Yilmaz, 2003; Coskun, 2001; Helldin, 2007; Hoang, 2006; Humayon et al, 2004). While others concentrate on political factors, most researches showed that countries should look at their macroeconomic and political stability instead of the level of government incentives (Barbaros and Yilmaz, 2003; Bitzenis & Marangos, 2008; Coskun, 2001; Frey, 1985; Humayon et al, 2004; Lehmann, 1999; Ramcharran, 1999; Tuman and Emmer, 1999).

Yemen has various basic components to make it as a place to attract investment particularly its strategic geographical location in the Middle East. Yemen is directly situated on the international maritime lines between Europe and Asia, hours away from international navigation lines. It is the main entrance to the east of the African continent. Labor in Yemen is distinctly low cost, competitive, and highly skilled. Yemen has established an appropriate and encouraging legal environment for investment where the Government issued laws which give investors the necessary economic incentives and facilities. Investment Law No. (22) of the 2002 alternative to the Investment Law No. (22) for 1991, as amended, regulates and encourages investment, and grants facilities and incentives to investors in several areas such as foreign capital. Foreign investors are equal to Yemeni capital and investors in terms in their rights, obligations, rules,

procedures and investment projects and have the right to buy or lease land and buildings. Yemeni, Arab and foreign investors have the right to own 100% of any investment project.

## 1.2 Problem Statement

Yemen has good investment climate such as an appropriate and encouraging legal environment, a strategic location, low labor cost, and other components to attract foreign investment. In spite of these incentives, Yemen has low levels of FDI inflows. It is ranked as the country with the least amount of FDI inflows in the Middle East, as shown in Table 1.1

Table 1.1: FDI inflows into Middle East during the period 1990-2007  
(In million of USD)

| <b>FDI inflows</b>   | <b>1990-2000<br/>(Annual Average)</b> | <b>2003</b> | <b>2004</b> | <b>2005</b> | <b>2006</b> | <b>2007</b> |
|----------------------|---------------------------------------|-------------|-------------|-------------|-------------|-------------|
| Iran                 | 3                                     | 482         | 306         | 918         | 317         | 754         |
| Iraq                 |                                       | 5           | 300         | 515         | 383         | 448         |
| Jordan               | 155                                   | 424         | 816         | 1774        | 3219        | 1835        |
| Palestine            | 155                                   |             | 49          | 47          | 19          | 21          |
| Lebanon              | 449                                   | 358         | 1993        | 2791        | 2739        | 2845        |
| Syria                | 127                                   | 150         | 275         | 500         | 600         | 885         |
| Kuwait               | 58                                    | -67         | 24          | 234         | 122         | 123         |
| Bahrain              | 458                                   | 517         | 865         | 1049        | 2915        | 1756        |
| Oman                 | 91                                    | 138         | 229         | 1688        | 1623        | 2377        |
| Qatar                | 169                                   | 400         | 1199        | 1298        | 159         | 1138        |
| Saudi Arabia         | 245                                   | 208         | 1942        | 12097       | 18293       | 24318       |
| United Arab Emirates | 18                                    | 480         | 10004       | 10900       | 12806       | 13253       |

|         |     |      |      |       |       |       |
|---------|-----|------|------|-------|-------|-------|
| Yemen   | 77  | 6    | 144  | -302  | 1121  | 464   |
| Algeria | 282 | 634  | 882  | 1081  | 1795  | 1665  |
| Egypt   | 844 | 237  | 2157 | 5376  | 10043 | 11578 |
| Libya   | -6  | 143  | 357  | 1038  | 2013  | 2541  |
| Morocco | 545 | 2279 | 895  | 1653  | 2450  | 2577  |
| Tunisia | 452 | 584  | 639  | 782   | 3312  | 1618  |
| Sudan   | 164 | 1349 | 1511 | 2305  | 3541  | 2436  |
| Turkey  | 791 | 575  | 2785 | 10031 | 19989 | 22029 |

*Source: UNCTAD, World Investment Report 2008.*

In spite of the efforts of Yemen government to attract FDI, the inflow of FDI to Yemen is still minor and inconsistent. This study aims to examine the impact of political risk, corruption and infrastructure on the inflow of FDI to Yemen during the period (2003 to 2007).

### **1.3 Research Questions**

The general question of this research is what are the factors that contribute in the sharp fluctuations of inflow of FDI to Yemen during the period (2003-2007) as shown in Table 1.1. Specifically, the research attempts to answer the following questions:

1. What is the relationship between political risk and the inflows of FDI to Yemen?
2. What is the relationship between corruption and the inflows of FDI to Yemen?

3. What is the relationship between infrastructure and the inflows of FDI to Yemen?

#### **1.4 Research Objectives**

The general objective of this study is to examine the non-economic determinants of FDI inflows to Yemen. Specifically, the objectives are:

1. To examine the relationship between political risk and inflows of FDI into Yemen.
2. To examine the relationship between corruption and inflows of FDI into Yemen.
3. To examine the relationship between infrastructure and inflow of FDI into Yemen.

#### **1.5 Significance of Study**

Prior research shows that investment choice is based on a certain set of conditions. Zanatta & Queiroz (2007) pointed to that world competition for foreign direct investment (FDI) in research and development (R&D) has been increasing in the last few years.

It is imperative therefore to know not only what factors to concentrate on in order to attract FDI, but also to determine the relative importance of these factors. Analyzing FDI flows to Yemen is important for several reasons. First, on the subject of FDI, Yemen remains under-researched. To the best of the author's knowledge, there is no published empirical study on FDI that focuses exclusively on Yemen. Second, to the extent that FDI to Yemen is driven by different factors,

policies that have been successful in other regions may not be equally successful in Yemen. Third, since FDI contributes to growth, it is important to know the factors that affect FDI flows to the slowest growth region, that is, Yemen. Understanding FDI determinants for Yemen is of interest to both policy makers and investors because FDI is particularly driven by globalization of markets, which has become pervasive. Any additional external investment capital can be an important and stable source of foreign capital flows for Yemen.

### **1.6 Limitation of Study**

There are many factors that influence inflows of FDI. This study focuses on a limited set of variables because of limited availability of information and data. There are problems in the measurement of one variable, infrastructure. There are many aspects of infrastructure, for instance, transportation facilities like road network, ports, airports, communication infrastructure covering telecommunication network; information infrastructure; energy availability, etc. A comprehensive indicator of infrastructure is not available making analysis for infrastructure variable difficult. Therefore, I have to rely on a composite index of these different aspects of physical infrastructure.

### **1.7 Organization of the Study**

The remainder of the research is divided into four chapters. The next chapter, Chapter 2, provides a review of related literature on foreign direct investment determinants. Chapter 3 discusses the research methodology, which begins with theoretical framework, hypotheses development, variable measurement and data collection. Chapter 4 presents empirical findings and results obtained from the

secondary data, validity analysis and reliability analysis. Finally, chapter 5 provides discussion and implications of the study as well as suggestions and recommendations for future research.



## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction:**

This chapter consists of three parts. Part one discusses foreign direct investment (FDI) in Yemen and its business environment. Part two contains the definition of FDI, types and theory. The last part reviews political risk, corruption and infrastructure.

#### **2.2 Background of FDI and its climate in Yemen**

Yemen is located in the Middle East at the southern tip of the Arabian Peninsula between Oman and Saudi Arabia. It is situated at the entrance to the Bab el Mandeb strait, which links the Red Sea to the Indian Ocean (via the Gulf of Aden) and is one of the most active and strategic shipping lanes in the world.

Yemen does not have a stock exchange, therefore limiting inward portfolio investment. Portfolio investment abroad is also very limited, resulting in portfolio flows that have been largely unrecorded by authorities. In the early 1990s, net direct investment was at its peak as foreign investors tapped Yemeni oil reserves, but since 1995 net direct investment flows have been negative because cost recovery for foreign oil companies has exceeded new direct investment. (Yemen Federal Research Division, 2008)

The Government of Yemen is currently working with the private sector to develop a strategic plan to enhance the business environment. It aims to provide more incentives than those currently provided under Yemen's investment law, accelerate Yemen's accession to the World Trade Organization (WTO), execute free trade agreements with the European Union and the United States of America, and encourage privatization, particularly in the field of telecommunications.

The new Yemen's investment law, designed to promote and regulate the investment of Yemeni and foreign capital, has some benefits such as:

- Foreign capital and foreign investors are equal to Yemeni capital and investors in terms of their rights, obligations, rules, and procedures.
- Investors and investment projects have the right to buy or lease land and buildings.
- Yemeni, Arab and foreign investors have the right to own the investment project 100%.
- All project products are exempted from compulsory price regulation and profit limiting.
- Investors are entitled to transfer abroad his foreign currency, funds and net profit to any transferable currency.
- Foreign investors have the right to transfer abroad their invested capital upon liquidation or disposal.

A lack of adequate infrastructure, coupled with an uncertain security environment, continues to impede foreign investment; nevertheless, risk-tolerant investors can

find attractive opportunities in Yemen. According to the Central Bank of Yemen (CBY) 2006 report, the United States is among the top five exporters to Yemen, with exports totaling USD 374.406 million in 2006. Furthermore, according to the joint World Bank (WB) and International Finance Corporation (IFC) report Yemen ranked 98, better than previous year's rank of 101. The report ranked 175 economies, including Yemen, according to criteria such as time and cost necessary to meet government requirements for business start-up operations.

Yemen's infrastructure is inadequate for a country of more than 20.7 million people. According to the Central Statistical Organization's recent report, Yemeni population will double in 23 years. Yemen's maximum electricity capacity is 600 megawatts, but actual output is between 350 - 400 megawatts, and that reaches only 30 percent of the population. Water and sewage services are even less adequate. The asphalt roads is only 9% of the total road network with an average of 11 km/1000 km<sup>2</sup>; it is a very low percentage compared to the regional and international roads.

There are also major political issues affecting the business climate. Bureaucratic corruption at all levels of government affects every aspect of business in Yemen. Judicial and administrative corruption has distorted the free market economy. Illegal commissions and nepotism involved in trading, tendering and investment undercut transparency and enforcement of related laws and practices. In June 2004, some parliamentarians criticized other members and government officials, calling on them during parliamentary debate to refrain from operating businesses that received contracts from the state.

In December 2005, World Bank (WB) aid to Yemen was reduced from USD 420 million to USD 280 million for the following three years. According to the Bank, the decision was made as a result of increasing corruption in WB projects. In February 2006, the United States and Europe strongly encouraged the Yemeni government to undertake significant short-term reforms aimed at managing public funds more transparently. That same month, President Saleh of Yemen re-shuffled his cabinet, appointing new ministers of Planning and International Cooperation, Finance, and Health, among others. After these reforms, the WB approved the new Country Assistance Strategy for Yemen, by providing about USD 400 million in credit with 19 projects for the period 2006-2009. (U.S Commercial Service, 2008)

## **2.3 The Inflow of FDI:**

### **2.3.1 FDI definition**

According to Musonera (2008) *FDI is defined as activities that are controlled and organized by firms in different nations or host countries (Dunning, 1988), or when the parent company has branch plants or subsidiary operations in another country. World Bank (2004) defines FDI as the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. FDI is also defined as the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments.*(WDR, 2004) (pg 2)

### **2.3.2 The importance of FDI**

Krogstrup and Matar (2005) point that FDI flows to developing countries have recently picked up again, and continued to be the most important source of foreign financing in the developing world, by far outstripping inflows of official development assistance (ODA)

FDI plays an important role in the development of emerging economies and it has recently been considered a force for the integration of countries, particularly developing ones, into the global economy. (Musonera, 2008)

Foreign direct investment is viewed as a major stimulus to economic growth in developing countries. Its ability to deal with two major obstacles, namely, shortages of financial resources and technology and skills, has made it the centre of attention for policy-makers in low-income countries in particular. Only a few of these countries have been successful in attracting significant FDI flows (Marr, 1997)

MNCs have many motives behind FDI. It can be resource seeking: exploiting cheap labor, natural resource etc. in the host country. It can be market seeking: avoiding high transportation cost, acquiring more information about market etc. in the host country. Finally, the motive can be efficiency seeking: exploiting economy of scale.

The host countries also have many motives for trying to attract FDI. FDI has an employment creation effect in the host country, not only directly but also indirectly via backward linkages. ( Lahiri, 2008)

### **2.3.3 The types of FDI**

There are many types of FDI. Greenfield Investment involves building new facilities or expansion of existing facilities. Mergers and Acquisitions (M&A) on the other hand is taking over an existing foreign firm, although some capacity building often takes place subsequently. Toyota, opening a car factory in the U.S.A., is an example of horizontal FDI. Vertical FDI can take two forms: backward vertical and forward vertical. Toyota, opening a firm in China for producing parts for its Japanese operation, is an example of backward vertical FDI, and Toyota opening a dealership in Hawaii to sell Toyota cars produced in Japan is a forward vertical FDI. FDI can also involve the creation of a 100% subsidiary of an MNC. Finally, FDI can take the form of an International Joint Venture (IJV). The last two can be either Greenfield or M&A.

### **2.3.4 The FDI theories**

Overall, there are many theories which have discussed the determinants of FDI, such as according to the neoclassical trade theory, ownership advantages, in the ownership, location and internalization advantage (OLI) framework, according to the knowledge-capital model , according to diversified FDI, risk diversification models and other theories.

The first theoretical attempt to explain FDI was based on the Heckscher–Ohlin model of the neoclassical trade theory where FDI was seen as part of international capital trade. The Heckscher–Ohlin model was based on a  $2 \times 2 \times 2$  general equilibrium framework with two countries (home and foreign), two factors of production (usually capital and labour) and two goods, assuming perfectly competitive goods and factor markets. Hymer (1976) and Kindleberger (1969) were among the first to criticize the neoclassical approach for its limited ability to explain FDI flows. They argued that the assumption of perfect competition in neoclassical theory could not explain FDI, which (in their view) needed structural market imperfections to flourish. FDI was assumed to be linked to the theory of MNEs

Dunning (1977, 1979) brought together internalization theory and traditional trade economics to create the eclectic paradigm of FDI, synthesizing the reasons for firms to operate internationally (advantages) and the mode of entry (FDI, export and licensing). Dunning (1988) stated that Location and Internalization Advantage (OLI) advantages varied depending on whether countries were developed or developing, large or small, industrialized or not, whether industries were high or low technology, innovatory or mature, processing or assembly, competitive or monopolistic, or whether firms were large or small, old or new, leader or follower, innovator or imitator. Following Dunning's example, there have been numerous studies analyzing factors related to ownership, location and internalization advantages. Santiago (1987), for instance, considered industry- and location specific determinants and consequences of FDI when investigated data on US firms from 64 industry groups in Puerto Rico.

There is not one single theory of FDI, instead there are a variety of theoretical models attempting to explain FDI and the location decision of Multinational Enterprises (MNEs). While the neoclassical model, which explained international capital trade due to differences in returns on capital, was heavily criticized because of its assumption of perfect competition, Dunning's OLI framework proved to be a better approach of explaining FDI as linked to MNEs, which were seen as firms with market power. His model combined ownership, location and internalization advantages as determinants of FDI after they were previously discussed in separate theories. (Faeth, 2008)

Political risk, investment environment, infrastructure, regulatory framework, bureaucratic hurdles and red tape, judicial transparency, and the extent of corruption in the host country are found insignificant as determinants of FDI or have mixed influence on FDI inflow. (AbdulMottaleb, 2007)

This study attempts to search for another variant of FDI determinants, that is slightly different from the much studied macroeconomic aspects as influencing FDI. Specifically this present study examines the impact of political risk, corruption, and infrastructure on FDI.

## **2.4 Political Risk:**

The concept of political risk as a field of scientific research has gone through an important evolution over the past decades. Because of the importance and significance of political risk for FDI, political risk definition must become one of the essential tasks of international investors. Moreover a definition of political



risk is a prerequisite for any kind of analysis on it. In considering the relationship between political risk and FDI, Agmon (1985), defines political risk as the unanticipated changes in political factors that affect the relative prices of traded factors of production, goods and services caused by the actions and reactions of governments and other political groups within and between countries.

The major political risk concerns of foreign investors could be viewed as follows:

1. Stability of local economy, and absence of high inflation
2. Fair and equal treatment from the host government
3. Freedom from arbitrary and changing government regulation
4. Free transfer of profit from the host country and
5. Ability to sell or liquidate investment and subsequently, to withdraw funds from the country
6. The political willingness and ability to make structural reforms. The ongoing economic crises in Asia and Russia show that the political reluctance to conduct structural reforms is considered also as a political risk.

Some studies put more emphasis on economic variables as explanatory factors of FDI, whereas others concentrate on the political factors. Other statistical empirical deal with the determinants of FDI by concentrating on two factors: political and economic.

Bennett and Green (1972) examine the relationship between US direct marketing investment flows for 46 countries and the Feierabend index of political stability (a weighted index of politically relevant, aggressive behaviors occurring within a

nation over a particular time period). They find that political instability provides a more hostile environment for foreign corporations, thus discouraging their investment.

Kobrin (1976) examines the relationship between the number of new manufacturing subsidiaries established in each country, the book value of manufacturing direct foreign investment, and several variables measuring political structure and unrest, economic-size and growth, and socio-economic development. He finds a systematic relationship between FDI and market-potential related variables, but all political variables are found not to be related to the flow of FDI.

Green and Cunningham (1975) examine the relationship between US- direct manufacturing investment flows for 25 countries using 1965 data and several variables measuring political risk. They find that host country instability is considered to be a major deterrent in FDI project location decisions

Thunell (1977) relates changes in the flow of FDI to regime changes and other events affecting political stability. Thunell, through a number of statistical tests, examines the hypothesis that investments in a country decreases when it is unstable and increases when it is stable. He finds that (1) political events are not directly associated with short-term fluctuations, but only with trend changes in foreign investment flows (2) the relationship is asymmetric, that is, the investing companies do not react in the same way when a country becomes more stable as when it becomes unstable.

Nigh (1985) analyzes foreign direct investments in manufacturing in 24 countries, including 11 developing countries during 1954-1975 by multinational corporations based in United States. He finds that for the developing countries in particular, FDI flows are related to internal conflicts such as riots and civil war. Whether investors from other industrial countries are as averse to political instability is unclear.

Another study of political risk in developing countries is by Brewer (1983) who find a very weak correlation between the governmental instability and their restrictions on international funds associated with FDI projects and less so than among developed countries. The relationship of expropriation to government instability is also found not consistent (Kobrin, 1984).

Musonera (2008) examines the effects of country-risk factors-economic, financial and political risks-on FDI flows into Sub-Saharan Africa (SSA) countries during 1990-2002. The writer finds that to attract more FDIs, SSA governments must importantly establish favorable political conditions such as democratic, transparent and stable governance in a state free of internal and external conflicts.

Mathur and Singh (2007) conduct a study to find how a wide variety of factors relating to the competitive and economic environment in the host countries, affect FDI flows. They used data for the period 1980-2000 on FDI inflows to twenty-nine host countries such as India and China in South Asia, Brazil and Argentina in South America, and Indonesia, Philippines, Thailand, Malaysia in East Asia. They

find that more democratic countries receive less FDI flows than less democratic countries. Their democracy measure is a measure of political rights and civil liberties of citizens, but not a good measure of economic freedoms.

Resnick and Li (2003) find that the level of democracy has a negative impact on foreign capital flows. However, property rights protection goes a long way in encouraging FDI flows.

Jensen (2007) mentions that despite the growing consensus on the importance of attracting foreign direct investment and the shift in developing countries from hostility to FDI to country promotion to attract FDI, governments still enact policies that have direct and indirect negative effects on the profitability of multinational firms.

## **2.5 Corruption:**

Traditionally scholars view corruption as public officials' discretionary power over the resources to the private sector (see for example Rose-Ackerman, 1978, 1999). Following past research, other researchers define corruption broadly as the abuse or misuse of positions or resources of public officials for private gains usually in the form of bribery.

Corruption in business is amongst the serious problems confronting global society today. United Nations, World Bank, OECD, and other international bodies acknowledge its occurrence in international business. Corruption continues to be a part of the contemporary social structures. One hears and reads about the

occurrence of corruption on a daily basis, in the media and the works of anticorruption bodies such as Transparency International.

AbdulMottaleb (2007) conducts a study using panel data from 60 developing countries to find out the influential factors that determine the FDI inflow in the developing countries. He finds that a reduction in corruption and the expansion of infrastructural facilities can reduce transaction, information, communication and business start-up costs can contribute to the development of a business friendly environment, which might encourage inflow of FDI to the developing countries and also might contribute to attain rapid economic growth in the developing countries.

Javorcik and Wei (2008) point that when corruption level is sufficiently high no investment will take place, but when corruption is low enough, investment can take place.

However, Wheeler and Mody (1992) fail to find a significant correlation between the capital expenditure of US companies' foreign affiliates and a host country risk factor, including perception of corruption. Henisz's (2000) results indicate that corruption increases the probability of investing in a foreign country, or has no significant effect at all. Hines (1995) also fails to find a negative correlation between total inward FDI stock and the corruption level in host country, but his results suggest that corruption affects the growth of US-controlled FDI adversely. Hakkala, Johan, & Svaleryd (2004) examine the effects of host country corruption on different types of FDI. They used data for 1998 in a survey that

covers almost all Swedish multinational firms in the manufacturing sector. They find that the effects of corruption are not uniform across different types of investment. Given that the firm invests in the country, corruption decreases Horizontal investments but increases Vertical FDI. The diverging results depending on type of investment could be an explanation why earlier studies have come to disparate results.

Mathur and Singh (2007) mention that corruption perception does play a big role in investors' decision of where to invest. Countries which rank poorly on the index receive low FDI flows relative to those that rank above them (controlling for other factors). Cazorra (2006) points that corruption not only reduces in FDI. The investors from the FDI origin country changes the composition of country of origin of FDI, also bring the corruption culture that they practice in their country to the countries that they wish to invest in.

Wei (2000) studies the effect of corruption on foreign direct investment. The sample covers bilateral investment from twelve source countries to 45 host countries. There are two central findings. First, a rise in either the tax rate on multinational firms or the corruption level in a host country reduces inward foreign direct investment. In benchmark estimation, an increase in the corruption level from that of Singapore to that of Mexico would have the same negative effect on inward FDI as raising the tax rate by fifty percentage points. Second, American investors are averse to corruption in host countries, but not necessarily more so than average OECD investors.

## **2.6 Infrastructure:**

Infrastructure can be defined as the basic physical and organizational structures needed for the operation of a society or enterprise. It is the services and facilities necessary for an economy to function (Sullivan & Sheffrin, 2003). The term typically refers to the technical structures that support a society, such as roads, water supply, sewers, power grids, telecommunications, and so forth. Viewed functionally, infrastructure facilitates the production of goods and services; for example, roads enable the transport of raw materials to a factory, and also for the distribution of finished products to markets.

More recently, a number of studies have suggested a potential role for advanced infrastructure, in particular, in attracting FDI. A survey of international firms in Hong Kong, Singapore and Taiwan, for example, finds the presence of advanced infrastructure to be the most important consideration in the placement of regional headquarters, services and sourcing operations. It is the second most important factor in determining the production site (Mody, 1997)

Globerman and Shapiro (2002) examine the effects of governance infrastructure on both foreign direct investment (FDI) inflows and outflows for a broad sample of developed and developing countries over 1995–97. They also examine the role of other forms of infrastructure including human capital and the environment. They find that governance infrastructure is an important determinant of both FDI inflows and outflows. Investments in governance infrastructure not only attract capital, but also create the conditions under which domestic multinational corporations emerge and invest abroad.

Kumar (2001) analyzes the role of infrastructure availability in determining attractiveness of countries for FDI inflows and their export-orientation. Using data for 66 sample countries over the 1982-94 period based on the Infrastructure Index, he finds that infrastructure availability does contribute to the relative attractiveness of a country towards FDI by MNEs, holding other factors constant. He also points that infrastructure investment contributes to improvement of overall investment climate in the country and helps attract FDI.

Khadaroo and Seetanah (2007) analyze the role of infrastructure availability, particularly with respect to transportation in determining the attractiveness of foreign direct investment (FDI) inflows. Their study is based a panel of 33 Sub-Saharan African countries for the period 1984–2002. They find that transportation and other infrastructure development is also an important element of the strategy to attract FDI inflows and this is particularly true for SSA counties where there is much to be done in that respect.

Quere, Coupet, & Mayer (2007) mention that there are several reasons why the quality of institutions may matter for attracting FDI. One is rooted on the results of the growth literature: by raising productivity prospects, good governance infrastructures may attract foreign investors. Ancharaz (2003) asserts that the importance of an adequate supply of physical infrastructure as a magnet for FDI is well known.



Table 2.1: Summary of selected previous studies on FDI

| Study                             | Area  | Period             | Variables  |  | Result   |
|-----------------------------------|---|--------------------|------------|--|--|
| Musonera (2008)                   | SSA countries   | 1990-2002          | FDI        | political risk   | (-) impact   |
| Mathur and Singh (2007)           | 29 host countries   | 1980-2000          | FDI        | corruption<br>level of<br>democracy                            | (-) impact<br>(-) impact                               |
| Resnick and Li (2003)             | 53 countries  | 1982 to 1995       | FDI        | level of<br>democracy  | (-) impact   |
| Jensen (2007)                     | Belgian Export Credit Agency<br>(pricing of foreign direct<br>investment insurance) |                    | FDI        | political risk   | (-) impact   |
| AbdulMottaleb (2007)              | 60 developing<br>countries  | 2003,2004 and 2005 | FDI        | physical<br>infrastructure<br>business friendly<br>environment | (+) impact<br>(+) impact                               |
| Javorcik and Wei (2008)           | firm-level data set<br>based on a survey<br>by EBRD                                 | 1995               | FDI        | corruption   | (-) impact   |
| Hakkala, Johan, & Svaleryd (2004) | Swedish<br>multinational<br>firms   | 1998               | FDI        | corruption   | not uniform across<br>different types of<br>investment |
| Podobink,b., et al (2008)         | CPI for all all<br>countries in the<br>world  | 1999–2004          | GDP<br>FDI | corruption   | significant (-)<br>impact<br>significant (-)<br>impact |
| Kumar (2001)                      | 66 sample<br>countries  | 1982-94            | FDI        | infrastructure<br>availability                                 | (+) impact   |
| Khadaroo and Seetanah (2007)      | 33 Sub-Saharan<br>African countries   | 1984–2002          | FDI        | infrastructure<br>availability                                 | (+) impact   |
| Smarzynska and Wei (2000)         | firm-level data set<br>based on a survey<br>by EBRD                                 | 1995               | FDI        | corruption   | (-) impact   |

## **CHAPTER THREE**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **3.1 Introduction**

The previous chapter reviews prior studies that have been carried out in different countries on the inflow of FDI. This chapter presents a theoretical framework to determine the relationships between inflow of FDI and specific non-economic factors (firm political risk, corruption and infrastructure). Lastly presents background of the variables.

#### **3.2 Theoretical Framework**

Yin (1999) highlights that the volume of foreign direct investment (FDI) grew rapidly over the past 20 years or so, especially in developing countries. Foreign direct investment (FDI) has become the most important source of development finance. Foreign direct investment is said to be taking place when a foreign corporation buys at least a 10 percent shareholding in a domestic firm or undertakes a greenfield investment in a foreign country. Recognising that FDI can contribute to economic development, all governments want to attract it. The world market for FDI is highly competitive, and developing countries, in particular, seek such investments to accelerate their development efforts. Both developing and

developed countries are competing for global FDI flows. The result is that FDI flows are concentrated in few developed countries. It becomes critical for economic development to developing countries to attract more FDI flows into their economies. FDI flows are basically the result of investment decisions taken by trans-national corporations in response to certain pull factors. As such, it is important that countries work hard to investigate the determinants that are critical to attracting more FDI.

Bitzenis (2004) points that if countries do not succeed either in creating an attractive economic environment and a successful market economy or in gaining FDI inflows, MNEs will decide not to invest in the specific countries and the advantages from FDI for the host countries will never occur. MNEs invest whenever and wherever the host countries offer incentives and opportunities that satisfy their goals.

The theoretical framework of this study suggests three variables (political risk, corruption and infrastructure) that may influence the inflow of FDI.

### **3.3 Background of the variables**

#### **3.3.1 The inflow of FDI**

The World Bank (2004) define FDI as the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is also expressed as the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as reported in the balance of payments.

There are many studies that detail the inflow of FDI and the factors that influence it. Institutional factors, such as corruption and political instability, are key determinants of FDI (Wei, 1997) and Markusen (1998). Corruption can discourage FDI by inducing a higher cost of doing business. Hines (1995), Wei (1997), and Gastanaga et al. (1998) examine the impact of institutional factors on FDI. Hines (1995) shows that FDI from the United States grows more rapidly in less corrupted countries after 1977. Wei (1997) presents alternative explanation of a large negative and significant effect of corruption on FDI.

#### **3.3.2 Political Risk**

Robock (1971) defines political risk as the likelihood that political forces will cause drastic changes in a country's business environment. He defines political risk as the change in political institutions due to changes in government control, and in social and economic factors.

Levis (1979) tests the two hypotheses that economic considerations are the prime determinants of foreign investment flows and that political variables are of secondary importance. The political variables considered are political instability, a political competition index and the relations with COMECON countries (which may be an indirect indicator for political risk). The model is tested by a step-by-step regression for 25 developing countries- Africa, Asia and Latin America- and for the period 1965-1967. The result shows, that economic variables are more important than political ones.

Root and Ahmed (1979) attempt in their model to account for political risks. With the help of discriminant analysis, Root and Ahmed (1979) test whether 16 economic, 5 social and 7 political factors (frequency of government change, number of internal armed attacks, degree of administrative efficiency, degree of nationalism, per capita foreign aid, colonial affiliation and role of government in the economy) have a significant influence on FDI. They find that the social status of the host country has long been considered an important determinant of FDI and they also find negatively relationship between political risk and FDI

Yu (1987) and Brewer (1985) analyze the relationship between governmental regimes instability and compared developing countries and industrial countries in terms of political stability. These studies find weak and statistically insignificant relationships among developing countries. There is as much or more policy instability in industrial countries as in developing countries.

The effect of political risk is indeed uneven across firms. While higher levels of political risk typically discourage entry, the impact is significantly lower for firms with greater levels of international experience (Holburn, 2002). In a most recent study, Musonera (2008) finds a negative relationship between political risk and FDI.

### **3.3.3 Corruption**

Every year, Transparency International provides a ranking of countries based on the “degree to which corruption is perceived to exist among public officials and politicians.” The organization defines “corruption” as the “abuse of public office for private gain”. A higher score represents less corruption. (Mathur & Singh, 2007)

Wei (2000) examines the effect of taxation and corruption on FDI by using a sample covering bilateral stocks of FDI from twelve source countries to 45 host countries. He finds clear evidence that an increase in either tax rate or level of corruption reduces inward foreign direct investment.

Mauro (1995) studies how corruption and other institutional factors affect economic growth. Using several different indices of institutional quality and the extent of corruption he finds that corruption and bureaucratic inefficiency has a negative effect on the rate of domestic investment. Corruption lowers the rate of investment and thereby undermines the potential for economic growth.

Campos et al (1999) find that due to the predictability of corruption in the East Asian countries, the negative effects of corruption on investments have been much smaller although still negative.

Javorcik and Wei (2008) find that the probability of investment taking place is negatively related to the extent of corruption in a host country. Smarzynska and Wei (2000) find that extent of corruption in a country reduce inward-bound FDI into Eastern Europe and the former Soviet Union.

Hakkala, Johan, & Svaleryd (2004) find that corruption seems to have a negative effect on the probability that a firm will conduct any investment in a country. Wei (2000) studies whether host country corruption affects the ability to attract FDI. Using three different indices to measure corruption Wei finds that corruption has a significantly negative effect on FDI inflows.

### **3.3.4 Infrastructure**

Cheng and Kwan (2000) examines the effects of the determinants of foreign direct investment (FDI) in 29 Chinese regions from 1985 to 1995, and find that large regional market, good infrastructure, and preferential policy had a positive effect.

Asiedu (2002) investigates whether factors that affect foreign direct investment in developing countries affect countries in sub-Saharan Africa (SSA). He finds that a higher return on investment and better infrastructure have a positive impact on FDI to non- SSA countries, but have no significant impact on FDI to SSA.

Reynolds et al (2004) examines the empirical relationship between FDI flows and the level of telecommunications infrastructure present in host countries, and find preliminary evidence of a significant link.

Fredriksson et al (2003) empirically examines the implications of theoretical model using US state-level panel data from four industrial sectors over the period 1977–1987. The empirical results show that environmental policy and corruption both play a significant role in determining the spatial allocation of inbound US FDI

Richaud et al (1999) provides additional support to the positive impact of infrastructure on FDI. Drawing on endogenous growth theory, they set up a four-equation model to investigate the impact of infrastructure on growth, trade, domestic investment and FDI. Their estimates confirmed the positive impact of infrastructure on FDI. Markusen and Venables (1999) find that good physical infrastructure will induce FDI inflows. Kumar (2001) points that investment contributes to improvement of overall investment climate in the country and helps attract FDI.

### **3.4 Data collection**

#### **3.4.1 Sample Selection**

This study covers the period from 2003 to 2007 as complete data is available for the country under investigation, that is, the Republic of Yemen Foreign direct investment (FDI) is computed for a sample of Yemen for five years (2003 to



2007) from world investment reports published by UNICTAD. For Yemen for the five year period, Political Risk Services (PRS) taken from group database, Corruption Perception Index (CPI) from Transparency Organization, and an Infrastructure Indicator is obtained from Yemen Annual statistics books.

### **3.4.2 Procedures**

In this study, secondary data is collected. The data is obtained from existing sources such as the websites, articles, annual reports, magazines, internet, newspaper, government publications, journals, doctoral dissertations as well as master's theses. These sources of secondary data provide a lot of information for research and problem solving (Sekaran, 2003).

## **3.5 Measurement of Variables**

To measure the relationship between variables for the inflow of FDI, secondary data is used in this study.

### **3.5.1 The inflow of FDI**

The variable (FDI) is inward FDI, which is measured as the annual amount of inflows of for the years 2003 to 2007. Data on FDI is obtained from world investment reports published by UNICTAD.

### **3.5.2 Political Risk**

To measure political risk that affects the inflow of FDI , I use the international country risk rating (ICRG) from the International Countries Risk Guide (The PRS Group, 2007) because a number of influential studies have employed ICRG data,

since country-risk ratings are reported to have a high correlation with actual future equity returns.

### **3.5.3 Corruption**

To measure corruption effect on the inflow of FDI , I use the data of the corruption perception index (CPI score) which is taken from the website of Transparency International. The CPI has been reported since 1995 and the number of countries covered has gradually increased. In the 2007 survey, 179 countries were included. The CPI ranges from 0 to 10 where 10 equals a perfectly clean country while 0 indicates a country where business transactions are entirely dominated by corruption. The CPI is a composite index and is constructed from several different sources in the form of surveys of business people as well as assessments by country analysts. 14 different sources were used for the 2007 survey. Assessments from the three previous years are combined to reduce variations.

### **3.5.4 Infrastructure**

A practical problem faced by empirical studies analyzing the role of infrastructure availability is that of measurement of availability of the different components of infrastructure objectively in an inter-country setting. There are many aspects of infrastructure, for instance, transportation facilities like road network, ports, airports etc., communication infrastructure covering telecommunication network; information infrastructure; energy availability, etc.( Kumar, 2001)

In this study due to inavailability of information on Yemen, I measure infrastructure as:

**- Transport Infrastructure:**

There are several aspects of transport infrastructure such as availability of and quality of roads and railways.

ROADS: road length per square kilometre of area.

**- Telecommunication:**

The availability of telecommunication infrastructure is captured as :

PHONECAP: the number of operating telephone lines.

**- Energy Availability:**

Energy availability is captured by electric power generation capacity.

ENERCAP: electric power generation capacity.

## **CHAPTER FOUR**

### **Results and Data Analysis**

#### **4.1 Introduction**

This chapter presents the findings of the present study which includes the descriptive statistics that show the general condition of the selected variables in the first section. In the second section, a matrix (Spearman's Correlational analysis) for the variables is examined for significant correlations among the variables. According to Levin & Rubin (1998) correlation analysis is the statistical tool that can be used to describe the degree to which one variable is linearly related to another. The Statistical Package for Social Science (SPSS) software (version 14) is employed to carry out the above analyses through using the data collected from the annual reports, since it offers greater flexibility and visualization.

#### **4.2 Descriptive statistics**

Table 4.1 presents descriptive statistics of all the variables concerning the current research. Descriptive statistics include mean, maximum limit, minimum limit, and standard deviation

**Table 4.1: Descriptive statistics**

|   | N | Minimum       | Maximum      | Mean          | Std. Deviation  |
|---|---|---------------|--------------|---------------|-----------------|
| <b>foreign direct investment</b>          | 5 | -181000000.00 | 585000000.00 | 80400000.0000 | 312316025.84562 |
| <b>Political Risk</b>                     | 5 | .72           | .75          | .7300         | .01225          |
| <b>Corruption</b>                         | 5 | 2.40          | 2.70         | 2.5600        | .11402          |
| <b>road length</b>                        | 5 | 9850.80       | 13127.20     | 11421.1400    | 1294.17323      |
| <b>operating telephone lines</b>          | 5 | 1161041.00    | 1326125.00   | 1261872.2000  | 63929.42373     |
| <b>electric power generation capacity</b> | 5 | 997.00        | 1160.18      | 1086.5640     | 61.26830        |
| <b>Valid N (listwise)</b>                 | 5 |               |              |               |                 |

Based on Table 4.1, the mean value of foreign direct investment is USD 80,400, 000, showing that the foreign direct investment mean is low as the minimum value is USD -181,000,000 and the maximum is USD 585,000,000. In addition, there are high differences between the values of foreign direct investment as indicated by the high value of the standard deviation 312,316,025.84562

The mean value of Political Risk is 0.7300 which means that the Political Risk is more towards the low side because the minimum value was 0.72 and the maximum was 0.75. Besides, there are small differences between values of Political Risk because the standard deviation is low 0.01225.

The mean value of Corruption is 2.56 which mean that the Corruption is high because the minimum value was 2.40 and the maximum was 2.70. Besides, there are small differences between values of the Corruption because the standard deviation is low 0.11402.

The mean value of road length is 11,421.1400 which mean that the road length is high because the minimum value is 9,850.80 and the maximum is 13,127.20. Besides, there are high differences between values of road length because the standard deviation is high 1,294.17323.

The mean value of operating telephone lines is 1,261,872.2000 which means that the operating telephone lines is high because the minimum value is 1,161,041.00 and the maximum is 1,326,125. There are high differences between values of operating telephone lines because the standard deviation is high 63,929.42373

Finally, the mean value of electric power generation capacity is 1,086.5640 which indicates that foreign direct investment is high because the minimum value is 997 and the maximum is 1,160.18, and there are high differences between the values of disclosure index because the standard deviation is high 61.26830.

#### **4.3 Correlation analysis:**

Correlation analysis is the initial statistical technique employed to analyze the relationship between the variables.

**Table 4.2: Spearman's correlations between variables**

|                |   |                            | foreign<br>direct<br>investment | Political<br>Risk | Corruption | road<br>length | operating<br>telephone<br>lines | electric power<br>generation<br>capacity |
|----------------|---|----------------------------|---------------------------------|-------------------|------------|----------------|---------------------------------|--|
| Spearman's rho | foreign<br>direct<br>investment             | Correlation<br>Coefficient | 1.000                           | -.949(*)          | -.718      | .100           | .100                            | .500                                     |
|                |   | Sig. (2-<br>tailed)        | .                               | .014              | .172       | .873           | .873                            | .391                                     |
|                |   | N                          |                                 | 5                 | 5          | 5              | 5                               | 5  |
|                | Political<br>Risk                           | Correlation<br>Coefficient |                                 | 1.000             | .730       | -.053          | -.053                           | -.580                                    |
|                |   | Sig. (2-<br>tailed)        |                                 | .                 | .161       | .933           | .933                            | .306                                     |
|                |   | N                          |                                 |                   | 5          | 5              | 5                               | 5  |
|                | Corruption                                  | Correlation<br>Coefficient |                                 |                   | 1.000      | -.051          | -.051                           | -.154                                    |
|                |   | Sig. (2-<br>tailed)        |                                 |                   | .          | .935           | .935                            | .805                                     |
|                |   | N                          |                                 |                   |            | 5              | 5                               | 5  |
|                | road<br>length                              | Correlation<br>Coefficient |                                 |                   |            | 1.000          | 1.000(**)                       | .700                                     |
|                |   | Sig. (2-<br>tailed)        |                                 |                   |            | .              | .                               | .188                                     |
|                |   | N                          |                                 |                   |            |                | 5                               | 5  |
|                | operating<br>telephone<br>lines             | Correlation<br>Coefficient |                                 |                   |            |                | 1.000                           | .700                                     |
|                |   | Sig. (2-<br>tailed)        |                                 |                   |            |                | .                               | .188                                     |
|                |   | N                          |                                 |                   |            |                |                                 | 5  |
|                | electric<br>power<br>generation<br>capacity | Correlation<br>Coefficient |                                 |                   |            |                |                                 | 1.000                                    |
|                |   | Sig. (2-<br>tailed)        |                                 |                   |            |                |                                 | .  |
|                |   | N                          |                                 |                   |            |                |                                 | 5  |

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).

The present study used the Spearman correlation which is a non parametric correlation measure. Since the input-output coefficients are not normally distributed, the Pearson correlation coefficients are not strictly appropriate. The Spearman correlation coefficient typically results in a lower coefficient, but is considered a more conservative statistic (Hair et al., 2007). Findings from spearman's correlations as shown in Table 4.2 indicate that foreign direct investment is significantly negatively related to political risk and insignificantly negatively related to corruption. However, the Correlation analysis shows that the negative relationship between foreign direct investment, corruption and political risk is strong, suggesting that to attract higher FDI, the Yemeni government should pay serious attention to the corruption level and political situation in the country. The finding also shows that infrastructure variable with the three proxies (road length, operating telephone line, and electric power generation capacity) are insignificantly positively correlated with foreign direct investment.



## **CHAPTER FIVE**

### **SUMMARY AND RECOMMENDATION**

The study concludes that foreign direct investments are still not attractive to investors as far as Yemen is concerned. The levels of FDI still are low compared to the FDI inflows in other countries in the same region. Even though in recent years Yemen has issued new investment law which gives foreign investors incentives and award them many advantages and granted facilities. This study provides insights into the determinants of foreign direct investment. Regarding the first factor that is political risk, the finding of the study shows that political risk is negatively and significantly related to FDI. This supports the previous studies which reveal that foreign investors take into consideration the political variable in their investment decision making and that political risk is one of the determinant of FDI inflow.

For corruption, consistent with previous research, the findings show that it is negatively correlated to the FDI inflow in Yemen. With respect to the infrastructure variable (which is measured by three proxies) it is insignificantly and positively influences FDI, meaning that foreign investors are aware of the benefits of good infrastructure of the host country. The findings of this study reveal that corruption and infrastructure are not related to FDI in Yemen in the

study period of 2003-2007. The findings of this study are consistent with prior evidence.

For further researchers, particularly those who are interested to carry out FDI study in Yemen, it is suggested that other variables (apart from political, corruption and infrastructure) are incorporated in model to find the determinants of FDI. Future research might also extend the scope of this study by involving comparative studies with other Arabic countries. Nevertheless, it is hoped that as a starting point for further research in this area, the results of this study could provide an insight into the policy makers of Yemen to further stimulate FDI inflow into the country.

The study recommends that Yemen government develops the country's infrastructure, make concerted attempts to reduce whatever corruption level that may exist, and attempt to stabilize the political system. Furthermore, the Yemen government should take into consideration that Yemen's economy is highly dependent on oil production, with the country's oil exports accounting for approximately 85 percent of export revenues and 33 percent of gross domestic product (GDP). The government has to find additional means to attract more foreign direct investments from multinational companies in order to diversify its economic activity and enhance its resilience.

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