THE DETERMINANTS OF INWARD FOREIGN DIRECT INVESTMENT IN

CHINA AND INDIA

TAN YIAN YIAN

This project is submitted in partial fulfillment of

the requirements for the degree of Bachelor of Economics with Honours

(Industrial Economics)

Faculty of Economics and Business

UNIVERSITI MALAYSIA SARAWAK

2011

ABSTRACT

THE DETERMINANTS OF INWARD FOREIGN DIRECT INVESTMENT IN

CHINA AND INDIA

By

Tan Yian Yian

This study investigates the relationship between inward Foreign Direct Investment (FDI) in China and India and its determinants such as GDP, TRADE, and exchange rate (ER). The methods applied in this study are Augmented Dickey-Fuller (ADF) test, Kwiatkowski, Phillips, Schmidt, and Shim (KPSS) test, Johansen-Juselius Cointegration test, Error Correction Model to analyze the annually data from 1980 to 2009. The empirical results GDP, TRADE, and exchange rate (ER) have significant long run relationship toward inflow of FDI in China and India. FDI inward in China and India are positively influenced by GDP and ER, while negatively affected by TRADE in long run. GDP has existence short run causal relationship with FDI inward in China. Meanwhile, GDP and TRADE have existence short run causal relationship with FDI inward in India. The error correction term suggests that approximately 62.5 percent of total disequilibrium in FDI flows was being adjusted to the long run in each year in China while approximately 89.7 percent of total disequilibrium in FDI flows was being adjusted to the long run in each year in India.

ABSTRAK

FAKTOR PENENTU PELABURAN LANGSUNG ASING KE DALAM

CHINA DAN INDIA

Oleh

Tan Yian Yian

Kajian ini adalah untuk menganalisis hubungan antara Pelaburan Langsung Asing (PLA) ke China dan India dan faktor penentunya iaitu GDP, perdagangan, dan kadar pertukaran asing. Ujian kepegunan Augmented Dickey-Fuller (ADF), ujian kopengamiran Johansen and Juselius, Normalized Equation, dan *Error Correction Model* diaplikasikan dalam kajian ini untuk menganalisis data tahunan dari 1980 hingga 2009. Hasil kajian tersebut menunjukkan bahawa GDP, perdagangan, dan kadar pertukaran asing mempunyai hubungan jangka masa panjang terhadap PLA dalam China dan India. Selain itu, PLA dalam China dan India mempunyai hubungan positif terhadap GDP dan kadar pertukaran asing tetapi mempunyai hubungan negatif terhadp perdagangan dalam jangka masa panjang. Bagaimanapun, hubugan wujud antara PLA dalam China dan GDP dalam jangka masa pendek. Tambahan pula, hubungan wujud antara PLA dalam India dan GDP serta perdagangan dalam jangka masa pendek. Terma pembetulan ralat (ralat) mencadangkan bahawa lebih kurang 62.5 peratus ketidakseimbangan dalam aliran PLA diperbetulan setiap tahun di China sepanjang tempoh kajian. Selain itu, terma

pembetulan ralat (ralat) mencadangkan bahawa lebih kurang 89.7 peratus ketidakseimbangan dalam aliran PLA diperbetulan setiap tahun di India sepanjang tempoh kajian.

ACKNOWLEDGEMENT

First of all, I would like to thank God for leading me all the ways to accomplish my final year project within a given period of time. I also want to thank to my family for support me in term of moral and financial in completing this study.

Next, I would like to thank to my supervisor, Mr. Jerome Kueh who helping me so much in completing this study. He is the one who always give me variable suggestions, advice, guidance and support during this study. Without him, I would never complete this study so smoothly. Besides, I also want to thank my friends got their cooperation in helping me in term of sharing information.

Finally, I also want to thank to all the lecturers and staffs of Faculty of Economics and Business (FEB) UNIMAS for their support throughout the period of this research project.

TABLE OF CONTENTS

Page

CHAPTER ONE: INTRODUCTION

CHAPTER TWO: LITERATURE REVIEW

CHAPTER THREE: METHODOLOGY

CHAPTER FOUR: EMPIRICAL RESULTS

CHAPTER FIVE: DISCUSSION

CHAPTER SIX: CONCLUSION AND RECOMMENTATIONS

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE

INTRODUCTION

1.0 Introduction

Foreign direct investment (FDI) is defined as "investment made to acquire lasting interest in enterprises operating outside of the economy of the investor."[1] FDI can be categorized into Greenfield investment, mergers and acquisitions, horizontal direct investment and vertical direct investment. Generally, the FDI is potentially beneficial in terms of generating employment, increase productivity, infrastructure development, transferring skills and technology and contributing to the long-term economic growth.

FDI is playing an increasing important role in the world economy. It is widely regarded as an amalgamation of capital, technology, marketing, and management (Cheng and Kwan, 2000). Moreover, FDI can affect a host country's economic growth in several ways. At the macroeconomic level FDI inflows can change the factor endowments of a country by increasing the stock of real physical capital (Zheng et al., 2006). To the extent that advanced technology is embodied in new capital equipment, FDI may be a major channel for technological transmission from developed countries to developing countries (Balasubramanyam et al., 1996; Borensztein et al., 1998).

---

[1] Foreign Direct Investment, United Nations Conference on Trade and Development.

In past two decades, foreign direct investment has grown rapidly important in developing countries. There are a growing number of developing countries succeeding in attracting substantial and rising amounts of inward FDI (Kotrajaras, 2010). There are number of factors developing countries favorable for FDI, one of these is affluent resources available in these regions. Besides, in order to attract more FDI, most of the developing countries are liberalizing their policy regimes and offering various incentive packages, such as tax rebate, trade liberalization, and establishment of special economic zones to the foreign investors. Moreover, the availability of essential infrastructures in host country such as telecommunications and different modes of transportation are also important incentives to encourage foreign investors to invest on that country.

1.1.1   FDI in China

Figure 1: The FDI inflow into China from 1980 to 2009
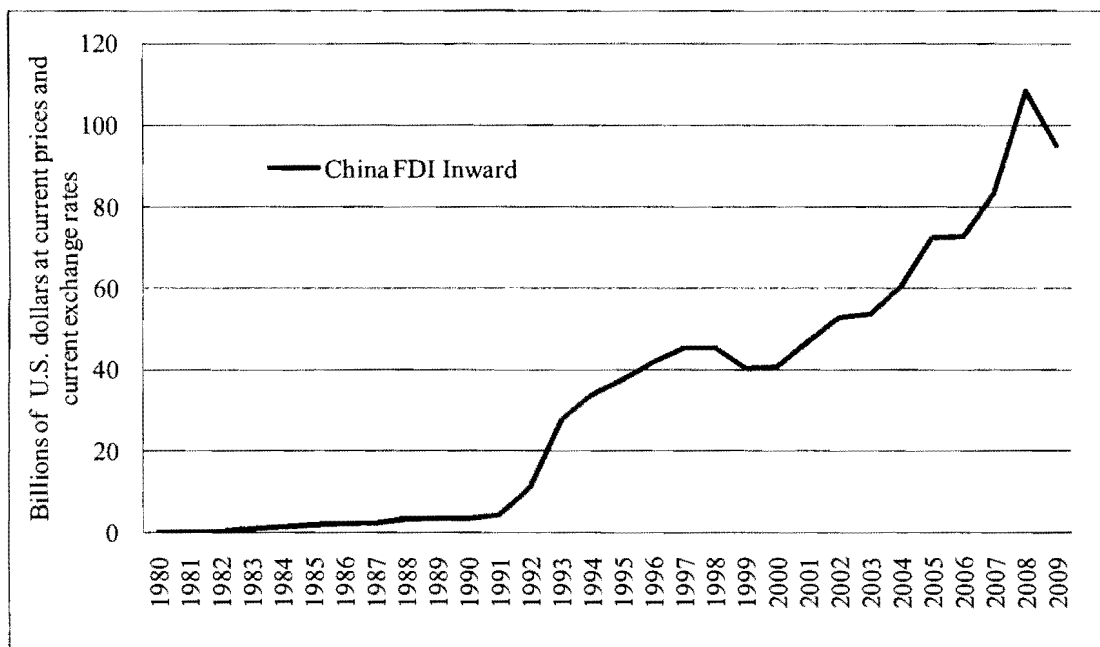
China is a success story of economic reform. China began economic reform in the end of 1978, since which foreign direct investment inflow has been promoted. China experienced a boom of inward foreign direct investment (FDI) by multinational corporations since 1980s. After more than the past three decades until the end of 2009, China has become the second largest FDI recipient in the world.

Figure 1 shows that the trend of FDI inflow in China from 1980 until 2009. During 1983 to 1991, FDI inflow has a steady growth and relatively large inflows because China has set up several special economic zones (SEZs) as the locations of foreign direct investments with valuable provisions for transportation,

3

telecommunication, and financial market facilities (Dutta, 2006). Although, FDI inflow was negligible from prior to 1992 but after Deng Xiaoping made his south tour in 1992. SEZs for strengthening foreign investment policies thus FDI in China rose dramatically. Furthermore, center government made further efforts to encourage export-oriented and technologically advanced foreign-invested enterprises (FIEs) in China.

Foreign investors were allowed to operate in specific sectors and administrative producers have been simplified and decentralized in order to create a more conduct commercial environment and reduce bureaucratic complexity (Wang, 1995). In 1998, FDI reached first peak of $45 billion. However, FDI inward in declining trend during 1999 to 2000. This temporary delay may due to the influence from Asian financial crisis. In 1999, the Ministry of Foreign Trade and Economic Cooperation made adjustments to the provincial regulations in order to expand the functions of such investment companies (Turker, 2009). In 2001, the FDI inward has recovered from the crisis with reached a new record of $46 billion because China entered the WTO on December 2001.

Furthermore, China was the largest FDI recipient country in the world in 2002. After that, FDI inflow fluctuated in 2003 and 2005 respectively. In 2006, China was the third largest recipient of FDI in the world, after the United States and the United Kingdom. In 2008, the FDI inflow in China has reached a historical high of $108 billion which more than ever before. However, FDI inflow in China fell to $95 billion in 2009 because of affected worldwide by the economic and financial crisis.

1.1.2 FDI in India

Figure 2: The FDI inflow into India from 1980 to 2009
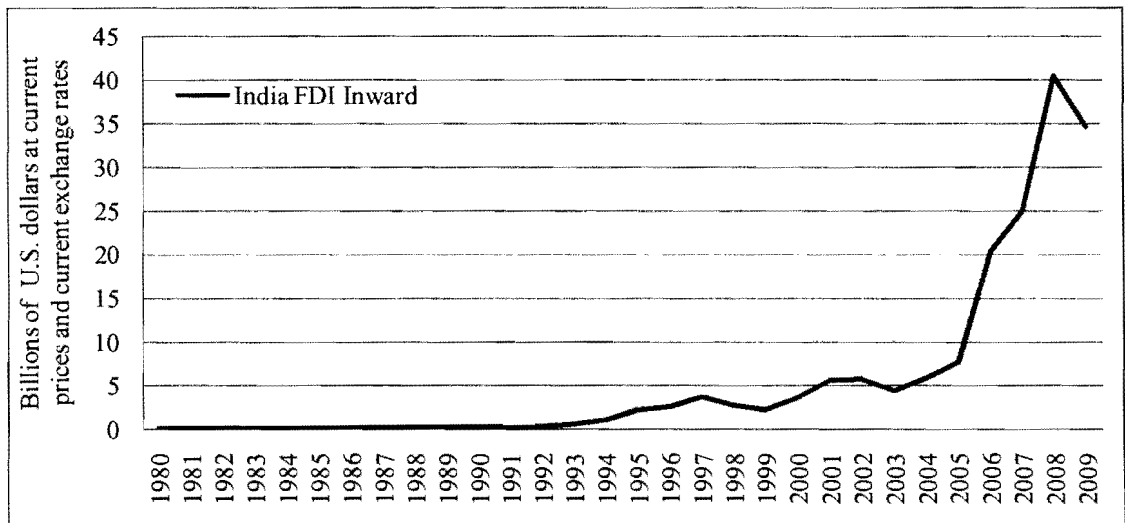
India was recognized as the first countries in Asia which the effectiveness of the Export Processing Zone (EPZ) model in promoting export due to Asia's first EPZ being set up in Kandla in 1965. Moreover, the Special Economic Zones (SEZs) Policy was announced in April 2000 and this has leaded to increase FDI rapidly. Furthermore, Mergers and acquisitions (M&A) have to play an import role in inflows which increase from $0.2 billion in 1991-1996 to $10 billion in 2006-2008. Besides, M&A activity tended to be prominent and grew faster in India compare to China.

Figure 2 show that the trend of FDI inflow into India during period 1980 to 2009. Prior to 1991, FDI inflow into India was negligible. Since 1991, foreign direct investment policy of the government of India has been gradually liberalized. This makes it more transparent and attractive to the foreign investors. FDI up to 100 percent is

5

allowed under automatic route for most sector and activities that attract industrial licensing. The Indian government has accelerated privatization of state-owned companies for major investments in infrastructure and created special economic zones in order to attract export-oriented FDI. India has emerged as the second most attractive destination for FDI after China. India has experienced a marked rise in FDI inflows in the last few years which doubling from an average of $5-6 billion the previous three years to around $19 billion in 2006-2007 (UNCTAD, 2007). This is because the existing law for the establishment of special economic zones (SEZs) was greatly liberalized in February 2006.

In 2008, the FDI inflow into India has reached a historical high of $40 billion which more than ever before and ranked the 13th largest FDI recipient in the world[2]. However, FDI inflow into India fell to $34 billion and ranked the ninth largest recipient in the world during 2009[3.] Nowadays, India is widely recognized as an emerging global economic power and has gained the leading position in software technology and has become the second largest software country in the world. Indian economy is more internally-oriented, but consistent social and educational policy has made possible a huge advance in attracting foreign investments in commercial services sector, especially in computer and information services (Gryczka, 2010).

---

[2] Source: UNCTAD, *World Investment Report 2009*
[3] Source: UNCTAD, *World Investment Report 2010*

1.1.3   Three development stages of inward FDI in China and India

The development of the inward FDI in China and India can be clearly divided into three stages which are the sustained growth stage, the stagnant stage and the rapid growth stage. Inward FDI varies significantly in respective countries in different stages (Wan, 2010).

During the sustained growth stage (period of 1992 to1998), inward FDI to china has been growing continuously. As is shown in Figure 1, inward FDI to China has risen from $11 billion in 1992 to $45.46 billion in 1998 which nearly 4 times increased compare to six years ago. However, inward FDI to India has increased nearly 10 times but has a small amount compare to China which has risen from $0.25 billion in 1992 to $2.63 billion in 1998.

In stagnant stage (1998-2003), world inward FDI has been gradually decreased and brought to stagnation. It is due to the breakout of Asian financial crisis in 1997. The crisis led world growth rate has gradually decreased and causing profits of MNCs to decline dramatically. FDI inward in China and India has experienced a "V" shape curve where gradually declining until 1999 after that gradually increasing. However, inward FDI to India has a declining fluctuation during 2003-2004.

In the rapid growth stage (2004-2008), inward FDI to China and India have been enjoying increasing trend continuously. Inward FDI to China has grown rapidly from $60.63 billion in 2004 to $108.31 billion in 2008 and become major recipient of FDI in

developing countries. Besides, inward FDI in India has increased rapidly from $5.77 billion in 2004 to $41.55 billion in 2008.

1.2 Problem statement

Over the past decades, foreign direct investment (FDI) is increasingly seen as an important source for achieving greater and more rapidly economic growth and technology accumulation in many developing countries. Moreover, governments of developing countries perceive FDI as a key source of economic development[4]. China and India are the two largest developing countries in the world and rapidly emerging economies. They have been both enjoying fast economic growth since the 1980s and have been maintaining high stable growth since the 1990s.

By 1996, China became the largest recipient of foreign capital among the developing countries and the second largest recipient in the world after U.S. (Chen and Yao, 2006). On the other hand, FDI in India has played an important role in the development of the Indian economy. India inward FDI has increased in the post-reform period and India now seems to be quite attractive place for such kind of investments. Besides, India had attracted $20 billion FDI inflow which more than ever before in 2006[5].

---

[4] Source: World Investment Report (UNCTAD) 1998.
[5] Source: United Nations Conference on Trade and Development (UNCTAD).

Besides, China economy appeared to be overheating which the notion of a "hard landing" for China economy has been exhibiting since the early 2000s. Although despite widespread predictions but this has not happened according to Business Monitor International (2010). China GDP growth rate has grown since 2002 which from 10 percent to 14.2 percent in 2007. Furthermore, China GDP growth rate has decrease after 2007 to 2009 but has increase to 11.9 percent in Q1 2010. On the other hand, for India, India GDP growth rate has also growth rapidly since 2002 which from 3.77 percent to 9.63 percent in 2007. Although, India GDP growth has drop to 5.12 percent in 2008 but has increase to 7.66 percent in 2009. Both countries seem going to have a hard landing.

According to Hansakul (2010), large foreign direct investment (FDI) and joint ventures in China mitigate risks of a hard landing. China has absorbed massive FDI inflows and thus foreign direct investors and joint ventures partners are big stakeholders in the Chinese economy which mitigating the risk that they would desert the country easily during a downturn. Therefore, this study intends to look into this problem in order to avoid hard landing occur in China and India and determines the key factors that can stimulate the FDI into China and India.

1.3 Objectives of the study

1.3.1 General Objective

China and India are generally recognized as emerging economies countries and have increase rapidly on FDI in the past decade. The main purpose of this study is to investigate the main determinants of foreign direct investment (FDI) into China and India by using yearly data covering the period ranging from 1980 to 2009.

1.3.2 Specific objective

i. To determine the significant factors influence the FDI inflows into China and India.

ii. To determine the short run and long run relationships between FDI inflows and its determinants.

iii. To examine the causality between dependent variable and independent variables.

1.4 Significant of the study

FDI has increasingly aware as an engine of growth in developing countries. Over the past decades, FDI has been a dominant composition of capital inflows into China and India. China and India are generally recognized as one of the BRICs countries and emerging economies countries respectively in the recent years. Both countries have visible attract larger capital because of their larger potential consumer market and larger population. In addition, China and India also have emerged as major destination for FDI inflows and as dominant global supplies of manufactured goods in China while India as dominant global supplies of services.

This study was conducted to the study of the relationship between FDI and its determinants in China and India. This is important for China's and India's economic development and could further provide some implications that could be helpful for China's and India's future economic policies' adjustments. Besides, this study is also useful for future researchers to refer which determines the key factors that can stimulate the FDI into China and India.

1.5 Scope of the study

In this study, secondary data will be collected from 1980 to 2009. The purpose of this study is to identify the important macroeconomic factors that can influence FDI in China and India. Besides, the next chapter will briefly and summarizes the previous studies. Chapter three will focus on theoretical framework, model, and methodology. Next chapter will discuss about the findings of the result. Last chapter will discuss the conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviews relevant literature and previous research on the determinants of foreign direct investment (FDI) inflow. The findings of previous studies have been summarized in Table 2.

2.1 The determinants of FDI

Dees (1998) investigates the determinants of FDI in China and its effects on the whole economy by using panel data from 1983 to 1995. From the result showed that the level of GDP has large positive effect on the stock of inward investment, while, the real exchange rate has negative effect on the stock of inward investment. They also found that the role of FDI in technology transfers and its effect on technical change. FDI affects Chinese growth through the diffusion of ideas. Moreover, FDI has a significant positive effect on Chinese long term growth through its influence on technical change but this influence is significant only in the 1990s. The transmission of ideas seems to have had a positive effect on Chinese growth.

Besides, Sharma (2000) investigates exports determinant in India using annual data for the period 1970 to 1998. The results of study suggest that demand for Indian

exports increase when its export price falls in relation to world prices. Furthermore, the real appreciation of the rupee adversely affects Indian exports. Exports supply is positively related to the domestic relative price of exports and higher domestic demand reduces export supply. Foreign investors appear to have statistically no significant impact on export performance although the coefficient of FDI is positive.

In addition, Hongskul (2000) used the autoregressive distributed lag method and a vector error correction model to investigate the macroeconomic impact of FDI on domestic private investment and trade in Thailand for the period 1965 to 1997. The empirical result showed that FDI had significant effects on imports and domestic private investment but not on exports.

Kim and Seo (2003) conducted a study on the dynamic relationship between inward foreign direct investment, economic growth and domestic investment in Korea. They found that FDI has positive but statistically insignificant impacts on domestic investment and economic growth for both the pre-crisis period and the entire sample period. This implies that a higher domestic investment was associated with a higher level FDI inflow. However, FDI has negative but statistically insignificant impact on domestic investment after the Asian Financial Crisis. This implied that a positive shock to domestic investment might discouraging signal to foreign firms and hence, crowds out the inflow of long-term foreign capital. Furthermore, economic growth is found to have statistically significant and highly persistent effects on the future level of FDI.

Moreover, Raguragavan (2004) found that a positive effect of FDI on the variables such as growth, trade, domestic investment and labour productivity led to an improvement of the balance of payments through an increase in exports rather than in imports. Economic growth has mainly been achieved through FDI's impact on exports and domestic private investment. In the short run, both economic growth and FDI stock strongly affect each other. The short run relationships implied by the impulse response function are supported by variance decomposition. In the long run, any shock to FDI stock or to economic growth affects each other. However, the shock to GDP is major source of the influence over FDI. This indicated that economic growth is the most important factor in attracting FDI in New Zealand. The forecast error variance results indicated that positives changes in FDI stock on imports are much stronger during later periods than during initial periods. The causality running from FDI to exports is stronger than export to FDI. The stronger causality running from FDI to domestic investment and labour productivity to FDI seems to be stronger than vice versa. The dynamic innovation techniques indicated a bi-directional causality between FDI and the variables. The long run causality runs mainly from growth and labour productivity to FDI rather than in the opposite direction. Furthermore, policy implication suggests that maintaining sustainable economic growth with a positive domestic investment environment is vital for attracting foreign investors. Besides, New Zealand should aim to channel it into innovative tradable sectors to encourage inward FDI.

Furthermore, Zheng et al. (2006) examined the impact of FDI on China's economic growth at both national and regional levels from 1985 to 1999. For national