MACROECONOMIC DETERMINANTS OF FOREIGN DIRECT INVESTMENT INFLOW INTO MALAYSIA: EMPIRICAL STUDIES

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A research submitted to the Othman Yeop Abdullah Graduate School of Business partial Fulfillment of the requirements for the degree of Master of Science (Finance), Universiti Utara Malaysia

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ABSTRACT

The purpose of the research is to add insights into the field of FDI and to investigate more about the relations -if exist- between macro economic determinants i.e., interest rate, exchange rate, inflation rate, growth domestic product, export of goods and services, import of goods and services, and FDI inflow into Malaysia as a major host country. Based on the reviewed and analyzed results, findings reveal general trends of such relations. Time series data from 1990-2010 has been studied using a linear regression analysis based on the OLS model and OLI Paradigm. Results showed that positive relationships correlated with FDI inflow into Malaysia; namely, interest rate and imports of goods and services need to be strengthened to ensure higher level of FDI. Malaysia's GDP was found signifcant and its negative influence needs to be managed. On the other hand, Malaysia's inflation rate was found positively insignificant whereas exchange rate was found negatively insignificant. That would require further investigation since the insignificant indicators don't reflect real influence on FDI inflow into Malaysia.

ACKNOWLEDGMENT

Praise to Allah, the Most Gracious, and the Most Merciful who gave me the physical, mental and spiritual strength. I would like to express my appreciation to my advisor, **Dr. Raj Yadav**, for her suggestions and invaluable comments throughout this study. She has usually been a guide to lead me towards more achievement to show a distinctive performance. Her advice and support were notably essential to the completion of this study.

I would like to thank my parents: my great father Mr. **Yousif Aldaqes**; My great mother who gave me the name, the life and everything else in between thank you for, endless support, encouragement, and inspiration. I would like to extend my sincere appreciation to my brothers, Dr. **Rami**, Director. **Raji**, Mr. **Rowaa**, Mr. **Mohammed**, thank you so much for all your love, support, and understanding; No words enough to thank my seven beloved **sisters** for their support and patience during my foreignness.

Finally, my grateful thanks would also be sent to the examiner of my thesis visiting **Pro.Dr. Ram .N. Agaswal** for his helpful and valiable perspective to improve the research work toward the better.

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LIST OF ABBREVIATION

ASEAN	Association of Southeast Asian Nations
CEECs	Central and Eastern European countries
CPC	Central Product Classification
EU	European Union
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
ISIC	International Standard Industrial Classification
MFN	Most Favored Nation
MNE	Multinational Enterprise
OECD	Organization for Economic Co-operation& Development
R&D	Research and Development
TNC	Transnational Corporation
TRAINS	Trade Analysis and Information System
UNCTAD	United Nations Conference on Trade and Development
UNIDO	United Nations Industrial Development Organization
US	United States
US$	United States Dollar
WAIPA	World Association of Investment Promotion Agencies

CHAPTER 1

INTRODUCTION

1.0 Introduction

Foreign direct investment (FDI) has played an important role in the economic growth and development of many countries in recent decades. Data in Table 1.1 shows trends of increased value since 1982 in total FDI inflow and FDI inflow as a share of GDP. Although these measures declined in 2008 due to global recession, FDI is still crucial, especially for developing economies. Host countries acquire capital through the FDI of multinational enterprises (MNEs). This is critical to developing countries with limited ability to raise private capital. FDI can provide host country firms without access to capital markets a means to raise capital in a cost effective manner. FDI is also considered a common mode of entry to a foreign market, a way to access technology and skills, and away to pursue global strategic objectives and respond to market opportunity.

Policymakers of many countries, especially those with developing economies, work to encourage FDI by providing incentives to MNEs to establish plants or companies in their countries due to the numerous positive effects that can bring

FDI to the host countries. A part from the direct benefit of an increase in the amount of capital in the host country, FDI can also cause spillover effects of benefit to the host through 1) technology transfer, 2) the introduction of new processes, 3) managerial skills, 4) new jobs and employee training, 5) international production networks, and 6) access to markets.

Table 1: World Bank Data on FDI

Value at current price in (billions US$)					
World FDI Data					
	1982	1990	2004	2007	2008
FDI Inflows	58	207	648	1,978	1,697
FDI Inward stocks	789	1,941	8,902	15,356	14,909
Gross Fixed capital Formation	2,798	5,102	8,869	12,367	13,799
GDP (current prices)	12,083	22,163	40,671	54,568	60,854
FDI Inflows per Gross fixed capital formation	2.07%	4.06%	7.31%	16.o%	12.35%
FDI Inflows per GDP	0.48%	0.93%	1.59%	4.86%	2.70%

Adapted from: World Investment Report 2005: Overview, UNCTAD/ World Investment Report 2008: Overview, UNCTAD/ World Investment Report 2009, UNCTAD. 1- Author calculation by dividing FDI inflow by Gross fixed capital formation. 2- Author calculation by dividing FDI inflows by GDP.

A number of studies found evidence of the positive effect of FDI on host countries. Magnus Bloomstrom and Ari Kokko (1998) claim that there are positive FDI effects for the host countries due to various FDI spillovers. These spillover benefits of FDI tend to increase with the level of local capability and competition. According to Laura Alfaro (2003), another positive effect of FDI is to encourage growth in the manufacturing sector. This makes attracting FDI an important issue of concern for many countries. The specific attractions for FDI, however, can be quite different according to characteristics of both industries and countries. It is therefore important to explore the critical country -level factors and industry- level factors that will determine the flow of FDI into the country. In addition to the level of FDI, the stability of FDI is also significant. According to Robert Lensink and Oliver Morrissey (2006), a high level of FDI volatility has a consistent negative impact on growth for several reasons. The first reason is that FDI promotes growth by decreasing the cost of research and development (R&D) through increasing innovation, whereby an increase in the FDI volatility will decrease incentives to innovate. Another factor is that the volatility of FDI typically can reflect economic or political uncertainty, a major determinant of both growth and investment productivity especially for developing countries. The volatility of FDI, as a result, is another important issue to be explored.

Developing countries, emerging economies and countries in transition have increasingly come to see FDI as the catalyst for economic development and integration with the world economy and this has resulted in policies those all

aimed at attracting FDI. Globalization has further intensified the competition, as attracting FDI increasingly depends on the ability to provide a favorable FDI regime and competitive factors of production. Pigato (2001) stated that competitive factors of production now extend beyond cheap raw labor and basic infrastructure to encompass adaptable labor skills, sophisticated supplier networks and flexible institutions because while incentives such as tax incentives may improve a country's attractiveness, if other factors of production are unfavorable, they will be insufficient to significantly increase inflows of FDI. In some cases this even limits the country's ability to attract more dynamic FDI.

1.1 Definition of Foreign Direct Investment

Referring to the Bank of Thailand, *Direct investment* reflects the lasting interest of a non-resident in the economy of the resident entity. An FDI investor can invest in three optional forms of direct investment, which include equity capital, lending to affiliates, or reinvesting earnings. Investment in equity occurs when direct investors own 10 percent or more of the ordinary shares or voting power for an incorporated enterprise, or the equivalent form of control for an unincorporated enterprise. Affiliate lending refers to the borrowing and lending of funds between direct investors and subsidiaries, branches and associates. Excluded from this classification are inter-office loans to/from financial

institutions, which are treated as “other loans”. Reinvested earnings are defined as investment earnings not distributed as dividends nor remitted to direct investors.

The OECD Benchmark Definition, OECD (1996, 7-8) provides the following

Designation:

> Foreign direct investment reflects the objective of obtaining a lasting interest by a resident entity in one economy (‘‘direct investor’’) in an entity resident in an economy other than that of the investor (‘‘direct investment enterprise’’). The lasting interest implies the existence of a long-term relationship between the direct investor and the enterprise and a significant degree of influence on the management of the enterprise. Direct investment involves both the initial transaction between the two entities and all subsequent capital transactions between them and among affiliated enterprises, both incorporated and unincorporated.

1.2 Objectives

This study is designed to attain various objectives. The first one is to identify what type of relation-if exists-between the macro-economic determinants affecting FDI inflow into Malaysia. Thereby, the study attempts to investigate the relationship between exchange rate, interest rate, inflation rate, gross domestic product, imports goods and services, as well as exports of goods and services and FDI inflow into Malaysia. It can guide countries tend to be most attractive to FDI patrons which will also produce a set of practical steps to set forth as suggested governmental recommendations for those host countries interested in promoting and attracting increased levels of FDI inflow.

The second role/objective of study is to benefit both financial practitioners and academics in research. For financial practitioners, especially investors, FDI has been considered as an effective, important indicator or a crucial measure of the economy growth and confidence of the suitable countries to invest in. Moreover, this study provides a general historical background of FDI as well as the development of FDI into Malaysia, the major types, reasons, and roles those have been played in growing countries cross the world and the Malaysian economy in particular over the past two decades. Besides, ample studies and empirical evidence were conducted in the field of FDI globally, in order to encourage mainly the academics and researchers to derive furthermore of beneficial studies in the same domain.

1.3 Structure of Study

Following this introduction in Chapter 1, the structure of this study is as follows: Chapter 2 begins with a theoretical framework of FDI globally and then essentially in Malaysia, following some background on Malaysian economic in particular. Finally, there is a literature review, including empirical research related to FDI determinants. Chapter 3 discusses the existing data and the methodology used to achieve the objectives of current study, hypotheses and data collection. There is also an additional discussion on the data analysis related to FDI.

Chapter 4 deals with the data and the methodology for the analysis of the FDI determinants and their analyzed results. The conclusion and policy implications of this study and some other suggestions will be followed in Chapter 5.

1.4 Problem Statement

Foreign Direct Investment is a well recognized factor that had led the acceleration of Malaysian economic growth since 1970's. In fact, Malaysia is one of the favorite locations for FDI to set up and to invest in. As recorded by UNCTAD (1996), Malaysia was the second largest recipient of the FDI in 1995 where such investment worth at US$ 5.8 billion compared to other Asian countries. This was due to Malaysia's industrial policies in the period of 1970's up to 1990's. These policies and incentives made Malaysia more attractive as an investment center as the economy benefited tremendously from the outward bound investment from Asian Newly Industrialized Economic (NEIs) that were relocating their production bases.

Various studies conclude that there is a positive correlation between GDP and inflow of FDI. Similarly, there is a clear notable, negative sign between the inflation and the effect on the inflow of FDI. Mc Aleese (2004) states that "FDI embodies a package of potential growth enhancing attributes such as technology

and access to international market" but the host country must satisfy certain preconditions in order to absorb and retain these benefits and not all emerging markets possess such qualities - (Boransztain De Gregorio & Lee, 1998; Collier & Dollar, 2001)- a host country is a recipient country of inward investment by a foreign firm, whereas the source or origin country is a country that invests in another country.

Besides, FDI is a major component of capital flow for developing countries, its contribution toward economic growth is widely argued, but most researchers concur that the benefits outweigh its cost on the economy (Musila & Sigue, 2006). According to Ayanwale (2007), the relationship between FDI and economic growth is unclear yet. Recent evidence shows that the relationship may be country and period specific. Therefore, there is a need to carry out more research on their relationship.

In the case of Malaysia, an analysis of foreign flow into the country so far has revealed that only a limited number of Multinationals or their subsidiaries have made FDI in the country (Omankhanlen, 2011). Added to this problem of insufficient inflow of FDI is the inability to retain the FDI which has already come into the country. That effect is due to the foreign direct investment on ample variables, including exchange rate, interest rate, inflation rate, import goods and

services as well as export goods and services and their effect as macroeconomic variables on FDI.

An economic policy providing a conducive economic environment will help to attract FDI inflows into the country since FDI has been considered as one of the most important contributing factor due to its economic profit. However, the characteristics of monetary policy according to Kiat (2008) presents that trade-offs must be done in order to maintain economic stability as these trade-offs can impact on the FDI inflow (Lahrèche, Révil & Bénassy, Quéré, 2002; Gelb, 2005; Umezaki, 2006) as cited by Kiat (2008). However, Malaysia needs to look at attracting new avenues of FDI, especially in the services, oil, gas, energy, and environment-related sectors as they offer strong potential growth (NG, 2010).

1.5 Research Objectives

1.5.1 General Objective of the Study

In general, the objective of the study is:

To identify the type of relations exists between macroeconomic determinants that affect FDI inflow into Malaysia.

1.5.2 Specific Objectives of the Study

Specifically, the objectives of this study are:

i. To identify the type of relation exists between Malaysia's exchange rate and FDI inflow into Malaysia;
ii. To identify the type of relation exists between Malaysia's interest rate and FDI inflow into Malaysia;
iii. To identify the type of relation that exists between Malaysia's inflation rate and FDI inflow into Malaysia;
iv. To identify the type of relation exists between Malaysia's gross domestic product and FDI inflow in Malaysia;
v. To identify the type of relation exists between Malaysia's imported goods and services related to FDI inflow into Malaysia;
vi. To identify the type of relation between Malaysian exported goods and services related to FDI inflow into Malaysia;

1.6 Significance of the Study

This study attempts to indentify the actual relationship between some of the macroeconomic determinants systems of host country and the inflow fund of foreign direct investment in that particular country (Malaysia). This study is to identify the effect of some specific factors which are a set of the components in macroeconomic in influencing the inflow fund of foreign direct investment of a country (Froot and Stein, 1991)

Aim of this study is limited to identify the type of relations if exist between macroeconomic determinants that affect FDI inflow into Malaysia. Specifically, exchange rate, interest rate, inflation rate, GDP, imported goods and services as well as exported goods and services. This study will look at whether there is a positive significant relationship exists between FDI and Malaysia macroeconomic variables systems. Thus, results from this study will show us whether exchange rate, interest rate, inflation rate, GDP, imported goods and services, and exported goods and services play a positive significant role in determining the flows of FDI from foreign investors to the Malaysia (host country) or vice versa.

This study is designed to benefit both financial practitioners and academics in research. For financial practitioners, especially investors, FDI is an effective and an important indicator and a measurement of the economy growth and confidence

as well. It has been increasingly recognized that FDI inflows can contribute to economic development and promise a diversification of potential benefits to poor country recipients. Due to the potential role of FDI in accelerating growth and economic transformation, many developing countries seek such investment to accelerate their development efforts. Consequently, FDI has become an important source of private external finance for developing countries. Hence, the main objective of this research is to investigate what type of relation-if exists-between these ample macro-economic determinants affecting FDI.

1.7 Summary

The current chapter is reviewed an introduction with specific definitions of status of FDI generally, That followed by discussing the main objective, structure, and problem statement of study, thereby providing a clear understanding in the regards to what issue has been studied and analyzed based on the previous findings. Thereafter, both general and specific research objectives are posed respectively, then the significance of the study had reported in the last section.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

The purpose of this part is to review and discuss what been discovered in the previous studies regarding the specific factors and foreign direct investment (FDI). This chapter examines the literature regarding FDI along with issues related to the theoretical framework globally and empirical evidence. The first section discusses the theoretical framework of FDI in general. The second portion presents some background on Malaysian economy particularly, and the theoretical framework of its FDI. The latter portion is composed of empirical results and research as pertaining to the test for FDI determinants.

2.1 Theoretical Framework of Foreign Direct Investment

2.1.1 Types of MNEs and Reasons for Foreign Direct Investment

Richard E. Caves (1982) considered the MNE as an economic organization.

According to Caves, multiplant firms can be divided into 3 groups: 1) horizontal multiplant enterprises, 2) vertically integrated MNEs, and 3) portfolio diversification and the diversified MNEs. Caves explain each grouping and his supporting reasons for MNE differentiation, which can be summarized as follows:

2.1.1.1 Horizontal multiplant enterprise: Horizontal MNEs will exist only if control and operation integration lead to lower costs under those of maintaining separate managements. An important issue for horizontal MNEs is concerned with intangible assets such as technology or specific skills which must often deal with problems of market failure. They are public goods that Caves contends suffer from opportunism and "impactedness."

Other firms can use newly invented technology with little extra cost; not paying as much for the knowledge as the knowledge is worth it to them. Uncertainty about the accuracy of knowledge further amplifies Caves' problem of impactedness. In response, several firms tend to band together into one MNE to share the intangible assets and avoid those problems. Scale economics and cost minimization, especially transactional economies, are another issue that promotes the existence of MNEs. The outbound shipment network allows MNEs the free movement of goods to market locations that have higher demand.

2.1.1.2 Vertically integrated MNEs: The internalization of an intermediate goods market becomes the crucial issue of vertically integrated MNEs' concern. Without homogeneous intermediate goods, changing partners or the selling of intermediate goods leads to substantial costs to the buyers due to the costs of testing and adapting to new or similar products. Long-term alliances become very important to the MNEs, so as to avoid uncertainty and disappointment when switching from problematic transaction partners. There are problems of fair bargaining, however, for both parties in the contract. The structure of a vertically integrated MNE provides one solution for these problems.

2.1.1.3 Portfolio diversification and the diversified MNE: Firms tend to locate plants in several countries in order to internationally diversify risk because adverse shocks, such as recessions, are not often correlated with other countries. Even though investing abroad leads to extra costs and the risks of adding activities, there is evidence that diversifying in domestic product markets and investing abroad are sound alternatives for mature companies.

Caves (1982) also indicated that there is a relationship between the FDI through MNEs and international economic activities. Typically, firms usually face trade-offs between FDI (producing goods abroad) and exporting (producing domestically), especially when firms face increasing marginal costs. Anything that might favor foreign investment will discourage the use of exports. In this

situation, firms can find more profit from foreign investments. With free-trade equilibrium, however, MNEs have no incentive to move capital internationally. Firms will invest abroad more heavily when trade is restricted to substitute for a decrease in exports. According to the capital arbitrage assumption, a "capital-rich country" (home) tends to export capital-intensive goods. The rentals to this capital-rich country will increase and workers' wages will fall with the expansion of exports. This results in an increase in unemployment in the short run and a decrease in real wages in the long run in the home country. The outcome is the opposite in the foreign country (host). These examinations not only reflect on the substitution between trade and horizontal FDI, they show that FDI can impact income distribution.

Regarding vertical FDI, the primary reason for this type of involvement occurs when MNEs desire to internalize their markets for intermediate goods. Namely, these foreign investments are driven by relative factor costs and resource endowments. They tend to create more trade by increasing exports of capital equipment and factor services from the home country to a plant in the host country and, in turn, exports of resource based products from the host country to the home country. Furthermore, an MNE's presence stimulates demand for the MNE's and other products that originate in the MNE's home country. In this situation, trade and FDI are complements.

International trade, however, can possibly adjust or eliminate the effects of capital outflow for the home country if the country is relatively small because the terms of trade are a given. The reason for this is that lower wages lead to more profits in labor-intensive goods, which are the country's imports. Factors of production will move to import competing sectors until the capital-labor ratio in all sectors retreats to the levels before being disturbed by the capital outflow. Hence, the effects of capital outflow in a small country will be eliminated. Nevertheless, there is also some evidence against the clims of the capital-arbitrage assumption. Namely, that most countries are both home and host for MNEs because MNEs move in all directions across the world.

Technology and productivity are also important issues relating to MNEs and foreign investment. The MNE has a crucial role in the production of new knowledge or technology. The MNE encourages new knowledge by pulling R&D toward the parent's headquarters, which acquires benefits from more efficient supervision and economies of scale. The next step is for the MNE to disperse the knowledge to its subsidiaries leading to technological transfer. Broader scale implications of national welfare come next into play as the MNE home country will lose to other foreign and world interests if the home country cannot collect rents on invented technology as it disseminates to other countries. Furthermore, as technology dissemination occurs through the MNE's international capital outflow, foreign entities can benefit from the resulting capital inflow. Hence, technology

transfers and capital movements can be substitutes for one another when independent.

2.2.1 The Determinants of FDI for Host Countries

According to UNCTAD 1998, there are several factors that influence the FDI position in the host countries. Host country determinants of FDI consist of 1) a host country policy framework for FDI, 2) business facilitation, and 3) economic determinants.

2.1.2.1 Host country policy framework for FDI: FDI cannot take place unless a country has openness to FDI. Even though this openness to FDI is necessary for attracting FDI, it is not by itself a sufficient determinant and other determinants have important roles to play. Trade policy plays the most prominent role. For example, some Asian countries have used both FDI and trade policies to encourage inward FDI and contribute to their export-oriented economic strategies. International investment agreement is also an important determinant. Namely, the host country should provide for fair and equitable treatment between domestic and foreign investors, including legal protection and guarantees against noncommercial risk. Furthermore, the host country should strengthen market controls in terms of competition (e.g., antitrust laws) and mergers and acquisitions or M&A (e.g., privatization).

As a result of interdependency and globalization, macroeconomic policies and macro-organizational policies also become determinants of FDI. Monetary and fiscal policies that determine the economic stability of a country, such as inflation rate, external and budgetary balances can influence FDI. Tax policy and exchange rate policy will also have an influence on FDI. Regarding macro-organizational policies, those influencing the industry composition of manufacturing are of primary focus and include the spatial composition of economic activities, the functional composition of activities, and the composition of activities by type of ownership and intensity of competition. Following these, policies affecting the supply and quality of productive resources are also important, including educational and health policies.

2.1.2.2 Business facilitation: For a country that wants to attract or regain investor attention, promotional activities have become necessary. Organizations such as the World Association of Investment Promotion Agencies (WAIPA) assist members in a variety of these image-building efforts. Investment-facilitation services are another important part of promotional activities. These services consist of counseling, accelerating the several stages of the approval process, providing assistance in obtaining all the needed permits, and providing after-investment services. Business facilitation measures, however, can only hold a supporting role as an FDI determinant. They are rarely the decisive factors. Host

countries may not be able to attract FDI if they do not possess the basic economic determinants as discussed in the next topic.

2.1.2.3 Economic determinants: The core economic determinants of FDI in host countries can be divided into three basic groups based on the specific type of FDI as classified by the motives of the transnational corporations (TNCs).

The first group is market-seeking FDI. The determinants for attracting marketseeking FDI are national markets also include market size (i.e., population), per capita income, and the market growth of the host country. National markets are important for many service TNCs because most services are nontradable and can be delivered to foreign markets only through establishment abroad. Another determinant is consumer preference, wherein a TNC must consider whether their products meet the host country consumer's preferences or not. The last determinant is access to regional and global markets. Host countries with significant accessibility will be more attractive for FDI. The second group is resource/asset-seeking FDI. Even though natural resources are a prominent FDI determinant, investment may or may not take place in countries with abundant resources. Investment will most likely take place in countries that possess abundant resources, yet lack the technical skills needed to extract or sell these raw materials out of the host country and on to final destinations (e.g., roads, ports, power, and telecommunication) are another key factor of attraction to resource-

oriented FDI. The availability of low-cost unskilled labor is another determinant for TNCs that require low costs of production. Specific determinants such as skilled labor, technological, innovatory and other created assets can be determinants of FDI, depending upon industry need. The third grouping is efficiency-seeking FDI. The determinants of this category may be impacted by the results of a regional integration agreement. These determinants include 1) the cost of resources and assets, as adjusted for productivity of labor resources after the regional integration of production, 2) other input costs such as transport and communication costs, and 3) membership of regional integration agreements that facilitate the establishment of regional corporate networks.

2.1.3 The Eclectic or OLI Paradigm

The eclectic paradigm of John H. Dunning (1980) is a general framework for explaining international production and FDI. The eclectic paradigm contends that the propensity of an enterprise to bring FDI into a host country depends on three important advantages as follows:

2.1.3.1 Ownership-specific (O) advantages: An enterprise possessing or being able to acquire certain assets, which their competitors or like enterprises of other countries do not possess, affects the capability and willingness of that enterprise to produce in foreign locations. Such ownership-specific advantages help

determine FDI since these assets equate to resources and capabilities for generating future income streams. These assets are both tangible, such as natural resources, manpower, capital, proximity to markets, intangible, such as information and technology, managerial skills, marketing and entrepreneurial skills, organizational skills, and favored market access for intermediate or final goods. Ownership forms may include proprietary rights of use, or a commercial monopoly, or an exclusive control over specific market outlets.

2.1.3.2 Location-specific (L) advantages: The ability of an enterprise to obtain ownership-specific advantage is also related to the host country's location endowment. Location-specific advantages explain the decision on where FDI occurs, i.e., whether an enterprise will supply each foreign market by exports or by local production. This helps explain the home country focus of their FDI in some specific industries over other home countries. According to Dunning (1979) and referenced by John H. Dunning and Sarianna M Lundan (2008), an example of this is the comparative advantage of Japanese firms in producing textiles and clothing abroad, contrasted with a U.S. advantage in producing transport equipment abroad. Home countries will exploit ownership-specific advantage wherever they can gain maximal benefits with minimal transfer costs.

2.1.3.3 Internalization (I) advantages: Ownership-specific advantages are necessary but not sufficient to explain FDI since an enterprise may choose to sell

a proprietary processes rather than attempt to exploit it via FDI. Internalization advantages allow firms an option to exploit ownership endowments and location endowments by producing abroad. Incentive to internalize ownership and location endowments is created since the firm can avoid the risk and disadvantage of market and price system imperfections and/or the fiat of public authority.

2.2 Background Malaysia Economy and FDI

2.2.1 Background on the Development of FDI in Malaysia

The relative attractiveness of a country as a destination for FDI inflows, especially from the U.S, Japan, Europe, Taiwan and Republic of Korea, has made Malaysia among the world's largest exporters of semiconductors devices and audio-visual equipment (MIDA, 2006). FDI has played a significant role in the development of the economy and the attainment of its socio-political goals in Malaysia (Siew & Yean, 2003). Since independence in 1957 Malaysia has fully capitalized both its tangible assets such as rich natural resources, abundant and cheap labor, and its sizeable domestic market as well as its intangible assets, namely its preferential trade status under the generalized system of preferences, macroeconomic stability, liberal trade regime and an efficient legal infrastructure, to attract FDI. The government of Malaysia's principal policy is to harness FDI as part of the economic development strategy in order to obtain foreign technology,

capital and skills. To this end, the predominantly import-substitution-based economy of the 1960s, to a large extent, was replaced by a vigorous and diversified export oriented economy.

This was followed by an unprecedented real GDP growth rate averaging 8.9 % per annum from 1988 to 1996, particularly buoyed by FDI in the manufacturing sector. Until 1993, foreign investment contributed 60% of all investment in Malaysia. FDI grew strongly in the late 1980s to reach a peak of RM17.7 billion in 1992. This was followed by a sharp drop to RM 6 billion in 1993 due to the world recession, but rose again to RM15.2 billion in 1994. Malaysia is among the top five recipients of foreign direct investment in the world. While in recent years FDI came mainly from other Asian countries, 1993 saw the US as the biggest inward investor with RM1.7 billion. Japan and Taiwan were clearly the largest overall investors with the US third, followed by France, Singapore and the UK (McLeman, 1994). Following share of global trends, FDI flows to Malaysia increased from US$ 2.33 billion in 1990 to US$ 5.1 billion in 1997 which equals to 5.2% of its GDP. However, after the financial crisis of that year, net FDI inflow dwindled to a mere US$1.5 billion which equaled to no more that 1.86 % of GDP in 2001 (World Development Indicators, 2003). Malaysia continued to receive FDI amounting to 5.9% of GDP, indicating that the nation remained as an attractive investment destination.

The report released by the United Nations Conference on Trade and Development (UNCTAD) in its World Investment Report 2006 however indicates that FDI into Malaysia dipped to RM 14.69 billion in 2005, compared to 2004 when RM 17.09 billion in FDI was recorded. As first time since 1999, Indonesia managed to overtake Malaysia in drawing in FDI. In the second quarter of 2006, gross inflows of FDI to Malaysia was reported to increase to RM 9 billion in half year 2006, reflecting larger inflows of both inter-company loans and equity capital (BNM Quarterly Bulletin, 2006).

The sizes of the inter-company loans were reported to be in the form of short-term loans extended by foreign subsidiaries in Malaysia. It is interesting to see that destination of FDI flows followed quite closely the long-run changes taking place in the economic structure of the country. Possibly, Malaysia's reliance on foreign capital for development in some measure, forced such changes on the economy.

Much of the foreign investment in the country is associated with the growth of modern manufacturing, including electronic goods, electrical machinery, chemicals, textiles and wood products. However, over time the services sector tended to expand faster, inducing a corresponding shift in the destination of FDI flows. This shift was picked up during the 1990s when the FDI was on the rise. One can easily see that the skyline of the manufacturing sector bars is concave from below while the services sector is convex. In fact, in year 2000 the share of

the services sector, at 43 % of FDI, had already overtaken that of the manufacturing sector, at 32% and Oil and gas sector was ranked the third in order of importance. The property sector has lagged far behind.

2.2.2 The impact of FDI on Gross Domestic Investment

Generally, it is known that LDCs have insufficient domestic capital resources available to meet their investment needs. Low domestic savings is often attributed to, among other factors, low per capita income, and high and fluctuating inflation rates, low exports to GDP ratios and poor financial intermediation. FDI is needed to reduced the distance between desired gross domestic investment and domestic savings. Jenkins and Thomas(2002) assert that FDI is expected to contribute to economic growth not only by providing foreign capital but also by crowding in additional domestic investment. By promoting both forward and backward linkages with the domestic economy, additional employment is indirectly created and further economic activity stimulated.

Olaniyi (1988) investigates the impact of direct foreign capital on domestic investment to ascertain its overall contribution to the enhancement of domestic savings capacity in Nigeria. His model of domestic savings and investment financing in Nigeria empirically tested in impact of FDI on the level of domestic savings and investment. His results confirm that domestic savings is by far more

relevant in determining investment growth than foreign capital inflows in Nigeria. At best, foreign capital complements domestic savings.

FDI may crowd out equal amounts of investment by domestic firms through aggressive competition in local product of financial markets, especially in cases where domestic firms are already financially constrained. Some researchers have suggested that the link between FDI and productivity might arise because foreign investors pursue higher productivity and capital formation. This raises the fundamental question of whether FDI takes place before higher labor productivity and capital formation. The common problem associated with most previous attempts to measure spillover effects from FDI is lack of investigation of the correlation between FDI and growth in detail. Though various empirical works have recognized this inadequacy, only a few studies directly address the problem without accepting the convention that the direction of causality is from other determinants including FDI to growth.

Most previous estimations attempting to establish the relationship between FDI and economic growth has always been to regress labor productivity on foreign direct investment, which implicitly assumes that FDI is causally prior to, or at least independent of, economic growth. But causation can run both ways. The inflow of foreign investment could potentially react to the vitality of the domestic economy. Bell and Pavitt (1993) observe that foreign direct investment has

generally been a consequence, rather than a cause of growth in domestic investment and rapid industrialization in developing countries.

Empirical evidence indicates that firms increase investment in response to the expansion of sales associated with the rise in GDP. Bandera and Whyte (1968) found a statistically significant correlation between US FDI to the European Union (EU) and European incomes (GNP), and conclude that a motive to invest abroad can be summarized as a desire to penetrate a growing market defined in terms of the level and growth of GNP in host countries.

Benefits such as increased productivity may also be highly dependent on the sectors invested and host country environments. Kokko and Blomstrom (1995) show that the affiliate technology imports increase with the host countries domestic investment and education levels. Therefore, the benefits of productivity may be highly dependent on sectors of investment, the technology gap in a particular investment, and host country environments.

FDI flows greatly to a relatively high technology and knowledge-base sector, the positive effect on net jobs may be marginal since these sectors are bereft of skilled and technical manpower because of inadequate domestic investment. Improved foreign exchange savings may not be feasible in the short run of the inflows of

FDI. If FDI flows only to concentrated sectors such as oil, as it is, with huge capital requirement, the net foreign exchange position will suffer some deterioration. This arises because the cost of importation of the capital equipment is much higher than the price of processed or semi-processed goods exported by developing economies.

2.2.3 The Role of FDI in the Malaysian Economy

FDI plays several important roles in the Malaysian economy. Its most important role was to generate economic growth by increasing domestic capital formation. According to Krugman and Obstfeld (1994), FDI functions as one way to bridge an inter-temporal gap of capital demand and supply, and, like other capital inflows, increases the production frontier of developing countries, which normally suffer a shortage of capital. Ishak and Rahmah (2002) too echoed this sentiment that FDI provides an additional source of capital and expanded host country production activities. The inflow of capital in the form of FDI allow host economies to invest in production activities beyond what could be achieved by investing domestic savings alone.

Its first role is to augment domestic capital formation which leads to incremental economic growth through expansion of production capacity. Higher economic

growth creates favorable investment environment which attracts investment from market seeking firms.

It can be observed that Malaysian economy grows in tandem with the growth of FDI. This leads to the hypothesis of FDI-Led-Growth which was proven empirically by Kew (1999). However, this is true only up to 1998. It seems that the economy grew despite receiving less foreign capital, during post 1998. This suggests that there is a break in the relationship between FDI and economic growth. It may also be that the economy is now more efficient and therefore being less dependent upon FDI for expansion.

FDI's second role is to fuel export growth. It has been observed that investing firms would naturally have ready international markets for their products. Therefore, the host economy benefits because it circumvents the need for domestic firms to spend resources and time to penetrate and acquire foreign markets. This is the case for Malaysia where exports grew along with FDI which suggests a stable positive correlation up to 1998. Since than other factors such as the depreciation of the Ringgit and global demand would have had a greater impact on the growth of exports. It is not likely that Malaysia would have experienced the tremendous growth in exports without the benefit of FDI.

The third crucial role of FDI is to facilitate the transfer of new technology to the host economy. FDI provides the fastest and most effective way to deploy new technologies in developing host countries (UNCTAD 2000). However, the success of this depends on the absorptive capacity of the host economy. Certainly, less advanced technologies are easier to be absorbed. Technology is also easier to be absorbed if the technology gap is narrower. There is no direct measure for technology transfer. However, productivity index would serve as a suitable proxy under the assumption that adoption of technology leads to higher productivity. However, there is insufficient data to make any inference about this relationship hence, it would be interesting to study this further.

Additionally, FDI also tend to lead to higher employment through the expansion of the economy and job creation. As a result, Malaysia can be considered to be at full employment. The demand for labor exceeds supply by a very large extent that most manufacturing industries now depend on imported labor from Indonesia, Bangladesh, Pakistan, Vietnamese, Nepal, India and other countries. It was reported by the MOF (2005) that in 2004 there were 1.3 million foreign workers making up 12% of total employment and 31% of employment in the manufacturing sector comprising of foreign labor. FDI was also the agent of transformation in the Malaysian economy. The massive influx of foreign investments into the manufacturing sector was pivotal in its transformation from an agricultural economy to an industrialized economy.

2.3 Literature Review on FDI Determinants

The field of international investment is full of various studies concerned with the relation between exchange rate, interest rate, inflation rate, imported goods and services as well as exported goods and services with FDI. These different studies attain different findings, varied between negative and positive results, significant and insignificant indicators. Others conclude with no real relations between the previous variables. The current literature review declares some of these multiple-concluding findings, based on many conducted studies.

Marial and Teng (2009), there is increasing in understanding that trade and FDI are the vehicle that moves globalization. The nature and quantity of determinants and factors that determine FDI flows into a country depend, largely on the barriers to trade. Each country must pull down and opportunities must be open up for attracting FDI into a country. As the race for FDI among the nations intensifies, the conditions for attracting FDI continue to increase and multiply as well. Among the important factors that attract the FDI flow are particularly the characteristics of host country.

These determinants and factors are broadly grouped into three major categories: Economic conditions, host country policies and MNE strategies. Under economic conditions, the important factors include the size of markets, natural resource

availability, location and competitiveness. host country policies are related to trade, industry and FDI policies. Finally, under MNE strategies, the important factors are the level of the country's risk, location, sourcing, and integration transfer (Marial & Ngie, 2009).

Froot & Stein (1991) investigated FDI in U.S during the period from 1973-1990, to examine the relationship between exchange rates and FDI on thirteen U.S. industries in the globally integrated capital markets. They concluded that the exchange rate led to significant change in wealth, which in turn led to significant changes in direct investment. Among the various types of capital inflows they analyzed, they found that FDI was the only type of capital inflow that had a statistically negative correlation with the value of the dollar. Besides, they concluded that the exchange rate effects were pervasive even in a much disaggregated level of industries. Among the different industries, the strongest exchange rate effects appeared in manufacturing industries. Their study and its empirical results added more credence to the claim that a depreciated currency motivated foreigners toward buying productive corporate assets since exchange rate changes had important impacts on the international wealth.

Besides, Goldberg & Klien (1997) investigated the relationship among trade, FDI and real exchange rate between South Asian Asset (SEA) and Latin American (LA) countries and both Japan and U.S. within the period 1978 - 1993. The SEA

countries consisted of Malaysia, Philippines, India and Thailand. The LA countries included in the sample were Chile, Brazil and Argentina. Three proxies were used for FDI, namely real foreign direct investment from U.S or Japan to that particular country, imports and exports for SEA and LA countries. Their independent variables were real exchange rates from U.S and Japan, real incomes of source countries and real incomes of host countries measured by the respected countries GDP. Both independent variables were lagged to avoid simultaneity problem. Three time series panel data regression analysis were executed, one with FDI as the dependent variable, one with exporting and the final one with importing as the dependent variable. Their results showed significant linkages between real exchange rates and GDP to FDI. They also showed that the source of FDI (U.S or Japan) influenced the degree and direction of the trade effects of FDI. The variables within the regressions were in logarithmic form, so that estimated regression coefficients were interpreted as elastics. A real depreciation of the currencies of the SEA countries with respect to the yen increased the flow of FDI from Japan to the SEA countries and decreased the flow of FDI from the U.S to these countries.

Moshirian (1997) found an index to proxy the exchange rate of the US dollar as positively correlated with FDI- based on the data from the international division of the U.S department of commerce. This meant that foreign investors had to consider investing in the US market not only for a general rate of return but also for an expected appreciation of the US dollar over time.

Recent studies, such as Tharumarajah (2001) investigated the determinants that led to the expansion of inward capitals inflows to Malaysia over the period of 1970 - 1998 using a sample model of linear regression. He finds that the most significant factors are import of home country into Malaysia and the GDP growth of Malaysia. Faster growth of GDP, import levels and domestic investment in Malaysia will result in greater amounts of FDI inflows. He also concludes that interest rates affect demand for loans and exchange rate of Malaysian ringgit against the U.S dollar. As expected both these variables coefficients have a negative sign indicating lower interest rates which reduce the cost of borrowing and increase the level of inward capital flow. The lower cost of financing in a host country relative to that in the home country results in a lower valuation of currency. This attracts foreign entities to begin operations in a country. Both of these coefficients are negatively correlated and significant at 5% significant level.

Lopez, (2002) analyzes the relationship between FDI inflows and both exports, and imports in Mexico, during the period from 1970 – 2000, using the annual World Development Indicators as data source. He finds that there is a causality relationship between FDI and imports, meaning that FDI has a close relationship with imports. Simultaneously as FDI increases, the import content also intensifies since there is a causality relationship between exports and FDI.

Trying to investigate FDI in U.S, Wakelin (2002) examines the impact of the level of the exchange rate, volatility in the exchange rate and exchange rate expectation on outward US FDI in 12 developed countries and inward FDI to the US from those countries from 1983 - 1995. He concludes that there is no evidence for an effect of exchange rate variation, on either US outward or inward investment in the US.

Bouoiyour (2003) studies the determining factors of FDI in Morocco from 1960-2000. During this period, Morocco was one of the most important recipients of FDI inflows in the Middle East and North African. He uses an empirical model using some macro-economic variables. His results find that GDP has a positive impact on the FDI inflows and it can also reflect the dynamism of Moroccan economy. He also finds that the inflation rate is significant with expected sign. The result suggests that macroeconomic stability is an important determinant of investments influx. On the other hand, the results of the second regression conclude that coefficient GDP as insignificant, negative sign, meaning that the instability of Moroccan economy growth can be a handicap for FDI inflows.

According to the results of the third regression, an increase of FDI is equivalent to an increase of exports and imports and a depreciation of real exchange rate against the investing country increased FDI inflows. Exchange rate can reflect the influence of favorable prospects on the evolution of the Moroccan economy.

Based on his study in India during an eight-year period (1992 -1999), Venkataramany (2004) follows the macroeconomic models by Buckley & Casson, (1976) and Trevino & Grosse, (1996) that focuses on the impact of macroeconomic variables to explore the factors participating in the independent of FDI to test whether the variables, such as firm size, profitability, trade, interest rate, economy and inflation really have a significant influence on the inflow of FDI into India. Panel data on investments from source countries like United Kingdom, United States, Japan, Germany, Switzerland and Sweden towards target industries of engineering (motors, electrical machinery, machinery and machines) were examined. FDI inflow to India was used as the dependent variable in this study, while the independent variables were change in GDP (size of market), change in inflation (specific advantage), interest rate for term deposits, interest rate for commercial loans, term of trade, changes in exports and changes in imports. A simple OLS was used to run regression tests for complete sample, target industry FDI inflows and source country FDI. The first regression yielded positive results with estimated coefficients bearing expected signs. Change in GDP turned out to be highly significant with a positive sign, showing the effect of FDI on the host economy. Similarly, the high significance and negative sign of the change in inflation showed adverse effect on the inflow of FDI. Among other variables, term deposit, commercial interest rates, terms of trade, change in exports and change in imports all proved to be highly significant with the exception of change in exports. The second regression involved a similar effect on target industries and source countries separately. As in the basic model, many of

the variables turned out to be highly significant. The variable change in exports was not significant in both analyses. Each of the analysis was also performed with dummy variables to see whether a target industry or a source country played a significant role in impacting the inflow of FDI into India but the results showed no conclusive evidence.

Herrero & Santabárbara (2004) analyzes empirically whether the emergence of China as a large recipient of FDI has affected the amount of FDI received by Latin American countries, during the period 1984 – 2001, based on the data from the International Financial Statistics. Results show that coefficient of bilateral exports is significant and positively correlated with FDI. In addition, there are a number of significant variables in the first specification with all regresses, which turn to be insignificant in the restricted ones, including the bilateral exchange rate and GDP growth in the host country. On the other hand, the bilateral exchange depreciation was clearly significant in increasing FDI to Latin American countries, suggesting a lower investment cost due to the exchange rate depreciation which weighs more than a reduction in repatriated benefits. In addition, larger bilateral imports seem to imply less in Latin American inward FDI.

Hasan (2004) conducts a study to see factors that attract foreign capital to the developing economies, and which of these or other factors have been relevant in

the Malaysian case and what policy lessons the experience has for Malaysia or others using annual data over a thirty one year from 1970 to 2000. He finds that the positive sign for the Malaysia Ringgit (RM) to dollar exchange rate is in line with the empirical evidence that a weak currency is likely to increase foreign investment flows to a country over time (Toro, 1999). Indeed, the exchange rate has been the most dominant determinant of the FDI flow into Malaysia. He also finds that a 1 percent rise in exports to GDP ratio is likely to increase FDI inflow by RM120 million, indicating that exports play a crucial role in attracting foreign capital to Malaysia.

To examine the relationship between FDI and financial sector performance in Malaysia and its neighboring countries, Indonesia and Thailand, Abd Ghani (2007), conducts his study based on quarterly data for the period 1999 -2006. The results of panel data analysis using no lag valves for independent variables find that GDP and inflation rates significantly and positively influence total FDI to the three countries. Lower interest rate is also found to have attracted higher FDI. The results of panel data analysis using lag one quarter valves for independent variables show that total FDI for a particular period is significantly related to changes in last quarter inflation rate at 95% confidence level and is significantly related to last quarter interest rate. Besides, change in inflation in the last quarter is found to be positively related to FDI while interest rate of the last quarter is found to be negatively related with FDI. The results of panel data analysis using lag two quarter valves for independent variables indicate that commercial bank

asset interest rate and inflation rate are positively and significantly related to overall FDI at 95% confidence level.

Kueh , Puah and Mansor (1998) candidate their study on the fifth largest investor among the developing economies in Asia region including Malaysia, the study aimed to examine the macroeconomic determinants of outward FDI of Malaysia, namely real income, exchange rate, trade openness and interest rate covering the quarterly data from 1991:Q1 to 2005:Q4. They found that outward FDI of Malaysia is positively affected by all the variables under study in long run. However, the interest rate does not Granger cause outward FDI in the short run.

Kotrajaras (2009) has done his study in Thailand in order to find the impact of FDI on macro economic growth and various aspects of the host countries in Asian economies. He concludes that FDI can generate more export and import. And from the simulation result, increase in FDI makes an increase in host country's exports and imports of manufactures in world market but have a small effect on real exchange rate.

Marial and Teng (2009) study was on the short-run and long-run factors that influence FDI flows into Malaysia using annual data over the period 1975 to

2006. Their results of long-run FDI equation indicate that FDI inflow into Malaysia is positively influenced by exchange rate while negatively by exports.

Walsh and James (2010) have done their research on the developed countries including Malaysia using a dataset which breaks down FDI flows into primary, secondary and tertiary sector investments and various macroeconomic determinants . They found that the FDI into Malaysia is positively affected by exchange rate.

Azam (2010) investigates the effects of different economic determinants on FDI for three countries selected from Central Asia namely Armenia, Kyrgyz Republic and Turkmenistan. He finds that the effect of inflation on FDI has been found insignificant with expected negative sign. This finding indicates that inflation needs to be managed in order to achieve higher level of FDI and to accelerate the process of economic development.

Anwara and Nguyenb (2010) have examined the impact of FDI on exports, imports and net export of Vietnam over the period 1990 to 2007. The study also considers the impact of FDI on trade during three sub-periods: the pre-Asian financial crisis, the post-Asian financial crisis and during the Asian financial crisis

period. The results show that the impact of FDI on exports and exports are insignificant and positive during the full sample periods.

Cavallari and Addona (2010) studied the role of country-specific sources of output and interest rate volatility in driving FDI activities. Building on a dataset that comprises bilateral FDI flows among 24 OECD economies over the period 1985-2007, they found that output and interest rate volatility mainly act as push factors they are more effective in deterring rather than encouraging foreign investments. A rise in host country volatilities does reduce the amount of FDI outflows in the recipient country.

2.4 Summary

The purpose of this part was to review deeply some previous studies connected with specific macroeconomic determinants and the factors related to foreign direct investment (FDI). This chapter also examined the literature regarding FDI along with issues related to the theoretical framework globally as well as empirical evidence, some particular background on Malaysian economy was presented, and enriched with the theoretical framework of its own regime.

CHAPTER 3

ANALYSIS OF FDI DETERMINANTS: DATA AND METHODOLOGY

3.0 Introduction

This chapter presents the data and methodology used to analyze the determinants of FDI into Malaysia as a host country which are assigned to achieve the research objectives. The chapter begins with a theoretical framework of the study which includes the dependent variables and independent variable. Second part presents the hypotheses of the study, followed by the data sample description and data collection in the third part. Data analysis used to describe the model and the explanatory variables is discussed within summary afterwards in the last portion.

3.1 Theoretical Framework

The theoretical framework of this study is based on some reviewed and conducted studies on FDI worldwide that demonstrate linkages, and relationships empirically among six macroeconomic determinants as independent variables,

and their impact on the inward of FDI into Malaysia as a major host country. Figure 3.1 presents the theoretical framework of this study.

3.1.1 Exchange rate and FDI inflow into the host country:

A declining exchange rate obviously decreases the purchasing power of income and capital gains derived from any return. However, a weaker real exchange rate might be expected to increase inward FDI as overseas firms take advantage of relatively low prices in host markets. On the other hand, a stronger real exchange rate might have a negative sign on FDI inflows into the host countries.

3.1.2 Interest rate and FDI inflow into the host country:

Host countries often lower the interest rate to attract foreign investments. The interest rate represents the price of capital; therefore, an increase in the interest rate will increase the cost of production. Hence, if there is an increase in the price of capital in the host country, that will have a negative impact on the FDI inflows.

3.1.3 Inflation rate and FDI inflow into the host country:

Inflation is a rise in the general level of prices of goods and services in an economy over a period of time, it also reflects the erosion in the purchasing power of money. Today, most economists favor a low, steady rate of inflation. Thereby, the impact of high inflation on growth is negative, in turn, a negative impact on FDI inflow into the host countries likely to be.

3.1.4 GDP and FDI inflow into the host country:

The GDP level of the host country reflects the purchasing power of a country and represents its market capability. Consequently, the higher level of GDP is expected to have a positive impact on the FDI inflows.

3.1.5 Imported goods and services and FDI inflow into the host country:

The ratio of imports of goods and services reflects the openness of the economy. The higher this ratio is, the more liberalized the economy is expected to be; this will have a positive impact on the inward FDI. Commonly, FDI inflows and imports have a complementarily relationship.

3.1.6 Exported goods and services and FDI inflow into the host country:

The ratio of export of goods and services reflects the openness of the economy. An increase in openness might be associated with more horizontal FDI, as investing firms might benefit from circumventing trade barriers through building production sites abroad; this will have a positive effect on the FDI inflow into the host markets.

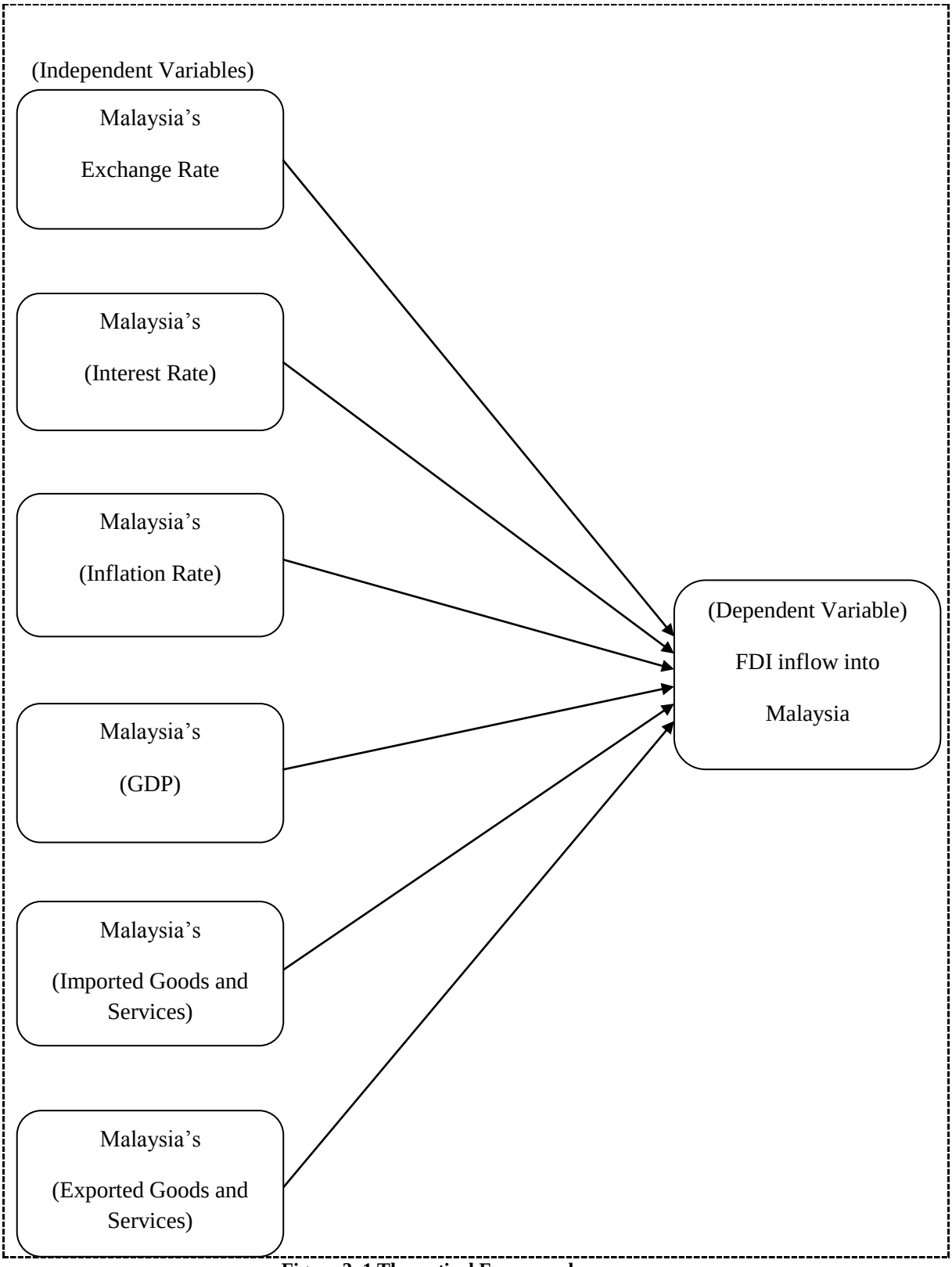

Figure 3. 1 Theoretical Framework

3.2 Hypothesis

Country specific factors are macroeconomic level environmental characteristics that are presumed to affect firm's investment activities (Kogut & Singh, 1988; Tallman, 1988). This empirical analysis hunts for expanding the understanding on macroeconomic determinants those affect FDI inflow into Malaysia, based on the incorporation of key factors drawn from the literature review into the modeling process. The determinants addressed in this study are:

3.2.1 Exchange Rate

Previous research has shown relationships between exchange rate fluctuation and FDI. Pan (2003) note that exchange rate is not a significant determinant for FDI in China. Moshirian (1997) shows that exchange rate is positively correlated with FDI in U.S. Herrero & Santabárbara (2004) note that bilateral exchange depreciation is significant in increasing FDI to Latin American countries. Lewis (1999) concludes that the exchange rate is highly and significantly affects FDI in LDCs. Tharumarajah (2001) finds that the exchange rate of Malaysian ringgit against the U.S dollar is negatively correlated and significant suggesting a lower valuation of currency will attract foreign entities to begin operations in a country. Goldberg & Klien (1997) note a significant linkage between real exchange rates to FDI. Hasan (2004) finds that a positive sign for the

Malaysia ringgit to U.S dollar exchange rate is in line with the empirical evidence that a weak currency is likely to increase the foreign investment flows to a country over time, Kueh , Puah and Mansor (1998) candidate their study on the fifth largest investor among the developing economies in Asia region including Malaysia, the study aimed to examine the macroeconomic determinants of outward FDI of Malaysia, namely real income, exchange rate, trade openness and interest rate covering the quarterly data from 1991:Q1 to 2005:Q4. They found that outward FDI of Malaysia is positively affected by all the variables implicit within the study in long run. However, the interest rate does not Granger cause outward FDI in the short run, Kotrajaras (2008–2009) has done his study in Thailand in order to find the impact of FDI on macro economic growth and various aspects of the host countries in Asian economies. He concludes that FDI can generate more export and import. And from the simulation result, increase in FDI makes an increase in host country's exports and imports of manufactures in world market but have a small effect on real exchange rate, Marial and Teng (2009) their study was done on the short-run and long-run factors that influence FDI flows into Malaysia using annual data over the period 1975 to 2006. Their results of long-run FDI equation indicate that FDI inflow into Malaysia is positively influenced by exchange rate while negatively by exports, Walsh and James (2010) have done their research on the developed countries including Malaysia, using a dataset which breaks down FDI flows into primary, secondary and tertiary sector investments and various macroeconomic determinnats and

found that the FDI into Malaysia positively affected by exchange rate, therefore, this study hypothesizes the following:

H1: Malaysia's exchange rate is positively related to FDI into Malaysia.

3.2.2 Interest Rate

Previous studies have shown that the cost of raising capital in a country affects its FDI outflow (Froot & Stein, 1991; Pan, 2002). Higher lending rates increase such costs, causing firms to earn higher profits to meet their expectations net of debt repayments. Domestically, it can be argued that firms compete on roughly equal footing, because they are faced with similar interest rates. Internationally, however, firms from source countries with high lending rates are at a cost disadvantage in raising capital, compared with those from countries with low lending rates (Grosse & Trevino, 1996). One might expect that, since in a world with mobile capital, risk adjusted expected returns on all international assets would be equalized, interest rate differences should have no bearing on FDI. In reality, capital mobility is not perfect. Only very large multinational corporations can raise capital internationally. In addition, complications such as hidden costs and exchange rate fluctuations work against raising capital in a third country.

Grosse & Trevino (1996) find that cost of borrowing at source country affects outward FDI into the United States. Firms from countries with low interest rates enjoy a cost advantage that enables them to raise more capital with a lower burden of interest payment. Pan (2003) finds that cost of borrowing in source country has negative association with its inflow of FDI. Tharumarajah (2001) finds a negative relationship exists between interest rates and demand for loans. Lower interest rates reduce cost of borrowing and increase the level of inward capital flow. Abd Ghani (2007) find that interest rate is negatively related with FDI in last quarter of the period 1999 to 2006 in Malaysia. Venkataramany (2004) finds that deposit and commercial interest rates are highly significant with FDI. Kueh, Puah and Mansor(1998) candidate their study on the fifth largest investor among the developing economies in Asia region including Malaysia, the study aimed to examine the macroeconomic determinants of outward FDI of Malaysia, namely real income, exchange rate, trade openness and interest rate covering the quarterly data from 1991:Q1 to 2005:Q4. They found that outward FDI of Malaysia is positively affected by all the variables under study in long run. However, the interest rate does not Granger cause outward FDI in the short run, Cavallari and Addona(2010) they have shown the role of country-specific sources of output and interest rate volatility in driving FDI activities. Building on a dataset that comprises bilateral FDI flows among 24 OECD economies over the period 1985-2007, they found that output and interest rate volatility mainly act as push factors they are more effective in deterring rather than encouraging foreign investments.

A rise in host country volatilities does reduce the amount of FDI outflows in the recipient country. Thus, this study hypothesizes the following:

H2: Malaysia's interest rate is positively related to FDI into Malaysia.

3.2.3 Inflation Rate

Previous research has shown that inflation rate is significant in influencing total FDI in three countries, Malaysia, Indonesia and Thailand (Abd Ghani, 2007). Venkataramany (2004) shows that there is a high significance and negative sign in the change in inflation indicating the adverse effect inflation can have on the inflow of FDI in India. Lewis (1999) finds that inflation rate is highly significant at the 0.5 level. Bouoiyour (2003) finds that inflation rate significantly influences FDI inflow into Malaysia, Azam (2010) investigates the effects of different economic determinants on FDI for three countries selected from Central Asia namely Armenia, Kyrgyz Republic and Turkmenistan. He finds that the effect of inflation on FDI has been found insignificant with expected negative sign. This finding indicates that inflation needs to be managed in order to achieve higher level of FDI and accelerate the process of economic development. Hence, this study hypothesizes the following:

H3: Malaysia's inflation rate is positively related to FDI into Malaysia.

3.2.4 Gross Domestic Product (GDP)

Existing literature suggests a positive impact of GDP on the outflow of FDI (Ajami & Barniv, 1984; Tallman, 1988; Grosse &Trevino, 1996). It is easier for firms from a large home country to raise the capital needed to invest overseas, because larger countries tend to have more firms that can expand into international markets aggressively and on a larger scale. Hermsey & Cliff (1984) find a strong GDP growth of host country is positively correlated with inward capital flow. Goldberg & Klien (1997) show a significant linkage between GDP to FDI. Foreign firms or countries of origin are attracted to host countries having strong and stable economic growth. The growth rate of GDP has a positive coefficient, but is insignificant in India (Maniam, 1998). Lewis (1999) notes that the average GDP growth is highly significant in LDCs. Bouoiyour (2003) finds the coefficient GDP is a negative sign and is not significant; meaning that the instability of Moroccan economy growth can be a handicap for FDI inflows. A source country GDP has a significant impact on FDI in China (Pan, 2003). Tharumarajah (2004) note that GDP is the most significant factor in Malaysia, this means that faster growth of GDP level and domestic investment in Malaysia will result in greater amounts of FDI inflows Abd Ghani (2007) notes that GDP is significant in influencing total FDI to Malaysia, Indonesia and Thailand. Accordingly, this study hypothesizes the following:

H4: Malaysia's gross domestic product is positively related to FDI into Malaysia.

3.2.5 Imports of Goods and Services

Tharumarajah (2004) finds that the import of source country is significant with FDI into Malaysia. This means that faster growth of import level and domestic investment in Malaysia will result in greater amounts of FDI inflows. Bouoiyour (2003) noticed that an increase of FDI is equivalent to an increase of imports against the investing country. Lopez (2002) finds that there is causality relationship between FDI and imports, which means FDI has a close relationship with imports. Simultaneously as FDI has increased, the import content has intensified. Venkataramany (2004) find that change in imports proved to be highly significant to FDI in India, Kotrajaras(2008–2009) has done his study in Thailand in order to find the impact of FDI on macro economic growth and various aspects of the host countries in Asian economies. He concludes that FDI can generate more export and import. And from the simulation result, increase in FDI makes an increase in host country's exports and imports of manufactures in world market but have a small effect on real exchange rate, Marial and Teng (2009) did their study using annual data over the period 1975 to 2006 and found that the short-run and long-run factors influence FDI flows into Malaysia. Their results of long-run FDI equation indicate that FDI inflow into Malaysia is positively influenced by exchange rate while negatively by exports, Anwara and Nguyenb(2010) have examined the impact of FDI on exports, imports and net export of Vietnam Over the period 1990 to 2007. The study also considers the impact of FDI on trade during three sub-periods: the pre-Asian financial crisis, the

post-Asian financial crisis and during the Asian financial crisis period. The results show that the impact of FDI on exports and imports are insignificant and positive during the full sample periods. However, this study hypothesizes the following:

H5: Malaysia's imports of goods and services are positively related to FDI into Malaysia.

3.2.6 Exports of Goods and Services

Hasan (2004) show the crucial role of exports in attracting foreign capital to Malaysia, where a 1 percent rise in exports to GDP is likely to increase FDI inflow by RM120 million. Bouoiyour (2003) notes that an increase in exports against the investing country increases FDI inflows in Morocco. Venkataramany (2004) finds that change in exports is not significant in both analyses of FDI inflows in India. Lopez (2002) finds an evidence of bi-directional Granger causality between exports and FDI. Herrero & Santabárbara (2004) find the coefficient of bilateral exports is significantly positive with FDI, Kotrajaras (2008–2009) has done his study in Thailand in order to find the impact of FDI on macro economic growth and various aspects of the host countries in Asian economies. He concludes that FDI can generate more export and import. And from the simulation result, increase in FDI makes an increase in host country's exports and imports of manufactures in world market but have a small effect on real exchange rate, Marial and Teng (2009) their study was done on the short-run

and long-run factors that influence FDI flows into Malaysia using annual data over the period 1975 to 2006. Their results of long-run FDI equation indicate that FDI inflow into Malaysia is positively influenced by exchange rate while negatively by exports, Anwara and Nguyenb (2010) examined the impact of FDI on exports, imports and net export of Vietnam over the period 1990 to 2007. The study also considers the impact of FDI on trade during three sub-periods: the pre-Asian financial crisis, the post-Asian financial crisis and during the Asian financial crisis period. The results show that the impact of FDI on exports and imports are insignificant and positive during the full sample periods. Thereby, this study hypothesizes the following:

H6: Malaysia's exports of goods and services are positively related to FDI into Malaysia.

3.3 Data Collection

The analytical framework is based on the OLS Model and the OLI Paradigm. The sampling framework and dataset used in the sample selection is composed of six macroeconomics variables, namely: Malaysia's exchange rate, Malaysia's interest rate, Malaysia's inflation rates, Malaysia's GDP, Malaysia's import of goods and services, and Malaysia's export of goods and services as well as the total amount of FDI inflow into Malaysia. The sampling and dataset of the study are selected from 1990 to 2010 covering a period of 21 years based on

annual basis. This dataset has been obtained from the Global Market Information DataStream, UUM DataStream, and from World Bank (Malaysian economy) to fulfill the purpose of the study.

3.4 Data Analysis

The study uses annual data from 1990 to 2010, covering a period up to 21 years. Following Venkataramany (2004), a simple Ordinary Least Squares (OLS) is adopted to run regression test of the complete sample, target industry FDI inflows and source country FDI. The annual data will be analyzed using OLS regression model in order to estimate what type of relation- if exists- between macroeconomic variables and FDI inflow into Malaysia. All of the six macroeconomic variables which are considered as crucial indicators of the economic growth-have been included in the analysis. The model derives the formula from:

Ordinary Least Squares (OLS)

$$Y_{ijt} = \beta_0 + \beta_1 X_{ijt} + \mathcal{E}_{ijt}$$

Where:

$\mathbf{Y_{ijt}}$: Dependent variable

$\boldsymbol{\beta_0}$: Parameter

$\boldsymbol{\beta_1 X_{ij}}$: Independent variables

$\mathcal{E}_{\mathbf{ijt}}$: Error term

3.4.1 The Regression Model

Linear regression model was used in this study which considers total FDI inflow into Malaysia as the dependent variable and Malaysia's exchange rate, Malaysia's interest rate, Malaysia's inflation rates, Malaysia's gross domestic product, imports of goods and services and exports of goods and services as independent variables. Therefore, the following model is formulated as:

$$\boldsymbol{FDI}_{inflow} = \beta_0 + \beta_1 ER + \beta_2 IR + \beta_3 IFR + \beta_4 IMP + \beta_5 EXP + \mathcal{E}$$

Dependent variable:

FDI $_{inflow}$ **:** Total Foreign Direct Investment inflow into Malaysia (1990-2010)

Independent variables:

β_0 **:** Constant

ER **:** Exchange rate

IR **:** Interest rate

IFR **:** Inflation rate

GDP **:** Gross domestic product

IMP **:** Import of goods and services

EXP **:** Export of goods and services

ε **:** Error term

3.5 Summary

This study attempts to investigate what type of relation –if exists- that might affect macroeconomic determinants on FDI inflow into Malaysia, using

annual data from 1990 to 2010 covering a period of 21 years. OLS method is used in order to achieve the objectives of the study. Several independent variables are modeled with one dependent variable separately to find out if the independent variables are positively and significantly related with the dependent variable. If so, in which direction they might affect the Malaysia FDI. Based on the attained outcomes, the hypotheses will be either accepted or rejected. The results will be discussed in the next chapter.

CHAPTER 4

ANALYSIS AND FINDINGS

4.1 Introduction

This chapter presents the data and methodology used to describe the model and the explanatory variables, hence to analyze the macroeconomic variables and their effects; the type of relationship-if exists-on FDI inflow into Malaysia. This discussion is segmented into three sections. The first section describes the data sample and the scope of the study with regard to the dependent variables. The second portion discusses the correlation analysis to unveil the strength of relationship between variables. The last part discusses the outcomes of the regression and panel data analysis that constitute the main findings of this study followed by a summary of the current chapter.

4.2 Data Analysis

Results of the descriptive analysis of the variables included in the models of this study are provided in Table 4.1. The variables are foreign direct investment in Malaysia (FDI) which is the main dependent variable. The independent variables constitute of Malaysia exchange rate (EX), Malaysia interest rate (IR),

Malaysia inflation rate (IFR), Malaysia's gross domestic product (GDP), Malaysia's import of goods and services (IMP) as well as Malaysia's export of goods and services (EXP).

4.2.1 Descriptive Analysis

Table (1) summarizes the statistics of the main explanatory variables with N=21. In this study, N represents the data taken of 21 time series data. Results of the descriptive analysis of the variables included in the models of this study are provided in the same table too. The variables are foreign direct investment in Malaysia (FDI), Malaysia exports of goods and services (EXP), Malaysia gross domestic product (GDP), Malaysia lending rate (IR), Malaysia inflation rate (IFR), Malaysia imports of goods and services (IMP) and the Malaysia exchange rate (EX). The data for the variables are obtained annually from 1990 to 2010 (a twenty-year period).

Table 2: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
FDI inflow	21	2.2	2.8	4.681	1.7107
EXPORT	21	.00	121.31	96.0486	26.79632
GDP	21	146.96	192.11	167.1300	16.74876
Interest rate	21	.0	11.6	4.471	3.1182
Inflation rate	21	1.58	10.21	4.9748	2.11420
IMPORTS	21	.00	98.02	81.2948	20.22351
EXCHANGE	21	75.98	112.52	81.7029	9.31079
Valid N (listwise)	21				

From the Table above, the mean of annual FDI inflow into Malaysia during the period studied is 4.681. The summary statistics shows the minimum level of the annual FDI inflow is 2.2 percent, while the maximum level of the annual inflow is 8.8 percent. Standard deviation statistics for this depended variable is 1.7107, which indicates that there is a quite variation of the FDI inflow into Malaysia for the selected period 1990 to 2010. In addition, there is a notable difference between the highest and lowest FDI inflow, indicated by the low value of standard deviation.

In the case of export of goods and services, the mean of the statistics results was 96.0486, and the scale is ranged from the lowest of .00 to the highest value of 121.31. Standard deviation for export of goods and services is 26.79632. The last independent variable is the GDP. The mean of Malaysia GDP was 167.1300. The maximum level is 146.96, whereas the minimum value is 192.11. Standard deviation of the Malaysia's GDP is 16.74876, reflecting a high variation between the GDP and The Malaysia's FDI. Average annual Malaysia's interest rate in the sample is 4.471. The highest level of annual Malaysia interest rate is 11.6, whilst the lowest is .0. Standard deviation is 3.1182, which is-somehow- a high indication of the possible foreign direct investment. Malaysia's inflation rate records a mean of 4.9748 per. The highest Malaysia inflation rate is 10.21 per, while the lowest is 1.58 per, and standard deviation is 2.11420 per.

For the import of goods and services, the reported mean is 81.2948; the range is from the lowest value of .00to the highest value of 98.02. Standard deviation for the import of goods and services is 20.22351. Based on the annual data, it is found that the average Malaysia exchange rate during the period was 81.7029, whereas the maximum value is 112.52, and the minimum value is 75.98. Standard deviation is 9.31079 percent.

4.2.2 Correlation Analysis

Correlation analysis was executed to gauge the strength of relationships between variables in this study. Statistical test at 0.01 level was used to test the significance of the relationships if exists among several determinants.

Table 3: Correlation Matrix among independent variables

		EXPORT	GDP	Interest rate	Inflation rate	IMPORTS	EXCHANGE
EXPORT		.		.			
		21					
GDP		-.246					
		.283	.				
		21	21				
INTEREST RATE		.033	.242				
		.887	.290	.			
		21	21	21			
INFLATION RATE		.177	-.133	-.242			
		.442	.566	.290	.		
		21	21	21	21		
IMPORTS		.826(**)	-.073	.146	-.179		
		.000	.754	.529	.438	.	
		21	21	21	21	21	
EXCHANGE		.197	-.160	-.253	-.130	.237	
		.391	.490	.269	.574	.300	.
		21	21	21	21	21	21

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

Table (3) summarizes the correlation analysis of a total of 23 time series data of the independent variables for the period 1990 to 2010. A few frequent correlations are observed among the independent variables at level 0.01. Malaysia's export of goods and services is insignificant and negatively correlated with GDP. The correlation is insgnificant as well with interest rate and positively correlated. It has a positively, weak correlation with Malaysia's inflation rate. On the other hand, the soly significant relationship is between the Malaysia export of goods and services and the import of goods and services which are both affected in the positive manner at 0.01 level. Finally, no significat relationship has been recoreded with Malaysia exchange rate, meanwhile it is a positive relationship.

GDP is negatively and insignificatly, weak correlated Inflation rate, import of goods and services, and Malaysia exchange rate. while there is a positive relationship linked with Malaysia's interest rate. Besides, The Malaysia's interest rate has an insignificant negative relationship and slight highly correlated with inflation rate, the same with the Malaysia exchange rate. On the other side, it is correlated insignificantly and positivly weak with Malaysia's import of goods and services.

In the terms of Malaysia inflation rate, it has insignificant relationships, consistently correlated with the others which are exchange rate and imports of goods and services. In the case of imports of goods and services, no significant

correlations are with other variables at all. They are mostly in the positive directions except the solely determinant; the inflation rate.

4.2.3 Regression Analysis

The formula is used to compute the regression weights of independent variables with one dependent variable (FDI) model. The results are shown to identify what type of relation-if exists- between macroeconomic variables and FDI inflow into Malaysia as a host country. Additionally, it would determine how far they are interacted and in which direction as well.

table 4 shows the model summary, including the indicator R squared and the calculated adjusted R squared. The relative predictive power of the model reflects that the variation of the FDI inflow into Malaysia is predicted by 9.10%, using the independent variables, namely; interest rate, exchange rate, inflation rate, exports of goods and services, imports of goods and services, and the Malaysia's GDP.

Table 4: Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.954(a)	.910	.872	.32351413975109	1.803

a Predictors: (Constant), XP, EX, IR, GDP, IF, IM
b Dependent Variable: FDI

Table 5: ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.865	6	2.477	23.671	.000(a)
	Residual	1.465	14	.105		
	Total	16.330	20			

a Predictors: (Constant), XP, EX, IR, GDP, IF, IM
b Dependent Variable: FDI

Table 5 declares F-test that implies the fitness and suitability of using the OLS model which was found at .000 probability level, as well as the implicit variables those were applied within the main regression equation in the present study.

4.2.4 Regression Analysis for All Observations

Table 6: Regression Analysis for All Observations

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-1.210	1.066		-1.134	.276		
	EX	-1.311	3.425	-.058	-.383	.708	.284	3.520
	GDP	-.090	.041	-.236	-2.217	.044	.568	1.762
	IR	.085	.028	.357	3.027	.009	.462	2.166
	IF	-.039	.037	-.124	-1.065	.305	.472	2.119
	IM	.348	.111	2.424	3.125	.007	.011	93.877
	XP	-.226	.135	-1.198	-1.670	.117	.012	80.275

a Dependent Variable: FDI

According to the results in the table above, it can be observed that some the variables are significant; GDP (0.044), Interest rate (0.009) and Import of goods and services. But the multicollinearity as shown in the table for some ratios are above 10 the rations are Import of goods and services, and Export

of goods and services which obviously affect the rations of other variable and as a result on the model. XP is thus omitted from the regression analysis to see whether multicollinearity still between the remaining independent variables.

4.2.5 Regression Analysis for All Observations Except XP Ratio

Table 7: Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.945(a)	.892	.857	.34226967553911	1.880

a Predictors: (Constant), IM, IF, GDP, IR, EX
b Dependent Variable: FDI

In the table above we can observe that the R square was declined to 0.892, exactly after excluding Export of goods and services as an inflated ratio, in which means that 0.892 of variation in lymphocyte count can be predicted using a function of reticulates.

Table 8: Regression Analysis for All Observations except XP Ratio

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-2.260	.911		-2.480	.026		
	EX	1.966	2.970	.086	.662	.518	.423	2.365
	GDP	-.095	.043	-.249	-2.225	.042	.571	1.751
	IR	.068	.028	.284	2.452	.027	.535	1.870
	IF	-.038	.039	-.122	-.986	.340	.472	2.119
	IM	.165	.019	1.145	8.719	.000	.416	2.403

a Dependent Variable: FDI

From Table 6, it is observed that multicollinearity problem has been eliminated since all the VIFs of the independent variables are less than 10. The independent variables which are statistically significant are GDP (0.042), IR (0.027), and IM (0.000). It also can be seen that some results, relatively found during the research period of the different macroeconomic factors and the main gits of the study which is FDI inflow into Malaysia's as a major host country. Overall, these outcomes are varied between negative and positive results, significant and insignificant indicators. Each sign will be explained in turn in order to be obviously understood.

The statistics results reflect that, when one unit (1%) is increased to the Malaysian's Exchange rate, that certaintly wouldn't enforce FDI inflow into Malaysia to decrease nor increase by the corresponding percent (9.5), since it has insingnificnat correlation liked with FDI as shown in table 4. Whereas, an increase of Malaysia GDP by one unit (1%), FDI inflow into Malaysia will go totally toward dropping of its total amount by 9.5 percent as can be observed in the above table. As a result, if the GDP tends to upgrade, directly FDI into Malaysia will be downgraded as it has a singnificantly negative correlation with FDI inflow into Malaysia at 0.05 level of confidence.

"Multicollinearity exists when one or more of the explanatory variables are highly collinear with"other variables in the regression model. In this study, each of the explanatory variables is regressed on the remaining explanatory variables to compute R square values"

If a change in Malaysia's interest rate increases by one unit (1%), the FDI inflow into Malaysia will skyrocket and directly get higher by 6.8 percent, as it obviously seen that Malaysia interest rate has been recoreded as the highest significant relation among the attained findings at 0.05 level of confidenece. Consequently, if the Malaysia's interest rate decreases by one unit, that would lead to dropping FDI sharply by 6.8 percent as they are integrated positively.

In regards to the Malaysia's inflation rate, the results indicate that there is no significant correlation with FDI inflow into Malaysia. Thereby, every increase in inflation rate per unit might maintain and affect the Malaysia's FDI inflow negatively by 3.8 percent. Essentially the existed realtionships are not clear yet based on the current results, it needs further invistigation.

Finally,Malaysia's import of goods and services has a significantly positive relationship at 0.001 level confidence with FDI inflow into the country, indicating that if Malaysia's import of goods and services grows up by one unit (%), by the same token the Malaysia's FDI inflow will get higher and upgrade by 16.5 percent. At the same time, the FDI inflow into Malaysia will increase as a result of increasing the Malaysia's import of goods and services, ultimately, it goes along to each movements of FDI in a completely linear manner which would

lead to achieve high levels from overseas investments that could essentially generate Malaysia's economic growth.

4.3 Summary

Data analyses are concluded in three sections. In the first section, descriptive analysis is performed to provide an understanding of the context within which the findings of this study are derived. In the second section, correlation analysis is carried out to identify macroeconomic variables that are significantly correlated with FDI inflow to Malaysia. The final section shows a regression analysis was applied to identify the type of relation existing between Malaysian macroeconomic variables and the FDI inflow into Malaysia.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter represents the ultimate summary of this study which includes the main conducted objectives, results, process, and essential guidelines during the research period. The chapter is divided into three sections. The first section includes the general overview of the research aims, processes and the outcomes. The second section discusses some reflected policy implications, based on the findings of current study. The last section presents the further suggestions for more, future research.

5.1 Conclusion

The field of international investment is full of studies concerned with the relation between interest rate, exchange rate, inflation rate, imported and exported goods and services with FDI inflow into the host countries. These studies attain different findings, varied between negative and positive results, significant and insignificant indicators. Others conclude with no real relations between the

previous variables. The aims of the present study are to investigate the effects of different factors on FDI inflow which are classified as macroeconomic variables, those are the most likely to encourage or prevent the inflows of the overseas investments. However, the main objective of this research is to identify the type of relation-if exists-between the ample macro-economic variables affecting FDI inflow into Malaysia. A set of twenty-one year from 1990 to 2010 has been studied. A linear regression analysis is used within the dataset based on the OLS model and OLI Paradigm to identify the actual relationship between exchange rate, interest rate, inflation rate, imports goods and services as well as exports of goods and services with FDI inflow into Malaysia.

This study suggests that in the case of positive relationships those sinificantly correlated with FDI inflow into Malaysia; namely, interest rate and imports of goods and services need to be strengthened in order to ensure higher level of FDI inflow. Whilst, Malaysia GDP that signifcantly and negatively affects on the total amount of FDI inflow, needed to be managed and in order to accelerate the process of economic development and enhance higher level of FDI inflow toward Malaysia as a host country. On the other hand, and concering Malaysia inflation rate and exchange rate which were found positive, negative insignificantly are needed to derive further more analysis, since the insignificant variables doesn't mean that no real effect on FDI inflow into Malaysia.

5.2 Policy Implications

Based on the study results of FDI determinants, a number of specific policy implications and recommendation can be targeted for consideration by governments of these countries. According to the results that a high volume of bilateral trade can attract more FDI, government should promote bilateral trade agreements with other countries in order to facilitate FDI production through the free flow of goods and services. The export-oriented industry should be promoted with product distribution as the important objective for investors. The government should also reduce the information and transaction costs to attract more FDI. Any policies that will increase national income and productivity are also important as market size and purchasing power have a positive impact on FDI. The government should also encourage industrial growth and increase the number of local suppliers. According to results of wage analysis, the government should ensure that labor wage remain competitive, especially for an industry that has a high potential to attract FDI. In general, the results of industry-level independence variables give government a guideline to manage and reallocate resources among industries.

5.3 Suggestions for Further Study

To expand the understanding of FDI determinants, researchers should consider including more independent variables in the models such as political

risk, business facilities, investment climate, regional integration, and natural resources. Researchers should find another proxy for transaction costs. Researchers can also expand their industry level analysis to host and home countries in different regions such as Latin American countries and African countries to explore the competition among ASEAN countries and countries in other regions. Instead of focusing on the level of FDI inflows for each host country, researchers should focus on the share of FDI inflows for each host country to explore the factors that may impact the share of FDI in each host country. Researchers should try another set of data that have a longer time frame to better analyze FDI inflows into the host countries.

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