

**THE RELATIONSHIP BETWEEN ECONOMIC GROWTH AND
FOREIGN DIRECT INVESTMENT IN MALAYSIA:
BASED ON LOCATION ADVANTAGE CHANNEL**

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**THESIS SUBMITTED IN FULFILLMENT FOR THE DEGREE
OF MASTER OF ECONOMICS**



UNIVERSITI MALAYSIA SABAH

**SCHOOL OF BUSINESS AND ECONOMICS
UNIVERSITI MALAYSIA SABAH
2012**

UNIVERSITI MALAYSIA SABAH

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JUDUL : THE RELATIONSHIP BETWEEN ECONOMIC GROWTH AND
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ON LOCATION ADVANTAGE CHANNEL

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ACKNOWLEDGEMENT

I would like to show my praise and gratefulness to GOD the Almighty for giving me such a great strength, patience, courage and ability to complete my thesis.

I would like to express my sincere gratitude to my main supervisor, Dr. Caroline Geetha Arokiadasan for her continuous guidance and advice during the whole process of completing this thesis. She has been a centre of motivation and guidance for me. I am truly thankful for her continuous support and cooperation. I would like to show my sincere appreciation for her unremitting assistance.

I would also like to express my deep and sincere appreciation towards my family especially my father and mother for their continuous support, love, trust they have extended me every step of my life. Even though, I know that there are no enough words to say thanks to them, but I would like to express my thankfulness and love to my family for being side by side with me in every steps I have taken in my life. Thank you Appa, Mama, Dillon, Yeekoh, Mend and Dlo.

Finally, I would also like to show my demonstrative appreciations to all my friends especially to Qurratu' Aini Latuwo, Azrin Lasimin and others who has helped me either directly or indirectly in the process of completing this project.

Thank You.

Derrick Tanggapan

ABSTRACT

THE RELATIONSHIP BETWEEN ECONOMIC GROWTH AND FOREIGN DIRECT INVESTMENT IN MALAYSIA: BASED ON LOCATION ADVANTAGE CHANNEL

Foreign direct investment is an important indicator to boost the economic growth of Malaysia. Foreign direct investment was identified as a medium in order to acquire skills, knowledge, technologies and to internationalize business and at the same time to reduce debts of a nation. However, in the year 2009, inflow of FDI into Malaysia had decline as much as 81.13 percent. McKern (1996), Kathuria (1998, 2000 and 2001) and Noorbakhsh *et al.* (2001) believed that FDI does not take place automatically in a nation. Whereby, inflow of FDI should be encouraged. Hence, this study aims to identify the channels that can influence economic growth through FDI in Malaysia. Location advantage channels were group using human capital development, financial development and environmental condition whilst FDI was used as an interaction as well as an independent variable. The findings of the analysis clearly indicated that when FDI was used as an interaction with each location advantage channels, the interaction become insignificant in explaining the changes in economic growth. Thus, the study support that a certain value of location advantage channels were important to stimulate economic growth through inflow of FDI in Malaysia.



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LIST OF ABBREVIATIONS

GDP	Gross Domestic Product
HCD	Human Capital Development
FD	Financial Development
EC	Environmental Condition
FDI	Foreign Direct Investment
EG	Economic Growth
MNC	Multinational Companies
IMF	International Monetary Fund
UNCTAD	United Nation Conferences on Trade and Development
OLS	Ordinary Least Square Estimation
ARDL	Auto-Regressive Distributed Lag
ADF	Augmented Dickey Fuller
PP	Phillip-Perron
VECM	Vector Error Correction

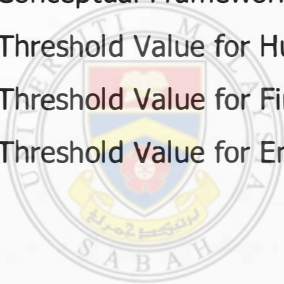
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CHAPTER 1

INTRODUCTION

1.1 Background of the Study

According to the New Classical Model, economic growth can be achieved by accumulating labor, capital and other factors of production. Since all these factors experience diminishing marginal returns, the economy can only achieve a steady equilibrium income through continuous increase in savings and investments but at the same time reduce population growth. However, a policy that helps to increase both savings and investment whilst reducing population growth especially in developing countries is difficult to be implemented. This was supported by Blomstrom and Kokko (2003), who claimed that developing countries have low-income that lead to low savings with higher population growth rates.

Solow (1956, 1957) also recognized the importance of technical progress as a determinant of economic growth. Therefore, technology is an exogenous factor. Per capita income cannot be increased to a steady state or even to a high-level income economy unless these technologies are converged. The modern growth theory also supports the importance of technological progress because it can convert diminishing returns to increasing returns. Technological progress can take place in the form of education, training, research and development (R&D). With this, developing countries have the potential to grow faster. Blomstrom and Kokko (2003) confirmed that the potential of converting this knowledge of technology depends on the economic level of the capital.

The economic level of capital in a nation is determined by two sources. One is the domestic capital and the other is the foreign capital. Domestic capital is obtained through domestic savings made by the public and private sectors. Meanwhile, foreign capital is obtained through the inflow of FDI (FDI). In developing countries, low-level of income contributes to low-level of savings (Blomstrom and Kokko, 2003). Therefore, the savings or domestic capital obtained

is insufficient for its investment, creating a saving-investment gap in the host country. To overcome the saving-investment gap, developing countries depend on FDI.

FDI is defined as a company or a country making physical investment into building a factory in another country (Graham and Spaulding, 2005). The direct investment in buildings, machinery and equipment is in contrast with the indirect investment made in the form of portfolio investment. FDI takes many forms such as direct acquisition of a foreign firm, construction of facility, investment in a joint venture with a local firm with the presence of technological input and licensing of intellectual property. FDI is also a medium for acquiring skills, technology, organizational and managerial know-how. Furthermore, FDI helps in the internationalization of business.

Unfortunately, inflow of FDI can only take place if the recipient country has advantages based on location. Krugman (1991) claimed that the determinant of location advantage is the quality of human capital development. The quality of human capital development is measured using education, cost of labor and the availability of labor in the country. With this, FDI will be able to transfer technology that could easily be absorbed by quality human capital.

Kathuria (1998, 2000 and 2001), supported the same view, stating that indirect gains from FDI also does not take place automatically with the presence of multinational companies (MNCs) in their economy. Nevertheless, it all depends largely on the effort made by firms and governments in investing towards learning, research and development activities. However, technology transfer from FDI can take place easily with efficient allocation of resources if the recipient country has a well-developed financial system. This spillover effect was analyzed by researchers like MacDougall (1960), Cokden (1967) and Caves (1971) suggesting that MNCs can improve allocation efficiency and reduce monopolistic distortion with transfer of technology if a well-developed financial system exists in the developing nation.

McKern (1996) and Noorbakhsh *et al.* (2001) claimed that the inflow of FDI as a source of fund while technology transfer takes place when the recipient country has a location advantage. McKern (1996) stated that location advantage is partly determined by the abundance of natural resources. This will help to reduce the cost of production and in experience economics of scale. This was supported by Dunning (2001) who agreed that cheaper resources can minimize costs that increased foreign investment. Meanwhile Noorbakhsh *et al.* (2001) argued on the importance of human capital to determine location advantage that eventually leads to economic growth.

A study by Hermes and Lensink (2003) confirmed that FDI influences economic growth through various channels. Firstly, the technological transfer because the quality of human capital plays an important role in absorbing the technology. Secondly, the local financial system of the recipient country also influences economic growth. The findings supported the study by Barro *et al.* (1995). Technological development through financial system can help in allocating FDI funds more efficiently.

Hermes and Lensink (2003) also stressed that technological development was strongly associated not only with the development of local financial system but along with the quality of human capital. Study by Barro (1996) using panel data claimed that environmental condition is an important variable of location advantage channels that encourage the inflow of FDI. Barro (1996) confirmed that government policy, fiscal, monetary and trade policies are crucial to measure the level of economic friendliness of recipient country in stimulating the inflow of FDI.

Apart from that, international relation is another important environmental variable that can measure the political friendliness between countries. Mun *et al.* (2009) argued that international relations with other Islamic countries such as 'Ummah network' is established by a win-win situation in a decision-making process. This is in line with Bourdieu's opinion on social capital concept outlining that the networking within and between social networks as well as within individual is known as relationship networking (Richardson, 1986).

Chakraborty and Nunnenkamp (2006) claimed that economic growth influenced by location advantage does not necessarily bring positive impact but it can give also negative impact to the economy. This supported the study by Li and Liu (2005) who found that when FDI inflow takes place, it can create job opportunity, economic growth and transferred technology but at the same time, it can also create negative impacts such as deficit in the balance of payments, pollution, economic dependence and social problems in the host country. Meanwhile, Kugler (2005) also claimed that FDI could affect industry negatively as well as positively, where it is usually underestimated.

Therefore, the inflow of FDI is essential as a source of technology transfer and funds. FDI inflow will only be possible if the host country has various channels that create location advantages. Thus, location advantage can be obtained through channels like human capital development, financial development and environmental condition.

1.2 Problem Statement

Malaysia has a consistent performance of gross domestic product from the period of 1970 to 2010. Based on International Monetary Fund (2011), Malaysia's economy was ranked the 30th largest economy in the world by purchasing power parity with gross domestic product estimated to be USD 414.43 billion. Particularly, FDI was the key driver underlying the strong growth performance experienced by the Malaysian economy until 1980. However, after 1980 the influences of FDI in contributing to the economic growth of Malaysia begin to decline.

According to Mahani Zainal Abidin (2010), the decline of FDI inflow to Malaysia was mainly due to unattractiveness of Malaysia as an advantage location. This is because, according to Dunning (1980) who developed OLI framework by combining three different theories of foreign investment such as Ownership, Location and Internalization, posited that there were three potential sources of advantage that may inspire a firm's decision to become a multinational. Location advantages of different countries were the key indicator where foreign firms choose to operate their foreign activities of transnational corporations. Mahani Zainal

Abidin (2010) identified that the reason of declining FDI inflows to Malaysia was mainly due to the shortage of human capital, high level of corruption and low level of technological capacity in Malaysia.

Financial crisis in different parts of the World Economy has caused Malaysia's inflow of FDI to decline from USD 7.3 billion (2008) to USD 1.4 billion (2009). The financial condition is claimed as one of the factors that influence the decline in FDI, Table 1.1 clearly indicated that there were eleven countries, which were major contributors of the total FDI in Malaysia for the period of 2005 to 2009. Only three countries emerged as the leading direct investor; Japan, USA and Australia. This showed that foreign investment approved projects by countries in Malaysia was dominated by the financial condition of these eleven countries (Table 1.1).



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**Table 1.1: Foreign Investment in Approved Projects by Country
(RM Million)**

Country	2005	2006	2007	2008	2009
United States of America	5 155.0 (43)	2 476.6 (38)	3 020.0 (33)	8 669.0 (22)	2 345 (19)
Australia	155.9 (12)	2 560.1 (20)	1 685.1 (17)	13 105.8 (20)	323.1 (13)
Netherlands	1 674.0 (26)	3 284.2 (13)	1 690.4 (9)	1 795.7 (19)	479.7 (21)
Hong Kong SAR	105.4 (17)	84.5 (9)	59.8 (14)	83.6 (7)	5 315.7 (7)
Indonesia	52.5 (3)	214.9 (11)	41.2 (5)	22.1 (2)	162.2 (17)
Japan	3 671.7 (84)	4 411.6 (81)	6 522.7 (60)	5 594.9 (63)	7 041.4 (54)
Germany	387.7 (11)	232.3 (15)	3 756.8 (26)	4 438.3 (19)	425.0 (14)
Republic of Korea	673.6 (24)	437.8 (18)	1 118.8 (23)	197.6 (9)	85.9 (8)
Singapore	2 919.9 (130)	1 884.7 (130)	2 952.2 (108)	2 004.3 (112)	1 992.5 (92)
Taiwan	430.7 (71)	405.5 (70)	408.7 (41)	911.6 (32)	716.1 (32)
United Kingdom	99.2 (11)	642.0 (17)	385.3 (20)	850.5 (23)	325.8 (24)
Others	2 557.3 (165)	3 593.8 (185)	11 785.1 (159)	8 425.5 (193)	2 932.3 (129)
Total	17 882.9 (597)	20 227.9 (607)	33 425.9 (515)	48 098.8 (521)	22 144.7 (430)

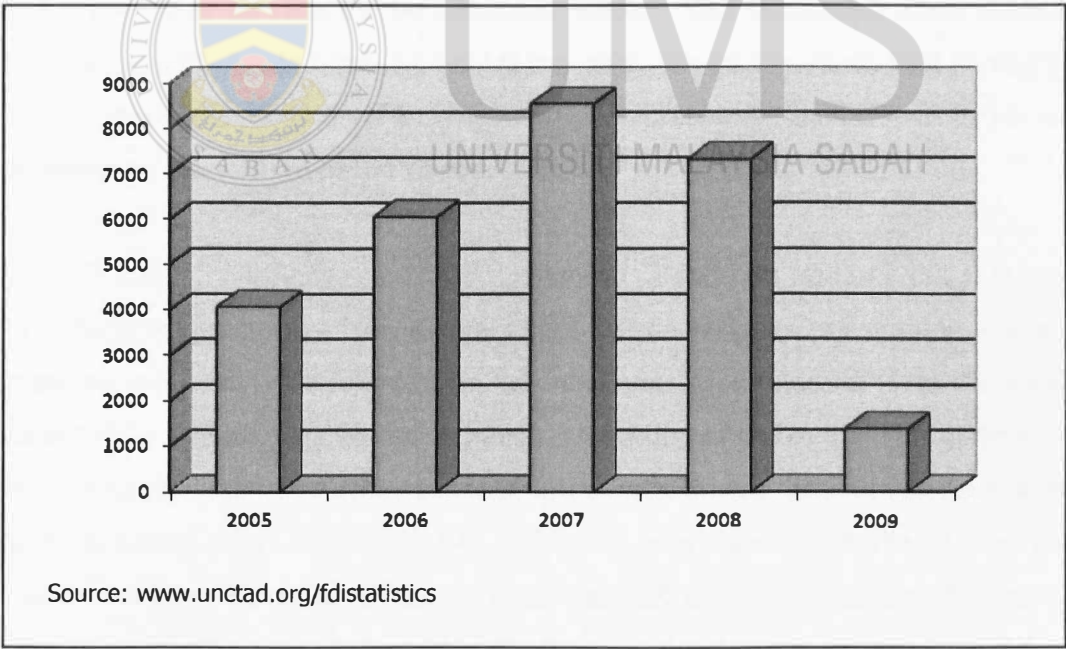
*Figures in parentheses refer to the number of projects

Source: MIDA

Moreover, over the years, the focus of foreign capital changed in Malaysia. The largest component of FDI was equity capital, followed by reinvested earnings and other capital. The value for equity capital increased from RM 63.2 billion (2001) to RM 135.7 billion (2007). The increase of 114.7 percent was contributed by new investment and expansionary investment in the existing companies. Meanwhile, the second largest component, reinvested earning, accumulated from RM 49.9 billion (2001) to RM 107.1 billion (2007), with an increase of 114.6 percent. However, other capital experienced a downward trend as much as 31.3 percent from RM 16 billion in (2001) to RM 11 billion in (2007).

According to the report of UNCTAD (2010), inflow of FDI increased in the years 2005 until 2007, but there was a decrease after the year 2007. In fact, this problem was exacerbated in the year 2009, where there was a drop of 81.13 percent in the inward and outward of FDI in Malaysia (Figure 1.1).

Figure 1.1: Inward and Outward of FDI in Malaysia, 2005-2009



A signal that Malaysia has begun to lose its attractiveness can be seen in UNCTAD report (2010). According to the report of UNCTAD (2010), the direction of

inward and outward FDI inflow into South Eastern Asia has changed since year 1998 whereby Malaysia's FDI was only USD 2,714 million compared to Thailand's FDI, which was as large as USD 7,492 million. Indonesia managed to attract USD 8,336 million of FDI compared to Malaysia, which was only able to attract USD 4,064 million (2005). The inflow of FDI into Malaysia increased to USD 7,318 million in the year 2008 but Vietnam managed to direct the inflow as large as USD 8,050 million (2008). During the global financial crisis in 2009, Philippines managed to attract a higher inflow of FDI compared to Malaysia. Philippine's FDI was as much as USD 1,948 million compared to Malaysia, which only received USD 1,381 million (2009). This clearly indicates that Malaysia has lost its attractiveness as a location to attract FDI inflow.

The issue of debt is also common for poor and developing countries. Debts usually arise when there is a fall in the export earnings and a deficit in the budget. Debt that arises due to a fall in export earnings is known as external debt meanwhile a deficit in the government budget is known as domestic debt. In fact, debt is a form of sickness to the economic growth. This is because when there is debt, the country needs funds to resolve the debt. Hence, the funds that should be used for development is used to overcome debt problems. Thus, fewer funds are channeled to the welfare of the nation.

Cuaresma and Vincelette (2007), Easterly (2002) and Nafula (2002) claimed if a nation decides to cope with external debt by imposing tax to its nation, this will create an economic problem known as inflationary tax. According to Ricardian model theory, inflationary tax will increase the burden of tax to the next generation and eventually result in further increase in poverty. In the year 2006, developing countries spend as much as US\$ 446 billion to repay their debts. Meanwhile, low income countries continue to pay as much as US\$ 100 million to creditors daily. Burquet and Ruiz (1998) argued that foreign investments are usually financed by debt in developing countries.

Burquet and Ruiz (1998) claimed that financing investment with taxes may depress current private investment and this may defeat the overall objective on the

use of domestic capital for growth. Noorbakhsh *et al.* (2001) also supported that, foreign direct investment is a good alternative to be used as a source of funding to overcome debt in developing countries. Hence, Malaysia needs to attract more foreign direct investment in order to resolve debt issue.

However, this scenario became bad to worse since developing nation like Malaysia depend on FDI to solve debt. According to Auditor-General's report posited that total debt in Malaysia increased from RM 306.4 billion in (2008) to RM 362.3 billion in (2009) (Shazwan Mustafa Kamal, 2010). The debt level continues to increase to RM 455.0 billion (2011). The deficit was caused by large subsidies and bloated inefficiency of public services (Martin Jalleh, 2010). A high cost was also acquired by the government because of non-competitive, bidding practices employed by the government due to corruption and tax fraud contributed to unmeasured revenue loss (9th Malaysia Plan, 2009). Thus, according to Idris Jala (2010), if the level of debt persists and the inflows of FDI declines, the Malaysian economy will have to take another 15 years to settle all its debt or even face a similar situation like Greece that could lead to bankruptcy (Quah Boon Huat, 2010).

Furthermore, in line with the 10th Malaysian Plan's vision to be a high-income country by the year 2015, a steady income growth of 8 percent is needed. A New Economic Model was formed to overcome the weaknesses and to enhance the strength of the economy. This is to increase the attractiveness of Malaysia based on the location advantage related to eclectic theory where emphasis was given to human capital development, financial development and environmental condition as suggested in the Economic Transformation Plan.

Thangavelu (2010) also supports that a high-income economy can only be achieved when emphasis is given to technology transfer, which is the key competition in the industry. A high-income economy cannot be achieved with the accumulation of only labor, capital and other factors of production. He also added that this can be achieved through the maintenance of human capital. Therefore, the quality of human capital should be increased based on industrial education and

relevant training. This will ensure that the labor force of the nation is consistently updated and is open to technical progress.

Even though, various actions and strategies have been implemented using the short-term Malaysian Plans to make Malaysia attractive for the inflow of FDI still decline since 1980. Attention was given to human capital development, financial development and environmental condition as the macroeconomic strategies to attract FDI to stimulate economic growth. However, up to date, the effectiveness of the effort is still questionable. ***Therefore, this study aims to identify the channels that can influence economic growth through FDI ?***

1.3 Objective of the Study

The overall objective of this study is to determine which location advantage channel can influence economic growth through FDI in Malaysia. The precondition term also known as interaction is used to describe single statistical relationship with FDI. Hence, the specific objectives of this study are as follows:-

- a.** To determine whether FDI is the precondition for HCD to influence economic growth in the short-run and long-run;
- b.** To identify whether FDI is the precondition for HCD to contribute positively to economic growth in the short-run and long-run;
- c.** To determine whether FDI is the precondition for EC to enhance economic growth in the short-run and long-run;
- d.** To determine threshold values for each location advantage channels leads to up trend in economic growth;
- e.** To provide some recommendation on how the development of these channels collectively known as location advantage channels can contribute to the future inflow of FDI to stimulate positive economic growth in Malaysia.

1.4 Scope of the Study

This study aims to identify the channels that can stimulate economic growth through inflows of FDI in Malaysia. In addition, it also aims to determine the threshold value for each location advantage channels that enhances economic growth through FDI inflows. This study used quarterly time series data from 2000 to 2010 whereby the quarterly time series data were obtained from the Malaysia Statistical Report, Monthly Bulletin of Bank Negara Malaysia and Ministry of Finance.

The location advantage channels were grouped into human capital development, financial development and environmental condition. Human capital development was measured using government expenditure on education and training while financial development was measured using total loans and environmental condition of the nation was measured using exchange rate. FDI was measured based on the inflow of FDI to the nation while economic growth was measured using gross domestic product.

Initially, the time series data were tested using Ordinary Least Square (OLS) estimation to detect autocorrelation problem while unit root problem was identified using Augmented Dickey Fuller (ADF) and Phillips Perron (PP) test. This was followed by the Co-Integration test using FDI as an interaction variable in the framework. This determines the long-run relationship between the variables. Meanwhile, Vector Error Correction Model was used to determine short-run relationship with FDI as an interaction variable. Finally, the critical value or threshold value for each location advantage channels was determined that leads to growth in Malaysia through FDI inflows.

1.5 Significance of the Study

To add on the body of literature, this study analyses the contribution of location advantage channels with the inflow of FDI as an interaction that stimulates economic growth in Malaysia. Besides that, previous studies by Ahmad Zubaidi Baharumshah and Suleiman W. Almasaied (2009), Blomstrom and Kokko (2003), Geetha (2002), Noorbakhsh *et al.* (2001), Kathuria (2000 and 2001) and Barro