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# ANALYSING THE IMPACT OF FINANCIAL MARKET ON MALAYSIAN FOREIGN DIRECT INVESTMENT



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# ANALYSING THE IMPACT OF FINANCIAL MARKET ON MALAYSIAN FOREIGN DIRECT INVESTMENT

# By

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# Thesis Submitted to

**School of Economics, Finance and Banking (SEFB)** 

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**ABSTRACT** 

This study investigates the impact of financial market on foreign direct investment

(FDI) in Malaysia using yearly data over the period of 1981to 2014. Using stock

market and credit market as proxy of financial market, the Johansen cointegration

test and Vector Error Correction Model (VECM) are employed to determine the long

run relationship. The VECM results indicate that the stock market does not have

significant influence on FDI while the credit market has a significant and positive

impact on FDI. This shows that even though the financial market does not become

the main source of financing for foreign investors, its development is still an

important agenda in attracting foreign investors to invest in Malaysia. Hence, this

study provides insights for policy recommendation in the future in promoting FDI. In

order to attract foreign investment, policy makers should not just focus on providing

various incentives, but also should look at other factors which may indirectly affect

the flows of FDI, such as the development of the financial market.

Keywords: Financial market, Foreign direct investment, cointegration test, VECM

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ABSTRAK

Kajian ini mengkaji hubungan di antara pasaran kewangan dan pelaburan langsung

asing di Malaysia menggunakan data daripada tahun 1981 hingga 2014. Ujian

kointegrasi Johansen dan VECM digunakan ke atas pasaran saham dan pasaran

kredit iaitu proksi bagi pasaran kewangan untuk mengkaji hubungan jangka panjang

antara pemboleh ubah. Dapatan VECM menunjukkan bahawa pasaran saham tidak

mempengaruhi pelaburan langsung asing manakala pasaran kredit mempunyai kesan

positif terhadap pelaburan langsung asing. Ini menunjukkan bahawa walaupun

pasaran kewangan tidak menjadi sumber utama pembiayaan bagi pelabur asing,

pembangunannya masih merupakan agenda penting dalam menarik pelabur asing

untuk melabur di Malaysia. Oleh itu, kajian ini membantu dalam memberikan

pandangan mengenai polisi bagi meningkatkan pelaburan langsung asing di masa

hadapan. Dalam usaha untuk menarik pelaburan asing, pembuat dasar tidak

seharusnya hanya memberi tumpuan kepada menyediakan pelbagai insentif, tetapi

juga perlu melihat faktor-faktor lain yang secara tidak langsung boleh mempengaruhi

aliran pelaburan langsung asing, seperti pembangunan pasaran kewangan

Kata kunci: Pasaran kewangan, Pelaburan langsung asing, ujian kointegrasi, VECM

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Figure 4.1 Impulse Response Analysis

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# LIST OF ABBREVIATIONS

ADF Augmented Dickey-Fuller

AIC Akaike Information Criterion

BNM Bank Negara Malaysia

FDI Foreign Direct Investment

FPE Final Prediction Error

GDP Gross Domestic Product

HQ Hannan-Quinn Information Criteria

KPSS Kwiatkowski-Phillips-Schmidt-Shin

LR Test Statistic

Utara Malaysia

OLS Ordinary Least Square

PP Phillip-Perron

PRIVCR Private sector credit

SCAPT Stock Market Capitalization

SIC Schwarz Information Criteria

VAR Vector Autoregressions

VECM Vector Error Correction Model

# **CHAPTER 1**

# **INTRODUCTION**

# 1.1 Background of Study

For a few decades, foreign direct investment (FDI) has become one of the main sources of capital flows. The debt crisis in 1980s eventually caused the policymakers to develop policies that attract more direct cross-border investment capital flows. By 1990s, FDI became the largest source of external financing for developing countries (Chowdhury & Mavrotas, 2006). Compared to 1980, the total of FDI net inflow has increased worldwide about 17 times from \$51.46 billion to \$1561.36 billion in 2014 (World Bank, 2016). FDI could be defined as the direct investment of equity that flow into the economy of a country. It consists of equity capital, reinvestment of earnings and other capital of one country that enters into another country. However, the foreign investor must at least own ten percent of voting shares in order to be considered as FDI (World Bank).

One of the main benefits of FDI is its positive impact on economic growth (Bosworth, Collins and Reinhart, 1999). There are a number of studies examining the effect of FDI on economic growth. Many studies reveal that there is a positive relationship between FDI and economic growth. The FDI can benefit countries by improving employment, productivity and knowledge transfer as well as allowing incorporation with global value chains which then will cause the growth to accelerate (Echandi, Krajcovicova and Qiang, 2015).

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### REFERENCES

- Adam, A. M., & Tweneboah, G. (2009). Foreign direct investment and stock market development: Ghana's evidence. *International Research Journal of Finance and Economics*, 26, 178-185.
- Alfaro, L., Chanda, A., Kalemli-Ozcan, S., & Sayek, S. (2004). FDI and economic growth: the role of local financial markets. *Journal of International Economics*, 64(1), 89-112.
- Alfaro, L., Chanda, A., Kalemli-Ozcan, S., & Sayek, S. (2010). Does foreign direct investment promote growth? Exploring the role of financial markets on linkages. *Journal of Development Economics*, *91*(2), 242-256.
- Al Nasser, O. M., & Soydemir, G. (2011). Domestic and international determinants of foreign direct investment in Latin America. *Journal of Emerging Markets*, 16(2), 7.
- Ang, J. B. (2008). Determinants of foreign direct investment in Malaysia. *Journal of Policy Modelling*, 30(1), 185-189.
- Ang, J. B., & McKibbin, W. J. (2007). Financial liberalization, financial sector development and growth: evidence from Malaysia. *Journal of Development Economics*, 84(1), 215-233.
- Azman-Saini, W. N. W., Law, S. H., & Ahmad, A. H. (2010). FDI and economic growth: New evidence on the role of financial markets. *Economics Letters*, 107(2), 211-213.
- Baharumshah, A. Z., Slesman, L., & Devadason, E. S. (2015). Types of foreign capital inflows and economic growth: New evidence on role of financial markets. *Journal of International Development*. doi:10.1002/jid.3093.
- Beck, T., Demirgüç-Kunt, A., & Levine, R. E. (2000). A new database on financial development and structure. *World Bank Economic Review*, *14*, 597-605.
- Bekhet, H. A., & Al-Smadi, R. W. (2015). Determinants of Jordanian foreign direct investment inflows: Bounds testing approach. *Economic Modelling*, 46, 27-35.
- Bosworth, B. P., Collins, S. M., & Reinhart, C. M. (1999). Capital flows to developing economies: Implications for saving and investment. *Brookings Papers on Economic Activity*, 1999(1), 143-180.
- Carkovic, M. V., & Levine, R. (2002). Does foreign direct investment accelerate economic growth?. *U of Minnesota Department of Finance Working Paper*.
- Chowdhury, A., & Mavrotas, G. (2006). FDI and growth: What causes what?. *The World Economy*, 29(1), 9-19.

- Claessens, S., Klingebiel, D., & Schmukler, S. (2001). FDI and stock market development: Complements or substitutes?. World Bank Working Paper.

  Retrieved from https://www.researchgate.net/profile/Sergio\_Schmukler/publication/228943955

  \_FDI\_and\_stock\_market\_development\_complements\_or\_substitutes/links/091
  2f50996b9a49c58000000.pdf
- Gujarati, D. N. (2003). Basic Econometrics. (4th ed.). New York: McGraw-Hill.
- Deichmann, J., Karidis, S., & Sayek, S. (2003). Foreign direct investment in Turkey: regional determinants. *Applied Economics*, *35*(16), 1767-1778.
- Department of state: 2014 Investment climate statement. (2014). Retrieved from http://www.state.gov/documents/organization/228922.pdf
- Desai, M. A., Foley, C. F., & Hines, J. R. (2006). Capital controls, liberalizations, and foreign direct investment. *Review of Financial Studies*, 19(4), 1433-1464.
- Desbordes, R., & Wei, S. J. (2014). The effects of financial development on foreign direct investment. *World Bank Policy Research Working Paper*, (7065).
- Echandi, R., Krajcovicova, J., & Qiang, C. Z. W. (2015). The impact of investment policy in a changing global economy: A review of the literature. *World Bank Policy Research Working Paper*, (7437).
- Gebrehiwot, A., Esfahani, N., & Sayim, M. (2016). The relationship between FDI and financial market development: The case of the Sub-Saharan African region. *International Journal of Regional Development*, *3*(1), 64-80.
- Giles, D. E. (2007). Spurious regressions with time-series data: Further asymptotic results. *Communications in Statistics—Theory and Methods*, *36*(5), 967-979.
- Hajilee, M., & Al Nasser, O. M. (2015). The relationship between financial market development and foreign direct investment in Latin American countries. *The Journal of Developing Areas*, 49(2), 227-245.
- Har, W. M., Teo, K. L., & Yee K. M. (2008). FDI and economic growth relationship: An empirical study in Malaysia. *International Business Research*, 1(2), 12-18.
- Henry, P. B. (2000). Do stock market liberalizations cause investment booms? *Journal of Financial Economics*, 58(1), 301-334.
- Hermes, N., & Lensink, R. (2003). Foreign direct investment, financial development and economic growth. *The Journal of Development Studies*, 40(1), 142-163.
- Johansen, S. (1991). Estimation and hypothesis testing of cointegration vectors in Gaussian vector autoregressive models. *Econometrica: Journal of the Econometric Society*, 1551-1580.

Kholdy, S., & Sohrabian, A. (2005, February). Financial markets, FDI, and economic growth: Granger causality tests in panel data model. In *EFA 2005 Moscow Meetings*.

MIDA. (2014). Malaysia Investment Performance 2014. Kuala Lumpur.

Ministry of Finance. (2001) Economic Reports 2001. Kuala Lumpur.

Soumaré, I., & Tchana, F. T. (2015). Causality between FDI and financial market development: Evidence from emerging markets. *The World Bank Economic Review*, 29(suppl 1), S205-S216.

World Bank. (2016), *World Development Indicator 2016*. Softcopy Database. World Bank.

