

## **Fundamentals and Country Specific Determinants of FDI: Evidence from United States and Malaysia**

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### **ABSTRACT**

This paper analyses the impact of macroeconomic fundamentals and country specific determinants on Foreign Direct Investment (FDI) in the United States of America (USA) and Malaysia from 1981 to 2013. Increased world integration, liberalisation and deregulation have reduced trade barriers in all countries across the world, allowing for vast growth in international trade and investment. In addition, negotiations on regional free trade agreements and the adaptation of favourable policies towards expansion of foreign investment in emerging countries have resulted in tremendous interest on the part of policy makers to compete for FDI that brings prosperity to these host countries. Empirical results conclude that while the rate of economic growth and domestic credit draw more FDI into the USA, changes in total trade and domestic interest rates have a significant effect on FDI flows into Malaysia.

*Keywords:* Domestic credit, FDI, interest rate, international trade

### **INTRODUCTION**

Foreign direct investment (FDI) plays an astonishing role in global business and is considered to be an indicator of global

economic health and stability. In the last two decades, global economy has experienced escalated flow of capital from both direct and portfolio investments. FDI flows are less susceptible to speculative activities relative to portfolio investment and are expected to provide greater contribution to economic growth. FDI can also bridge the savings and investment gap as well as meet foreign exchange requirements of emerging countries. With the current

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trend of negotiations on regional free trade agreements, there is vast interest in applying favourable policies towards FDI in emerging countries. Understanding FDI flows is therefore of crucial interest to policymakers. It has also become an integral component of the balance of payments in emerging countries with large growth in international trade through increased global financial linkages. Some large investment flows in smaller economies have significant consequences on macroeconomic fundamentals in the host country. This gives rise to the need to understand the trends and determinants of FDI flows in order to formulate policy decisions and verify their impact on the domestic economy. In addition, with the current global uncertainty, relatively high unemployment worldwide and slowdown in not only emerging but developed nations, authorities are under intense pressure to create jobs and maintain stability in the economy fiscally and financially.

FDI may spread capital, technology and management skills, entrepreneurial ability, brands and access to markets across the globe, all of which are ingredients crucial for growth and development (Athukorala & Wagle, 2011). FDI is also capable of providing and stimulating economic growth; increasing employment by creating new production capacity and jobs; developing infrastructure; restructuring enterprise; and relieving capital account by adding to the stock of capital in the host country. In addition, multinational companies (MNCs) are expected to transfer foreign

intangible assets such as technology and managerial skills to provide a source of new technologies, processes, products, organisational technologies and management skills. This would provide a strong stimulus for economic development of the host country (Wijeweera et al., 2010). On the other hand, FDI may provide foreign investors with new markets and marketing channels; cheaper production facilities; opportunity for foreign investors to circumvent trade barriers; movement from domestic export sales to locally-based national sales; capability to increase total production capacity; and opportunities for co-production, joint ventures with local partners, as well as joint marketing arrangements and licensing. Furthermore, improvement of the access to international markets would stimulate competition and efficiency in the host country.

The yearly global foreign direct investment flows have increased tremendously from USD26.7 billion in 1990 to USD208 billion in 1999. As shown in Figure 1 (UNCTAD, 2015), FDI flows have grown in the last decade to a peak of almost USD2,000 billion in 2007 before falling to about USD1,300 billion due to economic uncertainty and geopolitical risks in recent years. The six top FDI recipient countries in 2014 were China (\$128 bil), Hong Kong (\$111 bil), USA (\$86 bil), Singapore (\$81 bil), Brazil (62 bil) and the United Kingdom (\$61 bil), respectively (UNCTAD, 2015). FDI flows in developing economies remained resilient in 2014, reaching more than US\$700 bil, the highest level ever

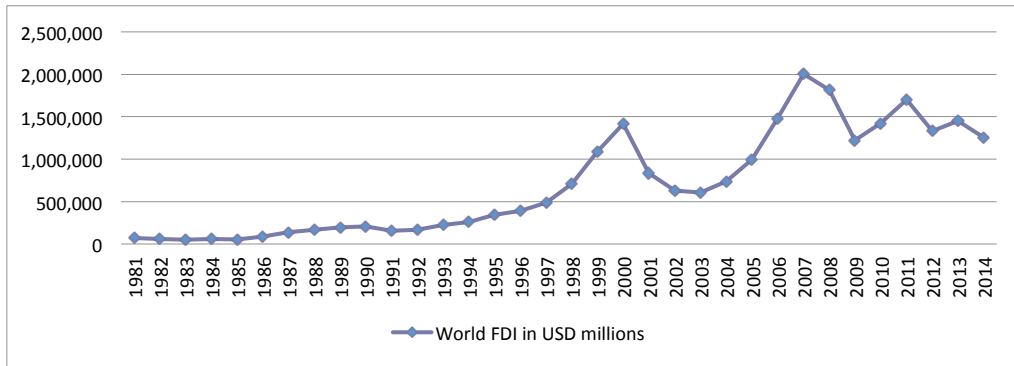


Figure 1. World FDI flows from 1981 to 2014  
Source: UNCTAD (2015)

recorded, and accounting for 56% of global FDI flows. The increase was mainly driven by developing Asia, the world’s largest recipient region (UNCTAD, 2015).

**FDI in Malaysia**

The Malaysian government has intensely encouraged FDI since the 1970s but there remains some constraints on investment in specific sectors. While FDI inflow continues to improve after the effects of the 2008-2009 global financial crisis, Malaysia’s performance in attracting FDI relative to both earlier decades and the

rest of the Association of Southeast Asian Nations (ASEAN) has slowed down (US Department of State, 2014). The level of FDI inflows for Malaysia fell drastically during the Asian financial crisis as observed in Figure 2 from a high of almost \$7.3 bil in 1996 to a low of almost \$600 mil in 2001. FDI in the country is very sensitive to global economic conditions. Even though FDI expanded after 2001 to a peak of \$8.6 bil in 2007, it fell drastically again to \$1.5 bil in 2009 before rallying to a high of \$12.2 bil in 2011 and falling slightly to \$11.6 bil in 2013 (UNCTAD, 2015).

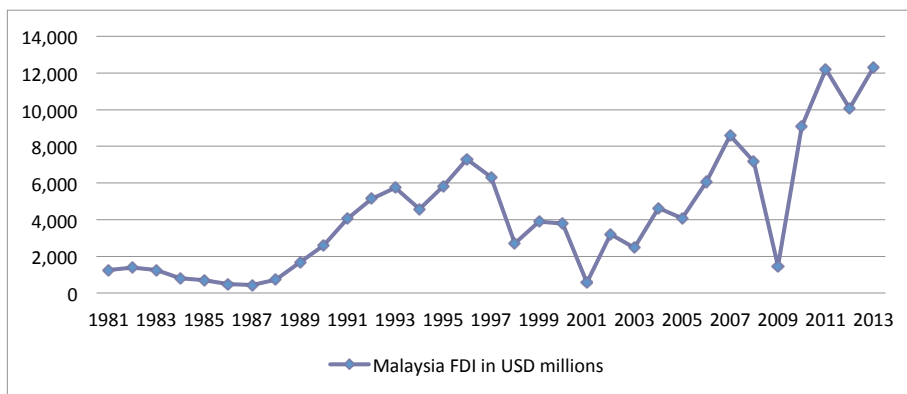


Figure 2. Global FDI flows into Malaysia from 1981 to 2013  
Source: UNCTAD, 2015

According to Malaysia's central bank, Bank Negara Malaysia (BNM), the United States was the fifth largest source of new FDI to Malaysia in 2013 with \$2.8 bil in new investments. BNM reported that Singapore was Malaysia's largest source of new FDI, with \$5.2 bil in investments, followed by Japan with just under \$4.8 bil, the Netherlands with \$4.1 bil and Hong Kong with \$3.7 bil (UNCTAD, 2015). BNM listed the United States as Malaysia's third largest source of cumulative investment stock, with \$11.7 bil as of 2012 (UNCTAD, 2015). FDI played a vital role in Malaysia's rapid economic growth through export-orientated industrialisation (Athukorala & Wagle, 2011). Since Malaysia is a developing country, FDI plays a crucial role in its development and growth. This is especially so as Malaysia relies heavily on its export-orientated activities for the generation of income and growth. The US has always been a major foreign investor in Malaysia and any global crisis would drastically affect foreign investments in the country. Even though FDI flow into Malaysia between 1997 and 1998 was interrupted by the Asian financial crisis, Malaysia still received more FDI than any of its neighbours in ASEAN during that period (Athukorala & Wagle, 2011; Baharumshah & Almasaied, 2009). Malaysia was able to offer attractive incentives that attracted FDI into selected industries such as electrical and electronics (Wong, Tang, & Fausten, 2009). As mentioned by Choong and Lam (2010), Malaysia, though a small country in terms of income, is one of the developing countries that attracts FDI very well.

### **FDI in the United States of America**

The United States of America is one of the largest recipients of FDI flows in the world and hence USA's perspective is important in the study of FDI. The country has vast potential to absorb FDI flows due to its huge market. As shown in Figure 3, the amount of American FDI increased tremendously during the Asian financial crisis from a level of \$84 bil in 1996 to a peak of \$314 bil in 2000. There has been much volatility in the FDI flows since year 2000 and the proportion of American FDI relative to the world FDI has deteriorated due to these flows moving mainly to emerging countries (UNCTAD, 2015). Over the past decade, FDI in the USA peaked in 2008, reaching \$310 bil. The recent global economic recession had a direct influence on inward direct investment transactions. Foreign companies dramatically reduced their investment in 2009, which dropped more than half from the prior year. Foreign investment in the USA increased in 2010 and again in 2011, before falling in 2012. In 2013, foreign investors' confidence in the USA returned and inward direct investment rose 35% (Organisation for International Investment, 2015).

Japan was the United States' largest foreign investor in 2013 at nearly \$45 bil, and it constituted nearly one fifth of all foreign investment in the country. The United Kingdom, Luxembourg, Canada and Switzerland constituted the rest of the top five largest investors in the USA. Between the years 1974 and 1994, the USA received

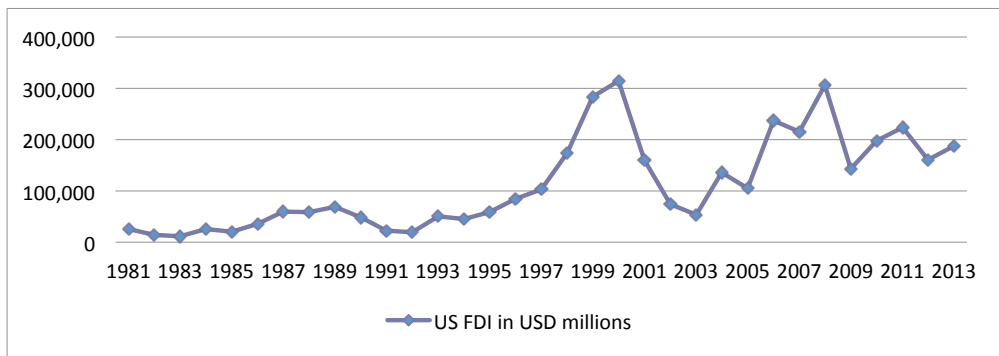


Figure 3. Global FDI flows into the United States from 1981 to 2013  
Source: UNCTAD 2015

the most FDI inflow from around the world and was one of the preferred destinations for FDI due to its large market size and liberalised investment policy (Axaroglou, 2005). According to Salehizadeh (2005), FDI inflows into the USA are said to be the positive contributing factor towards its macroeconomic indicators. The USA is not only the largest supplier of FDI, it is the largest receiver as well. Of the total world FDI received by developed economies, the USA received the largest inflow (Roy & Berg, 2006; Bode & Nunnenkamp, 2011). FDI to the the USA accounts for almost 75% of total FDI that flowed into developed countries in 1999 (Choong & Lam, 2010).

For the fourth consecutive year, more than half of global foreign direct investment in 2013 flowed to developing and transition economies. Developed countries now account for only 39% of global FDI inflows (Organisation for International Investment, 2015). According to UNCTAD (2015), from 2015, trends in global FDI flows were expected to be rather uncertain due to: the fragility of the world

economy; growth tempered by hesitant consumer demand; volatility in currency markets and geopolitical instability. In addition, the decline in commodity prices may also lower investments in the oil and gas and other commodity industries. Within developed countries, increasing divergence in economic growth between the USA, Euro zone and Japan may result in differing patterns of FDI. With the increased uncertainty in Europe and the potential complexities arising from Brexit, the outlook for the coming years could be rather discouraging for this region. On the other hand, in developing economies, investment could be negatively affected by slower growth prospects and regional conflicts.

Worldwide economic power shifts have continued to evolve in the last two decades and this has resulted in dramatic changes in the trend of global businesses. This study investigated two contrasting economies, one well-developed and the other emerging, to examine the differences in the theoretical explanations and determinants of FDI. This

study aimed to provide a clear understanding of determining factors that drive FDI in developed and emerging markets. FDI has become not only an important source of investment but also a foundation of vital capital formation and growth for many countries. Policy makers from less developed countries that aspire to become more developed markets can learn from the experiences of other countries to attract FDI and move up the level of development (Ho & Rashid, 2011).

This research investigated the macroeconomic fundamental and country specific determinants of FDI in two countries. The results could provide policy implications to regulators on investment strategies and trade agreements as well as information to potential investors to make appropriate investment decisions through better understanding of these conditions. Any significant differences in empirical findings and theoretical understanding would also provide evidence that theoretical explanation for one nation may not necessarily be applicable to others with different levels of development.

The remainder of the paper is structured as follows: Section 2 reviews the empirical literature on fundamental and country specific factors on FDI. Section 3 describes the data and methodology applied in the empirical analysis and section 4 presents the empirical findings. Section 5 ends with a summary of the major findings and offers some policy implications.

## LITERATURE REVIEW

Loksha and Leelavathy (2012) defined FDI as the process where domestic investors of a home country acquire assets for the intention of controlling activities of enterprise in a country located outside of the home country. FDI is very important for both developed and developing countries (Aamir et al., 2011; Ramrattan & Szenberg, 2014) in guiding sustainable development and growth. According to Klimek (2011), mergers and acquisitions are the major form of global FDI flow and macroeconomic variables play a crucial part in the mode of foreign establishment. FDI is an important source of knowledge in terms of the transfer of technology and management skills to the labour forces in countries such as Indonesia, Malaysia, Thailand and the Philippines. FDI can also enhance the domestic firms' usage of more advanced technologies, one of the crucial sources of economic growth in a country, and elevate the country to a global platform. It is also one of the principal sources of funding for developing countries, especially when a country is in financial crisis.

Three theories that commonly explain FDI flows are the internationalisation, market imperfection and product life-cycle theories. The internationalisation theory explains the gradual process of a firm's international involvement. The process outlines several interrelated steps a company must comply with in order to properly invest in foreign countries. Foreign entry

pattern starts with exports by local agents to new markets to setting up licensing and manufacturing plants later. Rugman (1981) stated that the process of internationalisation is as follows: 1) exporting; 2) licensing; 3) establishment of local warehouses and direct local sales, 4) local assembly and packing; 5) formation of a joint venture; and eventually 6) foreign direct investment. The market imperfection theory explains foreign investment as a strategy to profit from tangible or intangible competitive advantages not shared by competitors in foreign countries (Hymer, 1970). Foreign firms use these competitive advantages to capitalise on market imperfection in products and factors of production in the host country. The product life-cycle hypothesis, on the other hand, provides evidence of the maturity of product process and shifting of production to the most cost-efficient location.

Higher economic growth strengthens confidence in a domestic country and attracts foreign investors who expect to profit handsomely from their investments in that country. A rise in economic growth positively influences FDI inflows as it denotes a larger market with more opportunities and potential prospects for services and products produced. In addition, higher economic growth also corresponds to a higher level of productivity that lowers the cost of production through economies of scale. Furthermore, increase in economic growth denotes advanced infrastructure facilities that boost the marginal return to capital, which eventually attracts foreign

investors. According to a previous study by Baharumshah and Almasaied (2009), FDI and economic growth have a significant and positive relationship. Similar to Choong and Lam (2010), Aw and Tang (2010) found that economic growth and the openness level of the Malaysian economy are very important factors that attract foreign investors into Malaysia. A country with higher gross domestic product (GDP) rate is likely to attract more foreign investments as it has higher demand for the services and products produced. Leitao (2010) analysed the determinants of FDI in Canada and concluded that economic growth is positively significant in affecting FDI inflows.

Openness level refers to the degree of trade openness of an economy and it is measured by a country's import and export activities. Kakar and Khilji (2011) mentioned that free trade or openness level has been regarded as the engine of a country's economic growth. Fast growing trade activities play a major role in the acceleration of growth in local demand and level of exports. When a country's openness level increases, the country provides opportunities for investors to bring their foreign products into the local markets (Athukorala & Wagle, 2011). Similarly, Demirhan and Masca (2008), who employed cross-sectional data of 38 developing countries from 2000 to 2004 to test the determinants of FDI found that trade openness is positively related to FDI inflows. Another study by Surge et al. (2008) on the drivers of FDI inflows into Rwanda

also confirmed a positive significant effect of trade openness on FDI inflow. Hailu (2010) noted that a higher degree of trade openness attracts foreign investors as high integration of the host country to the international market makes it cheaper to export products to other countries. Similar to Ho and Rashid (2011), Ho et al. (2013) also found that trade openness is positively significant for attracting FDI inflows for BRICS and Malaysia.

Empirical studies have shown that higher inflation negatively affects FDI inflow (Aw & Tang, 2010). Higher inflation rate in a host country indicates higher cost of conducting business; hence, it discourages foreign investment. In contrast, an increase in the inflation rate could also attract FDI as it implies larger demand and consumption levels. That in turn provides opportunities for foreign investors to increase production and benefit from higher sales in developed nations (Singhania & Gupta, 2011).

Host countries with lower interest rates are attractive to multinational firms that plan to raise funds domestically. High interest rates increase production costs and the cost of borrowing in the host country, discouraging direct foreign investments. However, previous studies showed conflicting evidence for this. Lave and Hidalgo (2000) found a negative relationship between FDI inflow and interest rate in the host country. Similarly, Ho et al. (2013) found a significant negative relation between interest rate and FDI inflows in China and South Africa, and concluded that a high interest rate increases the cost

of doing business and leads to lower foreign investment. Anna et al. (2012) found no significant impact of interest rates on FDI inflows in Zimbabwe. In contrast, Yang et al. (2000), who employed time series data in their study to examine the determinants of FDI in Australia, found that interest rate has a positive and significant relation with FDI inflows.

Exchange rate is the currency of a country expressed in another country's currency such as the value of Malaysian Ringgit (MYR) expressed as a unit of US dollar (USD). A study by Aw and Tang (2010) found that there is no significant relation between exchange rate and foreign investment decisions. However, Suliman et al. (2015) and Aamir et al. (2011) found a negative relationship between FDI and exchange rate. A later study on exchange rates by Mugableh (2015) found that exchange rates, gross domestic product, money supply and trade enhanced the flows of FDI into Malaysia, while consumer price index worsened them. In addition, Dua and Garg (2015) investigated macroeconomic factors underlying FDI flows in India by co-integrating VAR and found that depreciating exchange rates, higher domestic returns and domestic output as well as better infrastructure are conducive to FDI, while trade openness and global FDI flows are detrimental to India's FDI.

Positive stock market performance is a good indicator of healthy economic condition and potential for future growth, thus motivating foreign direct investment. Countries with a more developed financial



sector allow investors access to liquidity and funds via domestic or external finance. Agbloyor et al. (2013) found that countries with more developed stock markets attract FDI, as improvement in the stock market performance strengthens confidence of investors in terms of better outlook and investment climate for the domestic market. Similarly, Arcabic et al. (2013) analysed both the long and short-term relationships between FDI and the stock market in Croatia and found that in the short run, upward movement on the stock market positively affects FDI.

A recent study by Malhotra et al. (2014) evaluated the determinants of FDI in Brazil, Russia, India and China over the period 1995 to 2012 and found that debt servicing and inflation have negative impact on FDI flows while GDP growth and per capita income have positive impact on FDI. Additionally, Kirchner (2012) modelled inward foreign direct investment for Australia and found that FDI is positively related to income and productivity growth and negatively related to foreign portfolio investment, trade openness, exchange rate and foreign real interest rate. Moreover, Kaur and Sharma (2013) concluded that openness, reserves, GDP and long-term debt positively impact FDI while inflation and exchange rate negatively affect FDI. In summary, changes in income, exchange and inflations rates, export and import, household consumption and economic activities of the host country affect foreign investors' sentiment and investment decisions.

## DATA AND METHODOLOGY

In order to analyse the impact of fundamentals and country specific determinants on FDI in Malaysia and the USA, annual data from 1981 to 2013 were collected from international financial statistics, namely, from the International Monetary Fund, the World Economic Outlook, the World Bank, the United Nations Conference on Trade and Development (UNCTAD), the Organisation for Economic Co-operation and Development (OECD) and the Global Market Information Database, Euromonitor International. The list included nine macroeconomic fundamentals and country specific factors, namely, exchange rate, inflation rate, interest rate, economic growth, total trade, domestic stock index, domestic credit, household consumption and domestic investment. This list of factors is shown in Table 1.

To provide a comparison for the two countries in the sample, Table 2 provides descriptive statistics of the variables used in the study. Being a developed and large country, it is no surprise that the USA has substantially larger FDI inflows, about 28 times larger than that of Malaysia. The USA's total trade flows, however, is on average only about 10 times larger than that of Malaysia. The inflation rate between the countries are on average very similar. The USA, on the other hand, has a slightly higher interest rate on average during the sample period. The USA also has a higher domestic credit and household consumption as percentage of GDP compared to Malaysia.

Table 1  
*Proxy for each variable and expected relation with FDI*

Variables	Proxies	Expected Relation
Foreign Direct Investment (FDI)	Foreign Direct Investment/GDP	
Exchange Rate (ER)	Exchange Rate	Negative
Inflation Rate (INF)	Inflation Rate	Negative
Interest Rate (INT)	Interest Rate	Negative
Economic Growth (EG)	Gross Domestic Product	Positive
Total Trade (TR)	(Export + Import)/GDP	Positive
Stock Market (SM)	Domestic Stock Index	Positive
Domestic Credit (DC)	Domestic Credit/GDP	Positive
Household Consumption (HHC)	Household Consumption/GDP	Positive
Domestic Investment (DINV)	Gross Fixed Capital Formation/GDP	Positive

Table 2  
*Descriptive statistics of the variables for the USA and Malaysia from 1981-2013*

Variables	USA				Malaysia			
	Mean	Max	Min	Std Dev	Mean	Max	Min	Std Dev
FDI (US\$M)	114,380	314,007	11,518	92,293	4,296	12,197	422	3,324
ER		2.02 \$/£	1.30 \$/£	0.17 \$/£	3.04 RM/\$	3.92 RM/\$	2.30 RM/\$	0.57 RM/\$
INF (%)	3.22	10.30	-0.30	1.77	2.93	9.70	0.30	1.90
INT (%)	5.08	16.38	0.10	3.78	4.72	8.46	2.12	2.13
EG*	8,959	16,768	3,126	4,155	354,416	986,733	57,613	288,788
TR (US\$M)	1,730,922	3,847,914	460,394	1,082,165	166,906	434,229	23,312	130,382
SM**	7,001	16,576	875	4,631	822	1865	233	451
DC (%)	179.32	240.55	111.36	39.66	123.18	163.35	72.67	22.86
HHC (%)	65.05	69.32	59.42	2.45	48.69	57.32	41.56	4.45
DINV (%)	21.78	25.08	17.51	1.82	28.84	43.59	20.57	7.32

*Note:* \* GDP for the USA is measured in billions of USD while GDP is measured in Malaysia in millions of MYR. \*\*SM for USA is the Dow Jones Industrial Index while that for Malaysia is the Kuala Lumpur Composite Index.

Malaysia has a higher domestic investment as a percentage of GDP, 28.84% on average, as opposed to 21.78% for the USA.

*FDI* is the inflow of foreign direct investment; *ER* is average yearly value of the country's currency in terms of one unit of US dollar for Malaysia and one unit of British pound for the USA; *INF* is inflation

rate proxied by changes in consumer price index; *INT* is interest rate; *EG* is the gross domestic product (GDP) of the respective countries; *TR* is total trade flows; *SM* is the domestic stock market index; *DC* is measured by domestic credit as a percentage of GDP, *HHC* is the domestic household consumption as a percentage of GDP and

*DINV* is an indicator of domestic investment and is the gross fixed capital formation as a percentage of GDP.

This study employed ordinary least Square (OLS) multiple regression analysis to investigate the FDI inflow behaviour of each country and to explore the significance of macroeconomic and country-specific factors on FDI inflow. This approach provides accurate predictions of the equation and measures the extent, direction and strength of association of each determinant in explaining the change in FDI.

The OLS regression model in this study is described as:

$$FDI_t = \alpha_0 + \beta_1 ER_t + \beta_2 INF_t + \beta_3 INT_t + \beta_4 EG_t + \beta_5 TR_t + \beta_6 SM_t + \beta_7 DC_t + \beta_8 HHC_t + \beta_9 DINV_t + \beta_{10} CS_t + \varepsilon_t \quad (1)$$

where *FDI* is the inflow of foreign direct investment; *ER* is average yearly value of the country's currency in terms of one unit of US dollar for Malaysia and one unit of British pound for the USA; *INF* is inflation rate proxied by changes in consumer price index; *INT* is interest rate; *EG* is economic growth as measured by the change in gross domestic product; *TR* is total trade flows as measured by total export and import as a ratio of GDP; *SM* is the change in domestic stock market index (Dow Jones Industrial Index for the USA and Kuala Lumpur Composite Index [KLCCI] for Malaysia); *DC* is measured by domestic credit as a ratio of GDP, *HHC* is the domestic household consumption as a ratio of GDP and *DINV* is an indicator of domestic investment and is the gross fixed capital formation as a

ratio of GDP; *CS* is the crisis dummy with 1 indicating crisis year, 0 otherwise, and  $\varepsilon_t$  is the error term representing the effects of omitted variables. It is assumed that  $\varepsilon_t$  can be characterised by an independently, identically distributed, random variable with mean zero and variance and subscript *t* represents years.

The changes in the variables are computed as a measure of the respective transformed factors in order to ensure stationarity and to avoid spurious analysis of results. Unit root test results for both countries are shown in Table 3. This study applied both Augmented Dickey-Fuller (ADF) and Kwiatkowski-Phillips-Schmidt-Shin (KPSS) unit root tests in order to check stationarity of the time series. The data series were also corrected for multicollinearity, autocorrelation or heteroskedasticity problems with Variance Inflation Factor, White tests and Newey-West corrections.

## EMPIRICAL FINDINGS

The empirical results on macroeconomic fundamentals and country-specific determinants of FDI into the USA and Malaysia are detailed in Table 4. The results show that some factors impact developed and emerging countries similarly while others impact them rather differently. First, the coefficients on exchange rates are negative but insignificant for both countries. Similar but significant relations were found by Aamir et al. (2011) and Suliman et al. (2015) on exchange rates and FDI. FDI is attracted by an increase in the value of domestic currency, signalling foreign

Table 3  
*Descriptive statistics of the variables for the USA and Malaysia from 1981-2013*

Variables	USA			Malaysia		
	ADF Test t-stats	Model (lag)	KPSS Test KPSS statistic	ADF Test t-stats	Model (lag)	KPSS Test KPSS statistic
FDI	-6.7276***	C(0)	0.2121	-6.6373***	C(0)	0.2485
ER	-4.0614***	C(0)	0.0879	-4.2664***	C(0)	0.1381
INF	-7.1743***	C(1)	0.1801	-7.8368***	C(0)	0.1956
INT	-5.1837***	C(3)	0.3257	-5.9264***	C(0)	0.5000**
EG	-5.6028***	C(0)	0.0836	-4.9037***	C(0)	0.0793
TR	-6.4616***	C(0)	0.5000**	-4.7261***	C(0)	0.1234
SM	-5.6396***	C(0)	0.2692	-7.0074***	C(0)	0.0593
DC	-7.3553***	C(0)	0.2028	-5.2012***	C(1)	0.1113
HHC	-7.6819***	C(0)	0.2541	-5.2155***	C(0)	0.4193*
DINV	-4.8745***	C(0)	0.0849	-3.9570***	C(0)	0.1116

*Note:* The ADF test has null hypothesis of the existence of a unit root in the time series while the null for KPSS tests is that the time series is stationary. \*\*\*, \*\* and \* denote statistical significance at 1, 5 and 10 %, respectively

investors' confidence and the strength of the domestic economy. Inflation rate has an indirect relation with FDI in Malaysia but a positive relation with FDI in the USA. The negative relation between inflation and FDI flows in Malaysia are consistent with Aw and Tang (2010). In the study on Malaysia, they argued that a higher inflation rate in Malaysia (and most emerging countries) signals higher costs of production. That worries foreign investors and lowers FDI inflows. The positive relation between inflation and FDI flows in the USA is consistent with Singhania and Gupta (2011), who argued that higher inflation in the USA signals a high level of economic activity and consumption, thereby attracting foreign interest in investments. While the effect on inflation is different for developed and developing countries, it is found to be not significant for both countries in this study.

In Malaysia, the coefficient of interest rate on FDI is positive and significant at the 5% level. A higher interest rate indicates a positive economic condition with a relatively higher level of investment and consumption, attracting FDI into the market. Interest rate, however, is not a significant driver for FDI in the USA. The contradictory results for interest rate show that interest rate provides differing signals depending on the state of development of a nation. Lower interest rate may indicate a positive economic outlook and cheaper source of financing for businesses in developed economies. A similar condition in less developed nations, however, may signal loss of business confidence and sluggish economic environment. While interest rate is not significant in affecting FDI in the USA, it is important to note that FDI inflow into the US is positively and significantly affected

by economic growth. When the domestic GDP improves, more FDI is attracted into this developed nation, consistent with our theoretical understanding. It is also consistent with findings from Choong and Lam (2010) and Aw and Tang (2010), where a growing and larger market was found to more likely attract global enterprises seeking markets for their ready products. It is interesting to note that while economic growth is the most significant driver of FDI in developed countries like the USA,

a similar relation is not found in Malaysia. On the contrary, the coefficient of economic growth on FDI is negative in Malaysia, even though it is not statistically significant. The negative coefficient indicates that faster economic growth may offset cost advantages of less developed nations for international firms seeking relatively cheap destinations for their labour intensive production. Additionally, faster growth may lead to higher inflation, which discourages FDI inflow into developing countries.

Table 4  
Results of fundamental and country-specific factors on FDI for the USA and Malaysia

	USA		Malaysia	
ER	-0.1197	-0.0996	-0.1731	-0.1973
	0.3609	0.5050	0.3798	0.3101
INF	0.0051	0.0023	-0.0026	-0.0026
	0.6154	0.8649	0.6838	0.7159
INT	-0.0012	0.0003	0.0151*	0.0162**
	0.8025	0.9460	0.0921	0.0448
EG	0.0747***	0.0650***	-0.3373	-0.3532
	0.0002	0.0027	0.3386	0.2399
TR	0.3126	0.3125	0.4842**	0.4964**
	0.1408	0.1470	0.0375	0.0321
SM	-0.0312	-0.0191	0.0134	-0.0001
	0.6027	0.7767	0.6854	0.9987
DC	0.5376**	0.4835*	-0.0686	-0.0448
	0.0233	0.0598	0.4683	0.5800
HHC	-0.4583	-0.2075	-0.5867	-0.8770
	0.3153	0.6499	0.4914	0.3589
DINV	-0.0156	0.1038	-0.0171	0.0885
	0.9509	0.7138	0.9255	0.6523
CS		0.0159		0.0524
		0.5601		0.1362
C	-0.0244	-0.0269	-0.0037	-0.0163
	0.2096	0.2088	0.9251	0.5777
Ad R <sup>2</sup>	0.3257	0.3040	0.2313	0.2545
F-sig	0.0293	0.0473	0.0838	0.0787

Note: \*\*\*, \*\* and \* denote statistical significance at 1, 5 and 10 %, respectively.

This table presents the OLS regression results as shown in equation (1):

$$FDI_t = \alpha_0 + \beta_1 ER_t + \beta_2 INF_t + \beta_3 INT_t + \beta_4 EG_t + \beta_5 TR_t + \beta_6 SM_t + \beta_7 DC_t + \beta_8 HHC_t + \beta_9 DINV_t + \beta_{10} CS_t + \varepsilon_t$$

where *FDI* is the inflow of foreign direct investment; *ER* is average yearly value of the country's currency in terms of one unit of US dollar for Malaysia and one unit of British pound for the USA; *INF* is inflation rate proxied by changes in consumer price index; *INT* is interest rate; *EG* is economic growth as measured by the change in GDP; *TR* is total trade flows as measured by total export and import as a ratio of GDP; *SM* is the change in domestic stock market index; *DC* is measured by domestic credit as a ratio of GDP, *HHC* is the domestic household consumption as a ratio of GDP and *DINV* is an indicator of domestic investment and is the gross fixed capital formation as a ratio of GDP; *CS* is the crisis dummy with 1 indicating crisis year, 0 otherwise, and  $\varepsilon_t$  is the error term and it represents the effects of omitted variables. It is assumed that  $\varepsilon_t$  can be characterised by an independently, identically distributed, random variable with mean zero and variance and subscript *t* represents years.

Exports and imports play major roles in attracting investments from foreign nations and total trade signals the ease of doing business, especially in emerging countries. This factor is found to be significant in driving FDI for Malaysia. The relation is positive, indicating that the higher the level

of international trade, the more positive is the outlook for foreign investors to build capacity and production in that country. The relation is also positive for developed USA but is not statistically significant. The results indicate that openness in an economy is important for attracting FDI in developing countries but not so for the developed ones where openness was already a given. The results also highlight the significant benefit emerging nations could derive from negotiating in regional trade agreements so they will not be side-lined and miss out on investment and trade opportunities. It is surprising to note that stock market activities are not found to be a significant factor in encouraging foreign investment in both of the countries.

Another interesting finding is that both household consumption and domestic investment are negative but not significant drivers of FDI for both countries. The relation seems to suggest that an increase in domestic investment actually discourages foreign investments. This may be due to the crowding out effect of domestic investment replacing foreign investment and vice versa during this period of study. The relation of domestic investment and FDI, however, turns positive but insignificant after controlling for the crisis period. Domestic credit, however, is found to be a significant factor in fostering foreign investment in the USA. This is because easing of domestic credit boosts economic activity, facilitates expansion in local production and consumption and signals a rosy economy favourable to business. Unfortunately, the

same is not found for emerging Malaysia due to the stringent credit policies set by the central bank.

In order to control for the different economic crisis periods in this study, a crisis dummy variable was added to the regression as a control variable. The results of fundamental and country-specific determinants on FDI remained robust with the introduction of the crisis variable. The variables in the model were significant in explaining the changes in FDI in both countries with *f*-statistics of less than 10%. The adjusted R-squares indicated that these variables explained 30% and 25% of movements in FDI for the USA and Malaysia, respectively.

## SUMMARY AND CONCLUSION

The objectives of this paper were to compile the statistics on FDI and investigate the impact of fundamentals and country-specific determinants on FDI for both developed and developing countries. A set of nine factors were examined together in a model under two categories: fundamentals and country-specific factors. Fundamental variables included exchange rates, inflation and interest rates, economic growth and total trade, while country-specific factors included stock market performance, domestic credit, household consumption and domestic investment. The data set spanned from 1981 to 2013. The model also controlled for periods of economic crisis with a dummy variable.

The results from empirical tests found that economic growth and domestic credit

were significant drivers of FDI into the USA. A higher level of economic activities in developed countries provides a catalyst for FDI, while domestic credit expansion facilitates financing of investments from abroad. Higher economic growth was found to be significantly positive in affecting FDI in Baharumshah and Almasaied (2009) as well. FDI in the USA was negatively correlated to foreign currency value, indicating lower domestic currency value reduces the incentive for foreigners to invest. However, the factor was not statistically significant. Inflation, international trade and domestic investment after controlling for the crisis period all had positive coefficients on FDI in the USA, but they were also statistically insignificant. Stock market performance and household consumption were insignificant in driving FDI in the USA as well, but there seemed to be a negative relation between these factors and FDI.

For emerging Malaysia, domestic interest rate and international trade were two significant drivers attracting FDI into the country. The Malaysian economy would be more attractive to international investors worldwide if the economy were more open to trade where products can be exported to surrounding countries. The relation of interest rate on FDI was significantly positive for Malaysia, which is in contrast to theoretical understanding and evidence gathered mostly from developed nations. For developing countries, a higher interest rate may signal a higher level of economic activities and promising business environment that provide opportunities for

production and consumption stimulating FDI. Similar to the USA, exchange rate was insignificant but the negative relation seems to suggest stronger currency value would draw higher foreign interest in domestic investments. Inflation rate was negatively related to FDI for Malaysia but the factor was not significant. Domestic credit, household consumption and domestic investment were also found to be insignificant in attracting FDI into Malaysia.

The results in this paper documented that different factors were significant in driving FDI into developed and emerging nations. To fully understand the behaviour of foreign direct investments, more comprehensive studies in the future may look into other factors specific to emerging countries such as tax rates, skills and expertise, country risk factors, and others for a larger group of countries.

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