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FOREIGN DIRECT INVESTMENT IN DEVELOPING ASIA ACCORDING TO THE LOCATION ADVANTAGE HYPOTHESIS

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Key Words

Foreign Direct Investment; Panel Data; Location Advantage.

Abstract

This paper investigates the location factors of Foreign Direct Investment (FDI) flows across Asian developing countries. The dataset covers ten selected developing countries in Asia using yearly data over the period from 1975 through 2009. The Hausman's specification test is conducted to compare results of fixed effects to random effects. Panel unit root tests confirm that all variables are stationary at their given levels. Results indicate that location determinants of FDI are important in attracting FDI flows for Asian developing countries. Our findings show that the main determinants of FDI for developing countries in Asia include market size, infrastructure development, trade openness, financial deepening, GDP growth, economic development, and human capital. Estimates are robust in the different econometric specifications and show that FDI flows into Asian developing countries are encouraged through economic size, financial deepening, development in infrastructure, trade openness, GDP growth, economic development, and human capital.

Introduction

Foreign Direct Investment (FDI) is one of the basic elements in strategic plans for economic development objectives in developing countries. Development and transfer of modern technology, creating job opportunities for national labor, as well as creating a competitive business environment are the most important economic consequences resulting from the flow of FDI. Recently, restrictions on FDI adopted by many developing countries have been gra-

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dually reduced to achieve economic objectives.

The substantial change of FDI flows toward developing countries has been observed in the last two decades. Post 1980, the growth of world trade has been overtaken by the growth of FDI flows. Changes in FDI volumes were highly pronounced during the period 1985-1990, as many countries started relaxing economic barriers and attracting more FDI. Although Europe and North America are considered to be the highest-hosted regions of FDI inflows, Asia and Pacific nations have begun to attract high shares of FDI inflows since 1990. The potential impact of international movements in FDI is thus a key factor in driving world output and welfare. For this purpose, determining factors affecting the volume of the FDI flows may help formulate the extent of benefits to the host countries in order to encourage FDI. Particularly, in this paper, we examine the location advantage hypothesis for the net FDI flows in the case of developing Asia.

In this study, we investigate the main location factors of FDI across countries from developing Asia. Studying such a case is important in several aspects. First, studying the net inflow for the case of developing Asian countries can help these countries understand the factors affecting net flows of capital during a long time-period horizon (1975-2009). Second, adopting Dunning's theoretical framework (1981) helps explain the location advantage hypothesis for the Asian developing countries. Furthermore, we use several specifications that the Hausman test uses to choose the appropriate method. Finally, based on the results of this study, we can draw several policy implications for the policy makers to control FDI flows in developing Asia.

According to this study, we use a panel model corrected by Hausman's (1978) specification test. We test predictions of the model using yearly data over the period 1975 to 2009. The theoretical framework adopted by Dunning (1981) is used to identify the location determinants of FDI for Asian developing countries. The net flows of FDI for developing Asia are estimated to increase with the market size, infrastructure development, economic openness, financial deepening, GDP growth, GDP per capita, and population. Results of fixed effect and random effect techniques are robust to the findings of pooled OLS. However, after controlling both random effect and fixed effect techniques, the random effect approach was chosen according to Hausman test.

This paper is organized as follows. Section 2 contains a brief survey of the relevant literature. Section 3 shows an overview for FDI trends in developing Asia. In section 4, the methodology and model specification used in the study are explained. Data descriptions are provided in section 5. The empirical results are explained in section 6. In section 7, the conclusion and policy implications are provided.

Literature Review

There are a host of studies that have investigated the determinants of foreign direct investment for countries in developing Asia. Azam and Lukman (2010) estimate the dynamic relationship between some economic factors and FDI inflow into India, Indonesia, and Pakistan for the period between 1971 and 2005. They use log linear regression by applying OLS technique for each country. Results show that market size, openness, and infrastructure factors have positive impacts on FDI inflow, whereas external debt has a negative relationship with FDI inflow. On the other side, Tsen (2005) examines the relationship between FDI and variables that could influence FDI in Malaysia over the period 1980-2002. The author uses time series data and then applies the unit root tests to avoid spurious regression or nonsense correlation. He concludes that a good education, infrastructure, and larger market size have a direct relationship with FDI, but higher inflation and exchange rate lead to decreasing the FDI in Malaysia.

Mughal and Akram (2011) investigate the FDI relationship with market size, exchange rate, and corporate tax rate. They use a model in which an autoregressive distributed lag modeling approach to cointegration and an error correction model are used to evaluate the relationship between variables for the time series data between 1984 and 2008 in Pakistan. Authors find that the market size factor can attract FDI inflows in the long run, whereas there is no impact of market size found on FDI inflows in the short run. Results also support a significant negative relationship between FDI inflows and exchange rates in both the long and short run. Previous studies have identified various variables that influence FDI. These variables include market size, local economic growth, local infrastructure, trade openness, and population. In general, empirical results usually support a significant and positive relationship between FDI and economic growth, market size, infrastructure, and openness. On the other hand, the effect of population factor on FDI was ambiguous in many studies.

Bevan and Estrin (2004) apply a panel dataset to study the determi-

nants of FDI for selective countries in Europe. The results show that FDI is positively related to GDP. Bakir and Alfawwaz (2009) use a standard gravity model between Jordon and other Arab countries for the period between 1996 and 2007 to identify the determinants of foreign direct investment. They report that GDP and per capita GDP have a positive effect on FDI. Cevis and Camurdan (2007) use panel data analysis to examine determinants of FDI in developing countries and transition economies from 1989 to 2006. The conclusion shows that economic growth has a positive effect on FDI. Tsai (1994) investigates the effect of economic growth on FDI by using a simultaneous equation model for sixty-two countries in the 1970s and fifty-one countries in the 1980s. He finds that there is a positive impact between economic growth and FDI.

With regard to the infrastructure factor, Moosa and Cardak (2006) apply extreme bounds analysis to cross-sectional data for 138 countries to estimate determinants of FDI. They state that the factor of telephone lines per 1,000 people (as a measure of infrastructure) has a positive impact on the FDI. Mina (2007) uses panel data model to estimate the location determinants of FDI inflows in GCC countries for the period between 1980 and 2002. Results support the findings in other studies in which the infrastructure factor encourages FDI inflows. Shahrudin and others (2010) estimate some economic factors, such as the supply of money, that may influence FDI in Malaysia from 1970 to 2008. In their model, they apply autoregressive distributed lag framework. The study shows that money supply has a positive and significant relationship with FDI inflows for both the short and long run in Malaysia.

For the openness factor, Erdal and Tatoglu (2002) investigate the FDI determinants in Turkey using time series analysis for the period between 1980 and 1998. They conclude that the degree of openness of an economy may attract more FDI inflows. Awan and others (2011) use quarterly data to examine the economic determinants of FDI in the commodity-producing sector for Pakistan, covering the period of 1996 to 2008. They use cointegration and the error correction model in their estimation. The paper indicates that degree of openness has a positive and significant impact on FDI inflows in Pakistan.

Regarding the population factor, Sethi and others (2003) analyze the US FDI into Western Europe and Asia over twenty years' duration from 1981 to 2000. This was to provide the determinants that may change the trend of FDI for these countries in relation to the US. Although the

authors find a negative relationship between population and FDI, this result is not statistically significant. Another study by Samimi and others (2011) used a panel data regression model to specify the relationship between political stability and FDI revenues in countries in the Organization of Islamic Conferences (OIC). They apply the model for sixteen countries in OIC for the period between 2002 and 2009. Their finding provides a positive, statistically significant relationship between population levels and FDI.

Overview on FDI Trend in Developing Asia

For over two decades, influences in the global economic and political environment have increased the level of FDI among countries around the world. This increase in FDI flows has changed a number of economic factors, such as, employment, income, prices, production, export, import, welfare, and growth rate. In addition, the trend in FDI has increased the degree of globalization among countries. It also has built a strong economic link between industrial and developing countries and among developing countries themselves. FDI is increasingly important for developing countries. The share of developing countries in FDI inflows rose from 17.8 percent in 1990 to 36.6 percent in 2004 and 35 percent in 2005 (Cevis & Camurdan, 2007).

A similar trend has also been observed in Asian developing countries, where reducing international investment restrictions has accelerated increases in FDI and economic expansion. The Asian developing countries have almost 50 percent of FDI flows to all developing countries on the globe. This percentage reflects the diversity among those countries in terms of market size, economic development, and FDI regulations. Appendix B shows the performance of FDI in selected Asian countries for the period between 1975 and 2009. As the data verified, the highest FDI averages recorded were about US$888.3 million in Singapore and US$786.5 million in Malaysia during 1975-1984. Gradually, FDI has increased in countries covered in this study, with the exception of Malaysia in the last five-year period (2005-2009). This increase in FDI was due to liberalization in countries' trade and investment regimes. Also, FDI relative to current GDP increased from about 1.6% on average in the period of 1975-1984 to about 2.5% in the period of 2005-2009. In addition, the FDI average increased from US$281 million in the first ten years to about US$6.35 billion in the last five years for all countries covered in the study. In the last five-year period

(2005-2009), the three countries with the highest FDI were India, Singapore, and Thailand. This can be explained by reductions in FDI restrictions, and hence, the rapid rise in these countries' economies.

According to Appendix B, Singapore records the highest percentage of FDI to the GDP with an average of 11.3% for the period 1975-2009. This can be explained by the high development in transport services and communications in the Asian region. In addition, Pakistan had a rapid increase in the FDI level from the 1980s to the 2000s. This was a result of the government in Pakistan initiating new economic policies during the 1980s. Since then, the Pakistani government has gradually liberalized its trade and investment regime and opened the sectors of agriculture, telecommunications, energy, and insurance (Khan & Kim, 1999).

Methodology and Model Specification

This study is based on the location advantages of Dunning's (1981) theoretical framework, which explains three factors necessary for a firm to produce abroad, which are ownership, location, and internalization. These three factors may motivate a firm to decide to produce abroad. First, ownership is an advantage because it implies that a firm is endowed with intangible assets such as technology and patents. Second, location involves the foreign market's supply of assets, such as market size, availability of natural resources, and a favorable business environment. Third, internalization involves the firm's ability to produce abroad based on existing restrictions, such as obtaining a business license for producing in a particular country and obtaining the requirements to start a business abroad. It is noteworthy that the first and the third factors are firm specific, while the second factor is host-country specific. As a result, the theoretical framework of the FDI flows model is identified for Asian developing countries based on location advantages.

Following the theoretical work used by Dunning (1981), the estimated equation can be expressed to explain the model of FDI determinants as below:

$$FDI = f(Market, Infrast, Money, Trade, Population) \quad (1)$$

where the "FDI" is the net FDI flow; "Market" is the market size as measured by the GDP to account for the economy size; "Money" is the ratio of broad money to GDP, representing the financial deepening; "Infrast" is the infrastructure development or quality; "Trade" represents the coun-

try's trade policy and its degree of openness; ''Population'' represents the number of buyers or customers and is measured by the population in each country.

According to the above equation (1), the determinants of FDI flows can be estimated by employing both fixed and random panel data specifications. The panel technique may help control the individual heterogeneity. This allows controlling for variables that cannot be observed. The above equation (1) represents a general form and can be rewritten to a simple panel regression model as follows:

$$Y_{it} = \beta_0 + \beta_1 X_{it} + \varepsilon_{it}, \quad \varepsilon_{it} = \alpha_i + \mu_{it} \quad (2)$$

Where (ε_{it}) is the panel error term-it has two components: the individual specific-time invariant component (α_i), and time-variant error term component (μ_{it}). Rewriting the equation (2) yields the following equation:

$$Y_{it} = \beta_i + \beta_1 X_{it} + \mu_{it} \quad \beta_i = \beta_0 + \alpha_i \quad (3)$$

While the fixed effects model treats the omitted country's specific variables, allowing them to be constant over time, the random model deals with the omitted country's specific variables as random variables. Although the panel analysis requires the appropriate specification between fixed and random effects, the Hausman's (1978) specification test gives the decision to choose between the random model and the fixed effects model. Accordingly, the log-linearizing equation (1) based on equation (3) can be expressed to explain the model of FDI determinants as below:

$$\begin{aligned} \log(FDI_i)_t &= \beta_0 + \beta_1 \log(GDP_i)_t \\ &+ \beta_2 \log(M_i)_t + \beta_3 \log(Infrast_i)_t \\ &+ \beta_4 \log(Trade_i)_t + \beta_5 \log(Pop_i)_t \\ &+ \mu_t + \varepsilon_{it} \end{aligned} \quad (4)$$

where the " FDI " is the net FDI flow; the market size is measured by the GDP in current US dollar; "M_i" is the ratio of broad money to GDP; "Infrast " is the infrastructure development or quality and is measured by the telephone line main subscribers per 1,000 people; "Trade" is trade openness, representing the country's trade policy; it is measured by the terms of trade; POP_i represents the number of buyers or customers and is measured by the population in millions; μ_i is country-specific effects; and ε_{ij} is an error term.

In order to estimate impact of the economic growth and economic development on the FDI flows, a GDP growth variable and a GDP per capita variable are used empirically in the estimated model above in addition to the GDP variable. These three variables are estimated separately by the model. The reason for not estimating

all three variables at the same time is to avoid multicollinearity in the model.

Data Description

The data included in this study cover ten countries throughout the period from 1975 to 2009. The country dataset includes Malaysia, Indonesia, Philippines, Pakistan, Sri Lanka, Nepal, Bangladesh, India, Singapore, and Thailand. Annual data for all variables are obtained from the World Bank database (*World Development Indicators, 2010*). All data are measured in current US dollars. The variable FDI is measured by the log net FDI flows. The GDP is measured by the log value of GDP of each country in US dollars. In addition, the GDP growth is measured by the log of GDP growth in percentage. The GDP per capita is measured by the current US dollars. We measure the financial deepening by the ratio of money plus quasi money as an indicator for money supply to the GDP.

The trade openness is measured by the log of sum of merchandise and services exports and imports as a percentage of GDP. The trade openness variable is from the authors' calculations based on World Bank data. For the infrastructure variable, we use the log of sum of telephone mainlines and cellular mobile phones per 1,000 people. The population of the country is in millions of people and is extracted from the World Bank database.

Empirical Results

Panel Unit Root Test

Tables (1) and (2) present the results of the panel unit root tests at different levels. We utilize two panel unit root tests to assess whether the data is stationary. In Table (1), we apply the Levin-Lin-Chu test for variables GDP, GDP growth, GDP per capita, population, and infrastructure. This is because these variables have strongly balanced data, which are required by the Levin-Lin-Chu test. The null hypothesis is that the series contains a unit root, whereas the alternative is that the series is stationary. According to the adjusted t statistic for each variable in Table (1), we reject the null hypothesis and conclude that all variables are stationary.

Based on Table (2), we apply the Im, Pesaran, and Shin test for the variables of FDI, trade openness, and financial deepening. This is because these variables do not have strongly balanced data. Strongly balanced data are not required by the Im, Pesaran and Shin test. According to the P-value for each variable in Table (2), we conclude that variables do not have a unit root.

By applying panel unit root tests to check for the stationarity of data used in the model, we can conclude that all variables are stationary. This is by applying the Levin-Lin-Chu test, and

Table 1
Panel Unit Root Test; Levin-Lin-Chu test

Variables	GDP	GDP Growth	GDP per Capita	Population	Infrastructure
			Null Hypothesis: there is a Unit root		
Adjusted t	9.5416	-5.4550	6.1704	-10.0717	2.4700
Number of Panels	10	10	10	10	10
Number of Periods	35	35	35	35	34

Table 2
Panel Unit Root Test; Im-Pesaran-Shin test

Variables	FDI	Financial Deepening	Trade Openness
		Null Hypothesis: there is a Unit root	
P-value	0.0383	0.0000	0.0469
Number of Panels	10	10	10
Average Number of Periods	33.90	34	33.90

the Im, Pesaran, and Shin test. The results of the panel unit root tests confirm that the variables are stationary at given levels.

Benchmark Results

A data summary is shown in Appendix A. Table (3) shows the results for the benchmark model using a pooled Ordinary Least Square (OLS) regression. The table represents the model regressed three times using the GDP variable, GDP growth, and GDP per capita separately. According to Table (3), all of the estimated coefficients for variables of FDI determinants are significant and show the expected signs. Findings in Table (3) suggest, as expected, that the market size positively influences net FDI flows to Asian developing countries. This result is consistent with most of the empirical evidence, such as Blonigen (2005), Chakrabarti (2001), and Moosa and Cardak (2006). The influence of trade openness on net FDI flows in developing countries in Asia is also positive, and its coefficient is statistically significant. This suggests that the more open the economies of the Asian developing countries, the higher the net FDI flows to these countries are. In addition, the estimated coefficient of the infrastructure proves to be statistically significant with a positive sign, suggesting developing countries in Asia have well-developed infrastructures to attract FDI flows.

Table 3
Benchmark Results; Pooled Sample

Dependent variable: Log FDI	Pooled OLS	Pooled OLS	Pooled OLS
Log GDP	0.7344***		
	(4.49)		
Log Infrastructure	0.4256***	0.7345***	0.4267***
	(3.52)	(7.11)	(3.52)
Log Financial Deepening	0.4022***	0.4532***	0.5011***
	(3.31)	(3.8)	(4.26)
Log Trade Openness	2.0214***	2. 4215***	2.0201***
	(7.05)	(8.78)	(7.05)
Log Population	0.6330***	1. 3735***	1.3661***
	(3.24)	(14.33)	(14.95)
Log GDP Growth		0.3770***	
		(2.66)	
Log GDP Per Capita			0.7346***
			(4.50)
Obs.	275	262	275
Adjusted R2	0.7791	0.7651	0.7791

Note: The table reports t-statistic in parentheses, *significant at 10%; **significant at 5%; ***significant at 1%
Robust standard errors (white test)

The ratio of money supply to GDP is used as a proxy for financial deepening. The estimated coefficient of financial deepening shows a positive impact on net FDI flows, suggesting that higher development in the Asian financial sector leads to attracting more net FDI flows. This result is in line with the theory and is consistent with the empirical evidence of Mohamed and Sidiropouls (2010) and Shahrudin, Yusof, and Satar (2010).

According to the population variable, which is used as a proxy for human capital, the estimated coefficient shows a positive effect of population on net FDI flows in Asian developing countries. This suggests that human capital is important in attracting more FDI inflows to Asian countries. Therefore, Asian human capital is expected to positively influence FDI in Asian countries, as that may improve the countries' location advantages. This result is in line with the empirical evidence of Mina (2007) and other studies that have proven the statistically significant positive effects of the population variable as a proxy of human capital on FDI flows for both developed and developing countries (Wheeler & Mody, 1992; Lecraw, 1991).

The effect of GDP growth is estimated after excluding the GDP vari-

able from the model. Findings show that the estimated coefficient of the GDP growth in developing Asia is to be statistically significant with a positive sign. This suggests that higher economic growth in these countries leads to attracting a higher net flow of foreign direct investment. In addition, the GDP per capita variable is included in the model (with the exclusion of the GDP variable) as a proxy for economic development in developing Asia. The estimated coefficient of the GDP per capita proves to be statistically significant with a positive sign. This finding suggests that high economic development of developing economies in Asia leads to attracting more foreign direct investment into these countries.

It is noteworthy that the inclusion of GDP growth and GDP per capita in the estimated model, regressed separately after excluding the GDP variable from the model, confirms the findings for other variables in different model specifications.

Extended Results

In Table (4), the estimated model is tested using the whole data sample. In this table, we try to control for un-

Table 4
Fixed Effects

Dependent variable: Log FDI	Fixed Effects	Fixed Effects	Fixed Effects
Log GDP	0.6277**		
	(2.43)		
Log Infrastructure	0.3942***	0.5600***	0.4012***
	(2.68)	(4.19)	(2.67)
Log Financial Deepening	0.4674***	0.4765***	0.4867***
	(3.76)	(3.72)	(3.60)
Log Trade Openness	2.1443***	1.8644***	2.2386***
	(6.67)	(5.65)	(6.67)
Log Population	1.0177	2.7156***	1.6394**
	(1.30)	(4.20)	(2.22)
Log GDP Growth		0.3046**	
		(2.25)	
Log GDP Per Capita			0.6250**
			(2.42)
Obs.	275	262	275
Adjusted R2	0.7405	0.1621	0.7412

Note: The table reports t-statistic in parentheses, *significant at 10%; **significant at 5%; ***significant at 1%
Robust standard errors (white test)

observed heterogeneity using fixed effects specifications. According to Table (4), the findings of the fixed effect technique are robust to the findings of the pooled OLS Table (3), confirming that the main determinants of FDI in developing Asia include the market size, infrastructure, trade openness, financial deepening, GDP growth, GDP per capita, and population (after excluding the GDP variable).

Based on the findings of Table (4), the high net FDI flow for Asian developing economies is associated with bigger market size (high GDP), higher financial deepening (high ratio of money supply to GDP), higher infrastructure development or quality, greater openness to trade, larger population, higher economic growth (high GDP growth), and higher GDP per capita.

On the other hand, according to Table (5), the findings of the random effect technique are robust to the findings of the pooled OLS in Table (3). All of the estimated coefficients for variables of FDI determinants are significant and show the expected

Table 5
Random Effects

Dependent variable: Log FDI	Random Effects	Random Effects	Random Effects
Log GDP	0.7388**		
	(3.71)		
Log Infrastructure	0.3702***	0.7359***	0.3715***
	(2.66)	(6.70)	(2.68)
Log Financial Deepening	0.4566***	0.5701***	0.5234***
	(3.55)	(3.43)	(3.55)
Log Trade Openness	2.1733***	2.2312***	2.1720***
	(7.49)	(7.51)	(7.49)
Log Population	0.6859***	1.3740***	1.4243***
	(2.76)	(8.02)	(8.87)
Log GDP Growth		0.2881**	
		(2.13)	
Log GDP Per Capita			0.7390***
			(3.77)
Obs.	275	262	275
Adjusted R2	0.7827	0.7653	0.7827

Note: The table reports t-statistic in parentheses, *significant at 10%; **significant at 5%; ***significant at 1%
Robust standard errors (white test)

signs similar to results found in Table (3), using the OLS technique, and in Table (4), using the fixed effect technique. This suggests that the results of the fixed effect and random effect are almost the same as those of OLS.

However, in order to evaluate the significance of estimators using the appropriate approach, the Hausman test is used based on the null hypothesis that random effect and fixed effect estimators are the same. This is because the individual effects would be uncorrelated with the other regressors in the estimated model (Hausman 1978). Therefore, if the null hypothesis is rejected, suggesting correlated individual effects with other regressors, then a random effect model reveals biased estimators. Therefore, a fixed effect model is safe to use. According to Table (6), the Hausman test shows that the P-value (0.9613, 0.2261, and 0.9617) for each model used is greater than 0.05; therefore, we accept the null hypothesis that there is no substantial difference between estimators of the fixed and random effects methods. Thus, since the null is not rejected (suggesting the difference of coefficients from the fixed effect and random effect estimation is not systematic), the random effect estimation is consistent and efficient.

Concluding Remarks

This paper is concerned with the investigation of the main determinants of foreign direct investment for selected countries in the Asian region. The theoretical framework of location advantages, used in this study, helps examine the role of location factors in attracting net FDI flows to Asian developing countries. Estimates of

Table 6
Hausman Test

Dependent variable: Log FDI	Differences between RE and FE	Differences between RE and FE	Differences between RE and FE
Log GDP	-0.1151		
Log Infrastructure	0.0431	-0.1562	0.0232
Log Financial Deepening	0.0076	0.0062	0.0044
Log Trade Openness	-0.0442	-0.3687	-0.0446
Log Population	0.3322	1.3407	0.2148
Log GDP Growth		0.0162	
Log GDP Per Capita			-0.1152
chi2(5)	1.02	6.93	1.01
Prob > chi2	0.9613	0.2261	0.9617

the model are tested using yearly data over the period 1975 to 2009. Findings show that all of the estimated coefficients for variables of FDI determinants are significant and show the expected signs. The net FDI flows for developing Asia is estimated to increase with big market size, high infrastructure development, economic openness, high financial deepening, high GDP growth, high GDP per capita, and high population. Results of the fixed effect and random effect techniques are robust to the findings of the pooled OLS. However, after controlling both the random effect and fixed effect, the random effect approach is chosen according to the Hausman test.

Several policy implications can be drawn from the results of this study. First of all, developing the financial and economic systems in Asian developing countries may lead to attracting greater FDI flows. This can be accomplished through reducing trade restrictions as well as building appropriate infrastructure in these countries. However, improving the economic systems requires tangible steps and more reliance on the private sector to lead economic activities away from government restrictions. Besides that, policies of privatization can also lead to creating a competitive local market, which may attract a greater flow of foreign investments. In addition, Asian policies designed to grow economies may lead to creating a bigger market, with increasing numbers of consumers to absorb foreign investments. It is noteworthy that efforts must also be made by all these Asian developing countries to evaluate the economic benefits of such increases in FDI inflows in terms of new technology, producing competitive products, creating new jobs, and enhancing developed management techniques.

Appendix A
Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
Log FDI	350	19.8733	2.3069	11.86858	24.4445
Log GDP	350	24.4794	1.3956	21.04709	27.90105
Log GDP Growth	330	1.6398	0.5687	-2.121818	2.587804
Log GDP Per Capita	350	6.7044	1.2951	4.591787	10.59537
Log of Infrastructure	340	0.4646	1.6961	-2.93446	3.877701
Log of financial deepening	337	2.8221	0.6801	-1.4714	4.275448
Log Trade Openness	339	-0.4676	0.8593	-2.136456	1.481605
Log Population	350	17.7749	1.4872	14.6322	20.86767

Appendix B
FDI Performance of Selected Asian Developing Countries

Malaysia			
Years	**US$ million, period average**	**Percent of current GDP, period average**	**Percent of constant GDP (2000), period average**
75-84	786.5	3.56%	2.94%
85-94	2485.5	4.71%	4.67%
95-04	2604.3	2.75%	3.01%
05-09	-3230.2	-1.80%	-2.32%
Indonesia			
Years	**US$ million, period average**	**Percent of current GDP, period average**	**Percent of constant GDP (2000), period average**
75-84	218.0	0.24%	0.32%
85-94	971.1	0.78%	0.83%
95-04	223.8	-0.06%	0.13%
05-09	3012.0	0.80%	1.33%
Philippines			
Years	**US$ million, period average**	**Percent of current GDP, period average**	**Percent of constant GDP (2000), period average**
75-84	64.3	0.26%	0.14%
85-94	540.0	1.16%	0.98%
95-04	1096.5	1.47%	1.53%
05-09	1347.4	1.08%	1.32%
Pakistan			
Years	**US$ million, period average**	**Percent of current GDP, period average**	**Percent of constant GDP (2000), period average**
75-84	48.8	0.20%	0.17%
85-94	232.1	0.54%	0.45%
95-2004	636.6	0.91%	0.88%
05-09	3920.6	2.77%	3.76%
Sri Lanka			
Years	**US$ million, period average**	**Percent of current GDP, period average**	**Percent of constant GDP (2000), period average**
75-84	34.2	0.78%	0.49%
85-94	72.7	0.80%	0.69%
95-04	193.4	1.19%	1.24%
05-09	461.4	1.37%	2.02%

Nepal			
Years	**US$ million, period average**	**Percent of current GDP, period average**	**Percent of constant GDP (2000), period average**
75-84			
85-94			
95-04	7.4	0.15%	0.15%
05-09	8.1	0.07%	0.11%
Bangladesh			
Years	**US$ million, period average**	**Percent of current GDP, period average**	**Percent of constant GDP (2000), period average**
75-84	0.0		
85-94	4.6	0.02%	0.01%
95-04	163.7	0.33%	0.33%
05-09	769.1	1.09%	1.11%
India			
Years	**US$ million, period average**	**Percent of current GDP, period average**	**Percent of constant GDP (2000), period average**
75-84	28.1	0.01%	0.02%
85-94	289.0	0.10%	0.10%
95-04	3,772.7	0.78%	0.81%
05-09	25,792.4	2.23%	3.27%
Singapore			
Years	**US$ million, period average**	**Percent of current GDP, period average**	**Percent of constant GDP (2000), period average**
75-84	888.3	7.25%	3.83%
85-94	3,803.7	10.42%	8.35%
95-04	12,980.2	14.21%	14.95%
05-09	21,602.6	13.49%	15.83%
Thailand			
Years	**US$ million, period average**	**Percent of current GDP, period average**	**Percent of constant GDP (2000), period average**
75-84	180.4	0.58%	0.47%
85-94	1,339.9	1.52%	1.64%
95-04	4,458.3	3.37%	3.53%
05-09	8,467.9	3.75%	5.00%

*Authors' calculations based on World Bank database

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الملخص

الاستثمار الأجنبي المباشر في دول آسيا النامية طبقاً لنظرية الموقع

نايف نزال الشمري
جامعة الكويت

عبدالوهاب عبدالقادر السرحان
الهيئة العامة للتعليم التطبيقي والتدريب

تختبر الدراسة عوامل الموقع لتدفقات الاستثمار الأجنبي المباشر في الدول النامية الآسيوية، حيث تغطي البيانات الفترة الزمنية ما بين ١٩٧٥ إلى ٢٠٠٩. وقد تم في هذه الدراسة استكشاف محددات تدفق الاستثمار الأجنبي المباشر في تلك الدول، والذي اعتمد على حجم الدولة الاقتصادي، وتطور القطاع المالي، وتطور قطاع البنية التحتية، ومدى انفتاح الاقتصاد على العالم الخارجي، والنمو الاقتصادي للبلد، وأخيراً رأس المال البشري.

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