Chapter 14

Taxation, Business Regulation, and Foreign Direct Investment in East Asia

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INTRODUCTION

Many countries worldwide have experienced remarkable growth in FDI flows and greater economic integration in recent years. Not surprisingly, there is increasing recognition of FDI as an important means of achieving deeper economic integration. Because it encourages the growth of dynamic production networks, investment is regarded as a key driver of regional economic integration, and the role of FDI in economic development, especially of developing countries, is widely accepted.

As a result, governments increasingly adopt tax instruments in order to compete for and attract new FDIs. The commonly used tax instruments are the provision of tax incentives and low corporate income tax rates. The effectiveness of these two measures, however, is still unclear. Hence, the first aim of this research is to review the tax instruments used in East Asia. Second, it will empirically examine the effects of those tax instruments, corporate income taxes and tax treaties in particular, on FDI inflows.

Another important concern of this research is the relationship between business regulations and FDI inflows. It is known that more efficient and transparent regulation systems are associated with lower business costs, which, in turn, foster a good investment environment. Although the positive effects of efficient regulation systems on FDI are somewhat expected, there is a scarcity of supporting empirical research due mainly to the limited amount of business-regulation data available.

Fortunately, the World Bank recently published a series of business-regulation indicators derived from numerous surveys conducted in 178 countries worldwide[1]. Hence, another objective of this study is to examine whether and how business regulations affect the investment decisions of multinational firms. The findings will

point to which regulation policies are crucial in enhancing a country's attractiveness as an FDI destination.

In summary, this research aims to accomplish several things. First, it seeks to present an overview of tax instruments used in East Asia, which is done in Section 2. Then, by using econometric frameworks in Sections 3 and 4, it examines the effects of corporate income tax rates and tax treaties on FDI flows to East Asian countries and to ASEAN-5 countries in Section 3. An empirical examination of the relationship between various business-regulation indicators and FDI inflows is provided in Section 4. The paper concludes with the policy implications for deepening economic integration in East Asia in Section 5.

2. AN OVERVIEW OF TAX INSTRUMENTS IN EAST ASIA

This section presents an overview of tax instruments used in 15 East Asian countries. Summaries of selected tax instruments are shown in Table 1 below. These selected tax instruments include tax incentive provisions[2]. Although the tax incentive schemes in the East Asian countries studied vary considerably, they share similar characteristics such as the provision of tax holidays and import duty exemptions.

Tax incentives are widely used, despite the inconclusiveness of evidence on the cost-effectiveness of using these incentives in encouraging new investments (Zee *et al*., 2002). In the East Asian context, Morisset and Pirnia (2000) and Chalk (2001) reviewed the literature on the effectiveness of tax incentives on FDI inflows in the region. They pointed out that even if tax policy mattered, it is not the most important consideration for multinational firms when selecting a recipient for FDI compared to other factors such as political and economic stability, labor cost, size of domestic market, and the availability of basic infrastructure and raw materials. Nonetheless, they accepted that tax incentives provisions are still important tools for investment promotions, especially in developing countries.

Table 1: Selected tax instruments in 15 East Asian countries

Tax Instrument	Australia	Brunei	Cambodia	China	India	Indonesia	Japan
Corporate income tax	30%	30%	5-30%	33%	33.99%,42.23%	10-30%	30%
Value-added tax	10%	No	10%	13%, 17%	12.50%	10%	5%
Additional taxes on branch profits remitted to the foreign head office	No	No	No	No	No	20%	No
Withholding taxes for nonresidents							
- Dividends	30%	Nil	14%	0%	Nil	20%	20%
- Interest	10%	20%	14%	10%	20%	20%	15%, 20%
-Royalties	30%	No	14%	10%	20%	20%	20%
Tax incentives							
-Tax holidays, tax exemptions	Yes	up to 5 yrs	up to 6 yrs	Yes	up to 15yrs	Yes	Yes
-Import duty exemptions	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Loss treatment: Carry forward	Infinite	Yes	5 yrs	5 yrs	8 yrs	5-10 yrs	7 yrs

Tax Instrument	Korea	Malaysia	New Zealand	Philippines	Singapore	Thailand	Vietnam
Corporate income tax	14.3, 27.5%	27%	33%	35%	18%	30%	28%
Value-added tax	10%	5-10%	12.5%	12%	7%	7%	0-10%
Additional taxes on branch profits remitted to the foreign head office	25%	No	No	15%	No	10%	No
Withholding taxes for nonresidents							
- Dividends	25%	Nil	30%	25%,35%	Nil	10%	Nil
- Interest	25%	Nil or 15%	15%	25%,35%	15%	15%	Nil or 15%
-Royalties	25%	10%	15%	25%,35%	10%	15%	10%
Tax incentives							
-Tax holidays, tax exemptions	5 yrs	Yes	Yes	3-8yrs	up to 15 yrs	3-8 yrs	Yes
-Import duty exemptions	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Loss treatment: Carry forward	5 yrs	Infinite	infinite	3 yrs	Infinite	5 yrs	5 yrs

Source: Data collected from the PricewaterhouseCoopers website. http://www.pwc.com (accessed August 15, 2007).

Additionally, a study by Halvorsen (1995) analyzed the cost-effectiveness of various fiscal incentive instruments in Thailand and found little justification for the use of such incentives. However, he acknowledged the need for correct incentives when the objective is to alter the composition of investments, not to promote or attract investments in general.

Fletcher (2002) analyzed tax incentives in the Lower Mekong (Cambodia, Lao PDR, and Viet Nam) region and found that tax incentives are not a primary driver of FDI inflows. Although his findings could be interpreted as evidence of the ineffectiveness of tax incentives, the methodology he used was somewhat questionable because he defined tax incentives simply as the natural log of the number of lines in the description PricewaterhouseCoopers provided in its tax summary. By defining tax incentives in this manner, the correct measure of the tax incentive schemes that could be more generous with the shorter number of lines may not be provided.

On the issue of corporate income taxes, Singapore offers one of the lowest tax rates in the region. Its tax rate is flat at 18 percent, around half of the tax rates in China and the Philippines. Theoretically, lower corporate income tax rates increase the net return on capital, which, in turn, encourages new investment and capital inflows[3]. Empirical evidence also points to the same direction. A country with higher tax rates appears to be less attractive for investment inflows (e.g., Hartman, 1984; Shah and Slemrod, 1990). With its low corporate income tax rate, Singapore is a very attractive investment destination in East Asia.

There is pressure on countries to lower their corporate income tax rates to ensure their competitive position in today's global economy. Many countries have attempted to shift their tax system from income-based taxes to consumption-based taxes such as the value-added (VAT) tax.[4] As a result, the world has been experiencing more tax competition as economies globalize and capital mobility increases.

This inevitably leads to a "race-to-the-bottom" situation, which could harm all countries involved as collected tax revenues decrease, leading to less provision of public goods. In addition, tax competition itself makes economic integration difficult.

Table 2: Date of conclusion of bilateral tax treaties

Country	Australia	Japan	Thailand	Philippines	Malaysia	Vietnam	China	Singapore	India	Indonesia	Korea	Brunei	Laos	Myanmar	NZ
Australia	-	Mar-69	Aug-89	May-79	Aug-80	Apr-92		Feb-69	Jul-91	Apr-92	Jul-82				Jan-95
Japan	Mar-69	-		Feb-80	Feb-99	Oct-95	Sep-83	Apr-94	Mar-89	Mar-82	Oct-98				Jan-63
Thailand	Aug-89		-	Jul-82	Mar-82	Dec-92	Oct-86	Sep-75	Mar-85	Jun-01	Aug-74		Jun-97		Oct-98
Philippines	May-79	Feb-80	Jul-82	-	Apr-82	Nov-01	Nov-99	Aug-77	Feb-90	Jun-81	Feb-84				Apr-80
Malaysia	Aug-80	Feb-99	Mar-82	Apr-82	-	Sep-95	Nov-85	Oct-04	May-01	Sep-91					Mar-76
Vietnam	Apr-92	Oct-95	Dec-92	Nov-01	Sep-95	-	May-95	Mar-94	Sep-94	Dec-97	May-94				
China		Sep-83	Oct-86	Nov-99	Nov-85	May-95	-	Apr-86	Jul-94	Nov-01	Mar-94		Jan-99		Sep-86
Singapore	Feb-69	Apr-94	Sep-75	Aug-77	Oct-04	Mar-94	Apr-86	-	Jan-94	May-90	Nov-79	Aug-05		Feb-99	Aug-73
India	Jul-91	Mar-89	Mar-85	Feb-90	May-01	Sep-94	Jul-94	Jan-94	-	Aug-87	Jul-85				Oct-86
Indonesia	Apr-92	Mar-82	Jun-01	Jun-81	Sep-91	Dec-97	Nov-01	May-90	Aug-87	-	Nov-88	Feb-00		Apr-03	Ma r-87
Korea	Jul-82	Oct-98	Aug-74	Feb-84		May-94	Mar-94	Nov-79	Jul-85	Nov-88	-		Nov-04	Feb-02	Oct-81
Brunei								Aug-05		Feb-00		-			
Laos			Jun-97				Jan-99				Nov-04		-		
Myanmar								Feb-99		Apr-03	Feb-02			-	
New Zealand	Jan-95	Jan-63	Oct-98	Apr-80	Mar-76		Sep-86	Aug-73	Oct-86	Mar-87	Oct-81				-

Source: International Bureau for Fiscal Documentation website. http://www.ibfd.org (accessed September 15, 2007).

Table 3: Dividend withholding tax rates in tax treaties

	Contracting State														
	Australia	Japan	Thailand	Philippines	Malaysia	Vietnam	China	Singapore	India	Indonesia	Korea	Brunei	Laos	Myanmar	NZ
Australia	-	15%	15%,20%	15%,25%	0%	0%		0%	15%	15%	15%				15%
Japan	15%	-		10%,25%	5%,15%	0%	10%	0%	15%	10%,15%	5%,15%				15%
Thailand	15%,20%	20%	-	15%,20%	0%	0%	15%,20%	0%	15%,20%	15%, 20%	15%, 20%		15%		15%
Philippines	15%,25%	10%,25%	15%,20%	-	0%	0%	10%,15%	0%	15%,20%	15%, 20%	10%,15%				15%
Malaysia	0%,15%	5%,15%	15%,20%	15%,25%	-	0%	10%	0%	10%	15%	15%				15%
Vietnam	15%	10%	15%	10%,15%	10%	-	10%	0%	10%	15%	10%				
China		10%	15%,20%	10%,15%	0%	0%	-	0%	10%	10%	5%,10%		5%		15%
Singapore	15%	5%,15%	20%	15%,25%	5%,10%	0%	7%,12%	-	10%,15%	10%,15%	10%,15%	10%		5%,10%	15%
India	15%	15%	15%,20%	15%,20%	10%	0%	10%	0%	-	10%,15%	15%, 20%				15%
Indonesia	15%	10%,15%	15%,20%	15%,20%	0%	0%	10%	0%	10%,15%	-	10%,15%	15%			15%
Korea	15%	5%,15%	15%,20%	10%,15%	0%	0%	5%,10%	0%	15%,20%	10%,15%	-		5%,10%	10%	15%
Brunei								0%		15%		-			
Laos			15%				5%				5%,10%		-		
Myanmar								0%			10%			-	
New Zealand	15%	15%	15%	15%	0%		15%	0%	15%	15%	15%				-

Note: The rates provided are the maximum withholding rates should a contracting state impose a withholding tax on dividends in the future. Where a treaty rate is higher than the domestic rate, the latter is applicable. If the treaty provides for a rate lower than the domestic rate, the reduced treaty rate may be applied at source.
Source: Data are collected from the International Bureau for Fiscal Documentation website. http://www.ibfd.org (accessed September 15, 2007).

Another tax instrument worth considering is the bilateral tax treaty agreements. Tables 2 and 3 below provide a summary of conclusion date and dividend withholding tax rate of the existing bilateral tax treaty agreements across 15 East Asian countries. Apparently, there is a lack of a comprehensive network of tax treaty agreements within East Asia. This lack is associated with double taxation, tax avoidance, and inconsistent definition of tax bases. In addition, it increases business costs, compliance costs, and administrative costs.

While many East Asian countries (e.g., Singapore and Indonesia) have extensive bilateral treaty networks, many others (e.g., Brunei, Lao, Myanmar) have very limited networks with other East Asian countries. Cambodia, though not reported, does not have tax treaty agreements with any of the 15 East Asian countries. Several ASEAN member countries also offer more favorable treaty agreements to non-ASEAN member countries than they do to ASEAN member countries (Farrow and Jogarajan, 2006). This is an impediment to economic integration in East Asia.

The bilateral tax treaty agreements of each East Asian country differ substantially among themselves. For instance, New Zealand offers a single, flat withholding tax rate on dividends to all bilateral treaty partners. This flat tax rate results in lower business and administrative costs compared to other tax rate regimes.

Many tax treaties were concluded a long time ago. Some of them, such as Japan's and New Zealand's treaties, are more than 40 years old, which means they may be obsolete and out of step with the changes that have happened in the global economy since then. It is time-consuming and costly to revise each bilateral tax treaty separately. This may also result in tax treaties with less bargaining power than treaties that are negotiated as a whole region. One possible direction to take in order to deepen the process of economic integration in East Asia is to develop a standard regional framework of tax treaty agreements to be implemented across the entire East Asia. Such framework will definitely enhance regional economic integration.

3. CORPORATE INCOME TAX, TAX TREATY, AND FOREIGN DIRECT INVESTMENT

3.1. Model specification

This section analyzes factor determinants of bilateral FDI inflows and undertakes an empirical assessment of the impacts of tax instruments; namely, corporate income taxes and tax treaties on FDI inflows to East Asian countries and specifically to ASEAN-5 countries.[5] The model used is simply a modification of the standard gravity model of bilateral FDI flows, augmented by adding corporate tax rates and tax treaty variables as parameters of interest. The model specification is in the form:

$$\ln FDI_{ijt} = \beta_0 + \beta_1 \ln GDP_{it} + \beta_2 \ln GDP_{jt} + \beta_3 \ln GDPPC_{it} + \beta_4 \ln GDPPC_{jt} + \beta_5 \ln Dist_{ij} + \beta_6 Z_{ijt} + \varepsilon_{ijt},$$

where *FDI* denotes flows of outward FDI from FDI home country; *i* to FDI recipient country *j* in year *t*; *Z* is the set of parameters of interest; and ε_{ijt} is a residual term, which may not be a well-behaved white noise. To remedy potential estimation errors, a country-specific effect and a time-specific effect are introduced to capture omitted country, time-invariant effects and omitted time-variant effects.

FDI flows are basically determined by traditional gravity variables including GDP (*GDP*) and GDP per capita (*GDPPC*) of FDI home and recipient countries, capturing the sizes of economies and proxy of labor costs. In addition, FDI flows are determined by the distance (*Dist*) between FDI home and recipient countries' proxy for transportation and other trade costs that may influence firms' investment decisions.

For the parameters of interest, the effects of corporate income tax rates (*Tax*) in FDI home and recipient countries are examined. The estimated effects are hypothesized to be positive in the case of home country tax rates (Tax_i) and negative in the case of recipient country tax rates (Tax_j). As stated, an increase in the corporate income tax rate

lowers the level of investment by increasing the net return to capital. This encourages capital outflows. Hence, the estimated coefficient of Tax_i is expected to be positive.

Likewise, recipient countries with higher corporate income tax rates would be less attractive for foreign investments, resulting to less capital inflows. Thus, the estimated coefficient of Tax_j is hypothesized to be negative. This research also examines the sensitivity of the difference between FDI recipient and home countries' corporate income tax rates $(Tax_{jt} - Tax_{it})$, which is hypothesized to have a negative impact on FDI inflows.

Tax treaties, which are the rules on how taxes paid in an FDI recipient country are treated in an FDI home country, are expected to have some influence on the level of FDI inflows. Tax treaties are believed to increase investment since they indicate the tax cooperation between treaty partners and claim to remove tax barriers to investment (Davies, 2003; Blonigen and Davies, 2002). However, it is less certain whether tax treaties can actually increase investment. Since tax treaties reduce double taxation and minimize opportunities for tax avoidance and other tax savings, treaties may hamper the level of investment outflows instead (Blonigen and Davies, 2002). Hence, the effects of tax treaties on FDI flows are theoretically ambiguous. What is more important at this point is empirical evidence. Unfortunately, the existing empirical evidence on the effects of tax treaties on FDI flows showed mixed results and hardly support the theory that tax treaty formation is associated with more FDI inflows.

For instance, Blonigen and Davies (2002) used panel data of OECD countries over the period 1992 to 2002 and found strong negative impacts of tax treaties on FDI flows. Their findings are in contrast with the FDI promotion rationale for tax treaty formation. Later, Davies (2003) used the same panel data as Blonigen and Davies (2002) to estimate the effect of U.S. treaty renegotiations on FDI from 1966 to 2000 and found tax treaties to have an insignificant effect.

In particular, there is scarcity of literature examining the impacts of tax treaties in East Asia. Thus, another aim of this research is to examine the impact of tax treaties (*Treaty*) on FDI inflows to East Asian countries as well as to the ASEAN-5 countries. In line with this aim, the *Treaty* variable is added in the models described above. The

findings in this section will provide more insight on factors determining FDI inflows to East Asia.

3.2. Data and empirical issues

The analysis was limited to FDI outflows from 30 OECD countries to 11 East Asian countries over the period 1990 to 2003[6]. Data on FDI outflows were obtained from the Source OECD database. Data on GDP and GDP per capita were collected from the *World Development Indicators*. All data are in U.S. dollars and are adjusted for inflation. Distance between the FDI host and recipient countries data were obtained from Andrew Rose's (2005) data set.

For the *Tax* variable, corporate income tax rates were measured by the apparent average tax rates (e.g., Benassy-Quere *et al*., 2003; Desai *et al*., 2004) expressed as percentages of GDP, which is calculated by taking the ratio of the actual tax collected to GDP multiplied by 100. Data on corporate income taxes were collected from the *Government Financial Statistics*. The *Treaty* variable is a dummy variable, which takes a value of one when tax treaties for bilateral FDI partners are in force and zero otherwise. Tax treaties defined by income tax treaties were collected from the International Bureau for Fiscal Documentation.

For the estimation technique, this research implemented the ordinal least square regression (OLS) model estimator. As previously mentioned, an error term may not be a white noise leading to estimation errors. Thus, this research introduced unobservable recipient country and/or time fixed effects error components to capture the influence individual recipient country characteristics and individual year characteristics may have on FDI inflows. These estimations are known as one-way fixed effects and two-way fixed effects model estimators. In all estimators, robust standard errors are employed.

3.3. Empirical findings

All estimation results are reported in Tables 4 to 9. Note that the estimated time effects are rarely significant. The findings suggest no common unobservable time

factors influencing the level of FDI flows to East Asian countries during the sample periods. Hence, the following analysis was based mainly on the one-way fixed effects model estimations. The findings are summarized next.

First, the coefficient of FDI home country GDP levels is significantly positive. This indicates that the size of FDI home countries is relevant to firms' investment decisions. The larger the size of the home country, the higher are the FDI outflows expected. On the other hand, it was found that the size of FDI recipient country GDP levels did not have a strong influence on the decision to invest for OECD multinational firms, especially in the case of the 11 East Asian recipient countries' estimation.

Second, this research used GDP per capita to proxy labor costs in FDI home and recipient countries. The estimation suggests that labor costs in the OECD home countries are positively associated with FDI outflows. Thus, OECD investors are sensitive to their domestic labor costs. From the estimation of the ASEAN-5 recipient countries, labor costs in recipient countries were found to be significantly related to the level of FDI inflows. Moreover, from the estimation of the 11 East Asian recipient countries, the estimated coefficient of recipient labor costs turned out to be positive and significant. This is perhaps because some of the 11 East Asian countries (e.g., Japan and Singapore) are developed countries. The level of FDI flows to these countries is probably not induced by lower labor costs, but by their highly developed capital markets. Consequently, the estimated coefficient of the $GDPPC_j$ variable was found to be positive.

Third, FDI flows were found to be a negative function of the distance between FDI home and recipient countries. This finding indicates that transportation costs between home and recipient countries are another relevant factor on firms' decisions to invest in East Asian countries. Investors from OECD member countries tend to prefer investing in recipient countries that are nearer the home countries.

Corporate income tax rates were introduced next. Interestingly, the recipient country tax rates (Tax_j) variable appears to be insignificant. The findings indicate that corporate income tax rates of East Asian countries do not have a significant impact on the level of FDI inflows from the 30 OECD countries. In contrast, when the home country corporate income tax rates (Tax_i) variable was included, the coefficient of

Tax_i variable turned out to be significant and positive. These findings point to the importance of OECD home countries' tax policies on firms' decisions to invest in East Asian countries. A home country with higher corporate income tax rates is highly likely to invest more in East Asia.

When the sensitivity of the difference between FDI recipient country and home country corporate tax rates was assessed, the estimated coefficient was significantly negative. Now home country corporate income tax rates become relevant to firms' investment decisions. This finding contradicted earlier findings on the Tax_j variable. It is not clear whether the significant effects of the tax rates differentials are the results of either of these two factors: the relevance of the home and recipient countries' tax policies or the home countries' tax policies dictating the outcomes. The findings, however, suggest that both the FDI home and recipient countries' tax policies may exert some influence on the level of FDI flows. While holding all other factors equal, an increase in the recipient country's tax rates reduces its attractiveness as an FDI destination.

Regarding the impacts of bilateral income tax treaties on FDI flows, several findings are worth noting. First, the impacts are not significantly different from zero when data from all 11 East Asian recipient countries are estimated. This suggests that the level of FDI decisions is not affected by the formation of tax treaties alone. However, when the estimation includes only the ASEAN-5 recipient countries, the estimated effects become different. Now with the inclusion of the recipient country tax rates or the tax rates differentials variables, the estimations show the positive impact of tax treaties on the level of FDI inflows. Compare this with the insignificant impact of tax treaties when the home country tax rates variable is included. Nonetheless, the findings provide some evidence supporting the view of the FDI promotion rationale for tax treaty formation, especially in the case of the ASEAN-5 countries.

Table 4: OLS estimations for determinants of bilateral FDI flows from 30 OECD countries to 11 East Asian countries
(Dependent variable is ln FDI_{ij} .)

	1		2		3		4		5		6		7		8	
ln *GDPi*	0.0036	***	0.0031	***	0.0047	***	0.0036	***	0.0036	***	0.0031	***	0.0047	***	0.0036	***
	(0.0004)		(0.0003)		(0.0005)		(0.0005)		(0.0004)		(0.0003)		(0.0006)		(0.0005)	
ln *GDPj*	0.0008	*	-0.0004		0.0013	**	-0.0012	***	0.0008	*	-0.0003		0.0013	**	-0.0012	***
	(0.0004)		(0.0004)		(0.0006)		(0.0004)		(0.0004)		(0.0004)		(0.0006)		(0.0004)	
ln *GDPPCi*	0.0046	***	0.0045	***	0.0067	***	0.0061	***	0.0047	***	0.0046	***	0.0066	***	0.0062	***
	(0.0005)		(0.0005)		(0.0010)		(0.0010)		(0.0005)		(0.0005)		(0.0010)		(0.0011)	
ln *GDPPCj*	0.0013	***	0.0014	***	0.0017	***	0.0016	***	0.0013	***	0.0014	***	0.0016	***	0.0017	***
	(0.0003)		(0.0003)		(0.0004)		(0.0004)		(0.0003)		(0.0003)		(0.0004)		(0.0004)	
ln *DISTij*	-0.0020	**	-0.0016		0.0008		0.0010		-0.0020	**	-0.0016		0.0008		0.0010	
	(0.0008)		(0.0010)		(0.0008)		(0.0012)		(0.0008)		(0.0010)		(0.0008)		(0.0012)	
Tax j			0.00004								0.00004					
			(0.0002)								(0.0002)					
Tax i					0.0016	***							0.0016	***		
					(0.0004)								(0.0004)			
Tax j – Tax i							-0.0004	*							-0.0004	*
							(0.0002)								(0.0002)	
Treaty									0.0005		0.0012		-0.0011		0.0013	
									(0.0008)		(0.0008)		(0.0011)		(0.0011)	
Constant	23.9722	***	24.0140	***	23.8802	***	23.9828	***	23.9717	***	24.0120	***	23.8801	***	23.9820	***
	(0.0259)		(0.0206)		(0.0373)		(0.0249)		(0.0258)		(0.0212)		(0.0373)		(0.0252)	
No. of obs.	2616		1250		1478		790		2616		1250		1478		790	
R-squared	0.1121		0.1881		0.1509		0.1894		0.1122		0.1898		0.1515		0.191	
Country-fixed effects	No		No		No		No		No		No		No		No	
Time-fixed effects	No		No		No		No		No		No		No		No	

Note: ***, **, * denote 1%, 5%, 10% significant levels, respectively. Robust standard errors are in parentheses.

Table 5: One-way fixed effects estimations for determinants of bilateral FDI flows from 30 OECD countries to 11 East Asian countries (Dependent variable is ln FDI_{ij} .)

	9		10		11		12		13		14		15		16	
ln *GDPi*	0.0037	***	0.0030	***	0.0047	***	0.0038	***	0.0037	***	0.0030	***	0.0048	***	0.0038	***
	(0.0004)		(0.0003)		(0.0005)		(0.0005)		(0.0004)		(0.0003)		(0.0006)		(0.0005)	
ln *GDPj*	0.0011		0.0004		0.0020		-0.0003		0.0011		0.0005		0.0015		-0.0001	
	(0.0011)		(0.0012)		(0.0017)		(0.0017)		(0.0011)		(0.0012)		(0.0018)		(0.0018)	
ln *GDPPCi*	0.0049	***	0.0046	***	0.0074	***	0.0072	***	0.0050	***	0.0047	***	0.0073	***	0.0072	***
	(0.0005)		(0.0005)		(0.0010)		(0.0012)		(0.0005)		(0.0005)		(0.0010)		(0.0012)	
ln *GDPPCj*	0.0092	***	0.0070	***	0.0148	***	0.0026		0.0091	***	0.0067	***	0.0158	***	0.0023	
	(0.0022)		(0.0026)		(0.0037)		(0.0038)		(0.0022)		(0.0025)		(0.0037)		(0.0037)	
ln *DISTij*	-0.0027	***	-0.0045	***	-0.0004		-0.0035	**	-0.0027	***	-0.0044	***	-0.0006		-0.0034	**
	(0.0010)		(0.0010)		(0.0009)		(0.0013)		(0.0010)		(0.0010)		(0.0009)		(0.0013)	
Tax j			0.0003								0.0003					
			(0.0002)								(0.0002)					
Tax i					0.0015	***							0.0015	***		
					(0.0004)								(0.0004)			
Tax j – Tax i							-0.0009	***							-0.0009	***
							(0.0003)								(0.0003)	
Treaty									0.0002		0.0005		-0.0014		0.0005	
									(0.0008)		(0.0008)		(0.0012)		(0.0011)	
Constant	23.9189	***	23.9835	***	23.7815	***	23.9666	***	23.9185	***	23.9823	***	23.7890	***	23.9650	***
	(0.0393)		(0.0402)		(0.0601)		(0.0630)		(0.0396)		(0.0408)		(0.0608)		(0.0646)	
No. of obs.	2616		1250		1478		790		2616		1250		1478		790	
R-squared	0.1391		0.2509		0.1873		0.2502		0.1391		0.2512		0.188		0.2504	
Country-fixed effects	Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	
Time-fixed effects	No		No		No		No		No		No		No		No	

Note: ***, **, * denote 1%, 5%, 10% significant levels respectively. Robust standard errors are in parentheses.

Table 6: Two-way fixed effects estimations for determinants of bilateral FDI flows from 30 OECD countries to 11 East Asian countries (Dependent variable is ln FDI_{ij} .)

	17		18		19		20		21		22		23		24	
ln *GDPi*	0.0037	***	0.0030	***	0.0046	***	0.0038	***	0.0037	***	0.0030	***	0.0047	***	0.0038	***
	(0.0004)		(0.0003)		(0.0005)		(0.0005)		(0.0004)		(0.0003)		(0.0005)		(0.0005)	
ln *GDPj*	0.0029		0.0012		0.0086	**	0.0048		0.0029		0.0012		0.0081	**	0.0049	
	(0.0021)		(0.0026)		(0.0038)		(0.0045)		(0.0021)		(0.0026)		(0.0037)		(0.0046)	
ln *GDPPCi*	0.0050	***	0.0045	***	0.0077	***	0.0074	***	0.0050	***	0.0046	***	0.0076	***	0.0074	***
	(0.0006)		(0.0005)		(0.0010)		(0.0012)		(0.0006)		(0.0005)		(0.0010)		(0.0012)	
ln *GDPPCj*	0.0005		0.0092		-0.0092		-0.0127		0.00004		0.0092		-0.0087		-0.0129	
	(0.0056)		(0.0118)		(0.0104)		(0.0192)		(0.0056)		(0.0119)		(0.0103)		(0.0195)	
ln *DISTij*	-0.0027	***	-0.0045	***	-0.0009		-0.0035	***	-0.0027	***	-0.0044	***	-0.0011		-0.0035	**
	(0.0009)		(0.0010)		(0.0010)		(0.0014)		(0.0010)		(0.0010)		(0.0011)		(0.0014)	
Tax j			0.0002								0.0002					
			(0.0003)								(0.0003)					
Tax i					0.0017	***							0.0017	***		
					(0.0004)								(0.0004)			
Tax j – Tax i							-0.0010	***							-0.0010	***
							(0.0003)								(0.0003)	
Treaty									0.00005		0.0005		-0.0023	*	0.0003	
									(0.0009)		(0.0008)		(0.0013)		(0.0011)	
Constant	23.9269	***	23.9516	***	23.7583	***	23.9765	***	23.9268	***	23.9516	***	23.7707	***	23.9757	***
	(0.0515)		(0.0605)		(0.0886)		(0.1459)		(0.0517)		(0.0605)		(0.0890)		(0.1457)	
No. of obs.	2616		1250		1478		790		2616		1250		1478		790	
R-squared	0.1458		0.2588		0.218		0.2642		0.1458		0.2591		0.2198		0.2643	
Country-fixed effects	Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	
Time-fixed effects	Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	

Note: ***, **, * denote 1%, 5%, 10% significant levels respectively. Robust standard errors are in parentheses.

Table 7: OLS estimations for determinants of bilateral FDI flows from 30 OECD countries to ASEAN-5 countries
(Dependent variable is ln FDI_{ij} .)

	25		26		27		28		29		30		31		32	
ln *GDPi*	0.0032	***	0.0028	***	0.0041	***	0.0031	***	0.0032	***	0.0028	***	0.0041	***	0.0031	***
	(0.0005)		(0.0003)		(0.0006)		(0.0004)		(0.0005)		(0.0003)		(0.0006)		(0.0004)	
ln *GDPj*	0.0035	***	0.0017	*	0.0038	***	-0.0004		0.0035	***	0.0019	*	0.0038	***	0.00003	
	(0.0008)		(0.0011)		(0.0010)		(0.0012)		(0.0008)		(0.0011)		(0.0011)		(0.0012)	
ln *GDPPCi*	0.0050	***	0.0043	***	0.0068	***	0.0061	***	0.0050	***	0.0044	***	0.0068	***	0.0061	***
	(0.0008)		(0.0006)		(0.0012)		(0.0012)		(0.0008)		(0.0006)		(0.0012)		(0.0012)	
ln *GDPPCj*	0.0031	***	-0.0002		0.0043	***	-0.0012		0.0032	***	0.0001		0.0045	***	-0.0004	
	(0.0008)		(0.0007)		(0.0011)		(0.0012)		(0.0009)		(0.0008)		(0.0013)		(0.0012)	
ln *DISTij*	-0.0010		-0.0055	***	0.0014		-0.0027	*	-0.0009		-0.0051	***	0.0016		-0.0023	
	(0.0013)		(0.0013)		(0.0014)		(0.0015)		(0.0014)		(0.0013)		(0.0016)		(0.0015)	
Tax j			0.000005								0.000005					
			(0.0002)								(0.0002)					
Tax i					0.0013	*							0.0013	*		
					(0.0007)								(0.0007)			
Tax j – Tax i							-0.0003								-0.0003	
							(0.0002)								(0.0002)	
Treaty									0.0004		0.0015	*	0.0010		0.0021	**
									(0.0013)		(0.0008)		(0.0019)		(0.0010)	
Constant	23.8904	***	24.0155	***	23.8064	***	24.0277	***	23.8888	***	24.0044	***	23.8024	***	24.0072	***
	(0.0384)		(0.0340)		(0.0588)		(0.0439)		(0.0412)		(0.0364)		(0.0629)		(0.0471)	
No. of obs.	1165		631		647		361		1165		631		647		361	
R-squared	0.1502		0.3194		0.2111		0.3409		0.1503		0.3236		0.2116		0.3506	
Country-fixed effects	No		No		No		No		No		No		No		No	
Time-fixed effects	No		No		No		No		No		No		No		No	

Note: ***, **, * denote 1%, 5%, 10% significant levels respectively. Robust standard errors are in parentheses.

Table 8: One-way fixed effects estimations for determinants of bilateral FDI flows from 30 OECD countries to ASEAN-5 countries (Dependent variable is ln FDI_{ij} .)

	33		34		35		36		37		38		39		40	
ln *GDPi*	0.0032	***	0.0028	***	0.0041	***	0.0031	***	0.0032	***	0.0028	***	0.0041	***	0.0032	***
	(0.0005)		(0.0003)		(0.0006)		(0.0004)		(0.0005)		(0.0003)		(0.0006)		(0.0004)	
ln *GDPj*	0.0022	**	0.0014		0.0018		0.0004		0.0022	**	0.0016		0.0018		0.0015	
	(0.0010)		(0.0012)		(0.0016)		(0.0016)		(0.0011)		(0.0012)		(0.0019)		(0.0017)	
ln *GDPPCi*	0.0051	***	0.0043	***	0.0069	***	0.0061	***	0.0051	***	0.0044	***	0.0069	***	0.0060	***
	(0.0009)		(0.0006)		(0.0012)		(0.0012)		(0.0009)		(0.0006)		(0.0012)		(0.0012)	
ln *GDPPCj*	0.0093	**	0.0017		0.0141	**	-0.0038		0.0095	**	0.0009		0.0141	**	-0.0058	*
	(0.0047)		(0.0031)		(0.0069)		(0.0035)		(0.0045)		(0.0031)		(0.0068)		(0.0035)	
ln *DISTij*	-0.0012		-0.0055	***	0.0010		-0.0027	*	-0.0013		-0.0051	***	0.0010		-0.0021	
	(0.0013)		(0.0014)		(0.0013)		(0.0014)		(0.0014)		(0.0014)		(0.0015)		(0.0014)	
Tax j			0.0001								0.0001					
			(0.0002)								(0.0002)					
Tax i					0.0013	*							0.0013	*		
					(0.0007)								(0.0007)			
Tax j – Tax i							-0.0006	**							-0.0006	***
							(0.0002)								(0.0002)	
Treaty									-0.0002		0.0015	*	-0.00004		0.0025	**
									(0.0013)		(0.0008)		(0.0020)		(0.0010)	
Constant	23.8840	***	24.0059	***	23.7630	***	24.0236	***	23.8844	***	24.0031	***	23.7632	***	24.0020	***
	(0.0577)		(0.0436)		(0.0999)		(0.0446)		(0.0584)		(0.0440)		(0.1019)		(0.0478)	
No. of obs.	1165		631		647		361		1165		631		647		361	
R-squared	0.1568		0.3200		0.2189		0.3470		0.1569		0.3241		0.2189		0.3595	
Country-fixed effects	Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	
Time-fixed effects	No		No		No		No		No		No		No		No	

Note: ***, **, * denote 1%, 5%, 10% significant levels respectively. Robust standard errors are in parentheses.

Table 9: Two-way fixed effects estimations for determinants of bilateral FDI flows from 30 OECD countries to ASEAN-5 countries (Dependent variable is ln FDI_{ij} .)

	41		42		43		44		45		46		47		47	
ln *GDPi*	0.0032	***	0.0028	***	0.0040	***	0.0033	***	0.0033	***	0.0028	***	0.0041	***	0.0033	***
	(0.0005)		(0.0003)		(0.0005)		(0.0004)		(0.0005)		(0.0003)		(0.0005)		(0.0004)	
ln *GDPj*	0.0058	**	0.0053	*	0.0100	*	0.0015		0.0058	**	0.0052	*	0.0098	*	0.0018	
	(0.0025)		(0.0031)		(0.0055)		(0.0032)		(0.0025)		(0.0031)		(0.0057)		(0.0032)	
ln *GDPPCi*	0.0051	***	0.0042	***	0.0069	***	0.0059	***	0.0051	***	0.0043	***	0.0069	***	0.0059	***
	(0.0009)		(0.0006)		(0.0011)		(0.0011)		(0.0009)		(0.0006)		(0.0011)		(0.0011)	
ln *GDPPCj*	-0.0095		-0.0313		-0.0020		0.0223		-0.0095		-0.0301		-0.0019		0.0281	
	(0.0136)		(0.0240)		(0.0118)		(0.0281)		(0.0136)		(0.0242)		(0.0118)		(0.0282)	
ln *DISTij*	-0.0013		-0.0055	***	0.0010		-0.0025	*	-0.0014		-0.0051	***	0.0007		-0.0019	
	(0.0013)		(0.0014)		(0.0015)		(0.0014)		(0.0014)		(0.0014)		(0.0018)		(0.0014)	
Tax j			0.00002								0.00002					
			(0.0003)								(0.0003)					
Tax i					0.0016	**							0.0016	**		
					(0.0007)								(0.0008)			
Tax j – Tax i							-0.0009	***							-0.0010	***
							(0.0002)								(0.0003)	
Treaty									-0.0005		0.0014	*	-0.0008		0.0024	**
									(0.0013)		(0.0008)		(0.0021)		(0.0010)	
Constant	23.9117	***	24.1710	***	23.7174	***	23.8304	***	23.9125	***	24.1604	***	23.7232	***	23.7802	***
	(0.0965)		(0.1345)		(0.1596)		(0.1427)		(0.0973)		(0.1369)		(0.1645)		(0.1482)	
No. of obs.	1165		631		647		361		1165		631		647		361	
R-squared	0.1643		0.3289		0.2569		0.3954		0.1644		0.3326		0.2572		0.407	
Country-fixed effects	Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	
Time-fixed effects	Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	

Note: ***, **, * denote 1%, 5%, 10% significant levels respectively. Robust standard errors are in parentheses.

4. BUSINESS REGULATION AND FOREIGN DIRECT INVESTMENT

4.1. Model specification and methodology

The World Bank recently conducted the *Doing Business Project,* which involved publishing a series of *Doing Business* annual reports since 2004. The project's main objective was to provide quantitative indicators of business regulations and their enforcement across 178 countries. The *Doing Business 2008* annual report discussed business regulations involving the 10 stages of business' life; namely, starting a business; dealing with licenses; employing workers; registering property; getting credit; protecting investors; paying taxes; trading across borders; enforcing contracts; and closing business[7].

These business regulation indicators are linked to such activities as investment and trade and have found widespread use in a broad range of research. For instance, by using these indicator data, DJankov *et al.* (2007) found significant effects of time costs on trade. Their findings highlight the importance of reducing trade costs in stimulating trade. DJankov *et al.* (2002) also used data of regulation costs of entry in their study. They found that countries with heavier regulation costs had higher levels of corruption and a larger unofficial economy.

The main interest of this research is FDI environments, particularly how business regulations may directly affect FDI inflows. By employing the World Bank's *Doing Business Project* database, this research is able to identify whether and how various business regulation indicators affect aggregate FDI inflows. The findings will point to which stages regulations should be considered for reforms in order to enhance the investment environment.

Following Hsiao and Hsiao (2004), the aggregate FDI inflows are basically determined by the FDI recipient country's GDP (GDP_j), the rest of the world's GDP (GDP_{ROW}), the recipient-country's wage rate proxy by GDP per capita (GDP_{jt}), the recipient country's openness ($OPENESS_j$), and real exchange rates ($REER_j$). In addition, the standard model is augmented by adding a dummy variable of developing

countries ($Developing_j$) to capture the effects that developing countries have on FDI inflows and adding a set of business regulation indicators (R) for the purpose of the investigation. The model is specified below:

$$\ln FDI_{jt} = \beta_0 + \beta_1 \ln GDP_{jt} + \beta_2 \ln GDP_{ROWt} + \beta_3 \ln GDPPC_{jt} + \beta_4 \ln OPENESS_{jt} + \beta_5 \ln REER_{jt} + \beta_6 Developing_{jt} + \beta_7 R_{jt} + \varepsilon_{jt},$$

where a $Developing_j$ variable takes a value of one for developing countries and zero otherwise.[8]

Data on aggregate FDI flows are in real U.S. million dollars and collected from the International Monetary Fund's (IMF) *International Financial Statistics* (*IFS*)-2007 CD-ROM. All explanatory variables, except business regulation indicators, are defined as before and data are obtained mainly from the World Bank's W*orld Development Indicators* (*WDI*)-2007 CD-ROM. The real effective exchange rate is defined as the nominal exchange rate adjusted for the effects of inflation by multiplying the ratio of a recipient country's consumer price index to another major country's consumer price index. This research chooses the U.S. to be the comparison base country. Finally, openness is simply measured by the sum of a recipient country's imports and exports divided by its GDP.

For the methodology used, the standard OLS estimator was employed due to the small data set constraint. Although some data on business regulation indicators were available starting 2003, the bulk was not be obtainable until 2005. As a result, it was not appropriate to limit the study to East Asia alone. Therefore, this research extended the scope of the analysis to include all the 98 countries from which data were available over the period 2003 to 2005.[9]

4.2. Empirical findings

Estimation results are reported in Table 10. When pooling data of all countries are used, all estimated coefficients are significant. Most of them have the expected signs. For instance, the larger a recipient country's GDP is, the higher is its level of FDI inflows. Recipient country GDP per capita is found to be negatively related with the

level of FDI inflows. Note that although the estimated coefficient of the rest-of-the-world GDP variable is negative, it is barely significant.

Table 10: OLS estimations for determinants of aggregate FDI inflows
(Dependent variable is ln FDI_{jt}.)

	All countries		Developed countries		Developing countries	
ln *GDPj*	0.0400	***	0.1103	***	0.0183	***
	(0.0057)		(0.0253)		(0.0025)	
ln GDP_{ROW}	-0.8505	*	-0.7019		0.1090	
	(0.4525)		(0.7020)		(0.0804)	
ln *GDPPCj*	-0.0210	***	0.0206		0.0006	
	(0.0066)		(0.0470)		(0.0023)	
ln *OPENNESSj*	0.0335	**	0.1083	**	0.0159	***
	(0.0161)		(0.0453)		(0.0051)	
ln *REERj*	0.0079	***	0.0338	***	0.0006	
	(0.0026)		(0.0104)		(0.0009)	
Developing j	-0.1088	***				
	(0.0289)					
Constant	36.5165	***	29.6872		6.8038	***
	(14.1070)		(22.2759)		(2.5068)	
No. of obs.	322		77		245	
R-squared	0.4084		0.4184		0.4087	

Note: ***, **, * denote 1%, 5%, 10% significant levels respectively.
Robust standard errors are in parentheses.

A recipient country's openness to trade has quite a robust, positive impact on firms' decision to invest. The findings also suggest that an appreciation of the real exchange rate is associated with more FDI inflows. In addition, developing-country factors are found to have prominent roles in determining FDI inflows. The significant negative intercept indicates that developing countries receive less FDI inflows compared to developed countries.

When the estimation is limited to developed countries, the estimated coefficients of the rest-of-the-world GDP and recipient country GDP per capita variables are insignificant. In addition, the coefficients of all explanatory variables appear to be larger compared to the coefficients from the estimation of all 98 countries. This implies that investors' decisions to invest are more likely to be sensitive to a change in economic environments in developed countries. Finally, from the estimation of developing countries, the findings indicate that only the size of country GDP and country openness factors are relevant to the level of FDI inflows.

Now the analysis will focus on business-regulation variables. The estimated coefficients of various business-regulation indicators are summarized in Table 11 below. The findings suggest that not all business regulations are related to FDI inflows. From the total of 38 indicators, only 10 indicators were found to be significant. Moreover, the number of significant indicators was reduced to five when the estimation included only developed countries. In contrast, the number of significant indicators increased to 12 in the estimation of developing countries. This indicates that a larger number of business-regulation indicators are relevant to investment decisions in developing countries. Other findings on developing countries are highlighted next.

First, the number of procedures and the time involved in starting a new business are significantly related to investment decisions. There are less FDI inflows to a country that requires a large number of official procedures to start up a new business or where it takes a long time to complete a procedure in starting up a business. The difficulty in hiring new workers and the high cost involved in terminating redundant workers also have significant negative impacts on the level of FDI inflows.

This research also noted the negative effects of the number of procedures legally required to register property. The indicators on protecting investors measured the strength of shareholder protection against directors' conflict of interest. Though all indicators appeared insignificant in the case of developing countries, the disclosure index indicator was shown to be significant when all 98 countries were included. This finding underscores the importance of corporate transparency in promoting good investment environments.

For indicators on enforcing contracts, FDI inflows were negatively influenced by the efficiency of the judicial system in resolving commercial disputes and by the time that elapses from the moment a plaintiff files a lawsuit in court until restitution is made. Hence, a country with a more efficient judicial system definitely becomes more attractive as an FDI destination.

Finally, in a last stage of business's life--closing a business--none of the indicators was shown to be significant in the case of developing countries. Nonetheless, in the estimation of all countries, a higher level of FDI inflows is associated with a shorter time in the bankruptcy process.

Table 11: Estimated coefficients of various business regulation indicators
(Dependent variable is ln FDI_{jt}.)

Business regulation indicators	All countries	Developed countries	Developing countries
1. Starting a Business			
Procedures (numbers)	-0.0101 ***	-0.0172	-0.0022 **
	(0.00320)	(0.01053)	(0.00095)
Duration (days)	-0.0006 ***	-0.0005	-0.0002 **
	(0.00020)	(0.00150)	(0.00007)
Cost (% of income per capita)	0.000017	-0.0031	0.00001
	(0.00003)	(0.00214)	(0.00001)
Paid in Min. Capital (% of income per capita)	-0.000047 *	-0.0001 **	-0.000001
	(0.00003)	(0.00006)	(0.00001)
2. Dealing with Licenses			
Procedures (numbers)	0.0018	0.0171	0.0010
	(0.00160)	(0.02301)	(0.00085)
Duration (days)	0.000001	0.0001	-0.00001
	(0.00006)	(0.00058)	(0.00003)
Cost (% of income per capita)	0.000005 **	-0.0016 **	0.000003
	(0.00000)	(0.00063)	(0.00000)
3. Employing Workers			
Difficulty of Hiring Index	0.000033	0.0023 *	-0.0002 ***
	(0.00032)	(0.00130)	(0.00007)
Rigidity of Hours Index	-0.0002	-0.0004	0.0003 ***
	(0.00060)	(0.00260)	(0.00011)
Difficulty of Firing Index	-0.0004	-0.0007	0.0002
	(0.00040)	(0.00220)	(0.00016)
Rigidity of Employment Index	-0.0003	0.0009	0.0002
	(0.00080)	(0.00266)	(0.00015)
Nonwage labor cost (% of salary)	0.0007	0.0003	0.0008
	(0.00200)	(0.00646)	(0.00050)
Firing costs (weeks of wages)	-0.0005 ***	-0.0017	-0.0002 ***
	(0.00020)	(0.00111)	(0.00006)
4. Registering Property			
Procedures (numbers)	-0.0102 *	-0.0155	-0.0040 ***
	(0.00600)	(0.02135)	(0.00139)
Duration (days)	0.000018	0.0009 **	-0.000003
	(0.00005)	(0.00041)	(0.00002)
Cost (% of property value)	0.0022	0.0111	-0.0001
	(0.00160)	(0.00904)	(0.00043)
5. Getting Credit			
Legal Rights Index	0.0096	0.0374	-0.0003
	(0.01160)	(0.04393)	(0.00167)
Credit Information Index	0.0058	0.0088	0.0008
	(0.00470)	(0.02852)	(0.00131)
Public registry coverage (% adults)	0.0009	0.0021	-0.0016 ***
	(0.00130)	(0.00149)	(0.00059)
Private bureau coverage (% adults)	0.0001	-0.0010	0.0004 *
	(0.00070)	(0.00137)	(0.00021)

Table 11: (*Continued*)

Business regulation indicators	All countries	Developed countries	Developing countries
6. Protecting Investors			
Disclosure Index	0.0127 **	0.0629	0.0011
	(0.00640)	(0.03718)	(0.00207)
Director Liability Index	0.0009	0.0357	-0.0037 **
	(0.00630)	(0.05634)	(0.00176)
Shareholder Suits Index	0.0034	0.0317	0.0010
	(0.00580)	(0.06059)	(0.00197)
Investor Protection Index	0.0203	0.1129	-0.0030
	(0.01650)	(0.08448)	(0.00360)
7. Paying Taxes			
Payments (number)	-0.0007	-0.0063	-0.0002
	(0.00040)	(0.00645)	(0.00022)
Time (hours)	-0.000045	-0.0015	-0.000003
	(0.00003)	(0.00087)	(0.00002)
8. Trading Across Borders			
Documents for export (number)	-0.0009	0.0501	-0.0030
	(0.00420)	(0.08214)	(0.00217)
Time for export (days)	0.0006	0.0196	0.0001
	(0.00080)	(0.02149)	(0.00027)
Cost to export (US$ per container)	0.000008	0.000001	0.00001 *
	(0.00001)	(0.00023)	(0.000004)
Documents for import (number)	-0.0008	0.0085	-0.0018
	(0.00490)	(0.03391)	(0.00165)
Time for import (days)	0.0008	0.0191	0.0001
	(0.00050)	(0.01235)	(0.00020)
Cost to import (US$ per container)	0.000006	0.00003	0.00001 *
	(0.00001)	(0.00021)	(0.000005)
9. Enforcing Contracts			
Procedures (number)	-0.0052 ***	-0.0192 ***	-0.0002
	(0.00160)	(0.00614)	(0.00040)
Time (days)	-0.0001 ***	0.000004	-0.00003 **
	(0.00003)	(0.00007)	(0.00001)
Cost (% of debt)	0.0002	-0.0026	0.00003
	(0.00020)	(0.00447)	(0.00008)
10.Closing Business			
Time (years)	-0.0156 ***	-0.0399	-0.0016
	(0.00550)	(0.02564)	(0.00297)
Cost (% of estate)	0.0002	0.0024	0.0003
	(0.00090)	(0.00502)	(0.00033)
Recovery rate (cents on the dollar)	-0.0004	-0.0019	0.0005
	(0.00100)	(0.00160)	(0.00035)

Note: ***, **, * denote 1%, 5%, 10% significant levels respectively. Robust standard errors are in parentheses.

5. POLICY IMPLICATIONS

This research provides an overview of tax instruments in East Asia where tax instruments generally vary regionwide. There is increasing pressure on countries to lower their corporate income tax rates to ensure their competitiveness as capital mobility increases. Despite the fact that the effectiveness of tax instruments on attracting FDI inflows remains unclear, East Asian countries offer generous packages of tax incentives. The lack of a regional framework for tax harmonization may result in unnecessary competition within the region.

Empirical evidence on key determinants of bilateral FDI inflows confirms existing literature. FDI inflows are basically determined by the size of FDI home countries' GDP, labor costs in FDI home countries, and distance between FDI home and recipient countries. In addition, the significant relationship between home-country corporate income tax rates and FDI outflows from 30 OECD countries was found. There was, however, inadequate evidence that recipient-country corporate income tax rates have a significant impact on FDI inflows to East Asian countries. Bilateral income tax treaties were also found to positively affect the level of FDI inflows to the ASEAN-5. These findings support the view of the FDI promotion rationale for tax treaty formation.

The lack of a comprehensive network of tax treaty agreements within the East Asia region may increase business costs and be a major obstacle to the regional economic integration process. Besides, many tax treaties were concluded a long time ago and could be out of date. It is crucial that these tax treaties be revised. Hence, the development of a regional tax regime and a comprehensive tax treaties network with a standard framework for the East Asia region would definitely contribute to a good investment environment in the region.

Finally, the efficiency of business regulations in the various stages of business life, from starting a business to closing a business, was found to have critical roles in multinational firms' investment decisions. Thus, improvements in the domestic business environment, including economic regulations, corporate governance, and labor laws, would increase FDI inflows and would also be a key driver toward a single investment and production base in the East Asia region.

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NOTES

[1] For more details on business regulation indicators, see http://www.doingbusiness.org (accessed *December 28, 2007*).

[2] Tax incentives are defined as tax provisions granted only to qualified projects for which provisions are not applicable in general.

[3] For theoretical links between tax policy and investment, see Sasatra and Moore (2008) and Hassett and Hubbard (2002).

[4] Hall (1997) provided a detailed analysis on the move to a consumption tax base.

[5] The ASEAN-5 countries are Indonesia, Malaysia, Philippines, Singapore, and Thailand.

[6] The 30 OECD countries are Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States. The 11 East Asian countries are Australia, China, Japan, Indonesia, India, Korea, Malaysia, New Zealand, Philippines, Singapore, and Thailand.

[7] For details on business regulation indicators in each of 10 stages of business life, see the *Doing Business 2008* annual report.

[8] The World categorizes developing countries into low- and middle-income countries. See http://www.worldbank.org/depweb/english/beyond/global/glossary.html (accessed November 1, 2007).

[9] The 98 countries are the United States, the United Kingdom, Belgium, Denmark, France, Germany, Italy, Norway, Sweden, Switzerland, Canada, Japan, Finland, Greece, Iceland, Portugal, Spain, Australia, South Africa, Argentina, Bolivia, Brazil, Chile, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru, Uruguay, Guyana, Jamaica, Israel, Jordan, Kuwait, Oman, Saudi Arabia, Egypt, Bangladesh, Cambodia, Sri Lanka, India, Indonesia, Korea Rep., Malaysia, Maldives, Nepal, Pakistan, Philippines, Singapore, Thailand, Angola, Botswana, Burundi, Cameroon, Chad, Congo, Republic of Democratic Rec. Congo, Benin, Ghana, Cote d'Ivoire, Kenya, Lesotho, Madagascar, Malawi, Mali, Mauritius, Mozambique, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Namibia, Togo, Tunisia, Burkina, Faso, Zambia, Solomon Islands, Armenia, Albania, Georgia, Kyrgyz Republic, Bulgaria, Moldova, Czech Republic, Latvia, Hungary, Lithuania, Mongolia, Croatia, Slovenia, Poland, and Romania.