Ease of Doing Business and Foreign Direct Investment Inflows: Evidence from Emerging Economies

Padmaja Mundakkad

National Institute of Technology Tiruchirappalli, Tiruchirappalli, India
E-mail: padmaja@nitt.edu

Abstract

Emerging and developing countries has become major attraction for FDI inflows in recent years. Even though existing studies examine the role of host country factors in determining FDI inflows, there is only limited evidence on the role of governance and restrictions in determining FDI inflows. This paper examines the impact of Doing Business Rankings data from Ease of Doing Business report published by World Bank to account for DBR and the restrictions firms face for operating in their country. Using a panel data of 84 emerging countries from 2006 – 2018 the study examine the effect of improvement in Doing Business Rankings (DBR) on FDI inflows. The key questions examined are 1) whether ease of doing business improves the FDI inflows to the country 2) whether improvement of DBR effects FDI inflows to the country. Using Arellano-Bond dynamic panel GMM, the study suggests that improvements in doing business rankings leads to significant improvement in FDI inflows. However, large improvements in DBR does not result in attracting more FDI inflows.

1. Introduction

Foreign direct investment (FDI) acts as one of the major source of economic development and growth of emerging market (Lunn 1980, Carkovic and Levine 2002, Adams 2009, Basu and Guariglia, 2007). FDI, especially in terms of inflows are also considered to be an important source of technology spillovers. Given the importance of FDI inflows, impact of FDI has been investigated extensively in the literature. FDI impacts economic growth through different channels. First, by providing more inputs and larger array of intermediary goods through capital accumulation (Feenstra and Markusen 1994; Buckley et al 2002). Second, FDI enhances growth through technological changes, human capital improvements (Buckley et al., 2002) and technology diffusion (Lucas 1993).

What are the factors driving FDI inflows? This question has been discussed in an extensive literature. The cross country differences in FDI flows are approximated by the 'gravity' relationship (Ekholm 1998; Shatz 2003). In addition to this, the possible determining factors of FDI are natural resources, trade openness, human capital, financial development, size of the countries, macro-economic factors,
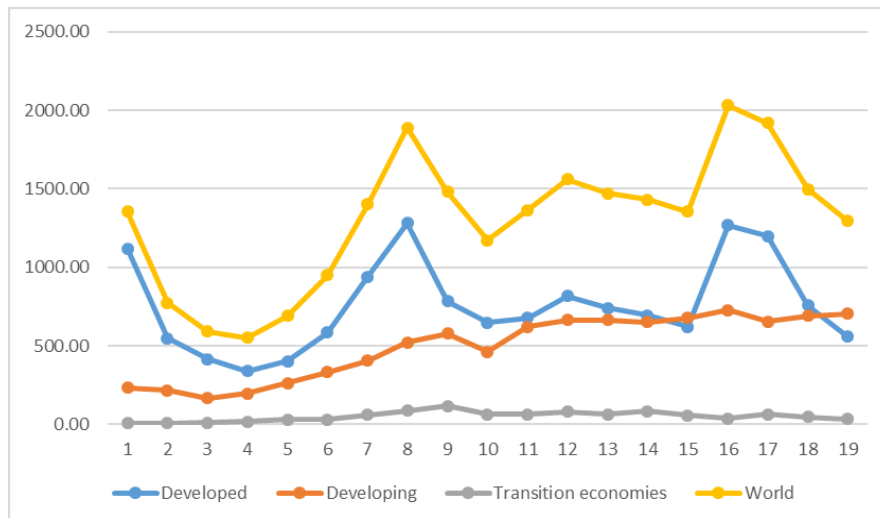
political factors, taxes, investment climate etc in recipient countries (Harris 2003; Adams 2009; Herzer 2011).

Recently, the regulatory and institutional framework has attracted the attention in the literature as important determinant of FDI. Using sample of OECD countries, Alesina et al (2005) shows that reforms in business regulations results in increase of investment. Eiffert (2009) investigated individual components of DBR and found evidence on significant effect of time duration to enforce contracts on FDI inflows. The study fails to get evidence on impact of DBR on FDI inflows. Djankov et al., (2006) examines the aggregate impact using all components of DBR in the context of cross-sectional analysis and showed that countries with high DBR significantly improves growth. Using fixed country effects, Busse and Groizard (2008) examines the influence of selected components of DBR on economic growth. Their evidence suggests that countries with lower regulations stimulates economic growth. Recent years has witnessed a changing direction of FDI from developed countries to developing countries, especially after the global financial crisis. This has attracted greater emphasis in literature to examine the link between FDI inflows and various determinants. These set of studies conclude that countries with favorable business environment are likely to attract more foreign investment than their counterparts (Godinez and Liu 2005; Herrera et al., 2014; Zhnag 2014, Hitt 2016).

The global FDI flows were $1.3 trillion in the year 2018. It has declined by 13% compared to previous year. The decline is particularly due to decrease of FDI flows in to developed economies. United States is the largest recipient of FDI ($251 billion), followed by China ($ 140 billion) and Singapore ($110 billion) (UNCTAD, 2019). According to UNCTAD investment report 2019, developing economies attracted $695 billion which is larger than half of global FDI. Regional analysis of developing countries shows highest growth rate for both Latin America and Caribbean at 16%. Africa registered a small rate of increase of 3% while that of developing Asia has decreased by 6%. Figure 1 depicts the trends in FDI inflows of developed, developing and transition economies and world as whole from the period 2000-2018. The trend shows that developing countries has attracted more FDI than developed economies in recent years.

The trend of FDI inflows has been changing in recent years as shown in Figure 1. Developing economies are emerging as important contributors of FDI like developed economies. Even though, the developing economies shows an increasing FDI inflows over the years, the transition economies are lagging behind. On the other hand, FDI is crucial for MNCs. Therefore both developing and developed countries are interested in encouraging FDI inflows. Given the significance of FDI inflows in determining economic growth, one of the crucial question for all countries is how to increase the FDI inflows.

Figure 1 - FDI Inflows, 2000-2018 (Billions of USD)

The increasing contribution of emerging and developing countries in global FDI has gained attention in recent years. However, the role of business environment and regulations as a factor effecting FDI is not given due attention in the context of emerging economies. Doing business rankings provides a reliable indicator of business regulations and easiness in each country. However, the empirical evidence on the significant role of changes in administrative regulations and delays associated with registering business, contract enforcement, property registration etc. in determining the FDI inflows is meagre.

Most of the existing studies use the macro economic variables to explain the FDI inflows .The role of business regulations and institutional environment has not been much focused as a determinant of FDI inflows in the case of emerging economies. Few exceptions are Corcoran and Gillanders (2015); Jayasuria (2011). This motivates the study to examine the role of ease of doing business rankings of emerging countries in determining their FDI inflows. This paper attempts to find the relationship between FDI inflows and 'Ease of Doing Business' as one of the major determinant of FDI. This paper adds to the literature by investigating the effect of favourable business regulations on FDI inflows to the country. The present study employs a panel of 84 countries from 2006 to 2018 to examine the effect of improvement in Ease of Doing Business Rankings on FDI inflows. Following are the contributions made by this study; First, the study examine the role of doing business rankings in determining FDI inflows for a large sample of 84 countries during the period, 2006-2018. Second, a detailed analysis using doing business rankings indicator components is also carried out to understand more detailed role of each of the indicators rather than aggregate doing business rankings. Using Generalized Methods of Moments (GMM) estimation, the study finds evidence on ease of doing business as significant factor for inviting more FDI inflows.

The remainder of the paper is structured as follows: Section 2 describes the literature discussing important determinant factors of FDI inflows; Section 3 outlines the data description and empirical

framework and methodology in detail; Section 4 details the empirical results and conclusion is presented in section 5.

2. Review of literature

An extensive set of literature has examined the key drivers of FDI. An extensive set of literature explains FDI as market –seeking, efficiency-seeking or resource-seeking. The market seeking approach considers FDI as attracted by size of the economy and locational factors; whereas efficiency –seeking approach considers human capital and infrastructure as attracting factors of FDI. Finally, resource seeking approach considers FDI is attracted by availability of strategic assets and natural resources.

A large set of studies also use 'gravity model' to explain the FDI flows between two specific countries. According to this model, factors such as market size, economic growth, distance, labour endowments and trade openness factors are the major drivers of FDI. For example, economies of Central and Eastern Europe received large FDI inflows over last couple of decades as they are seen as entry points to large European market and due to availability of educated labour forces (World Bank, 2013).

Parallely, there is growing literature on role of regulation and governance in FDI inflows. The regulatory and institutional framework also has attracted the attention in the literature as important determinant of FDI. Lucas (1993) is considered as the pioneering study which examined the role of business environment and regulations on FDI inflows. Lucas (1993b) argues FDI with technology transfer is crucial and it acts like a 'miracle'. Djankov et al (2002) finds that the firms from countries which face more regulatory rules are likely to be more corrupt. Similarly, Djankov et al (2004) finds that the country with higher rate of labour regulations have lower labour force participation. Desai et al (2003) finds evidence on correlation between regulations on entry and the entry rate of new firms in their cross-country study.

There is a growing literature on the impact of business regulations, institutional factors, quality of governance on FDI inflows (e.g, Godinez and Liu 2005; Herrera et al., 2014; Zhnag 2014). Most of these studies found that poor institutional quality and bureaucracy negatively impacts the FDI inflows. With the launch of Doing Business Ranking data by World Bank, studies have examined the role of components of business regulations in determining FDI. Walsh and Yu (2010) finds that labour market flexibilities and independence in judicial framework significantly improves FDI inflows. Wei (2000) finds that corruption reduces FDI inflows and the effect is similar to that of increase in tax rates on foreign firms. Wagle (2011) finds that 'number of procedures' involved in starting business have a significant impact on FDI inflows.

Hitt (2016) concludes that the regulatory factors are more significant than the cultural and cognitive factors in determining the FDI inflows. Using a meta analytic review, Bailey (2018) examines the role of institutional factors and FDI attractiveness. He finds evidence on significant positive relationship between institutional factors and FDI attractiveness. Hossain et al. (2018) study the role of DBR on

FDI inflows for the period; 2011 to 2015 in the context of about 177 countries. They considered five indicators of DBR, such as, initiating a business, procedures in property registration, tax payments, contract enforcement and getting credit. The study reports that contract enforcement have a positive significant impact on FDI inflows, while getting Credit and procedures in registering Property have a negative and significant impact on FDI. Also, starting Business and Paying Taxes have no significant impact on Inward FDI. Ketteni and Kottaridi (2018) investigates the impact of regulations on FDI-growth nexus form an institution-based view in the context of advanced and developing countries. The study finds that the host country institutional context are significant in shaping the strategies and competitiveness of MNEs activities and they have differential effect on economic growth. Contractor et al., (2020) examines the role of regulatory factors and business environment in determining the FDI inflows using cross country analysis of 189 countries. The study finds that the MNCs are willing to invest in countries with more competent international trade regulations along with more enforcement contracts. Contractor et al., (2021) conducts an exploratory study on the role of regulatory factors in attracting FDI inflows of emerging markets. The study finds a positive and significant relationship between effective start-up regulations, protections of minority investment, better procedures and infrastructure for trade across borders and FDI inflows.

The existing empirical literature shows that the Doing Business Ranking or its sub-indicators play a significant role in determining FDI (e.g., Jayasuria 2011; World Bank 2013; Jeong 2014; Corcoran and Gillanders 2015). Using a multivariate regression model, Piwonski (2010) founds that there is a strong relationship between measure of DBR and FDI. Shahadan et al., (2014) concluded that the DBR components; *starting a business, dealing with construction permits, registering property* and *getting credit* have significant effect on FDI inflows of Asian economies. Majority of the studies uses the aggregate measure of ease of doing business ranking to examine the relationship between business regulations and FDI. Few studies has used specific indicators of business regulations which are the sub-indicators of ease of doing business (Morris and Aziz 2011; Olival 2012). Gastanaga et al. (1998) finds significant effect of bureaucratic delay on the FDI inflows but they does not take in to account other components used in calculating ease of doing business. The present study contributes to the emerging literature on impact of ease of doing business indicators on FDI inflows.

3. Data and Variable Description

The present study employs a panel data of emerging economies during the period 2006 – 2018 to examine the impact of improvement in Doing Business Rankings (DBR) on FDI inflows. The important questions examined are 1) whether ease of doing business improves the FDI inflows to the country 2) whether improvement in DBR improves the FDI inflows to the country. Table 1 reports the description of all variables used in the analysis and their sources. The control variables such as *Real GDP growth, GDP per capita, inflation, trade openness, real exchange rate, Tax on corporate profits, Tax on International Trade* are sourced from World Development Indicators published by World Bank.

This paper uses Doing Business Ranking Data provided by World Bank for the information on DBR and ease of doing business emerging countries from 2006-2018. This database offers objective measures of regulations related to business. The DBR indicators given are comparable across various countries and gives information on costs of business related to regulations. The indicators of

regulations helps to obtain more objective information regarding regulations as they are less effected by concurrent changes. The advantages of using Doing Business Indicators is extensively discussed in Doing Business indicators (2006a), World Bank. Further, this database is widely used as a credible measure of regulations across countries (Pica and Rodriguez Mora 2005; Borrmann et al., 2006, Freund and Bolaky 2008).

Out of the various indicators available, we select only those which have a linkage with FDI inflows. Other indicators are excluded due to potential multi-collinearity and less relevance. The seven indicators chosen for analysis are; *1) starting a business 2) registering a property 3) protecting investors 5) paying taxes 6) trading across borders 7) enforcing contracts*. For each individual indicator, a ranking for the country is created. For example, the indicator "starting a business" is given rank in the interval (1-100). For these choice of ranking the value 1 for a country shows that these country is best in terms of starting business indicator among all other countries.

Dependent variable for the analysis is net inflow of FDI (in constant 2000 US dollars) from *World Development Indicators* provided by World Bank. Various studies consider different sets of variables such as "macroeconomic variables and governance indicators" as determinant factors of FDI inflows. Macroeconomic variables and governance indicators is used as control variables in the analysis. The description of the control variables are given below.

Table 1 - Descriptive Statistics

Variable	Description	Source	Mean	SD
Log (FDI)		**WDI**	20.34	2.29
	Log of FDI net inflows (in constant WDI 2000 US$)			
DBR	Doing business Rankings	WB	92.8	40.90
Control Variables				
Log (GDP)		WDI	1.34	0.811
	Log of GDP (in constant 2000 US$)			
Log (GDPPC)		WDI	8.38	0.98
	Log of GDP Per Capita(in constant 2000 US$)			
INF		WDI	5.69	10.23
	Inflation			
TO		WDI	92.90	59.40
	Trade openness , Export +Import/GDP			
REER		WDI	4.60	6.25
	Real Exchange Rate			
TAXPROFIT		WDI	7.68	8.63
	Tax on corporate profits			
TAXINT		WDI	6.94	9.24
	Tax on International Trade			
Starting a business	Time (days)	WB	58.20	32.99
	Cost (percent of income per capita)			
Registering-property indicator	Time(days)	WB	59.91	18.53
	Cost (percent of income per capita)			
Protecting-investors indicator		WB	49.61	20.39
	Strength of Investor Protection index (0-10)			
Paying taxes indicator		WB	57.59	21.66
	Payments (number per year)			
Trading across borders indicator	Time to export (in days)	WB	67.15	19.18
	Cost to export (in US $ per container)			
	Time to import (in days)Cost to import (in US$ per container)			
Enforcing Contracts indicator	Time (in days)	WB	51.41	18.37
	Cost (percent of claim)			

Note: The indicators; *starting business, registering property* etc are measured in scores.

GDP and GDP per capita: The control variables are selected on the basis of the theoretical and empirical studies. For instance GDP and GDP per capita gives a measure of Market Size. Due to scale of economies, larger potential demand and lower costs, host countries with bigger markets may attract higher amount of FDI. The rate of increase of GDP is considered as an indicator of larger economies of scale. Moreover high GDP per capita indicates availability of larger market. Both these factors attracts more FDI inflows (Corocoran and Gilanders,2015; Boateng et al., 2015).

Openness: It is measured as ratio of exports plus imports to GDP (Boateng et al., 2015). There is mixed evidence regarding the effect of openness in determining FDI. Kravis and Lipsey (1982) Edwards (1990) and Pistoresi (2000) finds evidence on positive effect of openness on FDI. i.e., more trade openness will attract more FDI inflows. Whereas, Wheeler and Mody (1992) finds a negative effect of openness on FDI inflows.

Exchange Rate: It is also treated as an important determinant factor of FDI inflows. A favourable exchange rate may give an advantage for firms in terms of cheaper goods in host country (Blongen 2005). Real exchange rate (REER) is included to account for the exchange rate changes on the FDI inflows (Boateng et al., 2015). Also, a currency depreciation will attract more FDI inflows (Froot and Stein 1991; Klein and Rosengren 1994).

Inflation: The variable "Inflation (INF)" account for the price changes in the home country (Boateng et al., 2015). It also indicates the economic stability. Higher rate of inflation reduces the value of income for investing firms and low rate of inflation improves the value and will attract more FDI inflows.

Taxes: The literature shows an inconclusive evidence on whether FDI is sensitive to taxes. This study includes tax on corporate profits and tax on international trade to account for role of taxes. For example, studies have found that depending on whether the country follows a double taxation policy or different rates of corporate tax etc. can influence the FDI inflows differently (Desai et al 2001).

The variables relating to governance indicators are taken from World Bank's Governance Indicators website. The variables considered are political stability and absence from violence indicator (PV); corruption control indicator (CC); voice and accountability indicator (VA); regulatory quality and government effectiveness indicator (GE) (Jayasuriya, 2011).

4. Methodology

To analyze the interaction between FDI inflows and DBR, the cross country regression can be used. However, this approach may lead to biased estimates due to reverse causality, measurement error or due to omitted variable bias. In order to account for these estimation problems, a panel data approach is used. Arellano- Bond methodology is used to account for endogeneity. The methodology used is similar to that used by (Walsh and Yu 2010). The Arellano-Bond methodology specifies a dynamic model which allows for time-invariant country specific effects and factors.

The equation estimated is as follows;

$$Y_{it} = \beta_0 + \beta_1 Y_{t-1} + \beta_2 X_{it} + \theta Z_{it} + \lambda W_{it} + u_i + \varepsilon_{it} \qquad (1)$$

Where Y represents FDI inflows, X is the vector of macro-economic variables (GDP growth rate, GDP per-capita, inflation, trade openness, Real exchange rate), Z represents DBR and various components of DBR and W represents the governance indicators. The governance variables included are political stability and absence from violence indicator (PV); corruption control indicator (CC) and voice and accountability indicator (VA). u_i is the error and ε_{it} is the unobserved heterogeneity factor. Different specifications using combinations of macro-economic variables, governance and DBR indictors are carried out to check the robustness of results and to take account of possible multicollinearity.

In order to eliminate the fixed effects from equation (1) above, we use a difference GMM approach as follows;

$$\Delta Y_{it} = \Delta X_{it} + \Delta Z_{it} + \Delta \varepsilon_{it} \qquad (2)$$

In order to account for serial correlation between error term and dependent variable, the first lag and lagged differences of the endogenous and exogenous variables are used in the analysis (Blundell and Bond 1998).

5. Empirical findings

Table 2 reports the results of OLS and fixed effects (FE) estimations. OLS results reports a negative and significant coefficient for doing business rankings. This implies that a lower DBR improves FDI inflows compared to a higher DBR. However, the coefficient of DBR is positive and significant under Fixed effects estimation. This implies that higher DBR improves FDI inflows, which is not consistent with the hypothesis. FE estimation fails to account for the heterogeneity across individual countries.

Further, according to the literature on endogeneity, there is scope of bias within the OLS and fixed estimation results (Daude and Stein, 2007; Hall and Jones, 1999). The OLS and fixed estimation result is prone to endogeneity. As a result of endogeneity, there exist a possibility of higher levels of FDI leading to improvement in ease of doing business rankings of the country. Secondly, there also exist unobserved heterogeneity and omitted variable bias. These three econometric problems are major cause of concern in empirical FDI literature. A panel data estimation such as Generalized Method of Moments accounts for these econometric issues. Thus, the dynamic panel estimation using Generalized Method of Moments (GMM) is carried out.

The results of analysis on role of DBR in determining FDI inflows after accounting for control variables is reported in Table 3. Robustness tests using alternative indicator for FDI, FDI stock has been carried out and the results are reported in Appendix I. The results are consistent with the results using FDI inflows. The results using multiple specifications are also reported. In all multiple specifications, we find that DBR as an indicator is a significant factor that explains FDI inflows. The results shows that an improvement in DBR increases FDI inflows. A negative and significant effect implies that improvement in ranking attracts more FDI inflows. The improvement of ranking by 1% on an average results in an increase in FDI inflows by 12 %. The results hold when using one or up to two lags of endogenous variables as instruments. The lagged value of FDI also is significant factor determining FDI inflows. This implies that having FDI inflows in previous year helps in attracting more FDI inflows in the current year. The control variables; GDP growth rate (GDPGR), GDP per-

capita (GDPPC), real exchange rate (REER) and openness indicator (OPEN) shows positive and significant impact on FDI inflows. Results of specification including tax variables shows that DBR is no longer significant after including "tax" control variables. Even after controlling for the governance indicators, the DBR continue to have a positive and significant effect on FDI inflows. The governance variables; political stability and absence from violence indicator (PV); corruption control indicator (CC); voice and accountability indicator (VA) are significant in alternative specifications reported in column (2) to (6). DBR variable continue to have significant effect in determining FDI even after controlling for these governance indicators. But is no longer significant once tax variables are included.

Table 2 - OLS and FE Estimation Results

VARIABLES	(1) OLS	(2) FE
DBR	-0.00551**	0.00328*
	(0.00241)	(0.00169)
GDPGR	0.465***	0.112**
	(0.130)	(0.0555)
GDPPC	1.257***	2.286***
	(0.119)	(0.454)
REER	0.116***	0.122**
	(0.0144)	(0.0536)
INF	0.00958	-0.000680
	(0.00791)	(0.00375)
TO	-0.00991***	-0.00115
	(0.00167)	(0.00263)
Time Dummy	Yes	Yes
Observations	513	513
R-squared	0.267	0.134
Number of country id		50

Note: Standard errors are shown in parentheses, ***Significant at 1 percent; **Significant at 5 percent, *Significant at 10 percent. GDP growth and GDP per-capita are measured in logs.

Table 4 reports the results of effect of doing business reforms on the amount of FDI inflows. Instead of using Doing Business rankings (DBR) DBR reform variable is included as the interest variable. The DBR reform variable is defined as dummy which takes value equal to '1' if the DBR ranking of the country has improved by 9 or more points and it is labelled as '0' if otherwise. This definition is similar to that of Jayasuria (2011). That is., for example, if DBR of country 1 was 120 in the year 2007 and in 2008 DBR is 109, for that country DBR reform dummy takes value '1'.

The results suggest a positive and significant impact of DBR reforms on FDI inflows as implied by positive and significant coefficient of DBR reform dummy. The coefficient of DBR reform dummy suggest that an improvement in DBR by 1 % on an average raises FDI inflows by 13 %. This implies that if a country improves their ease of doing business ranking by 9 or more points, it has a significant effect in attracting more FDI inflows. Similar to the results using DBR variable, DBR reform dummy is no longer significant in specifications including the tax variables as shown in column (3) and (4) in Table 3. The results implies that the tax variables such as tax on profits and tax on international trade has a negative impact on FDI inflows. However, tax on international trade has only a significant and negative effect on FDI inflows.

The results of analysis using the individual components of DBR is reported in Table 5. The indicators included are *1) starting a business (SB) 2) Getting electricity (SE) 3) Registering property (SP) 4) Getting Credit (SCR) 5) Protecting minority investors (SPI) 6) paying taxes (SPT) 7) trading across borders (STB) 8) Enforcing contracts (SEC).* Dependent Variable is the value of FDI Inflows (in 100s of million USD). The set of control variables are the same as the previous analysis. Both macro-economic variables as well as the governance indicators are included in the multiple specifications.

The results shows that components, viz, *getting electricity (SE), Registering property (SP), getting Credit (SCR) and Protecting minority investors (SPI)* has a positive and significant effect on FDI inflows. Other components, *paying taxes (SPT) and trading across borders (STB)* has a negative and significant effect on FDI inflows. The positive and significant effect of SE, SP, SCR, and SPI points out that reform measures to enhance the these indicator components will help in improving the DBR and in turn will attract more FDI inflows. The set of control variables are the same as the previous analysis.

The findings implies that the doing business indicator play an important role in determining the FDI inflows of emerging countries. Further, the study implies that few of the ease of doing business components such as *getting electricity (SE), Registering property (SP), getting Credit (SCR) and Protecting minority investors (SPI)* have more influence on the FDI inflows these countries. Improvement in any of these components will help the emerging countries in attracting more FDI inflows.

Table 3 - DBR and FDI Inflows

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Lag FDI	0.018**	0.014**	0.016**	0.023**	0.002**	0.014**	0.013**	0.021**
	(0.016)	(0.002)	(0.643)	(0.041)	(0.231)	(0.207)	(0.034)	(0.431)
DBR	-0.128**	0.110	-0.148	0.115	-0.131**	-0.132***	-0.147***	-0.160***
	(0.128)	(0.019)	(0.201)	(0.129)	(0.137)	(0.115)	(0.929)	(0.814)
GDPGR	0.197***	0.126***	0.0372	0.0327	0.0617	0.108***	0.123***	0.138***
	(0.373)	(0.366)	(0.528)	(0.890)	(0.447)	(0.235)	(0.267)	(0.325)
GDPPC	0.431***	0.804***	1.102***	0.424				
	(0.099)	(0.105)	(0.183)	(0.309)				
REER	0.045***	0.025***	0.048***	0.007	0.098	0.054	0.030***	0.023***
	(0.060)	(0.088)	(0.012)	(0.012)	(0.010)	(0.005)	(0.005)	(0.004)
INF	-0.043***	-0.0259***	-0.019***	-0.0150	-0.0196***		-0.030***	-0.033***
	(0.662)	(0.596)	(0.650)	(0.138)	(0.518)		(0.446)	(0384)
OPEN	0.0235***	0.051	0.0620***	0.0397	0.0246***	0.0132*	0.0818	
	(0.862)	(0.107)	(0.194)	(0.128)	(0.788)	(0.669)	(0.661)	
TAXPROFITs			-0.216					
			(0.242)					
VA		-0.0848	0.0508	-0.0871*	-0.0115**	-0.0540		
		(0.530)	(0.682)	(0.484)	(0.428)	(0.422)		
PV		-0.0160***	-0.0190***	-0.0137***	-0.0154***	-0.0168***		
		(0.331)	(0.472)	(0.308)	(0.369)	(0.357)		
CC		-0.0729*	-0.0160**	0.0235	0.0115***	0.0117***		
		(0.364)	(0.610)	(0.513)	(0.369)	(0.397)		
TAXINT				-0.119***				
				(0.317)				
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
AR(1)	0.014	0.023	0.012	0.036	0.016	0.042	0.028	0.030
AR(2)	0.411	0.625	0.152	0.146	0.477	0.104	0.808	0.399
Sargan Test	52.89	114.90	126.24	111.48	130.74	51.18	82.44	75.23
J –Test (Hansen)	0.32	0.26	0.22	0.53	0.32	0.24	0.34	0.18
Observations	471	471	333	391	471	502	471	506
No. of groups	50	50	39	42	50	52	50	53
No. of Instruments	43	43	24	22	43	44	43	44

Note: Standard errors are shown in parentheses, ***Significant at 1 percent; **Significant at 5 percent, *Significant at 10 percent. GDP growth and GDP per capita are measured in logs.

Table 4 - Ease of Doing Business Rankings Improvement (more than nine rankings) and FDI Inflows

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Lag FDI	0.013**	0.011**	0.023**	0.019**	0.026**	0.015**	0.012**	0.015**
	(0.007)	(0.004)	(0.043)	(0.324)	(0.006)	(0.007)	(0.003)	(0.034)
DBR Reforms	0.137***	0.237***	-0.026	-0.042	0.338***	0.156***	0.247***	0.167***
	(0.032)	(0.083)	(0.075)	(0.057)	(0.053)	(0.051)	(0.039)	(0.033)
GDPGR	0.202***	0.124***	0.046	0.069	0.022	0.069***	0.056***	0.057**
	(0.009)	(0.034)	(0.061)	(0.058)	(0.029)	(0.021)	(0.018)	(0.022)
GDPPC	0.563***	1.100***	1.143***	0.568**				
	(0.037)	(0.161)	(0.249)	(0.258)				
REER	0.047***	0.033***	0.041**	0.027**	-0.002	-0.003	0.021***	0.017***
	(0.004)	(0.009)	(0.016)	(0.012)	(0.012)	(0.005)	(0.005)	(0.005)
INF	-0.038***	-0.024***	-0.013*	-0.018	-0.020***		-0.032***	-0.023***
	(0.003)	(0.008)	(0.007)	(0.011)	(0.005)		(0.004)	(0.003)
OPEN	0.013***	0.012	0.007***	0.021	0.014***	0.032***	0.023	
	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.000)	
TAXPROFITs			-0.012**					
			(0.000)					
VA		-0.015***	-0.008	-0.006	-0.006	-0.010***		
		(0.005)	(0.007)	(0.004)	(0.005)	(0.003)		
PV		-0.017***	-0.011**	-0.010***	-0.019***	-0.011***		
		(0.004)	(0.005)	(0.003)	(0.004)	(0.002)		
CC		-0.011***	-0.018***	-0.002	0.009**	0.010***		
		(0.004)	(0.006)	(0.005)	(0.004)	(0.002)		
TAXINT				-0.012***				
				(0.053)				
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
AR(1)	0.023	0.031	0.026	0.041	0.014	0.046	0.034	0.021
AR(2)	0.210	0.235	0.450	0.253	0.145	0.237	0.683	0.324
Sargan Test	78.20	154.21	111.36	132.34	128.27	62.37	81.23	73.40
J –Test (Hansen)	0.37	0.62	0.48	0.28	0.63	0.27	0.35	0.24
Observations	471	471	333	391	471	502	471	506
No. of groups	50	50	39	42	50	52	50	53
No. of Instruments	43	43	24	22	43	44	43	44

Note: Standard errors are shown in parentheses, ***Significant at 1 percent; **Significant at 5 percent, *Significant at 10 percent. GDP growth and GDP per capita are measured in logs.

Table 5: Components of DBR and FDI Inflows

VARIABLES	(1)	(2)	(3)	(4)	(5)
Lag FDI	0.013***	0.017**	0.023	0.014	0.021
	(0.004)	(0.003)	(0.231)	(0.253)	(0.012)
SE	0.014***	-0.008	0.002	-0.003	-0.010
	(0.005)	(0.006)	(0.011)	(0.005)	(0.010)
SP	0.020*	0.018	0.021	0.008	0.032*
	(0.012)	(0.013)	(0.015)	(0.012)	(0.017)
SCR	0.022**	0.028***	0.041***	0.028***	0.041***
	(0.008)	(0.010)	(0.009)	(0.007)	(0.010)
SPI	0.017***	0.023***	0.019***	0.016***	0.014
	(0.005)	(0.006)	(0.007)	(0.005)	(0.009)
SPT	-0.037***	-0.040***	-0.049***	-0.025***	-0.061***
	(0.008)	(0.009)	(0.011)	(0.008)	(0.012)
STB	-0.016**	-0.018**	-0.023*	-0.019**	-0.018*
	(0.007)	(0.007)	(0.013)	(0.008)	(0.010)
SEC	-0.000	0.001	0.038***	0.021*	0.013
	(0.012)	(0.013)	(0.014)	(0.011)	(0.018)
GDPGR	0.155***	0.162***	-0.269***	-0.055	0.140**
	(0.046)	(0.042)	(0.093)	(0.074)	(0.068)
REER	0.058***	0.069***	0.106***	0.047***	0.132***
	(0.017)	(0.019)	(0.017)	(0.015)	(0.020)
INF	-0.026*	0.026*	0.014	0.004	0.067***
	(0.014)	(0.015)	(0.013)	(0.012)	(0.020)
OPEN	-0.003*	-0.002	0.004*	-0.002	0.004
	(0.002)	(0.002)	(0.002)	(0.001)	(0.003)
VA			0.033***		0.042***
			(0.007)		(0.010)
PV			-0.012*		-0.033***
			(0.006)		(0.009)
CC			-0.021***		-0.042***
			(0.007)		(0.009)
GDPPC	0.689***	0.913***			1.760***
	(0.159)	(0.212)			(0.364)
GE		-0.015**			
		(0.006)			
Time Dummies	Yes	Yes	Yes	Yes	yes
AR(1)	0.042	0.083	0.072	0.065	0.071
AR(2)	0.231	0.437	0.658	0.382	0.640
Sargan Test	75.37	69.34	78.62	77.25	74.36
J –Test (Hansen)	0.25	0.26	0.49	0.57	0.43
Observations	113	113	113	113	113
Number of Groups	45	45	45	45	45
No. of Instruments	32	32	27	32	29

Note: Standard errors are shown in parentheses, ***Significant at 1 percent; **Significant at 5 percent, *Significant at 10 percent. GDP growth and GDP per capita are measured in logs.
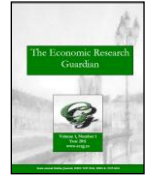
6. Conclusion

Attracting more FDI is one of the key issue of developing and emerging economies. The present study attempts to examine the relationship between ease of doing business ranking and FDI inflows of emerging countries over the period 2006 – 2018. The results shows that there is a significant relationship between DBR and FDI inflows. Using GMM analysis for a large set of emerging countries from 2006 to 2018, the present study shows that improvement in DBR increases FDI into a country. Doing business reforms also found to have a positive and significant effect on FDI inflows. The findings of the study implies ease of doing business acts as an important determinant of FDI inflows rather than any other macroeconomic determinants or governance indicators. The findings also implies that the ease of doing business influence the overall investment of a country. The findings are in consistent with that of Jayasuriya (2011); Corcoran (2014). From a policy perspective, a positive and significant impact of DBR on FDI calls for a more relaxed institutional and regulatory environment to improve FDI inflows of emerging countries. Thus policies to enhance business friendly regulations should be enacted to attract more multinational companies.

This study is not free from limitations. The current study has not accounted for the possibility of active involvement of multinational companies is formulation of various regulations. Thus, future research can focus on the process of governance and regulation changes by identifying the role of various multinationals. Further, future research can also look at the interactive effect of various regulatory indicators across various sectors.

Acknowledgements

References

Alesina A, Ardagna S, Nicoletti G, Schiantarelli F (2005). Regulation and investment. *Journal of the European Economic Association*. 3(4): 791–825.

Arellano M., Bond. S (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *Review of Economic Studies*. 58(2): 277–297.

Asiedu E (2002). On the determinants of foreign direct investment to developing countries: Is Africa different? *World Development*. 30(1): 107–119.

Asiedu E (2006). Foreign direct investment in Africa: The role of natural resources, market size, government policy, institutions and political instability. *The World Economy*. 29(1): 63–77.

Bailey N (2018). Exploring the relationship between institutional factors and FDI attractiveness: A meta-analytic review. *International Business Review*, 27(1): 139–148.

Barseghyan L (2008). Entry costs and cross-country differences in productivity and output. *Journal of Economic Growth*. 13(2): 145–167.

Blonigen B, Davies R, Waddell G, Naughton H. (2007). FDI in space: Spatial autoregressive relationships in foreign direct investment. *European Economic Review*. 51(5): 1303–1325.

Blonigen B, Piger J (2011). Determinants of Foreign Direct Investment. NBER Working Paper. Cambridge, MA: National Bureau of Economic Research. 16704.

Boateng A, Hua X, Nisar S, Wu J (2015). Examining the determinants of inward FDI: Evidence from Norway. *Economic Modelling*. 47:118-127.

Borrmann A, Busse M, Neuhaus S (2006), Institutional Quality and the Gains from Trade. *Kyklos*. 59(3): 345–68

Bruhn M (2011). License to sell: the effect of business registration reform on entrepreneurial activity in Mexico. *The Review of Economics and Statistics*. 93(1): 382–386.

Busse M, Hefeker C (2007). Political risk, institutions and foreign direct investment. European *Journal of Political Economy*. 23(2): 397–415.

Carr D, Markusen J, Maskus K (2001). Estimating the knowledge-capital model of the multinational enterprise. *The American Economic Review*. 91(3): 693–708.

Contractor FJ, Dangol R, Nuruzzaman N, Raghunath S (2020). How do country regulations and business environment impact foreign direct investment (FDI) inflows? *International Business Review*, 29(2): 101640.

Contractor FJ, Nuruzzaman N, Dangol R, Raghunath S (2021). How FDI Inflows to Emerging Markets Are Influenced by Country Regulatory Factors: An Exploratory Study. *Journal of International Management*. 27(1), 100834.

Corcoran A, Gillanders R (2015). Foreign direct investment and the ease of doing business. *Review of World Economics*. 151(1): 103-126.

Djankov S, Freund C, Pham C (2010). Trading on time. *The Review of Economics and Statistics*. 92(1): 166–173.

Djankov S, McLiesh C, Ramalho R (2006). Regulation and growth. *Economics Letters*. 92(3): 395–401.

Daude C, Stein E (2007). The quality of institutions and foreign direct investment. *Economics and Politics*. 19(3): 317–344.

Eicher T, Helfman L, Lenkoski A (2011). Robust FDI determinants: Bayesian model averaging in the presence of selection bias. Working Papers. 110.

Freund C, Bolaky B (2008). Trade, Regulations, and Income. *Journal of Development Economics*. 87(2): 309-321.

Gastanaga V, Nugent J, Pashamova B (1998). Host country reforms and FDI inflows: How much difference do they make? *World Development*. 26(7): 1299–1314.

Gillanders R, Whelan K (2010). Open for business? Institutions, business environment and economic development. Working Papers. School Of Economics, University College Dublin. 201040.

Hall RE, Jones CI (1999). Why do some countries produce so much more output per worker than others? *Quarterly Journal of Economics*. 114(1): 83–116.

Hitt MA (2016). International strategy and institutional environments. *Cross Cultural & Strategic Management*. 23(2): 206–215.

Hossain MT, Hassan Z, Shafiq S, Basit A (2018). Ease of Doing Business and Its Impact on Inward FDI. *Indonesian Journal of Management and Business Economics*. 1(1): 52–65.

Jayasuriya D (2011). Improvements in the World Bank's ease of doing business rankings: Do they translate into greater foreign direct investment inflows? Policy Research Working Paper. Washington, DC: World Bank. 5787.

Jeong H-G (2014). The Determinants of Foreign Direct Investment in the Business Services Industry. *International Economic Journal*. 28 (3): 475-95.

Ketteni E, Kottaridi C (2019). The impact of regulations on the FDI-growth nexus within the institution-based view: A nonlinear specification with varying coefficients. *International Business Review*. 28(3): 415-427.

Klapper L, Laeven L, Rajan R (2006). Entry regulation as a barrier to entrepreneurship. *Journal of Financial Economics*. 82(3): 591–629.

Lawless M (2009). Tax complexity and inward investment. Research Technical Papers 5/RT/09, Central Bank of Ireland.

Lucas R (1993). On the determinants of direct foreign investment: Evidence from East and Southeast Asia. *World Development*. 21(3): 391–406.

Pica G, Rodríguez Mora J (2005). FDI, Allocation of Talents and Differences in Regulation. Economics Department, University of Salerno, mimeo.

Uddin M, Chowdhury A, Zafar S, Shafique S, Liu J (2019). Institutional determinants of inward FDI: Evidence from Pakistan. *International Business Review*. 28(2): 344-358.

The World Bank. Doing Business (2021). http://www.doingbusiness.org/, accessed in 2021.

The World Bank. World Development Indicators (2021). http://data.worldbank.org/data-catalog/world- development-indicators, accessed in 2021.

Appendix

Appendix I - Robustness Check: DBR and FDI Inflows (Dependent Variable: FDI Stock)

VARIABLES	(1)	(2)
DBR	-0.007**	
	(0.003)	
DBR reforms		0.170***
		(0.010)
	(0.027)	(0.014)
GDPPC	1.542***	1.676***
	(0.241)	(0.045)
REER	0.138***	0.136***
	(0.024)	(0.010)
INF	0.056**	0.010***
	(0.022)	(0.002)
OPEN	-0.005	-0.008***
	(0.003)	(0.001)
Time dummy	Yes	Yes
Observations	482	482
Number of groups	49	49

Note: Standard errors are shown in parentheses, ***Significant at 1 percent; **Significant at 5 percent, *Significant at 10 percent. GDP growth and GDP per capita are measured in logs.