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INSTITUTION AND FOREIGN DIRECT INVESTMENT (FDI): SURVEY OF THE LITERATURE

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Abstract

In this paper, I survey the current literature relating to the relationship between the institution and foreign direct investment (FDI). In doing so, I have comprehensively analyzed two most recent paper written by Busse and Hefeker (2007) and Daude and Stein (2007). Both articles have used a difference econometric methodology, explanatory variables and institutions measurement in order to link whether institution variables matter or not in influencing the behaviour of foreign investors, in particular from Multinational Enterprise (MNE's). Based on these papers, they found that a better institution in term of government stability, investment profile, internal and external conflicts, law and order, democratic accountability and bureaucratic quality are pre-requisite for promoting the investment from MNE's. Therefore, the policy makers have to maintain a sound institution in order to take advantage the inflow of foreign investment. However, I argued that a sound institution is an inadequately in explaining the behaviour of MNE's. A good interaction between institutional variables and other macro variables such as a well-developed financial system, favourable growth performance, high trade openness, excellent infrastructure development, low country risk as well as an attractive fiscal and monetary incentive are also vital in stimulating the inflow of FDI to the host countries.

Keyword: Institution; Foreign Direct Investment (FDI); Econometric Modelling

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1. Introduction

It is generally accepted that Foreign Direct Investment (FDI) has a favourable impact as a key driver in promoting long run economic growth, particularly for the less-developed countries (LDC's), which have experienced shortage capital accumulation for their development. Indeed, most of the LDC's who have effectively attracted more FDI have undergone a persistency in their economic growth. Thus, most of the LDC's are highly dependent on FDI as an engine of economic growth and have been trying to attract foreign investors particularly from Multinational Enterprises (MNE's) by offering various fiscal and monetary incentives. As a result, most of the LDC's have been competing with each other in order to attract investment from MNE's, particularly the foreign investors from the advanced nations.

There is consensus among academic economists that FDI has a positive effect on economic growth. Therefore, a significant effect of FDI on economic growth has motivated many researchers to study the main factors which determined the inflow of FDI across countries. It is well-documented in the literature that the most important factors which determined the inflow of FDI are domestic market size, trade openness, cost of labour, persistency in economic growth as well as low tax and tariff. However, most of the prior studies have not taken into account the role of institutions on FDI. Meanwhile, since the 1990's the role of institutions become more important as a main factor in stimulating the foreign investors. Quere et al. (2007) have stated three reasons why the quality of institutions may matter for attracting FDI. First, by raising productivity prospects, good governance infrastructure may attract foreign investors. A second reason is that poor institutions can bring additional costs to FDI (for example, the case of corruption). A third reason is due to the sunk cost which FDI is especially vulnerable to any form of uncertainty, including that stemming from poor government efficiency, policy reversals and weak enforcement of property rights and legal system in general. For that reason, by maintaining a quality institution it can attract more investment, which in turn can expedite the economics growth process.

Schmieding (1993) has stated that institutions encompass not only bureaucracies and administration but also, more importantly, the entire body of formal laws, rules and regulations as well as the informal conventions and patterns of behaviour that constitute the non-budget constraint under which economic agents can pursue their own individuals ends. In addition, the quality of institutions are closely related to reducing information asymmetries, as a high quality institution channels information about market conditions, goods and participants, which in turn can encourage investment, either domestic or foreign. Indeed, the deeper understanding of the role of institutions in stimulating the inflow of FDI is pivotal for the developing countries in order to design an appropriate FDI-friendly policy. The empirical relationship between institutions and FDI has produced a mixed result. For example, Brunetti and Weder (1998) have found that there is a negative link between institutional uncertainty and private investment. In comparison, Lee and Mansfeild (1996) have found a positive relationship between FDI and intellectual property protection. Wei (1997, 2000) also found that the uncertainty about corruption has negative effects on FDI location. This is due to the fact that corruption will incur the additional cost of doing business because the investors have to bribe official in order to get the licenses and permits.

In this paper, I survey the current literature relating to the relationship between institution and foreign direct investment (FDI). Based on my best knowledge, so far there is no study has been done for surveying the literature relating to FDI and institution. This area

of research has examined empirically by several prior studies, for example; Brunetti and Weder (1998), Lee and Mansfield (1996), Brunetti and Weder, (1998) Wei (1997, 2000) and Quere et al. (2007). However, the focus on this paper is to compare the two most recent articles written by Busse and Hefeker (2007) and Daude and Stein (2007), which discusses comprehensively the role of institution on FDI. Both articles have used a difference econometric methodology, explanatory variables and institutions measurement in order to link whether institution variables matter or not in influencing the behaviour of foreign investors particularly MNE's, in order to make the investment decision.

The structure of this paper is organized as follow. Section 2 analyzed the relationship between institution and FDI by comparing the article written by Busse and Hefeker (2007) and Daude and Stein (2007). Section 3 discusses some comments and suggestion about the related article. Finally, section 4 concludes.

2. Institution and FDI : Some Stylized Facts

2.1 Motivation and Contribution

Both articles attempt to investigate whether the quality of institutions matter or not in influencing the inflow of FDI by utilizing the cross country analysis (cross section and panel data technique). This study is vital because a better institution will attract more foreign capital, which in turn can accelerate long-run economic growth particularly in LDC's. In fact, any changes in the institutions variable could affect the investment decision by the MNE's. Various measurements of institutional variables have been tested in order to examine their links on FDI. The paper is also quite difference from the existing literature because most of the prior studies have focused mainly on the effect of corruption or political risk on FDI.

2.2 Data and Variables

FDI Data

Daude and Stein (2007) have used the bilateral FDI stocks from the UNCTAD FDI database which the dataset comprises FDI from 34 source countries (developed countries) to the 152 host countries for the period from 1982 to 2002. In contrast, Busse and Hefeker (2007) have utilised FDI per capita (net inflow in current US dollars) for the period 1984 to 2003 for a sample of 83 developing countries.

Institution Variables

Both articles have utilised difference measurement for institutional variables. Daude and Stein (2007) have used a broader set which comprises three sets of institutional variables based on expert's report, survey and combination of both in their study. First, they used the set of institutional variables which developed by Kaufman et al. (1999a). There are six difference institution indicators which represent a difference dimension of governance such as *voice and accountability, political stability and lack of violence, government effectiveness, regulatory quality, rule of law and control of corruption*. This clustering of institutional variables is crucial in order to identify whether some dimension of governance matters or not in attracting the FDI location. Second, political risk where the variables can be found from International Country Risk Guide (ICRG) database. There are several indicators that have been chosen such as *risk of expropriation, government stability, democratic accountability, law and orders and corruption*. Third, the institutions indicators which also collected from the World Business Environment Survey (WBES) conducted by the World Bank. This survey

has focused on the quality of the courts, quality of the central government, corruption and change in law and regulations.

Conversely, Busse and Hefeker (2007) have employed 12 political risk and political institutions indicators which are taken from ICRG provided by Political Risk Services (PRS) Group to gauge the quality of political institutions. The variables are *government stability, socio-economic pressure, investment profile/risk, internal conflict, external conflict, level of corruption, the influence of military in politics, religious tension, law and order, tension among ethnic groups, democratic accountability of the government and the strength and quality of bureaucracy*. Each indicator is scaled from 0 to 12 with the highest value indicating better institution and less political risk. All the 12 indicators are expected to be positively related on FDI flows because less political risk and better political institution can attract foreign investment due to a lower risk premium.

Control Variables

Besides the role of institution on FDI, several others explanatory variables have also been considered in the studies. Busse and Hefeker (2007) have taken into account four control variables in their regression model such as Gross National Income per capita, the real growth rate of GNI per capita in percent, the ratio of import and export to GDP and GDP deflator as a proxy for inflation. In comparison, Daude and Stein (2007) have used seven controls variables in their model (*refer to Equation 1 for detailed explanation*). The selections of the control variables are also consistent with the theoretical underpinning and the determinants of FDI literature.

2.3 Econometric Methodology/Model

Most of the empirical studies of FDI determinants usually utilized the gravity model. Therefore, Daude and Stein (2007) have employed a benchmark model proposed by Carr et al. (2001) and added the measurement of institutional quality in the model. The empirical model is as follows:

$$\begin{aligned} \ln(FDI_{ij}) = & \beta_0 + \beta_1 SUMGDP_{ij} + \beta_2 SQDIFGDP_{ij} + \beta_3 ADIFGDP_{ij} \times ADIFSKILL_{ij} \\ & \beta_4 ADIFSKILL_{ij} + \beta_5 \ln(Distance_{ij}) + \beta_6 TARIFF_j + \beta_7 TARIFF_j \times SQDIFSKILL_{ij} \\ & + \beta_8 Institution_j + \varphi_i + \varepsilon_{ij} \end{aligned}$$

[1]

Where,

FDI is the outward stock of FDI from country i (source) in country j (host), SUMGDP is the sum of the logs of the host country and the source country GDPs, SQDIFGDP is the squared difference in the GDPs of the host and source country, ADIFGDP is the absolute difference between them, ADIFSKILL is the absolute difference between the countries endowment of skilled labour and SQDIFSKILL is the corresponding squared difference. Distance is the great circle distance between the countries' capital. Trade costs in the host are measured by the average tariff level between 1990 and 2000, φ_i is the source country dummy in order to capture the effects of possible systematic differences in the FDI.

By using the benchmark model in Equation 1, Daude and Stein (2007) have estimated several models such as cross section OLS, instrumental variables (IV), robustness test and a variety of panel data estimations such as pooled OLS, random effects, fixed effects, Poisson regressions, Prais-Winsten, Generalised Method of Moment (GMM) and GEE.

On the contrary, Busse and Hefeker (2007) have employed three difference models namely cross country analysis, fixed effect model and GMM models proposed by Arellano-Bond (1991). Specifically, the benchmark regression models are the following:

Model (Cross Country Analysis: Average 1984-2003)

$$\ln FDI_i = \beta_0 + \beta_1 \ln GNI_i + \beta_2 \ln GROWTH_i + \beta_3 \ln TRADE_i + \beta_4 \ln INFLATION_i + \beta_5 REGIONALDUMMY + \beta_6 POLITICAL_i + \varepsilon_i \quad [2]$$

Model Fixed-Effect (unbalanced panel)

$$\ln FDI_{it} = \beta_0 + \beta_1 \ln GNI_{it} + \beta_2 \ln GROWTH_{it} + \beta_3 \ln TRADE_{it} + \beta_4 \ln INFLATION_{it} + \beta_5 POLITICAL_{it} + \varepsilon_{it} \quad [3]$$

Model Generalised Method of Moments (GMM) or instrumental variables (First Difference)

$$\Delta \ln FDI_{it} = \beta_0 + \beta_1 \Delta \ln FDI_{it-1} + \beta_2 \Delta \ln GNI_{it} + \beta_3 \Delta \ln GROWTH_{it} + \beta_4 \Delta \ln TRADE_{it} + \beta_5 \Delta \ln INFLATION_{it} + \beta_6 \Delta POLITICAL_{it} + \Delta \varepsilon_{it} \quad [4]$$

Where, GNI is Gross National Income per capita in Purchasing Power Parity (PPP) US Dollars to control for the market size, GROWTH is the real growth rate of GNI per capita as a proxy for market growth and potential, TRADE is the ratio of imports and exports to GDP to control for openness to trade, INFLATION is the GDP deflator as a proxy for macroeconomic policy inadequacies and POLITICAL stand for one of the 12 indicators for political risk and institution. In addition, from Equation 4, ΔFDI_{it} is the first difference of FDI flows and ΔFDI_{it-1} is the first difference lagged of FDI flows as an instrumental variable. Therefore, to avoid the existence of multicollinearity, the political risks variables are added one by one to the benchmark regression (*Equation 2 – Equation 4*).

2.4 Empirical Result [Refer to Appendix 1-2 for the summary of empirical result]

Cross-Section OLS Result

Daude and Stein (2007) found that OLS model without including any institution variables has explained approximately 71 percent of the total variation in FDI stocks. The significant explanatory variables are the sum of GDPs, the squared difference of GDPs, distance and the absolute difference in factor endowments. In addition, distance has a negative effect on bilateral FDI, meanwhile the sum of GDPs has a significant positive effect. Meanwhile, the empirical result which have taken into account the roles of institution variables have shown a little improvement in R^2 . For instance, the model with institution variable has explained between 71% up to 75% of the total variation in FDI. In addition, the results also depend on the specific dimension of institution. *Voice and accountability, political stability, rule of law and control of corruption* have no significant impact on FDI, whereas the *regulatory quality*

and government effectiveness have a positive and significant effect on the volume of FDI. The largest effect is the *regulatory quality* where a one standard deviation increased in this dimension of governance would increase FDI stocks by a factor of 2. *Government effectiveness* has slightly lower effect where one standard deviation improvement would imply an increased FDI stocks by a factor 1.4%. Besides that, model with institution (six regressors simultaneously) have shown that a negative sign of *voice and accountability* (but not statistically significant) and *rule of law* (statistically significant). Others institutional variables such as *regulatory quality, government effectiveness and political stability* have the most relevance governance dimension in explaining the FDI inflows.

In comparison, Busse and Hefeker (2007) are found that the model without institution has explained 67% of the total variation in FDI inflows. All the control variables except inflation are statistically significant to explain the variation of the FDI inflow. Meanwhile, after taking into account the institutional variables is it clearly stated that a little improvement in R^2 that is between 67% to 70%. The results also show that only three out of twelve indicators of political risk have a positive and significant impact on FDI inflows, namely *government stability, religious tension and democracy*. This finding clearly stated that those countries with a lower political risk and better institutions which related to the three indicators received more FDI per capita in the period 1984 to 2003.

Result of Panel Data

Daude and Stein (2007) have employed a variety of panel data estimation, whereas Busse and Hefeker (2007) have utilized two panel data models namely the fixed effect model and Arellano-Bond dynamic panel data estimation. Busse and Hefeker (2007) have found that all control variables have the expected sign and are statistically significant at the 1% and 5% level, except for trade which has the expected positive sign but is not statistically significant. In addition, the institutional variables that are *government stability, investment profile, internal and external conflicts, law and order, democratic accountability and bureaucratic quality* are positively and statistically significant at least at the 10% level connected with the FDI inflows. In fact, the results also indicate that *government stability* and *democratic accountability* are showed that foreign investors are also highly sensitive due to the changes in political stability and the framework in which government operate. In addition, fundamental democratic rights like civil liberties and political rights do matter to MNE's operating in developing countries. Similarly, MNE's appear to be concerned about internal and external conflicts that affect the host country because the effect on economic and political stability. The occurrence of these conflicts such as civil wars, trade sanctions, cross border conflicts and all-out war will create uncertainty in the future. Thus, investors increase the risk premium of investment projects, which in turn reduces overall investment as well as reduces foreign capital. Busse and Hefeker (2007) also employed the dynamic panels data proposed by Arellano and Bond (1991) namely GMM estimator by using the first difference and instrument variables. The result shows that *government stability, internal and external conflict, corruption, law and order, ethnic tensions, democratic accountability and bureaucratic quality* of the government matter for the investment decision of multinational as the respective coefficient are positive and statistically significant. The strongest significant level is 1%, for *government stability, internal and external conflict* and *law and order*. The level of corruption is also significant in influencing the MNE's. Ethnic is also significantly associated with FDI in a dynamic setting, and investment profile is no longer significant in the GMM dynamic regression analysis.

In contrast, Daude and Stein (2007), have employed various panel data estimation in order to investigate the relevance of institution variables in attracting the FDI inflows. For instance, they estimated a various panel data analysis such as pooled OLS, random OLS, fixed effect, Poisson regression, Prais-Winsten, Arellano-Bond GMM estimator and panel-corrected standard errors GEE. The entire model indicated that the quality of institutions which is proxied by *government stability* (one of the ICRG component) has positively and significantly influences the inflow of FDI. In short, based on panel data evidence it is clearly stated that a significant and pivotal impact of institutions on FDI.

Instrumental Variables (IV) Estimation

One of the main difference between Daude and Stein (2007) and Busse and Hefeker (2007) is about the IV regression. Daude and Stein (2007) have utilised the instrumental variable techniques whereas Busse and Hefeker (2007) do not take into account the IV regression in their studies. Daude and Stein (2007) have stated that the standard cross section regression model could potentially be biased because of an endogeneity problem. The quality of institutions might be endogenous for two reasons. First, once the MNE's already invested in particular countries, they might be demand for better institutions. Second, there is potentially bias expert report that a better score on the quality institution because they observed a high level of FDI. Therefore, the two difference sets of instrument are used in the study. Firstly, to instrument *voice and accountability* as well as *political stability* this study used an index of ethno-linguistic fragmentation (ELF) from Easterly and Levine (1997) and the average number of homicides per 100,000 inhabitants during the 1990s. The second group of variables clustered in *government efficiency* which used the fraction of population that speak English and the fraction of the population that speak a western Europe language from Hall and Jones (1999). Thus, this study employed a set of dummy variables for Common Law, French Law, German Law and Scandinavian Law as instruments. The result of IV estimations shown that only *government effectiveness* and *regulatory quality* have a significant effect on FDI stocks, while the remaining variables are not significant. Similarly, for the clustered institutional variables the result also indicates that *government efficiency* has a positive and significant effect on FDI, while both *political stability* and *freedom* have a negative effect.

The quality of institutions has a significant effect and is economically important in influencing the location of FDI. Meanwhile, not all the dimensions of institutional framework have the same direct importance for the MNE's decisions. Regulatory framework and the effectiveness of the government are the most important factors to attract the investors. The results also reveal no evidence of a direct effect of civil liberties and political violence in promoting FDI. In fact, the results are robust to difference estimation methods, definitions of the dependant variable and specifications. Some institutional variables have a greater impact on FDI than others. Especially institutions that create predictability regulatory and legal framework as well as policy stability are the most important. Overall, the empirical results clearly stated that the institutional variable has a significant and economically important impact on the location of FDI. Therefore, it is very important for the host countries to maintain a high quality regulatory framework and the effectiveness of the government because these factors are the most sensitive aspect for foreign investors.

3. Comments and Suggestions

Meanwhile, there are several comments for both articles. Firstly, the both article just considered several institution variables and did not concerned other important institutions variables which can also influence the behaviour of foreign investment. For instance, a good property right protection, a good quality of education system, no risk of expropriation and dimensions of market efficiency are also important and should be considered precisely by the government. In fact, the role of other institution variables such as social capital measures (*civil liberties, economic freedom and civic community*), others social characteristics (*ethno linguistic fractionalisation and social development and capability*) and political instability measurement (*propensity for government change and duration of civil wars*) are also important in influencing the behaviour of foreign investors.

Second, a better institutional variable is an inadequately in explaining the behaviour of MNE's. Therefore, a good interaction between institutional variables and other macro variables such as a well-developed financial system (financial deepening), favourable growth performance, high trade openness, excellent infrastructure development, low country risk as well as attractive fiscal and monetary incentive are also vital in order to attract the inflow of FDI to the host countries. In fact, all these variables are complementary to each other. For instance, quality of institutions has no meaning if the host countries (particularly LDC's) do not have a well-developed financial system, excellent infrastructure and others sound environment in order to maintain the inflow of foreign investment. Both article written by Busse and Hefeker (2007) and Daude and Stein (2007) have not taken into account the role of interaction effect between institution and other macroeconomics variables on FDI in their model. Therefore, the further study should considered to test the hypothesis that the interaction between institutional quality and others macro variables has a separate influence on the FDI inflow to the host countries.

Thirdly, the issue of difference measurement of institution should be considered precisely by the host countries because difference measurement indeed produces difference results. This will produce a robust result because the government does not know which one of the institutional variables is essential in order to attract FDI. Hence, to get a clear picture, the future study should be conducted at the firm level by conducting the survey to the MNC's. This survey can capture how MNE's are sensitive to the institutional variables in particular country in order to invest or to maintain their investment in the host countries. In fact, the result from the survey can be used by the government in order to improve the quality of institutions continuously. The host countries government can also focus more on the particular institutional variables which are very sensitive for the investment decision by foreign investors.

Finally, in terms of econometric terminology, the future study should also considered the latest statistical analysis of dynamics panel data, namely the mean group (MG) and pooled mean group (PMG) estimators proposed by Pesaran and Smith (1995) and Pesaran et. al (1999). These methods are appropriate to the analysis of dynamics panels that have both large time and cross sectional data sets. In fact, the both techniques have the advantage to capture the long run equilibrium and the possible heterogeneous dynamics adjustment process. In addition, the future study can also consider separating the data sets into several categories of countries such as high, middle and low-income in order to investigate the heterogeneity effect of institutional variables on FDI.

4. Conclusions

In conclusion, there is without a doubt that appropriate institution (better quality of institution) plays a pivotal role in stimulating the inflow of foreign investment, particularly in developing countries which have experienced scarcity of capital, in order to generate their long term economic growth. Therefore, by maintaining a better quality of institution it can create an environment conducive in attracting the persistent inflow of foreign capital from MNE's. Both the article written by Daude and Stein (2007) and Busse and Hefeker (2007) have explained extensively the roles of institutions aspect in promoting the inflow of FDI. They found that most of the institutional variables positively and significantly influence the behaviour of foreign investment. In fact, in the long run for those countries which highly dependent on FDI, they should be considered several aspect of institutions quality such as government stability, regulatory quality, corruption and democratic accountability in order to attract continuously the inflow of foreign investment.

It is true to say that a better quality of institutions must be associated with higher FDI, and subsequently will foster more economic growth in the host countries. As a one of the main channel of economic growth, it seems that FDI has played a favourable role in stimulating growth in many countries. In short, better institutions will attract more FDI which in turn will generate more growth in the long run. In fact, most of the empirical studies have concluded that FDI positively and significantly influences economics growth. Therefore, the government particularly for the LDC's has to implement a *FDI-friendly policy* in order to attract as well as to maintain the inflows of FDI. This is very important due to the fact that FDI is not volatile and have many spill-over effects such as technology transfer, creating new job opportunity as well as access to new markets.

References

- Arellano, M. and Bond, D. 1991. Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *Review of Economics Studies* 58, 277-297.
- Brunetti, A. and Weder, B. 1998. Investment and institutional uncertainty : a comparative study of difference uncertainty measures. *Weltwirtschaftliches Archiv* 134, 513-533.
- Busse, M. and Hefeker, C. 2007. Political risk, institution and foreign direct investment. *European Journal of Political Economy*, 23, 397-415.
- Carr, D.L., J.R. Markusen, and K.E. Maskus. 2001. Estimating the knowledge-capital model of the multinational enterprise. *American Economic Review*, 87, 520-544.
- Daude, C. and Stein, E. 2007. The quality of institutions and foreign direct investment. *Economics & Politics*, vol. 19, 317-344.
- Easterly, W. and Levine, R. 1997. Africa's growth tragedy: policies and ethnic divisions. *Quarterly Journal of Economics* 112, 1203-1250.
- Hall, R.E. and Jones, C.I. 1999. Why do some countries produce so much more output per worker than others? *Quarterly Journal of Economics* 114, 83-116.
- Kaufmann, D., A. Kraay, and P. Zoido-Lobaton. 1999a. Governance matters. *World Bank Policy Research Working Paper*, 2196, Washington, DC.
- Lee, J-Y. and Mansfield, E. 1996. Intellectual property protection and U.S foreign direct investment. *Review of Economics and Statistics* 78, 181-186.

- Quere, B.A., Coupet, M. and Mayer, T. 2007. Institutional Determinants of Foreign Direct Investment. *The World Economy*, 764-782.
- Pesaran, M. H. and R.P. Smith. 1995. Estimating long-run relationship from dynamics heterogeneous panels. *Journal of Econometrics* 68:1, 79-113.
- Pesaran, M. H., Y. Shin and R.P. Smith. 1999. Pooled mean group estimation of dynamic heterogeneous panels. *Journal of American Statistical Association* 94:446, 621-634.
- Schmieding, H. 1993. From plan to market: on the nature of the transformation crisis. *Weltwirtschaftliches Archiv* 129, 216-253.
- Wei, S-J. 1997. Why is corruption so much more taxing than tax? Arbitrariness kills. NBER Working Paper 6255.
- Wei, S-J. 2000. How taxing is corruption to international investors? *Review of Economics and Statistics* 82, 1-11.

Summary of Empirical Result: The Role of Institution on Foreign Direct Investment

Institutional variables	Cross Section OLS	IV (TSLS)	Panel Data Estimates				
			Pooled OLS	Random Effect	Fixed Effect	GMM	GEE
Voice & Accountability	0.022 (0.10)	-2.042 (1.23)	-	-	-	-	-
Political Stability	0.251 (1.25)	0.143 (0.31)	-	-	-	-	-
Government Effectiveness	0.355 (1.93)*	0.886 (2.10)**	-	-	-	-	-
Regulatory Quality	0.702 (3.38)***	2.098 (2.96)**	-	-	-	-	-
Control of Corruption	0.815 (1.00)	0.546 (1.41)	-	-	-	-	-
Rule of Law	0.129 (0.70)	0.572 (1.26)	-	-	-	-	-
Political Stability & Freedom	-0.379 (1.23)	-1.835 (2.46)**	-	-	-	-	-
Government Efficiency	0.635 (2.05)**	2.303 (2.95)***	-	-	-	-	-
Government Stability	-	-	0.153 (2.37)**	0.200 (5.80)***	0.232 (6.58)***	0.121 (2.12)***	0.208 (5.27)***

Note: Absolute robust White-corrected t-statistics in parentheses

* Significant in 10%, ** significant in 5%, *** significant in 1%. The coefficient of control variables not include in this table.

Dependent variable is Foreign Direct Investment (FDI)

Source: Daude & Stein (2007)

Summary of Empirical Result: The Role of Institution on Foreign Direct Investment

Institutional Variable	Econometric Models		
	Cross-Country Analysis, average 1984-2003 ^a	Panel analysis, country fixed-effect, 1984-2003 ^b	Arellano-Bond dynamic panel-data estimation, 1984-2003 ^c
Government Stability	0.27 (1.66)*	0.17 (4.04)***	0.18 (2.6)***
Socio-economics indicators	0.1 (0.61)	-0.06 (-0.98)	0.01 (0.09)
Investment profile	0.92 (0.42)	0.15 (2.77)***	-0.07 (-0.83)
Internal conflict	0.05 (0.69)	0.07 (1.79)*	0.15 (2.86)***
External conflict	0.16 (1.54)	0.15 (3.37)***	0.14 (2.47)***
Corruption	-0.04 (-0.35)	0.06 (1.08)	0.12 (1.79)*
Military in politics	0.02 (0.39)	0.02 (-0.56)	0.13 (1.28)
Religious tensions	0.13 (2.01)**	0.05 (1.03)	0.07 (1.07)
Law and order	-0.00 (-0.05)	0.09 (2.05)**	0.14 (2.53)***
Ethnic tensions	-0.01 (-0.21)	0.04 (0.97)	0.12 (2.09)**
Democratic accountability	0.14 (2.29)**	0.14 (3.53)***	0.09 (1.89)*
Quality bureaucracy	0.07 (1.27)	0.08 (2.06)**	0.12 (2.11)**

^{a,b} t-values are reported in parentheses; *** significant at 1% level, ** significant at 5% level, * significant at 10% level

^c z-values reported in parentheses, *** significant at 1% level, ** significant at 5% level, * significant at 10% level

The coefficient of control variables not include in this table. Dependent variable is Foreign Direct Investment

Source : Busse and Hefeker (2007)