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Institutional Quality and International Capital Flows to the Emerging Economies

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ABSTRACT

The international capital flows and the factors influencing them are imperative in this era of globalization and financial liberalization. This paper empirically examines the role of institutional quality in enticing foreign capital flows in emerging market economies (EMEs). A panel data set for the period 1995-2018 is used for the 24 major EMEs including Argentina, Bangladesh, Brazil, Chile, China, Czech Republic, Greece, Hungary, India, Indonesia, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Qatar, Romania, Russia, South Africa, Thailand, Turkey, Ukraine, and Venezuela. The system GMM estimation technique of dynamic panel data handling developed by Arellano-Bover (1995) and Blundell-Bond (1998) is employed for the estimation. The empirical results reveal that the FDI inflows are positively and significantly affected by the institutional quality, but the portfolio equity capital inflows are not influenced by any indicator of institutional performance. In other words, the Lucas paradox is explained by the institutional quality only in the case of FDI inflows. The study accomplishes that the policy aiming at attracting FDI flows by improving institutional infrastructure is expedient for the emerging economies.

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1. Introduction

The effect of capital flows on emerging market economies is imperative in this era of globalization. The influence of financial liberalization on capital movements across nations is mainly explained by the neoclassical theory. This theory explains that capital flow liberalization directs capital flows towards the capital deficient poor economies where the marginal product of capital is higher. The investors are incentivized to invest in the developing economies due to the higher marginal product of capital. The openness of financial flows encourages the profitability of investments through efficient allocation of financial resources (Kose, Prasad, Rogoff, & Wei, 2009; McKinnon, 1973; Shaw, 1973).

The history of capital flows to EMEs can be observed as an irregular process of successive waves of investment in different periods. An increasing and decreasing trend was seen in the data coincide with events such as the 2008 crisis, the Asian financial crisis and the Latin American debt crisis. According to IMF, net capital flows to the emerging markets and developing economies (EMDEs) increased from less than 1% of GDP in the early 1980s to approximately 4% of GDP in the 1990s. Net capital flows to EMDEs slowed from 2011 to 2016 but then increased in 2017. In dollar terms, this translated into a sharp increase in capital flows from less than $ 100 billion in the 1980s to a peak of $ 719 billion in 2010. Data from Equity Portfolio Fund Research (EPFR) suggests that flows to EMDEs slowed around the second quarter of the year. The atmosphere for the global capital flows has undergone substantial changes since the 1980s in both categories of flows.

The composition of net capital flows to low-income countries has changed over the years (Khan & Nawaz, 2010). The increase in FDI inflows in the 1980s and the 1990s was remarkable with FDI constituting the majority of total capital inflows. Other investment flows and portfolio flows showed greater volatility than that of FDI. Portfolio and other investments were two to four times more volatile than foreign direct investment. East Asian economies and other many developing countries focused much on attracting FDI during the late 1990s. The net portfolio investment flows continued to increase until the mid-1990s and then declined until 2000.

The behaviour of capital flows can be affected by the factors discussed in the following text.

1.1. Missing Factors of Production

The lack of capital flows from rich to poor economies can be viewed in terms of other factors, such as human capital or land that positively influence the returns to capital. However, these factors are generally unheeded by the orthodox neoclassical approach. For example, if human capital positively affects the returns to capital, less capital tends to flow to countries with lower human capital endowments. The general production function can be written as

$$Y_t = F(K_t, L_t)$$

Adding human capital or Solow residual

$$Y_t = A_t F(K_t, L_t)$$

Let Z_t denotes an omitted or missing factor that affects the production process

$$Y_t = A_t F(K_t, Z_t, L_t)$$

This study can write the above relation in Cobb Douglas production function form as

$$Y_t = A_t (K_t^{\alpha}, Z_t^{\beta}, L_t^{1-\alpha-\beta})$$

The economies with more financial and trade integration tend to receive more foreign capital (Prasad, Rogoff, Wei, & Kose, 2005; Zhuang et al., 2021). Faria and Mauro (2009) also find a Positive correlation between openness and private capital inflows. Odedokun (2003) explains that the foreign public debt burden dissuades foreign investors while the accumulation of foreign reserves attract them.

One view prevails that the capital flows depend on the distance between these countries and economic size (Papaioannou & Siourounis, 2008). The idea is well reflected through the gravity model. The abundance of natural resources leads to increase FDI inflows (Faria & Mauro, 2009; Fernández-Arias & Hausmann, 2001).

According to Acemoglu and Zilibotti (2001), the human capital and natural resources increase the marginal product of capital raising the returns to capital. Anderton, Di Mauro, and Moneta (2004) finds a positive correlation between schooling and FDI inflows. Government policies can affect capital flows. The fiscal policy affects capital flows through taxation while monetary policy influences foreign finances through inflation targeting and the exchange rate stabilization policies. The other direct capital controls also obstruct financial flows (Stockman, 1988).

1.2. Institutional Quality

1.2.1. Property Right Institutions

The quality of the host country institutions is a major determinant of foreign capital inflows. The institutional quality influences the investor's sentiment promoting portfolio and direct investment inflows. Edwards (2008); Shittu, Hassan, and Nawaz (2018) and Wei and Wu (2002) find that corrupt economies receive less FDI . Institutional quality is the most important determinant of capital flows (Alfaro, Kalemli-Ozcan, & Volosovych, 2008). Faria and Mauro (2009) explain that equity capital is more attracted towards the countries with better institutions. The poor institutional quality with bad law and order situation leaves the productive potentials unexploited (Parente, 1995). The poor law enforcement and weak property rights with other uncertain socio-economic conditions deter foreign investors and hinder the capital inflows (Kamran, Qaisar, Sultana, Nawaz, & Ahmad, 2020). Prasad et al. (2005) assert that the bureaucratic corruption and miserable condition of property rights discourage inflows of FDI (Azam, Nawaz, & Riaz, 2019). Acemoglu, Johnson, and Robinson (2005) and Alfaro, Kalemli-Ozcan, and Volosovych (2007) explain that the major cause of differences in capital flows across nations is the differences in property rights protection.

1.2.2. Financial Sector Institutions

The financial sector institutions also affect the capital flows. It is generally found that developed financial institutions encourage portfolio investment. The developed financial sector of an economy can properly manage the capital flows and direct the funds towards more lucrative investment ventures hence facilitating the faster growth of an economy. However, some empirical evidence is present on the supportive role of poor financial sector institutions for FDI (Albuquerque, 2003; Nawaz, Azam, & Bhatti, 2019).

1.3. International Capital Market Imperfections

1.3.1. Asymmetric Information

The global capital markets are subject to moral hazard, adverse selection, costly verifications and cumbersome government regulations. Some or all of these types of asymmetric information problems undermine the laissez-faire market conditions and obstruct capital flows.

Gertler and Rogoff (1990) explore that the North-South financial flows are contracted and probably reversed concerning the perfect-information benchmark. Ultimately, the occurrence of home bias and the absence of international portfolio diversification leads to disinvestment, especially in low-income countries.

1.3.2. Sovereign Risk

It is a *risk* that the government will not honor the loan agreement or refuse to pay back the loan. Due to an overlapping association with institutional quality and political risk, sovereign risk is also linked to credit risk. According to Wright (2006), smaller amounts of financial flows can be supported in equilibrium due to default risk. Reinhart and Rogoff (2004) argue that the sovereign risk can explain the Lucas paradox well.

The core objective of this study is to examine the effect of institutional quality on financial flows and the role of institutions in explaining the famous Lucas paradox. This work is significant

and unique in its nature because we are targetting the EMEs exclusively as they are the most crucial and hotely debated destinations with respect to capital flows.

2. Literature Review

In this study, we examine the relationship between institutional quality and financial flows to the EMEs. One of the most important puzzles of international economics is the Lucas paradox. It has received considerable attention during the last two decades (Obstfeld & Rogoff, 2000). Albeit, few studies have empirically tested the Lucas paradox e.g., (Alfaro et al., 2008; Atiq-ur-Rehman, Ditta, Nawaz, & Bashir, 2020; Clemens & Williamson, 2004) yet a plethora of applied research is present which investigates determinants of flows. We also examine that whether institutional quality explains the Lucas paradox or not.

The other strand of literature focuses on foreign and domestic factors responsible for capital flows (Calvo, Leiderman, & Reinhart, 1993; Chuhan, Claessens, & Mamingi, 1998; Fernández-Arias & Hausmann, 2001; Yang & Shafiq, 2020). The substantial explanations suggested by extant literature emphasize the role of push (external factors e.g., common shocks, global risk, global liquidity, global asset prices, etc.) and pull factors (internal factors e.g., macroeconomic policies, country-specific shocks, institutions, financial policies, etc.) that contribute to capital flows either as barriers or complements (Gossel & Biekpe, 2017). Moreover, the wide range of problems like lack of infrastructure, less educated and low skilled labor, bribe and corruption (Noshad, Amjad, Shafiq, & Gillani, 2019; Wei & Wu, 2002), prevailing across developing countries can partly explain this paradox of very modest capital flows from developed to developing countries. Surprisingly, over time this phenomenon has been intensified and capital is flowing to developed (capital-exporting) from poor (capital-importing) countries. Economies are diverging in terms of capital inflows.

Lucas paradox can be well explained by sovereign risk or default risk (Reinhart & Rogoff, 2004; Wright, 2006). Countries at the initial level of growth attract more capital flows (Gourinchas & Jeanne, 2013; Shafiq, Hua, Bhatti, & Gillani, 2021). A loose policy of industrial economies (IMF, 2011), differences in MPK, the openness of the financial sector and global interest rate (Goldin & Reinert, 2006) could be the justifications of the capital movements across the borders. The difference in capital returns between poor and rich economies is because of the sensitivity of emerging markets to the shocks related to their economic growth in the long-run. Expropriation risk is the main reason for the lack of FDI inflows to less developed countries (Akhtaruzzaman, Berg, & Hajzler, 2017).

Long-run macroeconomic and institutional factors of FDI inflows in the Middle East and North Africa were estimated by Jabri and Brahim (2015) through Panel Co-Integration Analysis for the period 1984-2011. Government stability, economic growth, internal and external conflicts, rule of law, exchange rate and openness are the long-run determinant of FDI.

Moreover, the Lucas Paradox is also discussed under the role of capital account liberalization for a sample of South Asian countries via using fixed effects panel regression (Martin, 2018). The empirics are in the favor of the neoclassical notion of capital flows. Capital flows from capital-scarce to capital-abundant countries when the capital account is not restricted. The degree of financial liberalization also matters for economic development.

Many studies have indicated that institutional quality is a crucial factor for the potential explanation of capital flows (Alfaro et al., 2008; Daude & Fratzscher, 2008; Faria & Mauro, 2009). According to Alfaro et al. (2008) the Lucas paradox can be well explained and resolved by adding measure (proxy) of intuitional quality. They run cross country (both developed and developing countries) regression and deduce that capital inflows (FDI and Portfolio investment) are mainly affected by the institutional quality. Other variables such as human capital, asymmetric information, distantness and capital market deficiencies contribute significantly in explaining the paradox. Interestingly, institutional quality fully acts as a lead explanation of the paradox. Here arises a question; does "institutional quality" provide a definitive answer to resolve this paradox? Unfortunately, this is not the case, the results of (Alfaro et al., 2008) are biased and not robust

to the outliers. In other words, the strong claim of resolving the paradox is driven by the outliers (Azémar & Desbordes, 2013). Faria and Mauro (2009) claims that institutional quality disappears the paradox just in developed countries because they have better institutions but in case of developing countries, Lucas paradox persists even in the long-run due to their fragile institutional quality status. Aluko and Ibrahim (2020) tested the Lucas paradox in Africa. The results show that the institutional quality does not fully account for the capital flows because income level remains significant and positive while institutional quality is controlled. The results are robust to the presence of endogeneity and outliers. According to Rehman, Khan, Khan, Pervaiz, and Liaqat (2020), the institutional quality can be a justification for the Paradox just in case of FDI flows. The portfolio equity flows are explained by the development of financial markets. Given that this major issue of Lucas paradox has not been completely explained by the existing studies because these are not robust to the alternative econometric techniques and model specifications. The present study attempts to provide fresh insights and potential explanations in this regard with a special reference to the emerging market economies. Qamruzzaman, Tayachi, Mehta, and Ali (2021) empirically examine the role of institutions in foreign inflows and innovation output using panel data from 22 countries over the period 1997–2018. They find that there is a supportive role of institutions in FDI inflows and innovation output.

3. Empirical Estimation and Data

This study aims to examine the role of institutions in international capital flows to emerging economies. According to the empirical literature, the quality of institutions is a major determinant of financial flows across countries. In addition, some other factors can also affect the flow of capital, including human capital and financial development. We use the following empirical specification for the estimation.

$$INF_{it} = \alpha + \beta INF_{i,t-1} + \gamma Z_{it} + \delta IQ_{it} + \varepsilon_{it}$$

Where log symbolizes natural logarithm, INF is the foreign capital inflows categorized as FDI inflows and portfolio equity capital inflows both as dependent variables in turn. The notation Z embodies control variables including gross secondary school enrollment as a proxy for human capital and gross fixed capital formation as a proxy for the physical capital. Private sector credit is used to capture the effect of financial sector development. The error term is denoted by ε_{it} and the alphabets i and t specify country and time respectively. The institutional quality (IQ) is represented by the International Country Risk Guide (ICRG) indicators.

The empirical analysis involves 24 emerging market economies including Argentina, Bangladesh, Brazil, Chile, China, Czech Republic, Greece, Hungary, India, Indonesia, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Qatar, Romania, Russia, South Africa, Thailand, Turkey, Ukraine, and Venezuela. The data on FDI inflows (% GDP) and Portfolio equity, net inflows (% GDP) come from the World Development Indicators (WDI) database provided by the World Bank. The secondary schooling years data is also obtained from the WDI. Gross secondary school enrollment, gross fixed capital formation (% GDP) and private sector credit (% GDP) are also collected from the WDI. The institutional quality data are taken from the International Country Risk Guide provided by the Political Risk Services (PRS) group. In the beginning institutional quality is measured by summing up three core variables (ICRG3) consisting of corruption, law and order, and bureaucratic quality. The fore-mentioned three indicators are also individually used in regressions to test the role of institutional quality in a more precise manner.

The system GMM technique for dynamic panel data developed by Arellano and Bover (1995) and Blundell and Bond (1998) is used for the estimation. It is a modified and more sophisticated estimation technique having the advantage of controlling any endogeneity problem in dynamic panel data estimation. The system GMM combines the standard set of equations in first difference with suitably lagged levels as instruments with an additional set of equations in levels with suitable lagged first differences as instruments (Bond, Hoeffler, & Temple, 2001).

4. Empirical Results

The summary statistics are presented below in table 4.1.

Table 4.1
Summary Statistics

Variable	No. of obs.	Mean	Std. Dev.	Min.	Max.
FDI	576	2.857	4.719	-41.457	54.648
Portfolio	559	2.071	6.860	-1.541	6.070
Schooling	482	83.603	18.342	22.511	120.65
Capital	482	23.112	6.187	11.073	45.690
Credit	567	53.113	39.788	1.380	166.504
ICRG-3	576	8.322	2.099	3	15
Corruption	576	2.543	0.846	1	5
Law & order	574	3.547	1.129	1	6
Bureaucratic quality	576	2.245	0.778	1	4

The GMM estimates using Arellano-Bover (1995) and Blundell-Bond (1998) estimation techniques are presented below in table 4.2 and table 4.3 respectively.

Table 4.2
FDI Inflows and Institutional Quality

	Dependent variable: FDI				
Regression	(1)	(2)	(3)	(4)	(5)
FDI (-1)	`0.137*	0.1270*	0.1345*	0.1254*	0.1295*
	(0.386)	(0.039)	(0.038)	(0.039)	(0.039)
Schooling	0.080**	0.073**	0.076 **	0.084**	0.063**
	(0.034)	(0.034)	(0.035)	(0.036)	(0.035)
Capital formation	0.059 (0.092)	0.033	0.035	0.0421	0.058
		(0.093)	(0.094)	(0.092)	(0.092)
Credit	-.0172	-0.007	-0.015	-0.007	-0.006
	(0.023)	(0.023)	(0.023)	(0.024)	(0.024)
Institutional quality		0.562**			
ICRG-3		(0.229)			
Corruption			0.771***		
			(0.469)		
Law & order				1.146**	
				(0.478)	
Bureaucratic Quality					1.759
					(0.909)**
Constant	-4.437	-8.409**	-5.590	-8.836**	-7.528**
	(3.315)	(3.686)	(3.394)	(3.772)	(3.706)
Observations	450	450	450	449	450
Groups	23	23	23	23	23

Note: The data sample ranges from 1995 to 2018. System GMM estimator for dynamic panel data by Arellano-Bover / Blundell-Bond is used for estimation. Standard errors are presented in parentheses; *, ** and *** indicate significance at 1%, 5% and 10% levels respectively.

Table 4.3
Portfolio Inflows and Institutional Quality

	Dependent variable: Portfolio Inflows				
Regression	(1)	(2)	(3)	(4)	(5)
Portfolio Inflows (-1)	-0.122	-0.125	-0.125	-0.126	-0.124
	(3.399)	(4.011)	(4.031)	(4.021)	(4.030)
Schooling	2.070	2.091	2.010	2.190	2.060
	(3.360)	(3.361)	(3.902)	(3.410)	(3.603)
Capital formation	4.110*	4.380*	4.280*	4.320*	4.020*
	(0.859)	(0.873)	(0.871)	(0.8662)	(0.865)
Credit	1.0902*	1.060*	1.060*	1.100*	1.100*
	(0.701)	(0.171)	(0.172)*	(0.171)	(0.170)
Institutional quality		-5.340			
ICRG-3		(3.940)			
Corruption			-7.380		
			(5.490)		
Law & order				-1.170	
				(5.190)	
Bureaucratic Quality					0.768
					(1.020)
Constant	4.270	8.320	5.410	8.750	2.610
	(3.431)	(4.100)**	(3.540)	(3.980)**	(4.09)
Observations	438	438	438	437	438
Groups	23	23	23	23	23

Note: The data sample ranges from 1995 to 2018. System GMM estimator for dynamic panel data by Arellano-Bover / Blundell-Bond is used for estimation. Standard errors are presented in parentheses; * and ** indicate significance at 1% and 5% levels respectively.

5. Interpretations of Empirical Results

The GMM estimates in table 4.2 are the results of regressions run by using FDI inflows as a dependent variable. The initial GDP per capita is positive and statistically significant at a one percent level in all regressions. The secondary school enrollment is significant at 5 percent level in all the regressions indicating that better education can provide a competent labor force that attracts FDI flows. However, credit and capital formation variables remain statistically insignificant.

All the ICRG institutional quality indicators are statistically significant at one percent level with the expected signs. In the overall sense, there is a strongly positive impact of better institutional quality on FDI inflows. The individual ICRG indicators comprising corruption, Law and order, and bureaucratic quality are also statistically significant. The corruption indicator is significant at 10 percent while Law and order, and bureaucratic quality indicators are both significant at 5 percent level. The empirical findings indicate that the superior institutions with minimum corruption, better law and order and efficient bureaucracy can attract more FDI flows. The evidence also supports the notion that FDI inflows are the long-term inflows and the investors consider the quality of institutions in the host country at the time of these long-term investments. The influx of FDI is positively influenced by the institutional quality as the efficient, transparent and well-functioning institutions incentivize the foreign investors. Dunning (1988) asserts that institutional quality is one of the imperative determinants of FDI inflows. FDI is the most stable and the least volatile capital flow which is very advantageous for the emerging market economies. A skimpy institutional structure obstructs FDI and acts as a tax by enhancing the overall FDI outlays or costs (Buchanan, Le, & Rishi, 2012). Foreign investors are reluctant to invest in the states with fragile governance and weaker institutional arrangements because they feel that their investment is insecure in the countries having lawlessness and corruption.

The GMM results in table 4.3 are the estimates with the portfolio equity flows as a dependent variable. The capital formation and credit are highly significant at one percent level in all the regressions. It implies that the development of financial sector institutions and availability of physical capital give vent to the more influx of capital from abroad. The vibrant stock markets with better banking sector development are able to attract more portfolio inflows. The lagged dependent variable is found to be insignificant. It means that the previous year portfolio inflows do not affect

the inflows of the subsequent year. The educated labor force is required in the case of FDI only but not for portfolio inflows, that is why the schooling variable is found to be insignificant. The indicators for the institutional quality including ICRG-3, corruption, law and order, and bureaucratic quality all are statistically insignificant. The institutional quality is not much influential in the case of portfolio equity capital flows as these types of inflows are short-term investments in general. The short-term investors just keep an eye on the quick returns instead of considering the institutional quality. In the case of portfolio inflows, the developed banking sector with properly functioning stock markets is enough for the foreign investors while the institutional quality of the host economy is overlooked by the equity investors. The insignificance of institutional quality indicators may be due to the fragile institutional structures in low-income countries (Peres, Ameer, & Xu, 2018).

6. Conclusion and Policy

The effect of capital flows on emerging market economies is imperative in this era of globalization. In this study, we empirically examine the role of institutional quality in attracting foreign capital flows in emerging economies. A panel data set on the 24 EMEs is used for the period 1995-2018. The system GMM estimation technique for dynamic panel data developed by Arellano and Bover (1995) and Blundell and Bond (1998) is employed for the estimation. The empirical results reveal that the FDI inflows are positively and significantly affected by the institutional quality. However, the portfolio equity capital inflows are not significantly influenced by the institutional quality. FDI is the most stable and the least volatile capital flow which is very beneficial for the emerging market economies. It can provide the benefits of technological diffusion and innovations in the long-run.

The policymakers should focus on attracting foreign direct investment by providing better facilities to the investors along with tax havens, better institutional infrastructure and other incentives. So, the Lucas paradox is explained by the institutional quality in the case of FDI only. A cautious policy should be adopted about the short-term portfolio investment inflows and a sophisticated mechanism should be devised to properly manage foreign portfolio flows. FDI is a less volatile and the most beneficial capital inflow for the emerging markets. A policy aiming at attracting FDI flows by improving institutional infrastructure is expedient for the EMEs. The policy-makers ought to focus on improving institutional structure by abating corruption and improving law and order conditions. The strategy of attracting FDI by incentivizing foreign investors may help the emerging economies to achieve higher growth and rapid economic development.

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