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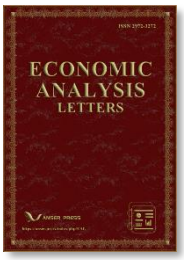

Greasing the revolving door: foreign aid, governance, and private capital flows

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ABSTRACT

There is a considerable amount of debate on the impact of capital liberalization on economic performance. Using Three-Stage Least Squares (3SLS) estimation technique introduced by Zellner and Theil (1962), we synthesize studies on the determinants of governance and capital flows. We find evidence of a revolving door relationship. Foreign aid has a negative impact on governance and, thereby reduces capital inflows since bad governance hinders capital inflows. The need to fill the gap created by private capital outflows encourages inflow of foreign aid, which in turn harms governance. Therefore, capital liberalization could grease a revolving door and undermine economic development in the aid receiving countries.

KEYWORDS

Capital Liberalization; Foreign Aid; Capital Flows; Governance; Three-Stage Least Squares

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1. Introduction and literature review

The neoclassical model predicts that capital should flow from rich to poor countries. However, it is possible that capital liberalization does not lead to capital inflow to the capital-scarce countries. Lucas (1990) shows that the observed capital flows fall short of the capital flows that the neoclassical model predicts. Alfaro, Kalemli-Ozcan, and Volosovych (2008) postulated that poor institutional quality explains this Lucas paradox. They cited examples like Intel choosing Costa Rica over Mexico due to better institutions and how Turkey's EU negotiations attracted investment through institutional reforms.

Boyce (1992) and Ndikumana and Boyce (2011) observed that private citizens of several third world countries accumulated substantial external assets at the same time their governments incurred large external debts. Two among their classifications of the hypothetical linkages between capital flight and debt are noteworthy, namely debt-fueled capital flight and flight-driven external debt. In flight-driven external debt, drain of domestic resources through capital flight generates demand for replacement of funds on the part of the government and the private sector. In debt-fueled capital flight (which is related to the incentive of corrupt governments to siphon debt), the same individuals (or bureaucrats) who borrow the money invest some in their private accounts abroad, and the money is never used for the purpose it is meant for. On this basis, these studies conclude that there is a scope for political and legal challenges to the legitimacy of a substantial fraction of the country's external debt. Specifically, it is recommended that odious debt be repudiated.

Cerra, Meenakshi, and Saxena (2008) share a connection with the works of Boyce (1992) and Ndikumana and Boyce (2011). Cerra et al. (2008) posited and estimated two relationships, namely (a) capital flight is partially determined by institutional quality, and (b) debt accumulation or other forms of foreign financing is partially determined by capital flight. The finding in Cerra et al. (2008) that countries with weak institutions have the propensity to accumulate debt because weak institutions instigate capital flight seems to support the flight-driven debt hypothetical linkage. The only difference is that in Cerra et al. (2008), capital flight is in large part due to poor institutions.

While foreign debt occupies an important position in economic research, foreign aid has an important position as well. In their paper, Ending Africa's Poverty Trap, Sachs et al. (2004) advocated giving aid to African countries. In fact, their understanding is that governance is not enough. According to Sachs et al. (2004) ''Africa's extreme poverty leads to low national savings rates. Low domestic saving is not offset by large capital inflows of private foreign capital… Africa's poor infrastructure and weak human capital discourage such flows… well governed African countries should be offered a substantial increase in official development assistance (ODA).''

Setting aside the fact that capital flight undermines the effectiveness of aid, a considerable number of studies demonstrate that aid could have a negative impact on governance. If aid poses damage to the governance of a country, it could do more harm than good. Poor governance can lead to capital flight**.** A notable study that stresses that aid could harm governance is Knack (2001); some of the reasons why aid can hinder good governance are as follows. First, aid can relieve the pressure on recipient governments to establish efficient policies and institutions that are necessary for attracting private capital, since aid provides an alternative source of revenues for governments. Second, by siphoning away scarce talent from the civil service and by implementing projects that local governments would have undertaken foreign aid can reduce the bureaucratic quality in the recipient countries. Third, aid can at times be used to sustain large government subsidies to state owned enterprises and parastatals. If public firms displace private investments, a weakened private sector cannot put enough pressure on government to establish accountable and transparent procedures and institutions. Indeed, using Ordinary Least Squares (OLS) and Two-Stage Least Squares (2SLS) estimation techniques, Knack (2001) showed that aid has a negative impact on governance. Rajan and Subramanian (2007) investigated the nature of growth of value added for industries that depend on governance. The idea in their empirical analysis is that governance should have a positive relationship

with growth of industries. If industries that are sensitive to governance grow less after obtaining aid it could be that aid reduced governance. Result from Rajan and Subramanian (2007) suggest that in countries that receive aid, the industrial sectors that are more governance sensitive have lower growth. More recently, using 2SLS and a sample of 52 African countries for the period 1996–2010, Asongu and Nwachukwu (2016) investigated the impact of foreign aid on three dimensions of governance, namely economic governance (regulation quality and government effectiveness), institutional governance (corruption-control and rule of law) and political governance (political stability, voice and accountability). Their study reveal that development assistance deteriorates economic and institutional governance but has an insignificant effect on political governance.

Going back to Cerra et al. (2008), we could add a third door. Following Cerra et al. (2008) we know that capital flight encourages aid and poor institutions lead to capital flight. From the foregoing we add the idea that aid harms governance to the revolving door literature. Furthermore, while the institution in Cerra et al. (2008) is constraint on executive power which makes it more difficult for the bureaucrats to siphon money, our study is based on governance measures, namely corruption, law and order and bureaucratic quality. Methodologically, we employ Three-Stage Least Squares (3SLS) estimation technique to investigate the revolving door.

Our synthesis is related to the literature on institutions and development. There is already a consensus that institutions play an important role in economic development. Important examples are Mauro (1995) and Rodrik, Subramanian and Trebbi (2004). Mauro (1995) demonstrated that bureaucratic inefficiency and corruption have negative impact on economic growth and investment. And, that a considerable portion of the impact of corruption on economic growth works through its effect on the amount of investment. A more forceful conclusion on the role of institutions on economic growth is Rodrik et al. (2004). Rodrik et al. (2004) investigated the impact of institutions, vis-à-vis international trade and geography, on economic development. Using 2SLS estimation technique, they found that institutions play a more important role than geography and international trade. Once institutions are controlled for, geography has, at best, a weak direct effect on income, while integration has no direct effect on income. In the words of Rodrik et al. (2004), ''institutions trump geography and openness.'' As capital inflow has some implications on economic growth and institutions influence capital flows, our synthesis provides an indirect avenue, through capital outflows, in which institutions can have an impact on economic performance. To the best of our knowledge, we are the first to empirically investigate such synthesis.

The remainder of this paper is organized as follows. Section 2 discusses the empirical technique employed by the synthesis. Section 3 discusses the data. Section 4 provides empirical results. Section 5 concludes the paper.

2. Empirical framework

Three hypotheses make up the revolving door, namely (a) aid has negative impact on governance, (b) weak governance results in the flight of private capital, and (c) the outflow of capital creates a demand for foreign aid. The relationships can be represented mathematically below:

$$Private\_Inflow_{it} = \alpha_0 + \alpha_1\, Governance_{it} + \alpha_2 Inflation_{it} + \alpha_3\, Democracy_{it} + u_{1it} \quad (1)$$

$$Aid = \beta_0 + \beta_1 Private\_Inflow_{it} + \beta_2 log(GNI\_percapita)_{it} + \beta_3 Democracy + u_{2it} \quad (2)$$

$$Governance_{it} = \gamma_0 + \gamma_1\, log(Human\_capital)_{it} + \gamma_2\, Aid_{it} + \gamma_3\, Democracy_{it} + u_{3it} \quad (3)$$

We employ the Three-Stage Least Squares (3SLS) estimation method proposed by Zellner and Theil (1962). This estimation technique involves estimating the 3 equations simultaneously. Zellner and Theil (1962) showed that when the error terms are correlated or when the equations are over identified, in the sense that the exogenous variables in the system are greater in number than the variables on the right-hand side of each equation of the system, the 3SLS is more efficient than the 2SLS. In our case, we have four pre-determined variables and 3 equations

on the right-hand side of each of the system. To ensure the reliability of our findings and to confirm that our results are not influenced by unaccounted-for country-specific and time-specific factors, we incorporate fixed effects into our analysis.

Equation (1) is the relationship between governance and capital inflows. We expect that the governance coefficient will be positive so that a higher level in the quality of governance implies an increase in private capital inflow. Equation (2) is the relationship between foreign aid and private inflow. We expect the coefficient on private inflow to be negative such that an increase in private inflow means there would be less need for foreign aid. Equation (3) is the relationship between governance and foreign aid. We expect the coefficient on foreign aid to be negative so that an increase in foreign aid would imply a decrease in the quality of governance.

In addition to the main variables that our analysis focuses on, we have included two additional variables that we believe have an impact on the right-hand variables in each of the equations. First, for equation (1), we believe macroeconomic instability can pose a considerable amount of risk and would make investors reluctant to invest in a country. We proxy macroeconomic instability and uncertainty with inflation. Democracy provides checks and balances on elected officials which in turn reduces arbitrary government intervention, lowers the risk of policy reversal, and strengthens property rights protection. Asiedu and Lien (2011) found that the impact of democracy on foreign direct investment depends on how much natural resources the host country has. For countries with abundant natural resources, FDI is negatively related to democracy, while democracy facilitates FDI in countries where the share of natural resources in total exports is low. Thus, why we include democracy in equation (1), we do not make any a priori expectation on the sign of its coefficient.

In equation (2), it is highly probable that countries with poor economic performance are the ones in need of aid. Income per capita has received considerable support in empirical research as a variable that explains donor decisions. We have also included democracy in equation (2) because donors may require countries seeking aid to adopt democratic practices. Some determinants of foreign aid can be found in (Strum, Berger and Han, 2005 and Barro and Lee, 2005). We expect that higher democracy should lead to more aid while higher GNI per capita should lead to low aid.

For the governance equation, equation (3), we include human capital because we believe that individuals with higher education levels are more able to recognize the deficiencies in governance, understand their implications, and actively advocate for better governance compared to those with lower levels of education. We also add democracy to the equation because, as Rivera-Batiz (2002) suggests, democracies enable the population to remove corrupt administrations peacefully and regularly, which should have a positive impact on governance.

3. Data

This section discusses the measures and sources of the variables used in the analysis and, as well, provides a summary statistics for the variables. The data consist of 41 countries in the DAC list of ODA recipients for the period 1995-2013. The list of countries is in table 1 below.

The variables in the analysis are governance, inflation, democracy, private capital inflow, per capita GNI, foreign aid and human capital.

The quality of governance is measured by subjective indices from the International Country Risk Guide (ICRG). ICRG is a commercial source on country risk that provides information on political risk to overseas investors and lenders. Like in Knack (2001), we sum the corruption in government, quality of bureaucracy and law and order indices. Each of the indices is a 0–6-point scale where 6 is the highest level and shows good quality of a given index. Summation of the three variables implies an index with maximum point of 18 and lowest point of 0.

Table 1. List of Countries.

List of Countries			
Bangladesh	Côte d'Ivoire	Jordan	
Indonesia	Egypt	Albania	
Kenya	El Salvador	Argentina	
Mali	Ghana	Botswana	Paraguay
Mozambique	Honduras	Brazil	Peru
Niger	India	China	Thailand
Senegal	Morocco	Colombia	Turkey
Tanzania	Nicaragua	Malaysia	Venezuela
Togo	Pakistan	Costa Rica	
Uganda	Sri Lanka	Jamaica	
Bolivia	Tunisia	Mexico	
Cameroon	Philippines	Panama	

Inflation, GNI per capita, and Aid are from The World Bank. Inflation is measured by the annual growth rate of GDP implicit deflator, and it shows the rate of price change in the economy. The GDP deflator is the ratio of GDP in current local currency to GDP in constant local currency. Per capita is the per capita gross national income converted to international dollars using purchasing power parity rates. Aid is the net official development assistance and consists of disbursement of loans made on concession terms (net of repayment of principals) and grants by official agencies of the members of the development assistance commission (DAC), by multilateral institutions, and non-DAC countries to promote economic development in countries in the DAC list of ODA recipients.

Our capital flow measure is the net private capital inflow constructed by Alfaro, Kalemli-Ozcan and Volosovych (2014). Alfaro et al. (2014) decomposed the current account data into purely private flows and purely sovereign flows, using the international financial statistics (IFS) from the IMF and the World Bank's global development finance (GDF) database. Net private capital flows include net flows of foreign direct investment (FDI), portfolio equity investment, and private debt. Net public capital flows include, among other things, grants, concessional aid, or any government-guaranteed debt, where reserves is netted out. Using these measures, Alfaro et al. (2014) demonstrated that sovereign-to-sovereign transactions can account for upstream capital flows and global imbalances. In particular, their research revealed that international net private capital flows (inflows minus outflows of private capital) are positively correlated with countries' productivity growth, while net sovereign debt flows (government borrowing minus reserves) are negatively correlated with growth only if net public debt is financed by another sovereign. Countries that are recipients of grants and concessional aid can include both those with poor institutions and those with strong institutions. In our research, we utilize net private capital flows to facilitate a study with policy implications for nations seeking to attract foreign private investment.

Our measure of democracy is from the Freedom in the World survey provided by the Freedom House. The Freedom in the World survey provides an annual evaluation of the state of the global freedom as experienced by individuals. The survey is grouped into two broad categories, namely political rights, and civil liberties. The category we use is political rights. Political rights enable people to participate freely in political process, including the right to vote freely for distinct alternatives in legitimate elections, compete for public office, join political parties and organizations, elect representatives who have decisive impact on public policies and are accountable to the electorate. The survey includes both analytical reports and numerical ratings for countries. In terms of numerical ratings, each country is assigned a numerical value on the scale of 1 to 7. A rating of 1 indicates the highest degree of freedom and 7 is the lowest level of freedom.

Human capital measure is from the Penn World Table (PWT) version 9.0. It is an index based on years of schooling and returns to education.

The summary statistics for the variables are in table 2 below.

Table 2. Summary Statistics (1995-2013).

VARIABLES	N	Mean	Std. Dev	Minimum	Maximum
Private_Inflow	41	3.896	2.263	0.167	10.29
Governance	41	7.299	1.449	4.357	10.26
Democracy	41	3.612	1.475	1	7
Inflation	41	8.961	7.390	1.370	36.17
Human_Capital	41	2.107	0.473	1.137	2.849
GNI_per capita	41	5,942	4,069	623.2	15,589
Aid	41	3.922	5.033	0.0306	22.11

There are 41 countries in the sample. For the descriptive analysis, the variables in each country are averaged over the period 1995-2013, so that each observation corresponds to a country.

4. Results

The results from 3SLS are in table 3 below. In equation (1), higher quality of governance increases net private inflow. A one standard deviation increase in Governance (1.449 in the summary statistics presented in table 2) leads to 1.182 percentage increase in Private_Inflow.

Table 3. 3SLS Results.

VARIABLES	(1)	(2)	(3)
	Private_Inflow	Aid	Governance
Governance	0.816**		
	(0.385)		
Inflation	-0.00770		
	(0.00905)		
Democracy	-0.414***	-1.149***	-0.0363
	(0.113)	(0.389)	(0.0392)
Private_Inflow		-1.827**	
		(0.801)	
log (GNI_ per capita)		-4.011***	
		(0.389)	
Aid			-0.0807***
			(0.0247)
Human_Capital			0.643
			(0.413)
Constant	-0.495	48.71***	7.287***
	(2.909)	(3.643)	(0.445)
Observations	779	779	779

*Notes: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.*

Equation (2) shows that the inflow of private capital reduces the need for foreign aid. This implies that an outflow of foreign capital should increase the need for foreign aid. Equation (3) suggests that aid hinders good governance. Taken together, the result in table (3) suggests that aid could hinder governance and, thereby, reduce private inflow since private inflow depends on good governance. When private capital flows out, there is need for aid to fill the gap created by capital outflow. Moreover, the inflow of capital and outflow of capital will not be possible in the absence of capital liberalization. Thus, capital liberalization could grease a revolving door and hinder economic development in the aid receiving countries. The result is robust to the inclusion of fixed effects as shown in table 4 below.

Table 4. 3SLS with fixed effects.

	(1)	(2)	(3)
VARIABLES	Private_Inflow	Aid	Governance
Governance	3.747***		
	(1.238)		
Inflation	-0.00136		
	(0.00507)		
Democracy	1.213***	-0.114	-0.424***
	(0.406)	(0.133)	(0.0984)
Private_Inflow		-0.724***	
		(0.217)	
log (GNI_ per capita)		1.387	
		(1.352)	
Aid			-0.604**
			(0.249)
Human_Capital			2.266
			(2.954)
Constant	-34.70***	-6.280	10.73***
	(10.93)	(9.920)	(1.117)
Observations	779	779	779

*Notes: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.*

5. Conclusion

Capital liberalization is one of the policies widely suggested for developing countries. The general idea is that capital liberalization could lead capital to flow into capital-scarce developing economies and boost economic development. Debt relief sometimes is suggested for the heavily indebted poor countries, or in some cases commentators suggest that the developing countries should be given foreign aid since these countries are handicapped by geographical factors that inhibit growth beyond a poverty level. While aid can be important in jump-starting the growth process of income trapped economies, many developing countries experience significant private capital outflows as well. Moreover, it is possible that aid could undermine development; aid could hinder development indirectly by weakening governance in the recipient countries. If aid hinders governance, it could discourage capital inflow from the capital-abundant developed countries to the capital-scare developing countries. In fact, it could trigger a capital reversal, causing capital to flow out of the aid recipient countries. The need to fill the gap created by private capital outflows encourages more foreign aid, which, in turn, can lead to further capital outflows.

Using Three-Stage Least Squares (3SLS) estimation technique proposed in Zellner and Theil (1962), we explore the relationship between foreign aid, governance, and capital flows. We find evidence of a revolving door relationship. Foreign aid has a negative impact on governance and, thereby, reduces capital inflows since bad governance hinders capital inflows. The need to fill the gap created by private capital outflows encourages inflow of foreign aid, which in turn harms governance. Capital liberalization could grease a revolving door and undermine economic development in the aid receiving countries. Our empirical result has some policy implications. Capital outflows could be somewhat 'restricted' in the aid recipient countries using capital controls. The use of capital controls should be more likely if individual country case study conforms to this revolving door hypothesis.

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Conflict of interest

The authors claim that the manuscript is completely original with no conflict of interest.

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