Do Foreign Direct Investment and Foreign Aid Promote Good Governance in Africa?

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Abstract

The literature on the roles that governance/political and economic stability play to attract capital flows into African economies has been burgeoning. Good governance, liberalization, infrastructure, incentive packages have been regarded as cures to break the deadlock to reverse the economic plight, to attract inflow of capital and, in some cases, to reverse outflows of African economies. The flow of capital, however, has undesirable side effects on host economies' working conditions, environmental standard, inequality, and culture, among others. These economic and social external or negative spillover effects are due to the phenomenon of "race-to-the-bottom" where companies invest in economies with lax regulations and generous incentive packages. Given the highly expected significant economic impacts of Foreign Direct Investment (FDI) and foreign aid in Africa,, it is becoming clear that the increased inflow of FDI and foreign aid may also have impacts on the political institutions and governance of a nation, especially for the case of economically low income African economies. However, these effects of capital flow on democratic institutions and governance of host economies have not been formally addressed. Using data on governance indicators, FDI, and foreign aid recently made available and other control variables, the present study explores whether FDI and foreign aid promotes or retards governance in African economies. Appropriate estimation techniques that take into account endogeniety in the data as well as heterogeneity of the sample countries are employed. The results of the study show that foreign aid (official development aid) has had immediate and persistent positive effects during the study period. Flow of FDI also has positive, though weak, effects on governance but with no persistent effect. Other forms of official flow, with less grant component, have both immediate and lag negative effects on governance in African economies.

Introduction

Presence of democratic institution and good governance are an important input to attract more and genuine foreign and local capital. Especially at the early stage of a country's development process, foreign investors are looking for stability and effective democratic institutions to invest in a host country. The role that democratic institutions, governance, and political and social stability plays to attract foreign capital has been the focus of the late 1980s and early 1990s empirical works. The belief that foreign capital inflows impose no influence on governance and democratic institution is fading. Anecdotal evidence shows presence of influence of big multinational firms that operate worldwide to have significant impact on small and economically weak states like those in Africa. The significance of this study for the case of African countries is paramount. The economic power of a small African country vis-a-visa a big multinational firm, who are the main foreign direct investors, is comparable for a company to have influential bargaining power. What is the role of capital flow on a country's governance institutions? Is there a difference between the role of FDI and other forms of capital flow (official development aid other official capital flow)? Do these capital flows have lagged effects or only immediate contemporaneous effects?

The purpose of this study is to determine the extent to which capital flows of different forms have influence on governance and democratic institutions of African countries. The role that capital flows - foreign direct investment, official development aid and other official flows – play to fill savings gap is well documented and early development economics scholars have been promoting increased flow of such capital. Recently, scholars have shifted the gear and have been looking into the role that capital flows play in promoting or retarding governance in developing countries,

although empirical works to substantial the claim is scarce, especially for developing African countries. This study attempts to fill this empirical gap.

Literature Review

Most studies focus on the effect of democratic institutions and/or political instability on FDI. For instance, see the studies by Li and Resnik (2003) and Lemi and Asefa (2003). Li and Resnik's (2003) develop a theoretical model to study this effect of domestic institutions on FDI. They conclude their study by saying that institutions affect FDI in a very complex manner. The complexity of the effect of institutions on FDI stems from the fact that increases in domestic democracy has a positive effect on FDI inflows because increases in democracy are associated with improved property rights. However, they also find that increases in democracy reduce the FDI received by these countries. They explain their conflicting findings by stating that while increased democracy helps the judicial system and rule of law, it also drives foreign investors away by imposing constraints on foreign capital and the host government. Similarly, Lemi and Asefa (2003), with focus on African states, address the same issue and show that there is differential effect of governance on different industries due to the nature, size and objectives of the FDI firms that enter African economies. The inclusive nature of the direct effect of FDI on democracy and the cautions placed on the interpretation of the results call for consideration of the reversal of cause and effect assumptions. Recently, the influence of capital flow on democratic institution has been getting attention as its influence seems apparent. As globalization in developing countries is gathering momentum, it is important to assess how democratization is being affected in this environment. This effect of globalization on domestic democratic institutions has been investigated by many theoretical as well as empirical studies.

However, the studies have not come to a consensus on the effect of globalization. The key globalization components considered in most of these studies are flows of capital as well as goods and services. Li and Revuney (2003) categorize the findings of these studies into three groups. One category finds that globalization enhances democracy while the second group finds the opposite; the third group however finds that globalization does not affect democratic institutions. Due to these conflicting findings, Li and Revuney (2003) investigate the effect of four national aspects of globalization on the effect of democracy for 127 countries during the period 1970 – 1996 by using a pooled time-series cross sectional statistical model. They find that two out of the four national aspects of globalization, namely, trade openness and portfolio investment inflows erode the prospects for democracy. On the other hand, the other two aspects of globalization, FDI and the spread of democratic idea flows, affects democracy positively. Huntington (1991) confirms this finding by asserting that global economic integration helps in the diffusion of democratic ideas which in turn lead to domestic democratization. Contrary to Li and Revuney's (2003) findings, Rudira (2005) by using a sample of 59 developing countries claims that trade and capital flows will be associated with enhanced democratic rights if social groups receive sufficient compensation for their (potential and actual) losses. His findings challenge popular views that the globalization automatically guarantees greater political freedoms. He also claims that it is invalid to assume that the expansion of democratic rights in the least developed countries (LDCs) necessarily preceded globalization.

On the other hand, some studies have questioned how globalization affects domestic political power. Berger (2000) focuses on studies that use international trade theory to derive political models used for observing the links between globalization and institutions. One of the most important predictions of these political models is that globalization shrinks the power and sovereignty of the nation. This prediction stems from two arguments, one being the notion that the magnitude and velocity of international economic exchanges erode the state's capabilities. The other is the argument that the extension of market relations across national borders diminishes the citizen's attachment to national authority, leading to a decline in the legitimacy of central governments. He argues that the spread of neoliberal doctrines, an outcome of globalization, has

reduced the legitimacy of state involvement in the economy as well as reducing the government's ability to shape or change market outcomes.

Although, the literature on the impact of globalization on domestic institutions is vast, there is only one study that we are aware of analyzing the effect of capital flow - in the form of official development aid, other official flows - on the domestic governance of African economies. The study by Goldsmith (2001) looks into how foreign aid influences statehood in Africa. The present study is different from Goldsmith's (2001) in that the later covers only foreign aid where as this study looks into three different components of capital flow including foreign aid. The sample size, and governance indicators and methodology are also different. We employ larger sample, more advanced methodology as well as improved governance indicator.

For purpose of comparison, it is important to look into these forms of capital flows, especially for the case of African economies not only due to the sheer size of the flow of these components but also the power they have vis-a-vise the economic power of individual African economies. The purpose of this study is to fill this empirical gap. Using data on political indicators and foreign aid recently made available, our study explores whether FDI and foreign aid promote or retard governance in African economies.

Methodology and Data

Flow of capital is intertwined with other major macroeconomic variables and governance of a country. Depending on the types and forms of capital flow, foreign capital may correlate with financial, exchange rate, prices, interest rate, GDP and governance, among others, of a host country. Direct investment and foreign aid are slow flows and pose less risk on the stability of a country's financial system compared to portfolio flows. On top of this, official flows (grant or market based) as opposed to private flows create less impact on financial instability, as they are not entirely driven by market forces. As these capital flows influence domestic market performance, their influence may also correlate with other major macroeconomic variables. In addition, countries or investors who send money to recipient countries look into the performance – initial conditionality and governance- of the economy to commit to the official flow of capital. Such interrelation between the flow of capital and other macroeconomic and governance indicators call for appropriate technique to account for the endogeniety of the variables of interest. A study that looks into the link between capital flows and governance variables does not escape the problem of endogenity.

Sample countries are drawn from Africa over the period 1975-2002. These sample countries have differences in history, culture, governance, and size. Given the panel nature of the data with such heterogeneous countries as a sample, correction for group-wise heterogeneity of the data is warranted. Hence, appropriate estimation technique should be used to account for the problems for the robustness of the results.

It is difficult, if not impossible to account for all estimation problems at once in one estimation technique. However, it is appropriate to correct for each of these problems one at a time and compare the results from each estimation technique. This is because one of the problems may be the source of the other problem in estimation. To this effect, three different estimation techniques are employed here. The first one is heterogeneity corrected generalized least square to account for the group-wise heteroscadasticity of error terms. The second technique is simple instrumental variable (IV) estimation that account for only endogenity of some of the variables in question. The last approach accounts for both problems at once, robust instrumental variable estimation, which takes into account both heterosckedaticity and endogenity. One of the nice features of the last estimation technique is that it allows test for the validity of the instruments used. Specifically, it allows a test of overidentifying restrictions (Hansen-Sargan Test) and likelihood ratio test of whether the equation is identified. The first test confirms validity of the instruments used and the second test confirms that the excluded instruments are irrelevant. Both tests are performed for the last specification and results are presented along with the regression coefficients.

The general form of the estimation equation is as follows:

$$governance = f(foreign\ aid, FDI, other\ official\ flow, cont\ rol\ \mathrm{var}\ iables)$$

Three components of capital flow are considered: foreign aid-measured by official development aid (ODA), foreign direct investment (FDI), and other official flows (OOF). The control variables used in the estimations are those variables believed to have influence on governance and the operation of democratic institutions of a country. These variables are income (gross domestic product per capita), debt burden (debt service ratio to national income), dependency ratio (number of dependents per working population), and adjusted national saving (education expenditure per national income). Greater per capita income, and higher adjusted national savings are believed to promote democracy, as these are the key economic indicators that forms the building block of democratic institutions of a country. On the other hand, international dependency (measured by debt burden) and domestic dependency (measured by dependency ratio) are believed to retard democracy by weakening the power of the government both internationally and domestically.

The instruments used in the estimation of IV models are labor, export, import, gross capital formation, telephone mainlines, and polity. These instruments are believed to affect the flow of the components of capital considered in this study. Not only flow of market based capital flows (FDI and to some extent OOF) but also flows with large grant component (ODA) are also influenced by these control variables. The first stage results of the IV models are not reported here, but are available on request.

Apart from the assumption of contemporaneous – immediate- effects of capital flow on democratic institutions, it is also logical to assume that there may be lag effects from these capital flows on the governance and democratic institutions of a country. To this effect, lagged values of the three capital flows (LAGODA, LAGFDI, LAGOOF) variables are used instead of the contemporary variables to see if there is any lag effect. Two different lag effects are considered: one-year lag and three-year lags. Results of the lag effects are presented in Appendix.

For all the three different estimation techniques, similar approach is employed. First, all the three capital flow components are placed in one equation to see their simultaneous effects Later, to see the separate individual effects, for each capital flow components separate equation is estimated using single capital flow component and all other control variables. The same approach is followed for lag effect estimation.

Data. Sample countries are drawn from Africa based on availability of data on capital flows, other major development indicators, and governance (democratic institution) indicators. Forty-four countries are selected, and the study covers the period 1975-2002. Capital flow variables are drawn from UNCTAD, Handbook of Statistics, CD-ROM 2003. The other development indicators that are used as control variables are obtained from World Bank, World Development Indicators.

Three capital flow components are considered: Official Development Aid (ODA), Other Official Development Flow (OOF) and Foreign Direct Investment (FDI). ODA is official aid with more than 25% grant component, whereas OOF are official flows with less than 25% grant component. See the appendix for detailed explanation of the variables. Table 1A in appendix presents the descriptive statistics of the model variables.   Descriptive statistics of the model variables show significant variations among countries of the region. The mean values of the model variables for each country for the years 1975-2002 is presented in the table. DEMOC variable that ranges from 0 to 10, is close to 10 for Mauritius and close to 0 for Congo Republic, Egypt, Gabon, Libya, Rwanda, and Swaziland. The mean value of debt service ratio to national income ranges from over 14% for Angola and below 1% for Rwanda. Ratio of FDI inflow to GDP ranges from over 22% for Central African Republic to less than 1% for Nigeria, South Africa, Togo, Egypt, and others. Ratio of ODA to GDP also ranges from over 47% for Guinea-Bissau to less than 1% for

Libya and Algeria. Ratio of other official flow is highest for Gabon (17.7%) and lowest for Guinea (less than 1%).

Results

Estimation results of the contemporaneous effects are presented in Tables 1-3 below. The results for the lagged effects are presented in Appendix Tables A.1 – A.3. Table 1 below presents the results for heteroscadeasticity adjusted GLS (Generalized Least Square) estimation. Where as Tables 2 present results for instrumental estimation with out heteroscedasticity correction and Table 3 presents IV estimation with correction for heteroscedaticity. The contemporaneous and lagged effects results are similar with slight difference for FDI flows. In each table, four estimation results are presented.

The first result is for estimation that uses all the three capital flow components at once. The other three estimation results are for the three components of capital flows (ODA, FDI, and OOF) estimated separately. The fitness test of the three models reveal that the specification is acceptable by the standard test statistics indicated in the tables. For the heteroscedasticity corrected GLS and IV models, wald tests show the significance of coefficients in almost all specifications. For the robust IV estimation, tests for instrument relevance (Anderson Canonical LR test) and equation identification (Hanson-Sargan test) are presented. In almost all specifications, the former test confirms the relevance of the instruments as indicated for each specification, whereas the later test fails to support the validity of the instruments. It is understandable that in IV models getting the right instruments is one of the major problems.

	All Flows	*ODA*	*FDI*	*OOF*
Official Development Aid	3.006***	2.330**		
	(3.964)	(3.247)		
Other Official Flows	-1.271***			-0.985***
	(-4.362)			(-3.674)
FDI inflow	-0.172		-0.022	
	(-0.662)		(-0.091)	
GDP Per Capita	0.055**	0.050**	0.056**	0.036*
	(3.016)	(2.788)	(3.154)	(2.190)
Debt Service Per GDP	-0.024	-0.027*	-0.021	-0.021
	(-1.868)	(-2.079)	(-1.566)	(-1.715)
Adjusted Saving(Education)	0.003	0.007	-0.066	-0.023
	(0.081)	(0.181)	(-1.411)	(-0.618)
Age-Dependency Ratio	-2.723***	-2.519***	-2.435**	-2.941***
	(-4.148)	(-3.955)	(-3.085)	(-4.939)
Constant	2.952***	2.705***	3.160***	3.578***
	(4.490)	(4.219)	(4.042)	(6.189)
Number of Observations	863.000	938.000	914.000	921.000
Chi2	88.70657	54.55733	38.89038	70.95273
Log Likelihood	-1841.264	-1988.534	-1991.418	-1944.684

*Table 1. Heteroscedasticity corrected GLS: Dependent Variable is Democracy. * p<0.05, ** p<0.01, *** p<0.001; Values in parentheses are z-values.*

The results show that official development aid (ODA) has significant positive effect on governance in African economies. This result holds in all alternative estimation techniques employed. The lag effect results also confirm the contention that the effects of ODA persists even after the commitment is made. The result confirms that the effect persists up to three years. Other

forms of official flows (OOF), on the other hand, have significant negative effect. This is a complete opposite to ODA. Official flows with less grant component help deteriorate democracy in Africa or help keep autocrats in power. The lag effects also support the same view, in that OOF has negative lag effects up to three years in negatively affecting democratic institutions in Africa.

The control variables have rather mixed results. Some of them have signs consistent with the a priori expectations, while others have different signs and level of significance for different specification. Two of the four control variables (GDP per capita and age-dependency ratio) have, for most specifications, the expected signs. GDP per capita has positive and significant effect on democracy. As stated earlier, income can serve as one of the necessary conditions to promote democracy. On the other hand, age-dependency has negative and significant effects in most specification, which confirms earlier assertion that high level of domestic dependence hinders progress towards democracy.

The other two control variables, debt burden, and adjusted saving (share of education expenditure) do not have the expected signs and the results are not consistent from specification to specification. One would expect that debt burden, measured by the share of debt service to income to impede progress towards democracy however, for two of the four specifications the variable has positive and significant effects, which is contrary to expectation. Adjusted saving has the expected sign for all specification except two. It has significant positive effect on governance in Africa.

Table 2. Instrumental Variable Estimation: Dependent Variable is Democracy

	All Flows	FDI	ODA	OOF
FDI inflow	-1.721	9.175*		
	(-1.030)	(2.348)		
Official Development Aid	16.547***		53.046***	
	(3.499)		(9.675	
Other Official flows	-36.863***			-23.471***
	(-10.638)			(-6.156)
GDP Per Capita	0.185***	0.021	0.454***	0.048
	(5.744)	(0.444)	(9.668)	(1.097)
Debt Service Per GDP	0.095***	0.011	-0.202***	0.034
	(4.482)	(0.369)	(-5.390)	(0.994)
Adjusted Saving(Education)	0.027	-0.185	0.472***	0.565**
	(0.318)	(-1.188)	(3.447)	(2.861)
Age-Dependency Ratio	3.774**	-5.719*	-1.088	0.331
	(2.745)	(-2.404)	(-0.607)	(0.125)
Constant	-3.370*	6.959**	-7.144***	0.286
	(-2.215)	(2.845)	(-3.316)	(0.105)
Number of Observations	823.000	823.000	859.000	824.000
Overall R2	.2149993	.0075333	.0673959	.0153206
Between R2	.3071627	.0866117	.0627174	.0948789
Chi2	175.5945	12.36344	129.1035	48.26318
Model P-value	1.66e-34	.0301333	3.69e-26	3.14e-09
Rho	.3318205	.5174088	0	.1837187

* $p<0.05$, ** $p<0.01$, *** $p<0.001$; Values in parentheses are z-values.

Table 3. Robust Instrumental Variable Estimation: Dependent Variable is Democracy

	|All Flows|	FDI	ODA	OOF
FDI inflow	5.934**	3.856*		
	(3.155)	(2.366)		
Official Development Aid	2.718		142.933**	
	(1.598)		(2.836)	
Other Official Flows	-0.150			-20.649***
	(-0.248)			(-3.771)
GDP Per Capita	0.027	0.025	0.705*	-0.020
	(1.473)	(1.399)	(2.310)	(-0.336)
Debt Service Per GDP	-0.015	0.014	-0.756*	-0.005
	(-0.666)	(0.574)	(-2.499)	(-0.082)
Adjusted Saving(Education)	-0.519***	-0.520***	0.470	1.002**
	(-3.346)	(-3.487)	(0.736)	(2.708)
Age-Dependency Ratio	-3.991***	-2.623*	1.391	9.555*
	(-3.846)	(-2.299)	(0.170)	(2.283)
Number of Observations	776.000	822.000	859.000	824.000
F Statistics	8.789	10.430	1.734	3.024
Prob>F	0.000	0.000	0.124	0.010
Hanson J statistics	154.145	186.956	7.210	57.402
P-value	0.000	0.000	0.027	0.000
Identification LR test	14.216	13.964	14.206	25.822
P-value	0.014	0.016	0.003	0.000

* $p<0.05$, ** $p<0.01$, *** $p<0.001$; Values in parentheses are z-values.

Foreign direct investment (FDI) has positive, but weak, effect on governance and its effect is not persistent like the other two forms of capital flows. FDI is driven by market forces, as opposed to the other two forms of capital flow, which makes it less influential in the area of governance.

It is also true that the flow of FDI is so low compared to ODA and OOF to have a significant and persistent influence on governance. The result confirms that if there is any effect from FDI on governance, it is positive. This result supports the view that market based flows of capital are in favor of democratic institution that guarantee property right and efficient government institutions. Unlike the results for the other two forms of capital flow, there is no evident to support lagged influence from FDI on governance in African economies. This positive effect of FDI on governance may not refute the view that FDI flows more to economies with lax regulation and standards, which has little to do with the quality of governance and democratic institutions. However, the result refutes the contention that FDI flows to a country with bad governance to manipulate the official to secure monopoly and oligopoly power.

One of the implications of the results is that ODA, compared to OOF is good to promote democracy. Are the difference between the two only the grand component or there is something else that differentials the two. The fact that the later has less grant component also imply less control by donors to trace the destinations and the actual uses of the money. What makes OOF different from FDI is that it may not be based on market forces and mostly it is through bilateral agreement between countries for friendship or security reasons. These kinds of official flows may have negative implication for democracy since there is no strict accountability for this.

The results of this study do not support of refute the highly believed view among scholars that foreign aid does not promote economic development. But it sheds light on the fact that official

development aid can prepare the ground work by improving governance and democratic institutions, which in turn is believed to promote economic development.

Conclusions

The fact that official development assistance (ODA) has significant positive effects on good governance in African economies is interesting. These results should be qualified by pointing out that whether ODA may enhance or retard democracy may depend on the type of assistance, how it is delivered, and its composition. It is quite possible for aid to promote democracy, if it is targeted to education, training, civil society groups such as women's groups, and effective NGOs. It also depends on whether basic accountability and transparency are present in the governance of the country receiving aid.

The results of this study also show the impact of FDI on governance is positive, though weak. This result is less surprising since governments may have incentives to attract FDI by improving their efficiency and accountability. A significant and sustained FDI is also one of the best ways of promoting economic growth and reducing poverty. In this regard, East Asia's success in promoting poverty reducing economic growth is due to its ability to attract FDI. Africa today receives the least proportion of FDI of all developing regions of the world, and it is the single region with greatest increase in poverty. In African economies where 70 % of the population on the average is currently in agriculture, massive investment in agriculture, especially in the areas of agro-processing industry is crucial. For these countries to attract significant FDI to agriculture and agro-processing industries, it is important that private citizens have a secured property right including land rights.

 Africa needs to grow the private sector rapidly to promote employment, independence of government or civil service employment. It is not apparently clear why other official flows (OOF) has consistent negative effects on governance in Africa. Compared to the other forms of capital flow, it seems that African democratic institutions and the effecting functioning of governance is persistently eroded by the inflow of this forms of official inflow. One needs to investigate further the type, purpose, and terms of these forms of capital inflow to know the core of the problem. Given the aggregate nature of the dataset used, it is not possible to see the nature of the flow in more detail. Future research should look into the details of each flow to understand the issue even better.

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Appendix: Data
Capital flows from UNCTAD, Handbook of Statistics, CD-ROM, 2003

OFFICIAL DEVELOPMENT ASSISTANCE (ODA): Grants or loans to developing countries that are undertaken by the official sector with the promotion of economic development and welfare as the main objective at concessional financial terms (if a loan, having a grant element of at least 25%).

OTHER OFFICIAL FLOWS (OOF): Transactions by the official sector with developing countries. OOF is flow which do not meet the conditions for eligibility as OFFICIAL DEVELOPMENT ASSISTANCE or OFFICIAL AID, either because they are not primarily aimed at development, or because they have a GRANT ELEMENT of less than 25%.

FOREIGN DIRECT INVESTMENT (FDI): is a private investment made to acquire or add to a lasting interest in an enterprise in a country on the DAC List of Aid Recipients. "Lasting interest" implies a long-term relationship where the direct investor has a significant influence on the management of the enterprise, reflected by ownership of at least 10%
of the shares, or equivalent voting power or other means of control. In practice it is recorded as the change in the net worth of a subsidiary in a recipient country to the parent company.
IMPORTS: Imports of goods and services in millions of dollars
EXPORTS: Exports of goods and services in millions of dollars
Development Indicators from World Bank, World Development Indicators, 2003
GDP: Gross Domestic Product of a host country (constant 2000 US$)
GDP per Capita (GDPPC): GDP per capita (constant 2000 US$)
Gross Capital Formation per GDP (GCFPGDP): Gross fixed capital formation as a percentage of GDP of the host country
Total Debts Service (TDEBTS): External debt Service as a percentage of GDP
Telephone Main Lines - Mobile phones (per 1,000 people)
Adjusted Savings - education expenditure (% of GNI)
Dependency Ratio - Age dependency ratio (dependents to working-age population), population with age 0-14 divided by working age population, 15-64.

Governance Indicators from datasets complied by Marshall and Jaggers (2003) and Freedom House, Annual Survey of Freedom Country Ratings 1972-73 to 2002-2003)
Democracy: Indicator of the degree of institutionalized democracy, rating ranges from 0 to 10.
Autocracy: Indicator of degree of institutionalized autocracy, rating ranges from 0 to 10. This is opposite of democracy.
Civil Liberty: Indicator for civil liberty (including freedom of speech and expression of views and free press). Rating ranges from 0 to 7.
Political Right: Indicator of political right (including freedom of expression of political views). Rating ranges from 0 to 7

Variable: ADJSAV (adjusted saving- education expenditure to national income), DEPRATIO (dependency ratio), TDEBTS (debt service per national income), DEMOC (institutionalized democracy), AUTOC (institutionalized autocracy), CIVILL (civil liberty), POLITICALR (political right), FDIINF (FDI inflows), TODAOA (total official development aid), TOOF (total other official flows), RFDIINF (ratio of FDI inflow to GDP), RTODAOA (ratio of ODA to GDP), RTOOF (ratio of OOF to GDP). * all values are in millions of dollars.

COUNTRY	ADJSAV	DEPRATIO	TDEBTS	DEMOC	AUTOC	CIVILL	POLITICALR
Algeria	4.940	0.859	10.514	0.393	6.714	5.643	5.964
Angola	4.833	0.967	14.294	0.273	6.182	6.464	6.571
Benin	3.153	0.995	2.217	2.667	3.889	4.750	4.893
Botswana	5.127	0.945	2.129	7.786	0.000	2.536	1.857
Burkina Faso	2.194	1.057	1.425	0.593	5.037	4.571	5.286
Burundi	3.262	0.942	2.709	0.136	6.136	6.179	6.643
Cameroon	2.565	0.911	4.781	0.393	6.786	5.679	6.250
Central African	2.624	0.862	1.736	1.786	4.429	5.321	5.500
Chad	1.352	0.969	1.017	0.350	5.000	5.786	6.429
Congo, Dem. Rep.	1.407	0.983	3.010	0.000	8.882	5.286	6.036
Congo, Rep.	6.371	0.951	11.749	1.111	6.000	6.250	6.536
Cote d'Ivoire	6.080	0.914	12.317	0.385	7.500	4.821	5.857
Egypt, Arab Rep.	4.151	0.744	4.952	0.000	6.036	4.964	5.321
Ethiopia	3.023	0.907	2.409	1.000	5.625	6.000	6.071
Gabon	2.672	0.748	7.745	0.000	6.778	5.000	5.429
Gambia, The	3.025	0.809	6.463	5.107	1.786	3.607	3.679
Ghana	2.775	0.931	5.160	1.731	4.077	4.500	4.929
Guinea	1.971	0.918	4.457	0.286	5.929	5.750	6.536
Guinea-Bissau	2.501	0.847	4.576	1.346	5.269	5.500	5.250
Kenya	5.911	1.042	7.912	0.643	5.679	5.214	5.571
Lesotho	4.830	0.827	2.683	2.000	5.250	4.500	4.714
Libya	2.137	0.827	.	0.000	7.000	6.536	6.571
Madagascar	2.357	0.917	4.118	3.259	3.556	4.786	4.000
Malawi	3.174	0.973	6.070	2.179	6.143	5.464	5.143
Mali	2.704	0.980	2.622	2.630	4.148	4.821	5.000
Mauritania	4.631	0.903	10.354	0.000	6.571	5.857	6.429
Mauritius	3.657	0.565	7.380	9.750	0.000	2.179	1.714
Morocco	4.781	0.795	8.960	0.000	7.500	4.679	4.464
Mozambique	3.803	0.888	3.597	1.929	5.036	5.607	5.321
Namibia	8.235	0.909	.	6.000	0.000	2.929	2.143
Niger	2.522	1.067	4.436	1.778	4.815	5.357	6.000
Nigeria	1.854	0.934	6.512	2.154	4.346	4.464	5.071
Rwanda	3.196	1.016	0.912	0.000	6.444	5.821	6.429
Senegal	4.011	0.921	5.859	2.429	3.107	3.857	3.857
Sierra Leone	2.373	0.869	5.289	0.435	6.261	5.143	5.214
South Africa	6.508	0.718	3.305	7.692	1.885	4.357	3.714
Sudan	2.385	0.838	1.252	0.889	6.296	6.143	6.071
Swaziland	4.709	0.895	3.229	0.000	9.643	5.036	5.643
Tanzania	2.500	0.964	3.471	0.679	5.536	5.357	5.571
Togo	4.699	0.934	5.799	0.385	5.462	5.607	6.250
Tunisia	5.468	0.723	8.069	0.357	6.179	4.857	5.714
Uganda	2.736	1.025	2.810	0.769	4.692	5.000	5.321
Zambia	3.283	0.965	12.229	1.821	5.643	4.643	4.643
Zimbabwe	6.115	0.987	5.808	2.148	4.407	4.964	5.036
Total	3.711	0.903	5.367	1.756	5.129	5.065	5.278

Table 1A

COUNTRY	FDIINF	TODAOA	TOOF	RFDIINF	RTODAOA	RTOOF
Algeria	134.540	212.959	376.152	0.003	0.005	0.092
Angola	165.537	199.115	18.196	0.029	0.031	0.037
Benin	154.547	169.393	6.822	0.082	0.110	0.052
Botswana	85.725	96.700	7.319	0.026	0.050	0.043
Burkina Faso	110.288	291.070	1.142	0.053	0.160	0.011
Burundi	113.303	150.993	0.392	0.176	0.218	0.010
Cameroon	140.267	340.630	82.326	0.018	0.047	0.118
Central African	204.493	125.300	0.996	0.226	0.156	0.013
Chad	108.231	168.226	0.313	0.092	0.151	0.002
Congo, Dem. Rep.	85.139	338.533	136.374	0.016	0.050	0.181
Congo, Rep.	126.364	126.496	47.041	0.044	0.051	0.194
Cote d'Ivoire	100.107	434.248	99.522	0.011	0.049	0.132
Egypt, Arab Rep.	54.321	2126.522	287.885	0.000	0.041	0.055
Ethiopia	294.216	613.926	4.981	0.057	0.152	0.015
Gabon	36.227	74.589	67.085	0.005	0.019	0.177
Gambia, The	80.624	58.522	0.989	0.094	0.207	0.047
Ghana	14.429	415.796	12.041	-0.001	0.118	0.039
Guinea	9.452	215.226	0.237	0.015	0.133	0.001
Guinea-Bissau	39.499	84.681	0.571	0.197	0.478	0.035
Kenya	80.062	539.633	-0.741	0.009	0.068	0.023
Lesotho	61.340	89.500	7.758	0.094	0.170	0.121
Libya	47.512	9.552	11.147	0.001	0.001	0.015
Madagascar	73.594	290.033	23.263	0.021	0.091	0.080
Malawi	62.546	301.604	2.696	0.041	0.233	0.040
Mali	97.610	332.382	3.437	0.041	0.195	0.023
Mauritania	79.566	210.441	8.244	0.086	0.333	0.169
Mauritius	58.453	39.744	2.707	0.018	0.018	0.028
Morocco	45.616	598.593	220.633	0.002	0.026	0.103
Mozambique	65.260	630.030	39.342	0.017	0.314	0.130
Namibia	22.124	119.165	2.380	0.003	0.042	0.008
Niger	26.100	258.222	-1.307	0.016	0.171	0.003
Nigeria	21.830	135.519	204.648	0.001	0.004	0.084
Rwanda	5.857	267.889	1.500	0.003	0.190	0.010
Senegal	77.104	451.641	25.144	0.029	0.147	0.100
Sierra Leone	61.790	108.259	1.659	0.072	0.131	0.012
South Africa	52.176	421.222	181.000	0.000	0.003	0.015
Sudan	89.992	542.222	52.078	0.013	0.081	0.091
Swaziland	93.222	37.330	3.433	0.132	0.048	0.069
Tanzania	124.360	798.726	17.030	0.028	0.137	-0.013
Togo	158.504	122.919	9.678	0.150	0.122	0.109
Tunisia	120.651	235.548	163.022	0.009	0.022	0.134
Uganda	89.228	405.867	0.256	0.041	0.138	0.013
Zambia	132.558	499.311	17.515	0.043	0.169	0.069
Zimbabwe	119.388	261.326	31.411	0.020	0.045	0.057
Total	88.608	317.126	48.995	0.047	0.119	0.067

Table 1A Continued

Table A.1. Heteroscedasticity corrected GLS with Lags: Dependent Variable is Democracy

	All Flows	*ODA*	*FDI*	*OOF*
One Year Lag of ODA	-8.887***	22.130***		
	(-3.645)	(11.467)		
One year lag of OOF	-38.722***			-40.048***
	(-21.473)			(-26.022)
One year lag of FDI	56.428***		55.857***	
	(9.752)		(11.156)	
GDP Per Capita	0.221***	0.171***	0.063***	0.241***
	(13.549)	(8.571)	(3.733)	(19.580)
Debt Service Per GDP	0.075***	-0.018	-0.008	0.067***
	(6.618)	(-1.678)	(-0.782)	(5.342)
Adjusted Saving(Education)	0.012	-0.063	-0.056	0.012
	(0.366)	(-1.766)	(-1.431)	(0.336)
Age-Dependency Ratio	1.665**	-3.636***	-3.222***	0.891
	(2.624)	(-5.815)	(-4.452)	(1.292)
Constant	-0.180	1.200	2.775***	0.507
	(-0.295)	(1.811)	(3.830)	(0.767)
Number of Observations	812.000	812.000	812.000	812.000
Chi2	935.3368	163.0154	158.124	1379.166
Log Likelihood	-1571.669	-1649.863	-1692.301	-1596.872

* $p<0.05$, ** $p<0.01$, *** $p<0.001$; Values in parentheses are z-values.

Three years lag

	All Flows	*ODA*	*FDI*	*OOF*
Three Years Lag of ODA	1.401	21.324***		
	(0.503)	(10.156)		
Three years lag of OOF	-30.657***			-35.926***
	(-13.892)			(-21.183)
Three years lag of FDI	32.516***		50.660***	
	(4.721)		(8.596)	
GDP Per Capita	0.235***	0.164***	0.065***	0.221***
	(12.142)	(7.664)	(3.607)	(15.892)
Debt Service Per GDP	0.040**	-0.024	-0.028*	0.035*
	(2.646)	(-1.834)	(-2.069)	(2.300)
Adjusted Saving(Education)	0.011	-0.072	-0.065	0.049
	(0.247)	(-1.773)	(-1.399)	(1.130)
Age-Dependency Ratio	0.243	-3.650***	-2.836***	-0.027
	(0.338)	(-5.473)	(-3.749)	(-0.037)
Constant	0.150	1.460*	2.709***	1.377
	(0.214)	(2.039)	(3.539)	(1.909)
Number of Observations	732.000	732.000	732.000	732.000
Chi2	502.032	139.3392	102.0151	993.0181
Log Likelihood	-1489.106	-1519.56	-1552.383	-1503.549

* p<0.05, ** p<0.01, *** p<0.001; Values in parentheses are z-values.

Table A.2. Instrumental Estimation with Lags: Dependent Variable is Democracy

	All Flows	FDI	ODA	OOF
One year lag of FDI	1.181	0.181		
	(0.899)	(0.137)		
One Year Lag of ODA	5.100***		79.906***	
	(4.224)		(8.300)	
One year lag of OOF	0.199			-25.173***
	(0.333)			(-4.813)
GDP Per Capita	0.041	0.012	0.629***	0.026
	(1.316)	(0.384)	(8.136)	(0.490)
Debt Service Per GDP	-0.014	-0.003	-0.123*	0.073
	(-0.793)	(-0.161)	(-2.412)	(1.835)
Adjusted Saving(Education)	-0.094	-0.105	0.371*	0.716**
	(-0.907)	(-1.048)	(1.994)	(2.866)
Age-Dependency Ratio	-5.039***	-4.848***	0.287	1.707
	(-3.333)	(-3.299)	(0.109)	(0.531)
Constant	5.887***	6.499***	-12.824***	-1.381
	(3.745)	(4.231)	(-3.822)	(-0.410)
Number of Observations	786.000	799.000	915.000	836.000
Overall R2	.0961757	.0864114	.050654	.0060261
Between R2	.2288421	.1775603	.0352129	.0509911
Chi2	37.28201	16.15664	85.75954	30.13171
Model P-value	4.15e-06	.0064108	5.22e-17	.0000139
Rho	.5137054	.6065315	0	.3009666

* p<0.05, ** p<0.01, *** p<0.001; Values in parentheses are z-values.

Three years lag

	All Flows	FDI	ODA	OOF
Three years lag of FDI	11.337	33.039		
	(0.989)	(1.359)		
Three Years Lag of ODA	7.574***		69.616***	
	(3.803)		(9.560)	
Three years lag of OOF	1.256			-28.461***
	(0.686)			(-5.767)
GDP Per Capita	0.029	-0.029	0.522***	0.097*
	(0.449)	(-0.189)	(7.045)	(1.972)
Debt Service Per GDP	-0.028	-0.026	-0.060	0.105*
	(-0.787)	(-0.339)	(-1.415)	(2.206)
Adjusted Saving(Education)	0.047	0.312	0.470*	0.413*
	(0.232)	(0.585)	(2.409)	(2.013)
Age-Dependency Ratio	-4.426	-3.419	2.592	0.238
	(-1.591)	(-0.496)	(0.645)	(0.076)
Constant	4.325	3.341	-13.961**	1.031

	(1.421)	(0.438)	(-3.018)	(0.328)

	All Flows	FDI	ODA	OOF
Number of Observations	730.000	744.000	820.000	784.000
Overall R2	.0052361	.0001972	.0753374	.0177146
Between R2	.0339205	.0050847	.0462698	.1546738
Chi2	20.60571	2.644171	105.5773	43.0989
Model P-value	.0043997	.7546431	3.52e-21	3.53e-08
Rho	.7208976	.7402082	.0897255	.1183882

* p<0.05, ** p<0.01, *** p<0.001; Values in parentheses are z-values.
Table A.3. Robust Instrumental Estimation with Lags: Dependent Variable is Democracy

	All Flows	FDI	ODA	OOF
One year lag of FDI	-0.697	-0.340		
	(-0.721)	(-0.298)		
One Year Lag of ODA	3.898*		125.917***	
	(2.499)		(3.782)	
One year lag of OOF	-1.022			-18.490***
	(-1.723)			(-3.935)
GDP Per Capita	0.037	0.020	0.636**	-0.018
	(1.951)	(1.095)	(3.279)	(-0.426)
Debt Service Per GDP	0.014	0.013	-0.195	0.002
	(0.529)	(0.487)	(-1.829)	(0.027)
Adjusted Saving(Education)	-0.391*	-0.464**	0.496	0.808**
	(-2.447)	(-2.909)	(0.780)	(2.856)
Age-Dependency Ratio	-1.174	-2.585*	3.232	7.380*
	(-1.017)	(-2.231)	(0.546)	(2.150)
Number of Observations	786.000	798.000	873.000	835.000
F Statistics	6.161	7.049	3.172	3.669
Prob>F	0.000	0.000	0.008	0.003
Hanson J statistics	197.072	182.140	7.478	89.664
P-value	0.000	0.000	0.024	0.000
Identification LR test	27.355	27.167	26.867	21.615
P-value	0.000	0.000	0.000	0.001

* p<0.05, ** p<0.01, *** p<0.001; Values in parentheses are z-values.

Three years lag

	All Flows	FDI	ODA	OOF
Three years lag of FDI	5.204	9.776***		
	(1.337)	(3.439)		
Three Years Lag of ODA	9.793***		83.658***	
	(5.239)		(7.085)	
Three years lag of OOF	-0.370			-26.396***
	(-0.496)			(-3.842)
GDP Per Capita	0.039	0.015	0.427***	-0.046
	(1.853)	(0.763)	(4.658)	(-0.644)
Debt Service Per GDP	-0.002	-0.005	-0.085	0.007
	(-0.080)	(-0.162)	(-1.558)	(0.097)

Adjusted Saving(Education) | -0.165 | -0.255 | 0.531 | 0.822*
                | (-0.979) | (-1.470) | (1.438) | (2.057)
Age-Dependency Ratio | -2.166 | -1.704 | 3.371 | 12.137*
                | (-1.658) | (-1.307) | (1.001) | (2.221)

Number of Observations | 729.000 | 743.000 | 820.000 | 783.000
F Statistics | 9.676 | 8.481 | 10.474 | 3.526
Prob>F | 0.000 | 0.000 | 0.000 | 0.004
Hanson J statistics | 156.829 | 175.031 | 11.669 | 50.828
P-value | 0.000 | 0.000 | 0.003 | 0.000
Identification LR test | 6.347 | 8.186 | 75.950 | 21.336
P-value | 0.274 | 0.146 | 0.000 | 0.001

* p<0.05, ** p<0.01, *** p<0.001; Values in parentheses are z-values.