

DOES JOINING THE EXTRACTIVE INDUSTRIES TRANSPARENCY INITIATIVE HAVE AN IMPACT ON EXTRACTIVE AND NON-EXTRACTIVE FDI INFLOWS?

By Fernando Londoño

Fernando Londoño completed the Master of Public Policy at the McCourt School of Public Policy and the Master of Science in Foreign Service at the Edmund A. Walsh School of Foreign Service in 2013. Matthew H. Fleming, PhD, served as his thesis adviser. Prior to his studies at Georgetown, Fernando served in the Colombian Army as an infantry officer for nine years. He is currently an analyst at Centra Technology, Inc., where he advises corporations and government agencies on managing political and security challenges in Latin America.

ABSTRACT

The Extractive Industries Transparency Initiative (EITI) invites resource-rich countries to voluntarily publish the payments they receive from corporations and open their books to the scrutiny of certified auditors. In return, the EITI offers potential members a seal of approval inherent to EITI candidacy or compliance that will signal lower political risk to investors, thereby attracting foreign direct investment (FDI) inflows. This thesis uses the Arellano-Bond General Method of Moments estimation to find that changes in EITI status are associated with net FDI inflow increases of over 50 percent on the year of the status change, holding the usual determinants of FDI inflows constant. This paper attempts to determine whether these effects are different across primary, secondary, and tertiary sectors of the economy but does not find significance at conventional levels for this portion of the analysis. These results suggest that countries can attract FDI inflows by joining the EITI and that the incentive structure of the EITI is valid.

I. INTRODUCTION

The Extractive Industries Transparency Initiative (EITI) is a partnership between governments, corporations, and financial investors designed to promote transparency and to address the resource curse: a tendency of resource-rich countries to have poor economic performance, a higher incidence of conflict, and suffer from poor governance.¹ The EITI is voluntary; countries that choose to join the initiative must meet certain requirements, which include the publication of rents derived from resource extraction and independent audits of payments from private and state-owned corporations. In return, the EITI validates the country as a *candidate* and later *compliant* country as it reaches milestones in publishing data accurately. A key assumption of the EITI incentive structure is that validation will signal a better investment climate to investors and attract more foreign direct investment (FDI).

If membership attracts FDI, resource-rich countries have an incentive to join the EITI. Policymakers and academics often agree that FDI fosters economic growth because it brings foreign technology and management practices, which can be adapted by the host country in other contexts (Walsh and Yu 2010; Moran, Graham, and Blomström 2005). Papers that study the determinants of FDI suggest that a country's investment climate

is important for investors making FDI decisions. Besides economic and market analyses, investors can be swayed by qualitative governance indicators or deterred by perceptions of high political risk. Participation in international organizations and partnerships like the EITI can increase a government's credibility (Dreher and Voigt 2011) and attract FDI inflows (Dreher, Mikosch, and Voigt 2010). Joining international organizations can signal lower political risk, because it restricts a country from pursuing policies that are harmful to investors such as expropriation, currency manipulation, and discriminatory treatment against foreign investors. EITI membership could have a similar signaling effect.

However, FDI in the extractive industry, which involves physically extracting metals, minerals, and aggregates from the earth, may be less sensitive to the qualitative measures of governance that the EITI tries to address because companies must operate where resources are naturally found, regardless of the quality of institutions. When the determinants of FDI are analyzed disaggregating extractive from non-extractive FDI (manufacturing, services, and construction), qualitative institutional factors are found to have little impact on extractive FDI inflows (Walsh and Yu 2010). This finding raises an interesting concern for resource-rich countries that may consider joining the EITI in order to attract FDI inflows. Would signaling transparency in the extractive sector improve

¹"Benefits," EITI website, accessed April 3, 2013, <http://eiti.org/eiti/benefits>

countries' investment climates, as the EITI advertises, or are extractive corporations obliged to invest in resource-rich countries regardless of the quality of their institutions? Alternatively, can resource-rich countries attract non-extractive FDI inflows by joining the EITI and thereby diversify their economies?

This paper uses panel data on 166 countries from 2002 to 2011 to assess whether changing a country's EITI status (by announcing interest, achieving candidacy, or achieving compliance) has an impact on extractive or non-extractive FDI inflows. It thereby assesses whether governments should join the EITI and evaluates the EITI's potential to provide incentives for resource-rich governments to become more transparent and accountable.

II. LITERATURE REVIEW

Papers that use multivariate analysis to assess the impact of institutional quality variables on FDI generally find a positive relationship between the two (Busse and Hefeker 2007; Wei 2000; Dreher, Mikosch, and Voigt 2010). Strong institutions matter to the multinational enterprises (MNEs) that make investment decisions, and transparency is likely to make governments more accountable and breed better quality institutions that can attract FDI. However, investment decisions differ depending on the sector of a particular MNE (See Blonigen 2005; Kolstad and Villanger 2004). Although joining international

organizations and reducing corruption are both believed to attract FDI, the existing literature does not study differences between extractive and non-extractive FDI.

The quality of government institutions matters to firms that are making investment decisions. Busse and Hefeker (2007) use data on 83 developing countries for the 1984-to-2003 period and conclude that, "government stability, the absence of internal conflict and ethnic tensions, basic democratic rights, and ensuring law and order are highly significant determinants of foreign investment inflows."

Existing literature has found evidence that corruption in particular can influence FDI inflows. Wei (2000) finds that an increase in the corruption level of a country has a negative effect on inward FDI. Smarzynska and Wei (2000) use empirical evidence to investigate whether perceptions of corruption in a country make MNEs more likely to enter a joint venture or use wholly-owned subsidiaries. They find that corruption perceptions changed the behavior of MNEs regarding FDI, reducing inflows and shifting the ownership structure toward joint ventures.

In order for the EITI to have an impact on FDI, investors would have to be persuaded that joining international initiatives will have an effect on the behavior of governments. Dreher, Mikosch, and Voigt (2010) found that membership in international organizations is an important

determinant of FDI inflows because it may restrain a country from pursuing policies that are harmful to investors. In a similar vein, Dreher and Voigt (2011) argue that joining international organizations improves government credibility. The EITI may have a similar effect, even if it is not as formal an international organization as those studied by Dreher, Mikosch and Voigt (the World Trade Organization, the International Center for the Settlement of Investment Disputes, the International Finance Corporation, and certain United Nations conventions).

The literature mentioned so far suggests that EITI status may have a positive impact on FDI because institutions, corruption perceptions, and international organization membership matter to foreign investors. Schmaljohann (2013) finds consistent evidence by evaluating the impact of the EITI on FDI. She finds that joining the EITI increases FDI inflows as a share of Gross Domestic Product (GDP) by up to two percentage points. However, Schmaljohann and the other authors cited above study total FDI inflows. It is very likely that extractive (primary) FDI has different determinants than manufacturing (secondary) or services and construction (tertiary) FDI.

Some researchers have found evidence of different factors influencing FDI across sectors. Kreinin, Abe, and Plummer (1999) use a survey of motivation for outward Japanese FDI compared across sectors. They find that natural resources are the most important motivation for agriculture

FDI. A wide range of industries in manufacturing FDI are surveyed and the results are different; securing local markets, establishing production and distribution networks, and cheap labor are their key motivations. For financial services, however, government regulations and restrictions are the most important.

Papers concentrating on particular production sectors also find differing factors that influence FDI inflows. Bajo-Rubio and Lopez-Puejo (2002) find that exchange rates are more important for manufacturing FDI, while economic growth and inflation are less significant. The key determinants for FDI in the food industry are gross national product (GNP) per capita, wages, and exchange rates, while subsidies, stock prices, corporate income taxes, and environmental regulations are insignificant, according to Gopinath (2000). For the chemical industry, McCorriston and Sheldon (1998) and Xing and Kolstad (2002) find that relative stock prices and environmental regulations are important determinants, while corporate income taxes, exchange rates, and GDP per capita are insignificant. In the case of tire manufacturing, Ito and Rose (2002) find significance in a country's GDP and distance from investor country, while the tax rate and political risk are insignificant. Xing and Kolstad (2002) find that neither GDP, exchange rates, stock prices, nor environmental regulations have a significant impact on the machinery and transportation equipment industry FDI, while that of

electronics and electrical equipment is determined primarily by exchange rates and corporate income taxes. The key determinants of services FDI are GNP per capita, wealth, GNP growth, trade, exchange rates, and FDI stock, while wages and interest rates are insignificant, according to Yamori (1998), Moshirian (1997), and Miller and Parkhe (1998).

If FDI in different industries within the manufacturing and services sectors have different determinants, the difference between extractive and non-extractive FDI is likely to be even greater. In fact, Walsh and Yu (2010) argue that qualitative institutional variables have an insignificant impact on extractive FDI, while they affect non-extractive FDI flows in different ways for advanced and emerging economies. This finding is consistent with Kreinin's survey, which suggests that resource abundance is the key motivation for agriculture FDI.

These findings pose an interesting question about the growth potential of the EITI, which focuses on transparency in extractive industries. The EITI relies on resource-rich countries joining voluntarily in order to attract FDI. If governments did not believe that they could attract FDI by joining, the EITI would not succeed. On the other hand, it is possible that the EITI could help resource-rich countries diversify their economies. Ofori-Brobbe, Ojode, and Desai (2008) found that political and economic stability attracts non-extractive FDI in sub-Saharan Africa.

III. DATA SOURCES

Table 1 presents a description of the main variables used in this paper. The dependent variable is a measure of net FDI inflows, which is the yearly country data of investment minus disinvestment in the country by foreign investors, as reported by countries to the United Nations Conference on Trade and Development (UNCTAD). These data are combined with World Bank GDP data to generate FDI inflows as a percentage of GDP. Primary, secondary, and tertiary FDI figures are also as reported by countries to UNCTAD and published in the International Trade Center Investment Map. They cover extractive, manufacturing, and construction and services investments respectively. The key independent variable is a dummy variable reflecting EITI status constructed using EITI data.

EITI status is measured by constructed dummy variables based on data from the EITI website. The variable EITI Interest indicates the year in which countries that achieved candidate status signaled their intention of joining the EITI and began collecting data to report for EITI validation. Countries that have declared interest but have not been approved as candidates by the EITI are not included, because it is not possible to measure the degree of commitment of this announcement. EITI Candidate and EITI Compliant are dummy variables that indicate the year in which each member country was awarded that status by the EITI. To avoid penalizing EITI candidates

Table 1. Description of Variables

Variables	Description	Source
EITI Interest	Dummy=1 on year when countries that achieved candidate status signaled their intention of joining the EITI	EITI
EITI Candidacy	Dummy=1 on year when EITI awarded candidacy status	EITI
EITI Compliance	Dummy=1 on year when EITI awarded compliance status	EITI
Total FDI	Total net FDI inflows, millions of current US\$	UNCTAD
Primary FDI	Primary net FDI inflows, millions of current US\$	ITC
Secondary FDI	Secondary net FDI inflows, millions of current US\$	ITC
Tertiary FDI	Tertiary net FDI inflows, millions of current US\$	ITC
FDI Stock	FDI stock, billions of current US\$	WDI
GDP	Gross Domestic Product, billions of US\$	WDI
GDP growth	GDP growth, annual %	WDI
GDP p.c. growth	GDP per capita growth, annual %	WDI
Population	Total population, millions of inhabitants	WDI
Tax rate	Total tax rate as a proportion of commercial profits	WDI
Inflation	Inflation, GDP deflator annual %	WDI
Interest rate	Real interest rate, %	WDI
Real effective exchange rate	Real effective exchange rate index	WDI
Official exchange rate	Official exchange rate, 1,000 local currency/US\$	WDI
Total trade	Net trade in goods and services, BoP current US\$	WDI
Trade Openness	Total trade as a proportion of GDP	WDI
School life expectancy	Expected years of education at birth	UNESCO
Natural resource rents	Total government income from natural resources as a proportion of GDP	WDI
Battle-related deaths	Battle related deaths, thousands	WDI
Internally displaced persons	Internally displaced persons, thousands (high estimate)	WDI
Corruption	Control of corruption percentile rank (0-100)	WGI

Note: When EITI compliance=1, EITI candidacy and interest also=1 in order to avoid penalizing countries that achieve compliance when the model runs the Candidacy or Interest variables.

UNCTAD: United Nations Conference on Trade and Development Statistics

ITC: International Trade Center Investment Map

WDI: World Development Indicators, World Bank

UNESCO: United Nations Educational, Scientific and Cultural Organization Data Centre

WGI: Worldwide Governance Indicators, World Bank

that become compliant in models that use the EITI Candidate dummy, the value of the EITI Candidate dummy continues to be one when the value of the EITI Compliant dummy is one. Similarly, EITI Interest continues to be one when a country achieves Candidate and Compliant status.

Other variables of interest are from UNESCO and the World Bank's World Development Indicators and Worldwide Governance Indicators, based on the determinants of FDI

frequently used in the literature. Table 2 presents summary statistics for key variables.

IV. METHODS

An ordinary least squares (OLS) regression could show a correlation between EITI membership and FDI inflows, holding observable country characteristics constant. However, it would certainly suffer from bias caused by omitted variables that are not

Table 2. Summary Statistics

Variables	Obs.	Mean	Standard Deviation	Min	Max
Total FDI	1,655	6,459.17	20,788.31	-32,080.20	306,366
Primary FDI	688	1,382.61	6,083.96	-11,267	105,060
Secondary FDI	722	3,112.77	9,633.98	-8,819.50	102,756
Tertiary FDI	733	6,559.87	17,919.95	-28,160	221,214
FDI Stock	1,646	83.97	280.39	0.00	3,600
GDP	1,649	304.51	1,193.87	0.07	15,000
GDP growth	1,641	4.38	5.07	-41.3	46.5
GDP per capita growth	1,641	2.77	4.93	-42.77	42.83
Population	1,660	37.81	139.4	0.07	1,344.13
Tax rate	1,660	0.51	0.43	0.08	3.4
Inflation	1,648	7.31	9.34	-33.79	120.5
Interest rate	1,286	7.26	19.15	-32	508.74
Real effective exchange rate	869	104.78	37.53	57.76	1025.26
Official exchange rate	1,647	0.81	2.89	0.00	25
Total trade	1,426	769.9	58,187.18	-753,286	348,833
Trade as proportion of GDP	1,525	0.9	0.46	0.00	4.4
School life expectancy	1,630	10.7	2.14	2.84	16.53
Natural resource rents	1,483	0.1	0.16	0.00	1.07
Battle-related deaths	1,659	0.1	0.58	0.00	8.4
Internally displaced persons	1,659	127.01	546.03	0.00	6100
Corruption	1,660	48.15	27.85	0.5	100

Sources: International Trade Center Investment Map, World Development Indicators, World Governance Indicators, UNESCO.

observable and correlated with both EITI membership and FDI inflows. A fixed effects model could remove some of the bias caused by time-invariant omitted variables, but bias caused by the time-variant country characteristics would remain. To address the omitted variable bias problem, this paper uses the Arellano-Bond General Method of Moments estimation.

If a single OLS regression could answer this paper's research question, it would be:

$$FDI = \beta_0 + \beta_1 EITI + \beta_2 X_2 + \dots + \beta_n X_n + u$$

Where *FDI* is the log of net FDI inflows, *EITI* is a dummy variable that indicates a country's EITI status, and *X*₂ through *X*_{*n*} represent the observable control variables that have relationships with both EITI status and FDI inflows.

If the error term “*u*” were uncorrelated with EITI status after including control variables, then β_1 would accurately measure the true impact of a country's EITI status on FDI inflows. However, it is unlikely that all variables that are possibly correlated with both FDI and EITI status can be included in the model. For example, though a country's cultural tolerance of foreign investment or transparency could affect both FDI inflows and the decision to join the EITI, it cannot be included as a control variable because it is difficult to measure. OLS is rarely used to estimate effects on FDI inflows, because many of their determinants are unobservable.

Fixed effects models are more generally used to find the determinants of FDI. They hold time-invariant country

characteristics fixed, because they measure differences in FDI inflows and in all independent variables over periods of time. Consider the linear unobserved effects model for *n* observations and *t* time periods:

$$FDI_{i,t} = \beta_0 + \beta_1 EITI_{i,t} + \beta_2 X_{2i,t} + \dots + \beta_n X_{ni,t} + \alpha_i + u_{i,t}$$

Where *t* = 2002, 2003, ... 2011, and *i* = Afghanistan, Albania ... Zimbabwe. Here α_i represents all unobserved time-invariant country effects that could influence both FDI inflows and EITI membership, such as cultural affinity to large source countries of FDI inflows that could be interested in transparency, e.g. the United States. Since parts of α_i are not observable, they cannot be included in the model as control variables. The fixed effects model eliminates α_i by demeaning the variables using the transformation:

$$\begin{aligned} FDI_{i,t} - \overline{FDI}_i &= \beta_0 + \beta_1 (EITI_{i,t} - \overline{EITI}_i) \\ &+ \beta_2 (X_{2i,t} - \overline{X}_{2i}) + \dots \\ &+ \beta_n (X_{ni,t} - \overline{X}_{ni}) \\ &+ (\alpha - \overline{\alpha}_i) + (u_{i,t} - \overline{u}_i) \end{aligned}$$

Because α_i is time-invariant, $(\alpha - \overline{\alpha}_i) = 0$. This means that all time-invariant country effects are automatically controlled for in the model and that time-invariant endogeneity—fixed country characteristics that are correlated with both FDI inflows and EITI status that would bias the results—is removed. This is likely to lead to a more accurate estimate of the effects of EITI status on FDI

inflows than the OLS model. However, endogeneity remains in the form of unobserved variables that change over time and are correlated with both FDI inflows and EITI status. For example, a new regime could engage in broad investment promotion that includes EITI membership. The fixed effects model cannot separate the effect of EITI membership on the log of FDI inflows from other investment promotion policies.

The Arellano-Bond General Method of Moments (GMM) is used in FDI literature, because it attempts to solve this and other problems associated with estimating the determinants of FDI. First, causality for many of the X_n variables may run in both directions. For example, GDP growth signals a growing market and may attract FDI inflows. However, FDI inflows may spur GDP growth as well. A new mining project may require the construction of roads, or a new manufacturing plant could raise demand for secondary products. Both would stimulate employment and increase GDP growth. OLS and fixed effects models cannot account for reverse causality.

Second, the Arellano-Bond General Method of Moments is a dynamic panel model that introduces a lagged version of the dependent variable as a control variable. This removes bias in the model by controlling for trends in FDI inflows that were occurring before the EITI status change. It also controls for any clustering effect, which occurs when FDI inflows attract further FDI inflows. For example, if Intel installs

a large microprocessor plant in Costa Rica, other companies may invest in Costa Rica in the following years to supply this new plant. The resulting new dynamic panel model would look like:

$$FDI_{i,t} = \beta_0 + \beta_1 EITI_{i,t} + \beta_2 FDI_{i,t-1} + \beta_3 X_{3i,t} + \dots + \beta_n X_{ni,t} + u_{i,t}$$

Even though the value of β_2 may not be of direct interest, “allowing for dynamics in the underlying process may be crucial for recovering consistent estimates of other parameters,” (Bond 2002).

Third, in order to control for time-invariant country characteristics, Arellano-Bond estimators use first differences to further transform the equation:

$$FDI_{i,t} - FDI_{i,t-1} = \beta_0 + \beta_1 (EITI_{i,t} - EITI_{i,t-1}) + \beta_2 (FDI_{i,t-1} - FDI_{i,t-2}) + \beta_3 (X_{3i,t} - X_{3i,t-1}) + \dots + \beta_n (X_{ni,t} - X_{ni,t-1}) + (u_{i,t} - u_{i,t-1})$$

The effects of this transformation are similar to those of the demeaning process of the fixed effects model.

However, the presence of the lagged version of FDI gives rise to autocorrelation, the correlation between values of a process at different times. Notice that the term $FDI_{i,t-1}$ is on both sides of the equation (Keele and Kelly 2006). Also, time-variant endogeneity persists. To address these issues, Arellano-Bond estimation uses lagged values of independent and dependent variables as instruments (Arellano and Bond 1991; Arellano and Bover 1995; Blundell and Bond 1998). When the idiosyncratic errors $u_{i,t}$ are independent from each

other and identically distributed, the first differenced errors ($u_{i,t} - u_{i,t-1}$) are first-order serially correlated. However, assuming that $u_{i,t}$ is serially uncorrelated, the lagged level $FDI_{i,t-2}$ will be uncorrelated with ($u_{i,t} - u_{i,t-1}$) and available as an instrument for the first differenced equation (Bond 2002). Because only lags of two time periods are used as instruments, only serial correlation at order two or higher will result in a misspecified model.

The model is also designed for situations with heteroskedasticity and autocorrelation within countries. In all estimations the standard errors are clustered at the country level to account for possible correlation of a country's error terms over time and heterogeneity between the clusters (Roodman 2006).

V. FINDINGS

The following tables illustrate how countries differ according to their EITI status. EITI member countries are generally less open to trade, have less educated populations, and have lower governance indicators.

Table 3 shows how FDI values differ on average based on EITI status (See Appendix for list of EITI countries by year of status change). The raw FDI data confirms the impression that there may be a reverse causality problem. That is, EITI countries could have lower FDI inflows because these low FDI inflows pushed them to join an initiative that is meant to attract FDI. However, it seems that the EITI may be

associated with higher FDI inflows as a percentage of GDP.

Regarding control variables, it appears that EITI countries generally have lower GDPs and populations, and higher tax rates, inflation rates, and interest rates than non-EITI countries. Likewise, EITI countries have higher total trade figures but lower trade openness and lower education rates than other countries. Due to large variations, there are no variables with significant differences in means between EITI status groups. Predictably, EITI countries have higher resource rents.

Evidence of the resource curse is shown by the consistently lower corruption percentile rankings for EITI countries (lower percentile rankings indicate higher perceptions of corruption). This finding is generalized across all Worldwide Governance Indicators. War, measured in battle-related deaths and internally displaced persons, is included because it is a time-variant factor correlated with FDI inflows and also possibly correlated with EITI status. For example, Yemen was suspended from the EITI between June 2011 and June 2012 after a period of prolonged violence. Such violence probably had a negative effect on FDI inflows, and if these variables were not included in the model this decline could mistakenly be attributed solely to EITI status changes.

VI. RESULTS

Arellano Bond estimation shows that EITI candidacy is associated with a 55

Table 3. Differences in Means of FDI Inflows According to EITI Status

Variables	EITI Status			
	None	Interested	Candidate	Compliant
Net Foreign Direct Investment (FDI)	6,948.79 (21,301.77)	4,102.01 (26,170.82)	2,305.21 (3,933.67)	2,277.63 (20,788.31)
Primary FDI	1,440.98 (6,358.97)	581.79 (1,612.96)	966.67 (1,317.66)	2,146.30
Secondary FDI	3,286.68 (9,887.10)	-97.25 (1,460.74)	634.74 (1,334.08)	
Tertiary FDI	6,867.64 (18,396.25)	919.98 (1,737.14)	2,193.87 (4,257.96)	
FDI as a percentage of GDP	4.89 (7.74)	5.17 (6.44)	8.49 (9.33)	13.95 (17.23)
Primary FDI as a percentage of GDP	0.8 (2.76)	2.72 (6.83)	6.24 (8.76)	4.84
Secondary FDI as a percentage of GDP	1.05 (2.45)	0.58 (1.10)	2.07 (4.96)	
Tertiary FDI as a percentage of GDP	3.14 (6.74)	1.86 (2.14)	3.26 (3.87)	

Standard deviations in parenthesis

Sources: International Trade Center Investment Map, dummy variables for EITI status constructed based on EITI data.

percent increase in FDI inflows holding the variables included in the model constant. The method removes some of the upward bias found in OLS and fixed effects estimates, moderating the results.

Table 5 shows the estimated influence of EITI candidacy on the natural log of FDI inflows using ordinary least squares (OLS), fixed effects, and Arellano-Bond General Method of Moments estimation. In column 1, OLS suggests that holding the stated control variables constant, EITI candidacy is associated with an approximate 110 percent increase in net FDI inflows. These results seem

exaggerated. Schmaljohann (2013) uses a different model with Arellano-Bond estimation to find that EITI candidacy is associated with an increase of FDI as a percentage of GDP of 2 percent, with the mean of FDI as a percentage of GDP for this sample being close to 5 percent. It is very likely that the OLS model in Table 5 suffers from omitted variable bias because unobserved variables may have an effect on both EITI candidacy and FDI inflows. It is probable that the results are biased upward because many of the unobserved variables that make a country more likely to join the EITI are also likely to attract higher FDI inflows.

Table 4. Differences in Means of Key Variables According to EITI Status

Variables	EITI Status			
	None	Interested	Candidate	Compliant
FDI Stock	91.34 (283.93)	58.29 (403.59)	14.37 (31.47)	17.2 (40.31)
GDP	330.03 (1,209.36)	241.51 (1,729.70)	47.76 (118.33)	54.31 (117.48)
GDP growth	4.22 (5.06)	5.15 (4.09)	5.66 (5.29)	6.74 (6.19)
GDP p.c. growth	2.7 (4.93)	2.88 (3.96)	3.38 (5.37)	4.15 (5.95)
Population	39.51 (147.65)	27.79 (52.62)	25.26 (42.32)	17.39 (36.04)
Tax rate	0.49 (0.40)	0.61 (0.50)	0.66 (0.68)	0.38 (0.13)
Inflation	7.01 (9.13)	8.27 (9.43)	10.52 (8.41)	8.41 (9.14)
Interest rate	6.85 (19.81)	11.64 (11.47)	10.55 (10.60)	9.83 (12.91)
Real effective exchange rate	102.99 (12.45)	103.74 (12.32)	142.14 (165.25)	104.51 (10.49)
Official exchange rate	0.76 (2.90)	1.04 (2.53)	1.42 (3.10)	0.25 (0.41)
Total trade	845.68 (58,987.73)	-5,151.89 (76,094.17)	3,728.81 (11,156.27)	4,540.21 (9,195.23)
Trade openness	0.91 (0.48)	0.8 (0.32)	0.81 (0.27)	1.02 (0.32)
School life expectancy	10.9 (2.07)	8.94 (2.39)	9.28 (1.80)	9.81 (1.94)
Natural resource rents	0.08 (0.15)	0.2 (0.18)	0.23 (0.21)	0.22 (0.17)
Battle-related deaths	0.1 (0.58)	0.1 (0.61)	0.11 (0.64)	0.00 (0.00)
Internally displaced persons	128.184 (565.23)	90.58 (342.91)	148.11 (426.47)	62.05 (185.87)
Corruption	51.2 (27.51)	27.2 (20.27)	24.57 (16.92)	29.37 (23.19)

Standard deviations in parenthesis

Sources: International Trade Center Investment Map, World Development Indicators, World Governance Indicators, UNESCO, dummy variables for EITI status constructed based on EITI data.

Table 5. Estimated Influence of EITI Candidacy on Log of FDI Inflows

Variables	(1) Ordinary Least Squares	(2) Fixed Effects	(3) Arellano-Bond GMM
EITI Candidate	1.10*** (0.22)	0.63*** (0.19)	0.55* (0.32)
Log. GDP p.c. growth (t-1)	0.38*** (0.07)	0.06 (0.05)	0.04 (0.07)
GDP p.c. (t-1)	0.09*** (0.01)	0.00 (0.02)	0.00 (0.01)
Trade openness (t-1)	-0.44** (0.19)	0.07 (0.38)	-0.35* (0.20)
Log. Resource rents (%GDP) (t-1)	0.10** (0.04)	-0.06 (0.08)	0.03 (0.03)
Total tax rate	-0.24 (0.27)	-0.12 (0.21)	0.16 (0.21)
Official exchange rate	0.04* (0.02)	-0.08 (0.19)	0.00 (0.02)
Inflation (GDP deflator, annual)	-0.01 (0.01)	0.02** (0.01)	0.00 (0.01)
Real interest rate	-0.03* (0.01)	0.01 (0.01)	-0.03** (0.01)
School life expectancy	0.16** (0.06)	0.16* (0.08)	0.00 (0.06)
Battle-related deaths	0.01 (0.09)	-0.03 (0.04)	-0.07 (0.04)
Displaced persons	0.00*** (0.00)	-0.00 (0.00)	0.00 (0.00)
Corruption	0.00 (0.00)	0.01 (0.01)	0.01* (0.00)
Log. FDI (t-1)			0.83*** (0.04)
Constant	4.96*** (0.68)	3.66*** (1.16)	1.28** (0.60)
Observations	812	812	786
R-squared	0.32	0.32	
Included fixed country effects		yes	
Included fixed year effects		yes	
Sargan p-value			0.537
Number of countries		127	126
Panel data for 2003-2011 used			
Robust standard errors in parentheses			
*** p<0.01, ** p<0.05, * p<0.1			

Joining the EITI may be part of a broader investment promotion strategy, or countries that are more open to international participation could attract more FDI and be more likely to join the EITI.

Table 6 addresses the possibility of multicollinearity based on the OLS regression in column 1. Since the variance inflation factor of the following variables when regressed on the log of FDI inflows is low, multicollinearity is discarded as a serious concern that could inflate the standard errors of the coefficients of a model using these regressors.

Column 2 of Table 5 shows that controlling for fixed country and year effects moderates the estimated influence of EITI candidacy on FDI

bias the OLS results upward. This could happen, for example, if countries are more culturally open to participating in the global economy and more willing to allow foreign investment within their borders, making them more likely to join the EITI. OLS would incorrectly interpret this unobservable cultural affinity for international participation as part of the estimated influence of EITI candidacy on FDI inflows. Because the fixed effects model estimates only variation within countries, these time-invariant characteristics that were biasing the results upward are removed from the model.

It is possible that fixed year characteristics could bias the results as well. For example, the years 2008 to 2009 had significant activity in countries declaring interest and achieving compliance or candidacy in the EITI, and the 2008 financial crisis could have been associated with lower FDI inflows. Lower FDI inflows associated with the financial crisis could mistakenly be attributed to EITI status changes for these countries if time fixed effects are not included. However, time fixed effects can be included or removed from the fixed effects model without significant changes in the results of column 2.

With the fixed effects model, the possibility of time-variant endogeneity remains and is likely to continue to bias results upward. The calculations in column 3 try to remove both forms of endogeneity by using Arellano-Bond estimation. It uses dynamic panel estimation to control for existing

Table 6. Variance Inflation Factor

Variables	VIF
Corruption	2.75
GDP p.c.(t-1)	2.01
School life expectancy	1.98
Inflation (GDP deflator, annual)	1.84
Real interest rate	1.67
Log. Resource rents (%GDP)(t-1)	1.32
Total tax rate	1.22
EITI candidacy	1.15
Displaced persons	1.14
Trade openness(t-1)	1.13
Log. GDP p.c. growth(t-1)	1.11
Official exchange rate	1.09
Battle-related deaths	1.09
Mean VIF	1.5

inflows to an approximate 63 percent increase. This confirms the prediction that time-invariant endogeneity would

trends in FDI inflows not associated with EITI candidacy, first differences to control for time-invariant fixed country effects, and lagged versions of all control variables as instruments to remove autocorrelation and endogeneity caused by time-variant country characteristics (see Methods section). The result is a further moderation of the estimated influence of EITI candidacy on FDI inflow to an approximated 55 percent. This makes sense, because countries that try to attract FDI inflows are likely to do so by various means that span multiple years. They could decide to join the EITI, strengthen investment promotion agencies, and offer foreign investors incentives that are not quantified by the control variables in the model. The fixed effects model would mistakenly interpret other changes in investment promotion strategies as part of the influence of EITI candidacy on FDI inflows. These results are significant at the 10 percent level, while OLS and fixed effects are significant at the one percent level.

This specification, in which the lagged determinants of FDI inflows are used as instruments, passes the Sargan tests for overidentifying restrictions, providing evidence of the validity of the choice of instruments (Roodman 2006).²

² Arellano-Bond estimation is intended for large-N, small-T panels because the use of lags could lead to over-identification in long (large-T) panels. This leads to potential danger of correlation between over-identifying instruments and the residuals. The central assumption of the Arellano-Bond estimation that the instruments, as a group, are exogenous can be tested with the Sargan test. The null hypothesis of this test is that the instrumental variables are uncorrelated with

Table 7 continues to use the Arellano-Bond GMM method to estimate the influence of EITI “interest” and “compliance” on the log of FDI inflows. Column 2 is the base case, equal to column 3 in Table 5, and columns 1 and 3 replicate the model using EITI interest and compliance as dependent variables.

These results show that there may be an influence on FDI inflows in each step of EITI membership. Countries that were eventually awarded candidacy may have increased their FDI inflows by an approximate 52 percent by declaring interest in the EITI. The EITI candidate status award may have increased FDI inflows an approximate 55 percent, and compliant status an approximate 71 percent. Even though the latter estimate is not significant at conventional levels, it has a p-value of 0.15. Because there are only 19 countries that were awarded compliant status on or before 2011, it is likely that more data would show this estimate to be significant in future years.

Table 8 continues to use Arellano-Bond GMM estimation to show sectoral results of the influence of EITI candidacy on the natural log of FDI inflows. Column 1 is the base case, and columns 2, 3 and 4 use the same model with primary, secondary, and tertiary FDI inflows as dependent variables. Differing estimated results and differing significance for control variables seem to imply that

the residuals and therefore useful as instruments; the higher the p-value of the Sargan statistic, the greater the probability that the instruments are valid (Mileva 2007).

Table 7. Estimated Influence of EITI Status on Log of FDI Inflows Using Arellano-Bond GMM

Variables	(1)	(2)	(3)
EITI Interest	0.52* (0.27)		
EITI Candidate		0.55* (0.32)	
EITI Compliant			0.71 (0.60)
Log. GDP p.c. growth (t-1)	0.02 (0.08)	0.04 (0.07)	0.00 (0.07)
GDP p.c. (t-1)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)
Trade openness (t-1)	-0.32 (0.22)	-0.35* (0.20)	-0.28 (0.23)
Log. Resource rents (%GDP) (t-1)	0.02 (0.04)	0.03 (0.03)	0.03 (0.03)
Total tax rate	0.15 (0.21)	0.16 (0.21)	0.17 (0.20)
Official exchange rate	0.01 (0.02)	0.00 (0.02)	-0.00 (0.02)
Inflation (GDP deflator, annual)	0.01 (0.01)	0.00 (0.01)	0.01 (0.01)
Real interest rate	-0.02* (0.01)	-0.03** (0.01)	-0.02* (0.01)
School life expectancy	0.03 (0.06)	0.00 (0.06)	0.01 (0.06)
Battle-related deaths	-0.08** (0.03)	-0.07 (0.04)	-0.05* (0.03)
Displaced persons	0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)
Corruption	0.01* (0.00)	0.01* (0.00)	0.01 (0.00)
Log. FDI(t-1)	0.83*** (0.05)	0.83*** (0.04)	0.84*** (0.04)
Constant	0.83 (0.62)	1.28** (0.60)	1.18** (0.58)
Observations	786	786	786
Sargan p-value	0.539	0.537	0.533
Number of countries	126	126	126

Panel data for 2003-2011 used. Two-step robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Note: EITI compliance is not significant at conventional levels, possibly due to a small number of observations. The p-value for this estimate is .15.

there may be a different influence between sectors. This finding would be consistent with the literature that suggests that the determinants of FDI are different across sectors. It makes intuitive sense that an extractive enterprise that will drill for oil or minerals in a country to sell them on the global market would be motivated differently than a company that would manufacture and sell or deliver services to the local market. However, none of the estimates are statistically significant at conventional levels. Sensitivity analyses that added sector-specific determinants did not reveal significant results either. It is very likely that this is due to missing sector-specific FDI data.

VII. DISCUSSION

The results of this research suggest that the key assumption used to promote the EITI (that a country can increase FDI inflows by joining the EITI) is supported by empirical evidence. This finding has policy implications for both countries that want to attract FDI inflows and for the EITI itself.

From the perspective of countries that want to attract FDI inflows, the EITI is a useful policy option. The results of this paper suggest that improving corruption perceptions, included in the model as a control variable, may not be enough to attract FDI. The EITI seal of approval seems to be an effective signaling mechanism of lower corruption for investors. When leads are introduced to the model to see whether the gains from EITI status changes carry over to future years, the

results lose significance. Even though the influence suggested by this paper of EITI status on FDI inflows is limited in time, the gains from increased FDI inflows do carry over to future years, as investment is associated with an increase in future production. Furthermore, because the effects of declaring interest and achieving compliance are similar, joining the EITI may deliver gains through multiple stages of the process. It is likely that future research with more observations regarding EITI compliance would show that this step in the EITI process also delivers FDI gains.

This paper uses models to isolate the influence of EITI status on FDI inflows. It does not consider the effects of more comprehensive investment promotion strategies. Future research that examines the relationships between joining the EITI and other strategies, such as spending on investment promotion agencies or other initiatives that are not reflected by the control variables in this paper, could assist countries in designing more effective investment promotion strategies.

From the perspective of the EITI as an institution, the results of this paper suggest that its promotion strategy of appealing to countries to join in order to attract FDI inflows is supported by empirical evidence. The incentive structure of the EITI does not need reform in order to be effective. Furthermore, other attempts by the international community to promote good governance may find a useful example in the EITI. Because participation is voluntary and

Table 8. Estimated Influence of EITI Candidacy on Log of FDI Inflows, Total and by Sector

Variables	(1) Log. Total FDI	(2) Log. Primary FDI	(3) Log. Secondary FDI	(4) Log. Tertiary FDI
EITI Candidate	0.55* (0.32)	0.04 (0.45)	0.53 (0.67)	-0.37 (0.31)
Log. GDP p.c. growth (t-1)	0.04 (0.07)	0.21* (0.11)	0.11 (0.14)	0.12 (0.08)
GDP p.c. (t-1)	0.00 (0.01)	0.01 (0.01)	0.02 (0.02)	0.01 (0.01)
Trade openness (t-1)	-0.35* (0.20)	-0.79 (0.59)	-0.81* (0.42)	-0.59* (0.32)
Log. Resource rents (%GDP) (t-1)	0.03 (0.03)	0.03 (0.12)	0.03 (0.05)	-0.05 (0.06)
Total tax rate	0.16 (0.21)	0.34 (0.60)	1.1 (0.68)	-0.07 (0.63)
Official exchange rate	0.00 (0.02)	-0.04 (0.05)	0.06 (0.05)	0.06 (0.03)
Inflation (GDP deflator, annual)	0.00 (0.01)	-0.00 (0.03)	-0.04 (0.03)	-0.03 (0.02)
Real interest rate	-0.03** (0.01)	0.01 (0.02)	-0.07** (0.03)	-0.02 (0.02)
School life expectancy	0.00 (0.06)	0.13 (0.10)	-0.06 (0.16)	0.02 (0.10)
Battle-related deaths	-0.07 (0.04)	-0.22* (0.12)	-0.06 (0.17)	-0.04 (0.06)
Displaced persons	0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
Corruption	0.01* (0.00)	0.00 (0.01)	0.01 (0.01)	0.00 (0.01)
Log. FDI (t-1)	0.83*** (0.04)			
Log. Primary FDI (t-1)		0.77*** (0.08)		
Log. Secondary FDI (t-1)			0.75*** (0.08)	
Log. Tertiary FDI (t-1)				0.79*** (0.05)
Constant	1.28** (0.60)	-0.02 (1.34)	2.57 (2.33)	1.6 (1.17)
Observations	786	330	377	391
Sargan p-value	0.537	0.387	0.765	0.942
Number of countries	126	75	78	78

Panel data for 2003-2011 used. Two-step robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

beneficial to members, it is possible that this incentive structure can work as a less confrontational alternative for other international initiatives that use more coercive diplomatic efforts by governments or name-and-shame strategies by NGOs. Voluntary multi-stakeholder partnerships to promote good governance similar to the EITI could be applied to issues such as human trafficking, trade, labor standards, and environmental policies.

Although a more than 50 percent increase in FDI inflows may seem high, FDI inflows are highly volatile (see Table 2) and this estimate of the influence of EITI membership is not unrealistic. This paper measures FDI differently, but finds similar results to those of Schmaljohann (2013), who finds that EITI candidacy is associated with an increase of FDI as a percentage of GDP of up to two percent. The mean of FDI as a percentage of GDP for the dataset used in this paper is close to five percent. Therefore, a two percentage point increase in FDI inflows as a percentage of GDP is comparable to a 55 percent increase in FDI inflows.

This paper's results are robust to certain stress tests. For example, some papers use real effective exchange rates as opposed to official exchange rates because the latter may introduce government distortions to market exchange rates. Though a valid concern, this paper's results are robust to the replacement of official exchange rates for real effective exchange rates, although missing data from the latter reduces the number of observations used to estimate results to 371. Some

papers include FDI stock to control for clustering effects. This paper does so by including the lagged version of FDI inflows as a control variable, but results are also robust to the inclusion of FDI stock as a control variable. The results are also robust to the inclusion of all other World Governance Indicators, including the removal of corruption, battle-related deaths, and displaced persons, and changing the dependent variable to FDI as a percentage of GDP does not change results significantly.

The results of this paper lose significance when lags from the log of GDP per capita growth, GDP per capita, log of resource rents, and trade openness are removed. This highlights one of the limitations of the data used; while FDI decisions are made in real time, data are reported in yearly intervals. Similarly, changes in EITI status are recorded by year. Though it would make sense to use differently timed control variables when a country changes its status in January or December, the data does not allow for that. It is possible that future research using monthly data would produce more accurate results. However, some variables may need to be lagged even with the use of monthly data. Investors make some decisions based on the observed values of some economic indicators like GDP, GDP growth, and trade openness. On the other hand, they could base their decisions on the expectation in future values of other variables like taxes, exchange rate volatility or interest rates that are not necessarily based on past performance but rather information about policy

changes. Because projections of some economic variables are usually based on recent past economic performance, the use of lags for these variables makes sense.

The greatest limitation to the results of this paper is the quality of data. Most variables used are as reported by governments to the World Bank, UNESCO, or UNCTAD and data manipulation or inconsistent data measurement across countries could affect the results. Missing sector-specific FDI data prevented this paper from reaching a conclusion on the influence of joining the EITI on FDI inflows by sector. Future research with better and more abundant data could show that the EITI influences FDI inflows in each sector differently. Meanwhile, the question of whether the EITI can help a country diversify its economy remains unresolved. The estimates that did show a significant influence of the EITI on FDI inflows also have data problems. Of a total of 1660 observations in the dataset, the model includes slightly less than half. Even though more developed countries are more likely to have better data, this is unlikely to bias the results of this paper because the Arellano-Bond model estimates this relationship based on changes in the variables of interest. The effect that this missing data problem is likely to have on these results is that high- and middle-income countries will have a more prominent role in the estimates than low-income countries with missing data.

Despite of data limitations, this paper reaches a conclusion similar to that

of Schmaljohann (2013) through a different model specification. Future research can improve on sectoral analyses with better data, but in the meantime, the governments of resource-rich countries will make policy decisions based on existing information. They should consider the EITI as an effective tool to attract FDI.

VIII. APPENDIX

Table 9. List of EITI Countries by Year of Status Change

EITI Country	Interested	Candidate	Compliant
Afghanistan	2009	2010-2011	
Albania		2009-2011	
Azerbaijan		2002-2008	2009-2011
Burkina Faso	2008	2009-2011	
Cameroon	2002-2006	2006-2011	
Central African Republic	2006-2008	2009-2010	2011
Chad	2007-2009	2010-2011	
Congo, Dem. Rep.		2007-2011	
Congo, Rep.	2006	2007-2011	
Cote d' Ivoire	2006-2007	2008-2011	
Gabon	2004-2006	2007-2011	
Ghana	2003	2004-2009	2010-2011
Guatemala	2010	2011	
Guinea	2005-2006	2007-2011	
Indonesia	2009	2010-2011	
Iraq	2009	2010-2011	
Kazakhstan	2005-2006	2007-2011	
Kyrgyz Republic	2004-2009	2010	2011
Liberia	2008		2009-2011
Madagascar	2007, 2011	2008-2010	
Mali	2006	2007-2010	2011
Mauritania	2005-2008	2009-2011	
Mongolia	2006	2007-2009	2010-2011
Mozambique	2008-2010	2011	
Niger	2005-2009	2010	2011
Nigeria	2002-2006	2007-2010	2011
Norway	2008-2009	2010	2011
Peru	2004-2009	2010-2011	
Sao Tome and Principe	2011	2008-2010	
Sierra Leone	2006-2007	2008-2011	
Solomon Islands	2011		
Tanzania		2009-2011	
Timor-Leste	2007	2008-2009	2010-2011
Togo		2010-2011	
Trinidad and Tobago	2010	2011	
United States	2011		
Yemen, Rep.	2005-2006	2007-2010	2011
Zambia	2008-2010	2011	

Note: Candidate and Compliant status are awarded by the EITI. Interest is determined based on the previous years reported by countries that achieved candidacy, except for the United States, whose "interested" status was recognized by the EITI. Suspended countries that are not delisted are demoted to Interested (Sao Tome and Principe 2011, Madagascar 2011).

VIII. REFERENCES

- Arellano, Manuel and Stephen R. Bond. 1991. "Some tests for specification for panel data: Monte Carlo evidence and an application to employment equations." *Review of Economic Studies* 58, no. 2: 277–297. <http://ideas.repec.org/a/bla/restud/v58y1991i2p277-97.html>.
- Arellano, Manuel and Olympia Bover. 1995. "Another look at the instrumental variable estimation of error-components models." *Journal of Econometrics* 68, no. 1: 29–51. <http://ideas.repec.org/a/eee/econom/v68y1995i1p29-51.html>.
- Bajo-Rubio, O. and C. López-Pueyo. 2002. "Foreign direct investment in a process of economic integration: The case of Spanish manufacturing, 1986-1992." *Journal of Economic Integration* 17, no. 1: 85-103. <http://www.aeefi.com/RePEc/pdf/defi02-02.pdf>.
- Bond, Stephen. 2002. "Dynamic Panel Data Models: A Guide to Micro Data Methods and Practice." Center for Microdata Methods and Practice, working paper CWP09/02. <http://www.cemmap.ac.uk/wps/cwp0209.pdf>
- Blonigen, Bruce A. 2005. "A Review of the Empirical Literature on FDI Determinants." NBER Working Paper No. 11299. <http://darkwing.uoregon.edu/~bruceb/FDISurvey2.pdf>.
- Blundell, Richard and Stephen R. Bond. 1998. "Initial conditions and moment restrictions in dynamic panel data models." *Journal of Econometrics* 87, no. 1: 115–143. <http://ideas.repec.org/p/nuf/econwp/9614.html>.
- Busse, Matthias and Carsten Hefeker. 2007. "Political Risk, Institutions and Foreign Direct Investment." *European Journal of Political Economy* 23, no. 2: 397– 415. <http://www.wiwi.uni-siegen.de/ewp/research/documents/hefeker/315.pdf>.
- Dreher, Axel, Heiner Mikosch, and Stefan Voigt. 2010. "Membership has its Privileges – The Effect of Membership in International Organizations on FDI." Cege Discussion Paper 114. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1694994.
- Dreher, Axel and Stefan Voigt. 2011. "Does Membership in International Organizations Increase Governments' Credibility? A Test on the Effects of Delegating Powers." *Journal of Comparative Economics* 39: 326-348. <http://ideas.repec.org/p/kof/wpskof/08-193.html>.
- Gopinath, Munisamy. 2000. "Foreign Direct Investment in Food and Agriculture Sectors", Oregon State University. <http://oregonstate.edu/dept/iifet/2000/papers/gopinath.pdf>.
- Ito, K. and E. L. Rose. 2002. "Foreign direct investment location strategies in the tire industry." *Journal of International Business Studies* 33, no. 3: 593-602. <http://www.jstor.org/stable/3069533>.
- Keele, Luke and Nathan J. Kelly. 2006. "Dynamic Models for Dynamic Theories: The Ins and Outs of Lagged Dependent Variables." *Political Analysis* 14, no. 2: 186-205. <http://pan.oxfordjournals.org/content/14/2/186.abstract>.
- Kolstad, Ivar and Espen Villanger. 2004. "How Does Social Development Affect FDI and Domestic Investment?" Chr. Michelsen Institute CMI Report 2. <http://hdl.handle.net/10202/139>.
- Kreinin, M. E., S. Abe, M. G. Plummer. 1999. "Motives for Japanese DFI: Survey, analysis and implications in light of the Asian crisis." *Journal of Asian Economics* 10: 385-394.
- McCorrison, Steve and Ian M. Sheldon. 1998. "Cross-Border Acquisitions and Foreign Direct Investment in the U.S. Food Industry." *American Agricultural Economics Association* 80, no. 5: 1066-1072.
- Mileva, Elitza. 2007. "Using Arellano-Bond Dynamic Panel GMM Estimators in Stata." Economics Department, Fordham University. <http://www.fordham.edu/economics/mcleod/Elitz-UsingArellano%E2%80%9393BondGMMEstimators.pdf>
- Miller, S.R. and A. Parkhe. 1998. "Patterns in the expansion of U.S. banks' foreign operations." *Journal of International Business Studies* 29, no. 2: 359-390.
- Moran, Theodore H., Edward M. Graham, and Magnus Blomström. 2005. *Does Foreign Direct Investment Promote Development?* Washington, DC.: Institute for International Economics and Center for Global Development.
- Moshirian, F. 1997. "Foreign direct investment in insurance services in the United States." *Journal of Multinational Financial Management* 7, no. 2: 159-173.

- Ofori-Brobbe, Kwadwo; Lucy Ojode, and Mayur Desai. 2008. "An Inter-temporal Comparison of the Determinants of Non-extractive US Direct Foreign Investment in Sub-Saharan Africa." *Journal of Global Business Management* 4, no. 2. <http://www.jgbm.org/page/3%20Kwadwo%20Ofori-Brobbe.pdf>.
- Roodman, David. 2006. "How to Do Xtabond2: An Introduction to "Difference" and "System" GMM in Stata." Center for Global Development Working Paper No. 103. <http://ideas.repec.org/p/cgd/wpaper/103.html>.
- Schmaljohann, Maya. 2013. "Enhancing Foreign Direct Investment via Transparency? Evaluating the Effects of EITI on FDI." Heidelberg University, Discussion Paper Series No. 538. <http://www.uni-heidelberg.de/md/awi/forschung/dp538.pdf>.
- Smarzynska, Beata K. and Shang-Jin Wei. 2000. "Corruption and the composition of foreign direct investment-firm-level evidence." Policy Research Working Paper Series 2360, The World Bank. <http://ideas.repec.org/p/wbk/wbrwps/2360.html>.
- Walsh, James P. and Jiangyan Yu. 2010. "Determinants of Foreign Direct Investment: A Sectoral and Institutional Approach." IMF Working Paper WP/10/187. <http://www.imf.org/external/pubs/ft/wp/2010/wp10187.pdf>.
- Wei, Shang-Jin. 2000. "How Taxing is Corruption on International Investors?" *Review of Economics and Statistics* 82, no. 1: 1–11. <http://users.nber.org/~wei/data/wei2000a/wei2000a.pdf>
- Xing, Yuqing and Charles D. Kolstad. 2002. "Do Lax Environmental Regulations Attract Foreign Investment?" *Environmental and Resource Economics* 21, no. 1: 1-22. <http://link.springer.com/article/10.1023%2FA%3A1014537013353?LI=true#>.
- Yamori, N. 1998. "A note on the location choice of multinational banks: The case of Japanese financial institutions." *Journal of Banking and Finance* 22, no. 1: 109-120.