

FINANCING GROWTH: COMPARING THE EFFECTS OF FDI, ODA, AND INTERNATIONAL REMITTANCES

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The world-wide emergence of remittances, in conjunction with challenges surrounding public foreign aid and the theoretical division regarding the development of FDI, prompt important questions as to whether international remittances outperform foreign aid and FDI as a determinant of a country's economic growth. Using panel data from 1990-2006 and applying System-Generalized Method of Moments (GMM) approach, we show that international remittances, FDI, and ODA are positively and significantly associated with the economic growth rate of low income countries. Specifically, we find that the impact is greater with international remittances. Moreover, international remittances prove to be a greater contributor of economic growth than ODA and FDI even when countries are highly dependent on FDI. We conclude by stressing the need for policy and business responses to stimulate the flow and create an appropriate distribution of international remittances to make full use of international remittances developmental potential.

Keywords: International Remittance, Complement Public Foreign Aid, FDI, Social Welfare, OLS Regression

JEL classification: F24

1. INTRODUCTION

In the "The Mystery of Capital," Hernando De Soto postulates about the mysteries of missing information, capital, political awareness, and legal failure. His main thesis is the world's poor already possess an enormous quantity of savings. Although available, much of this savings is found in "dead capital," or capital which is not recognized by the government. Governments overlook this "dead capital" for two main reasons: lack of evidence and deficiencies in domestic property laws (De Soto, 2000, p. 11).

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International remittances, often characterized as individual transfer payments from expatriates to home countries, are a primary example of “dead capital.” This “dead capital” is explicitly exposed to hazards of the informal market and the underground economy. International remittances have been neglected or underestimated as a potential development tool.

There is a growing consensus in the field of economic development regarding the importance of international remittances on home country development and poverty alleviation (Bourguignon, 2006; Adams and Page, 2003). In recent years, governments and transnational organizations have started to show an active interest in this potential source of external finance. This is largely due to four major developments. First, international remittance flows into developing countries have grown rapidly. This growth has been significant mostly in poor and lower middle income countries despite considerable restrictions on international migration (Griffin, 2000, p. 103). Second, for many developing countries, international remittance flow exceeds public foreign aid and foreign direct investment (FDI). It represents a large percentage of their GDP (Meyers, 2002; Government Accountability Office (GAO), 2005). Third, improvements in international remittance statistics, although modest, have increased governments’ awareness of the potential of international remittances significantly contribute to poverty alleviation, economic growth, and development. Fourth, the flow of public foreign aid continues to decline (Kim and Shaw, 2003; GAO, 2005), pressuring poor countries to look for alternative source of development financing.

In contrast to international remittances, public foreign aid programs and, to a lesser extent, FDI, are being challenged on a number of fronts. Many analysts argue that the system of foreign aid in the last few decades has proven counterproductive and failed to accomplish development objectives (Bauer, 1991; Bandow and Vásquez, 1994; Easterly, 2006). Foreign aid, it is argued, has fueled corruption, economic failure, and aid dependency in many poor countries.

On the other hand, a number of FDI theorists have been reticent about the true effect of FDI on host countries. They have expressed concern over potential negative social effects of FDI (Hymer, 1970) highlighted by vertical and technological spillovers (Eden, 2009). Yet, countries around the world, especially those with limited domestic resources, compete fiercely to attract FDI with studies looking at the myriad determinants of FDI (Mohamed and Sidiropoulos, 2010). Since the early 1990s, FDI flow to developing countries increased rapidly from \$36 billion in 1990 to \$379 billion in 2006. In 2007, international remittances surpassed official development assistance (ODA) and official aid as sources of development financing (Gabel, 2008, p. 1).

Most previous studies looked at the independent effect of Remittances, Aid and FDI on development and international migration. In this paper, we compare the significance of international remittances, foreign aid and FDI as determinants of economic growth in developing countries. The global emergence of remittances in conjunction with the challenges and controversies surrounding public foreign aid and the theoretical division regarding the development significance of FDI prompt some important questions:

- 1) Do international remittances outperform public foreign aid and FDI as a determinant of economic growth?
- 2) Will international remittances achieve the goals of foreign aid programs and FDI?
- 3) What does this mean to the global debate on international migration?

After a brief literature review, this study proposes to answer these questions by utilizing data from a 16 year panel covering 182 countries. The analysis is organized by level of income, degree of indebtedness, and dependence on FDI. We propose that in countries with low income, the contribution of international remittances to economic growth is superior to that of ODA and FDI. Limitations and policy implications for international migration are discussed.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. International Remittance

International remittances are principally built on the spontaneous and voluntary actions of private individuals (migrants) driven by the incentive to support their families, friends and/or invest in their home countries. The United Nations Technical Sub-Group on the Movement of Persons (TSG) proposed set of definitions of remittances, distinguishing between personal, institutional, and total remittances with personal remittances being those capital transfers being made by resident households to resident households; institutional remittances consisting of transfers by any residential sector to non-resident households and non-profits; and total remittance being the sum of personal and institutional remittance (World Bank, 2006, p 87).

Governments play an active role in the market of economic transfers. The primary objective for government intervention is to stimulate the flow of international remittances, channel them into productive activities, and protect market participants from coercion, abuse, and theft. To achieve these objectives, governments in many migrant-sending countries have initiated a range of legal, incentive, and counseling policies and programs (Orozco, 2002; World Bank, 2006). However, not all government interventions are minimally intrusive or less disruptive. In some instances governments tried to regulate the market of remittance transfers in order to tap into the flow of funds, though few were successful (Shivani and Rizema, 1999; Orozco, 2002).

The market of remittance transfers, which evolved through spontaneous order, has now become increasingly competitive and profitable (Lowell and De la Garza, 2002). This has given rise to numerous challenges. These challenges include: transaction security, even via formal channels,¹ underground economic activities, migrants' habits,

¹ Lowell (1998) reports that as many as one third of remittances transferred via Mexican government post offices were lost.

lack of knowledge about financial services and costs, as well as distrust in the government and the banking system (Lowell and De la Garza, 2002, p. 10). These challenges require sound policy responses not only from the government, but also from the private sector.

Past research was skeptical of the economic impact of international remittances, due in large part to their belief that remittances are merely spent on personal consumption, especially imported goods (Lipton, 1980; Russel, 1986). Recently, these studies have come under serious attack. According to Adams (2006, p. 5), “much of the literature in this area tends to be anecdotal, rather than empirical.” Recent empirical studies have shown that a large portion of international remittance income goes, in addition to consumption, into savings and investments (Dustmann and Kirchcamp, 2001; Woodruff and Zenteno, 2001; Adams, 2002).

International remittances have a profound effect on consumers, as they can help alleviate poverty by increasing the income of receiving households. This income is diffused to education, health, and entrepreneurship, thereby improving human capital, raising living standards and providing security in times of economic hardship (United Nations, 2006; World Bank, 2006; Clarke and Wallsten, 2004). Serino and Kim (2011) and Portes (2009) further reveal that this positive impact of international remittances in alleviating poverty and enhancing the welfare of the poor is more pronounced and the strongest in low income countries.

International remittances also have a pronounced effect on the balance of payments, foreign exchange rates, and interest rates (Congressional Budget Office (CBO), 2005; United Nations, 2006; World Bank, 2006). Evidence suggests that “foreign exchange inflows associated with remittances also improve the creditworthiness of receiving countries, lower their borrowing costs and provide reliable financing in times of instability” (United Nations, 2006). Because of the multiplier effect, international remittances can boost domestic output (Adelman and Taylor, 1992; World Bank, 2006) and “offset some of the output losses that a developing country may suffer from emigration of its highly skilled workers” (Ratha, 2003, p.164).

Developing countries have the opportunity to benefit significantly from international remittance inflows. Nevertheless, many conditions must be met before developing countries can fully maximize the gains from international remittances, particularly, the safeguard of the market-mechanisms and the enforcement of the rule of law. Regulatory measures intended at capturing international remittances will impose costs on a number of economic actors and could lead to the exact opposite of their anticipated aim.

2.2. The Role of FDI

Foreign direct investment (FDI) has had mixed effects on development financing. Some theorists are concerned that FDI has negative social effects (Blostrom and Kokko, 2003; Globerman and Shapiro, 2003; Mencinger, 2003; Hymer, 1970) as FDI takes advantage of market imperfections and leverages vertical and technological spillovers

(Eden, 2009). Other studies even casted doubt over the existence of a spillover effect from FDI (Haddad and Harrison, 1993).

Conversely, Hsiao and Shen (2003) contend that FDI has overall positive effects as a result of these spillovers. Regardless, FDI inflows continue to increase, surpassing even official aid mechanisms (UNCTAD, 2007; OECD, 2007; Colen, Maertens, and Swinnen, 2013, p. 76-77) implying that FDI has a significant impact on the host countries economic ability to enhance development.

Meyers' (2004) generalized framework highlights how FDI influences local firms. This framework details a reciprocal relationship between the FDI project and the local firm through spillover effects of technology, knowledge and resources. However, FDI also affects the natural environment, society, and government economies. Several studies allude to FDI slowing host country development, and thus impeding economic growth (Mencinger, 2003; Carkovic and Levine, 2002; Campos and Kinoshita, 2002; Nunnenkamp and Stracke, 2008). Due to their relative size, Multinational Enterprises (MNEs) were able to have control over the market, reducing overall competition and choice. They also internalize processes, and thus control the number of industries within the market (Hymer, 1970). Studies of the determinants of FDI cautioned that attracting FDI does not necessarily increase host country welfare, as it pertains to potential spillover effects (Blomstrom and Kokko, 2003; Globerman and Shapiro, 2003; Mencinger, 2003).

Other studies highlight the positive impacts of FDI (Borensztein *et al.*, 1998; Casson, 2007). Hsiao and Shen (2003) noted that FDI inflows produce a 1% increase in GDP growth in the short run, with a 7% GDP increase in the long run. Blomstrom and Kokko (1998) show that there are diverse effects of FDI spillovers, which vary systematically between countries and industries. They posit that any potential positive effects of FDI increase when local firms increase their ability to absorb and compete with the new firm.

In summary, existing studies offer divergent views of FDI impacts. To the extent that FDI influences society as a whole (Meyer, 2004), we argue that, though FDI may have negative impacts on some specific components of the host countries, the overall effects are likely to be conducive to overall welfare enhancement. As such, FDI will have a strong positive effect upon the host country (Bain, 1951; Penrose, 1956; Hymer, 1970; Buckley, 1990). The inflow of funds provides additional resources to the market economy (Mirza and Giroud, 2003). These resources are realized by host countries through taxation, which host countries can use to increase social welfare in areas such as literacy, health care, and employment benefits (Blomstrom and Kokko, 1998). FDI may also create demand for local supplies and expand supply chain activities that facilitate infrastructure development such as road construction and utility services. It can influence host country infrastructure through the effects of technology spillovers, industry structure, and indigenous technology development (Borensztein *et al.*, 1998; Zhao, 1995).

2.3. Development With or Without Aid?

Contrary to private foreign aid such as international remittances, public foreign aid does not flow according to market-mechanisms. Decisions regarding the allocation of public foreign assistances are made by governments and multilateral lending institutions. Yet, after decades of foreign assistances to the world's poorest countries, billions of dollars of aid have rarely achieved their intended aim in terms of economic development and poverty alleviation (Bandow and Vasquez, 1994). In some instances, these dollars were squandered in dubious ways and hardly touched the poor for whom these donated funds were intended. International remittances and market-driven capital flows, on the other hand, meet economic objectives far better than public foreign aid, doing a better job in channeling funds directly to the poor, and often providing the economy with a greater amount of capital.

There is a growing consensus that the answer to poverty and underdevelopment lie not in foreign aid, but in homegrown development strategies, especially market-driven programs such as international remittances and microfinance. Bandow and Vasquez (1994, p. 11) argue that "development can occur without aid, and indeed, is more likely to result if multilateral aid and the domestic impediments to growth financed by it are eliminated". Easterly (2006) writes "while the West was agonizing over a few tens of billions of dollars in aid, the citizens of India and China raised their own incomes by \$715 billion by their own efforts in free markets" (p. 2). Jalles (2011) empirically concluded that indebtedness should be reduced, particularly for countries with weak institutional quality where debt is proven to have negative effect on growth.

Although public foreign aid has failed to deliver sustainable growth in poor countries, there is no sign that there will be an end to it. It is true that the flow of foreign aid to developing countries is declining, yet many rich countries reaffirm their commitment to continue providing it within the framework of the United Nations Millennium Development Goals (Kim and Shaw, 2003, p. 128).²

In light of the above we might hypothesize that, in general, the contribution of remittances to economic growth is greater than that of FDI and ODA. Yet, the uneven distribution of these sources of development financing among countries might suggest different effect patterns. To gain insight into this bias, we suggest comparing the proportional contribution of these sources of development financing to economic growth by country income groups. Based on the proportional weight of each source of development financing on the national economy, its contribution to economic growth is expected to be uneven from one income group to another. We expect that the international remittances will contribute proportionately higher to the economic growth

² "This ranges from halving extreme poverty to halting the spread of HIV/AIDS and providing universal primary education, all by the target date of 2015." (<http://www.un.org/millenniumgoals/>)

rate of low-income countries and proportionally less to the economic growth rate of middle-income countries.

FDI, which can arguably contribute to the economic development of developing countries, remains highly concentrated on high-income developing countries. This is in line with the findings of several empirical studies and trade theories that foreign investment location choices are influenced by the host country's infrastructure, human capital, economic, social, and political conditions, and level of development (Peck, 1996; Globerman and Shapiro, 1999; Rugman and Verbeke, 2009). Indeed, the weight of FDI in national economics has been higher in high-income developing countries which accounted for 57% of inward FDI stock in developing countries in 2007 (UNCTAD, 2011). Middle-income developing countries also benefited from the waves of foreign investment of the past twenty years, but to a lesser extent. At the same time, there is strong evidence that international remittances and foreign aid, has been an alternative source of financing for middle-income and high-income developing countries, but not as large as FDI (UNCTAD, 2011). In contrast, ODA to middle-income developing countries has been declining in the past five years and is almost insignificant in high-income developing countries (see Figure 1). This leads to our first hypothesis:

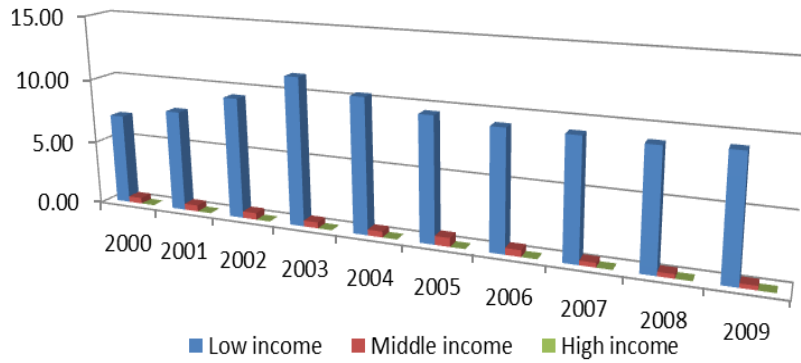
H1: The contribution of FDI to middle and high-income developing countries' economic growth is greater than that of international remittances and ODA.

In contrast, low-income developing countries, though actively seeking FDI, have been facing challenges in their effort to attract it. In fact, they are highly reliant on official development assistance to sustain development. Low-income developing countries' net ODA received in 2009 was about 9.2 per cent of GNI (UNCTAD, 2011). This figure is nine times higher than the level received by middle-income and high-income developing countries combined. It is also higher than the figures in 2000 reflecting a continuous inclination by low-income developing countries to rely on development assistance despite the declining trend of ODA worldwide (see Figure 2). This is particularly true for low-income countries with high indebtedness. Therefore, we expect that:

H2: In countries with high indebtedness, ODA would contribute the most to economic growth.

On the other hand, of the three sources of development financing, international remittances has the biggest weight on low-income developing countries' national economies. It reached a staggering 186% of GDP in 2009 (World Bank, 2010). Accordingly, we hypothesize that:

H3: The contribution of remittances to low income countries' economic growth is greater than that of FDI and ODA.



Source: WDI (2008).

Figure 1. Net ODA Received (% of GNI)



Source: WDI (2008).

Figure 2. Workers' Remittances and Compensation of Employees in Low-income Countries, Received (% of GDP), 1990-2009

3. METHOD OF ESTIMATION, MODEL EQUATION, AND DATA

3.1. Method of Estimation

To explore these hypotheses, we make use of panel data including as many as 180 countries over the period 1990-2006. The base growth model is derived from Barro (1998) and Kosack and Tobin (2006, p. 205-243) and is written as follows:

The Base Model:

$$\begin{aligned}
Growth_GDPCap_{it} = & \beta_0 + \beta_1 FDI_GDP_{i,t} + \beta_2 ODA_GDP_{i,t} \\
& + \beta_3 REMIT_GDP_{i,t} + \beta_4 Openness_{i,t} + \beta_5 Democracy_{i,t} \\
& + \beta_6 Governance_{i,t} + \beta_7 Inflation_{i,t} + \beta_8 Pop_Gwth_{i,t} \\
& + \beta_9 InitialGDPCap_{i,t-1} + \eta_i + \varepsilon_{i,t}.
\end{aligned} \tag{1}$$

The subscript($_{it}$) refers to the country index and time index, respectively.

η_i is the unobserved time-invariant country-specific effect.

ε_{it} is the error term.

The Dependent variable:

Growth_GDPCap: Growth Rate of Real Gross Domestic Product (GDP) per capita; from Penn World Table 6.1 (PWT 6.1).

The Explanatory Variables:

FDI_GDP: Direct investment in reporting economy (FDI Inward) as a percentage of GDP; from UNCTAD's online database.

ODA_GDP: Official Development Assistance (net disbursements) as a percentage of GDP; from the OECD's International Development Statistics (IDS) at <http://stats.oecd.org/qwids/>.

REMIT_GDP: Remittances as a share of GDP; from World Bank (World Development Indicators 2008 CD-ROM).

Other Variables:

Openness: Exports plus imports divided by GDP; from World Bank (World Development Indicators 2008 CD-ROM).

Pop_Gwth: Population growth (annual %); from World Bank (World Development Indicators 2008 CD-ROM).

Inflation: Inflation as measured by the consumer price index; from World Bank (World Development Indicators 2008 CD-ROM).

Democracy: To measure the affected country's level of democracy we use the Polity IV project democracy indicators by Marshall and Jaggers (2005). This widely used data set provides a number of political regime measures for all independent countries with a total population of 500,000 or more. Specifically, we chose to use the combined polity score computed by subtracting the autocracy indicator score from the democracy indicator score (Marshall and Jaggers, 2005, p. 15). The resulted score range from (-10): strongly autocratic to (+10): strongly democratic. The democracy indicator assesses the extent to which a political regime reflect first, "the presence of institutions and

procedures through which citizens can express effective preferences about alternative policies and leaders,” second, “the existence of institutionalized constraints on the exercise of power by the executive,” and third, “the guarantee of civil liberties to all citizens in their daily lives and in acts of political participation” (Marshall and Jaggers, 2005, p. 13).

Governance: This is a measure of the quality of a country’s system of governance. We use the scores of six aggregate indicators compiled by Kaufmann, Kraay and Mastruzzi (2009).³ Each indicator ranges from -2.5 to 2.5, with higher values corresponding to better governance outcomes. These indicators represent six dimensions of system of governance that rate a country’s administrative and political performance (Kaufmann *et al.*, 2009, p.5): Voice and Accountability (measuring political, civil and human rights), Political Instability and Violence (measuring the likelihood of violent threats to, or changes in, government, including terrorism), Government Effectiveness (measuring the competence of the bureaucracy and the quality of public service delivery), Regulatory Burden (measuring the incidence of market-unfriendly policies), Rule of Law (measuring the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence), and Control of Corruption (measuring the exercise of public power for private gain, including both petty and grand corruption and state capture). Since this data on governance does not cover the period 1990-1995 and the years 1997, 1999, and 2001, we used the existing data as proxies for those missing years ($Governance_{it-1}=Governance_{i1996}$ for the time period 1990-1995 and $Governance_{it}=Governance_{it+1}$ for the years 1997, 1999, and 2001). Examining the correlations among the six indicators reveals that they are collinear. As a result we used factor analysis to extract the underlying factor(s) from among the indicators and represent governance performance with a lesser number of uncorrelated variables. There was only one factor extracted and it accounts for a substantial amount of variance among the indicators (77.9%). The extracted factor shows significant correlation with “rule of law” (0.94) and “government effectiveness” (0.937).

Log of Initial GDP per Capita: The log of a country’s GDP per capita; from Penn World Table 6.1 (PWT 6.1).

To reflect economic development level and financing needs, we disaggregated countries and ran the analysis by income groups, indebtedness and FDI dependency. Every country in our sample is classified as low-income or middle income, which corresponds to the standard World Bank country classification. The low income group includes all economies having a GNI per capita (calculated using the World Bank Atlas method) equivalent to US\$ 975 or less. Middle income economies include all countries having GNI per capita from \$976 to \$11,905 (World Bank, 2010). Additionally, we include two dummy variables: FDI dependency and Indebtedness. As a proxy for FDI

³ <http://info.worldbank.org/governance/wgi/index.asp>.

Dependency we use inward FDI stock as a percentage of GDP from UNCTAD's online database. The FDI Dependency dummy variable takes a value of one if an economy is dependent on FDI (countries in the sample with an FDI stock at levels of 10 percent of GDP or above) and zero otherwise. The indebtedness dummy variable takes a value of one if an economy is classified as greatly indebted and zero otherwise. Greatly indebted includes countries classified by the World Bank as moderately or severely indebted.

3.2. System GMM Modeling

In terms of empirical modeling, we use the increasingly popular linear generalized method of moments (system GMM) methodology developed by Arellano Bond (1991), Arellano Bover (1995) and Blundell Bond (1998). The application of system GMM is justified in the empirical growth research as an effective approach to deal with a number of methodological issues associated with growth regressions, particularly:

1) Endogeneity bias: The development financing and institutional variables on the right-hand-side of Equation (1) are typically endogenous. This is a common feature on growth regression models. Kosack and Tobin (2006) reach this conclusion when exploring the effect of aid and FDI on economic growth. Boone (1994, 1996) and Burnside and Dollar (2000) similarly argue for the endogeneity of aid in the growth regressions. We should then adopt an econometric approach that is consistent and efficient in the presence of endogenous regressors to insure that the estimation of our model is unbiased. While instrumental variable approaches such as two stage least squares (2SLS) is typically used to handle endogeneity in panel data, system GMM is preferable and more efficient (see Kosack and Tobin, 2006). Technically, system-GMM estimators embody the assumption of endogeneity and employ moment conditions to generate a set of valid instruments for the endogenous regressors that can significantly improve efficiency (Blundell and Bond, 1998; Kosack and Tobin, 2006; Roodman, 2006).

2) Omission Bias: Empirical research on growth has typically relied on simple econometric approaches such as ordinary least squares (OLS) and instrumental variable (IV) estimation (Edison, Levine, Ricci and Slok, 2002; Beck and Laeven, 2006). These relatively simple methods would most likely bias the results due to the potential for weak instruments and the omission of unobserved time-invariant country-specific effects (Kosack and Tobin, 2006). The latter is usually present in growth models including ours. The existence of such unobserved effects in Equation (1) would bias our results because of the likelihood of significant correlation between the country-specific effects and the initial level of income. We should then implement a regression approach that takes these effects into account.

3) Static Framework: By comparison to static panel approaches, dynamic approaches such as system GMM fit growth models better (Barro and Sala-i-Martin, 1997; Sachs 2003; Eicher and Schreiber, 2007). In the words of Sachs (2003, p. 4), "The first obvious specification problem is one of statics versus dynamics. Economic theory suggests that the determination of per capita income should be specified as a dynamic process" (p. 4).

To explain how system GMM model deal with the issues listed above, we shall spell Equation (1) as follow:

$$\Delta Y_{i,t} = \beta_0 + \beta_1 Y_{i,t-1} + \beta_2 X_{i,t} + \eta_i + \varepsilon_{it}, \quad (2)$$

or equivalently,

$$Y_{i,t} = \beta_0 + (1 + \beta_1)Y_{i,t-1} + \beta_2 X_{i,t} + \eta_i + \varepsilon_{it}, \quad (3)$$

where $\Delta Y_{i,t}$ is the growth rate of real GDP per capita, $Y_{i,t-1}$ is the log of the initial level of GDP per capita, X is the set of explanatory variables, η_i is an unobserved country-specific effect, ε_{it} is the time-varying error term, and the subscript (i, t) denotes, respectively, the country and the year.

Arellano and Bond (1991) suggest first-differencing Equation (3) into

$$\Delta Y_{i,t} = (Y_{i,t} - Y_{i,t-1}) = (1 + \beta_1)\Delta Y_{i,t-1} + \beta_2 \Delta X_{i,t} + \Delta \varepsilon_{it}. \quad (4)$$

This is known as Difference GMM or D-GMM. By differencing Equation (2), D-GMM eliminates the unobserved country-specific effect since the disturbance η_i does not vary with time ($\Delta \eta_i = \eta_i - \eta_i = 0$). Thus eliminating omitted variable bias. Additionally, D-GMM helps overcome endogeneity by using lagged-values of the explanatory variables as instruments. However, first-differencing generates a new statistical issue that the constructed differenced error term ($\Delta \varepsilon_{it}$) is now correlated with the differenced lagged variable. As a solution, Arellano and Bover (1995) and Blundell and Bond (1998) propose system GMM (S-GMM) estimator which achieves superior efficiency by estimating concurrently two distinctly instrumented equations: first-differenced equation (Equation (4) above) and level equation (original Equation (3) above).

However, the use of system GMM depends on two conditions: (i) the validity of these additional instruments (ii) the absence of second-order autocorrelation. To assess these two conditions, Arellano and Bond (1991) and Arellano and Bover (1995) propose the Sargan/Hansen test of over-identification and the Arellano-Bond (AR2) autocorrelation. Table 1 reports the Sargan/Hansen test of over-identification, which tests the validity of the instruments, and Arellano-Bond (AR2) autocorrelation which tests for the absence of second-order autocorrelation. The high p-values of these tests in our robust estimations (see Table 1) insure the validity of our model. In the appendix, we report summary statistics and the correlations for the central variables in the study.

Before estimating the model, we explored the dataset for any bias, especially the problem of multicollinearity. The variance inflation factor (VIF) is largely below the threshold of 2 for all the independent variables indicating an absence of serious multicollinearity problem.

Table 1. Growth Regression using System GMM

Dependent Variable: Growth Rate of real GDP per capita	(1) Low Income Economies	(2) Middle Income Economies	Low Income Economies	
			(3) FDI Dependent	(4) Greatly Indebted
FDI/GDP	0.405*** (0.109)	0.124 (0.346)	0.359*** (0.0774)	0.0715 (0.115)
Remittances/GDP	0.575*** (0.198)	-0.153 (0.181)	0.507*** (0.194)	0.271 (0.225)
ODA/GDP	0.239* (0.125)	0.00814 (0.689)	0.228** (0.110)	0.298** (0.126)
Governance	5.539* (3.018)	-5.044** (2.280)	5.619* (2.993)	2.155 (2.848)
Openness	-0.0171 (0.0289)	0.0575* (0.0331)	-0.0331 (0.0285)	0.0301 (0.0356)
Lagged GDP per capita (<i>t</i> -1)	-0.943 (1.022)	-1.953 (1.417)	-0.835 (1.030)	-0.337 (0.973)
Democracy	-0.341 (0.266)	0.121 (0.158)	-0.288 (0.251)	-0.381 (0.236)
FDI Dependency (dummy)			3.371* (1.958)	
Indebtedness (dummy)				-6.976*** (1.692)
Constant	8.176 (8.488)	13.96 (11.65)	6.610 (8.373)	12.49 (8.713)
Observations	316	486	316	316
Number of Countries	47	54	47	47
Hansen Test (p-value)	0.961	0.843	0.978	0.938
Arellano-Bond Test for Autocorrelation (p-value)	0.607	0.315	0.616	0.701

Notes: Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

To run our tests, we used the statistical software STATA, version 10 and David Roodman (2006)'s proprietary program (xtabond2). The regression results are presented in Table 1.

3.3. Results and Discussion

Column (1) shows the results from estimating Equation (1) using the sample of low income countries. According to Column (1), the coefficients for FDI and International Remittances are, as expected, positive and significant at 1%. The coefficient for ODA is also positive and significant at 5%. This presents strong evidence that the three sources

of development financing are conducive to economic growth in low income countries. Governance is also positively and significantly associated with economic growth in low income countries.

The results from estimating Equation (1) using the sample of middle income countries are presented in Table 1, Column 2. These results show different outcomes and do not confirm our first hypothesis. Neither international remittances nor FDI nor ODA are significant determinants of economic growth in Middle Income countries. In contrast, openness and governance are significantly associated with these countries economic growth. Governance, however, enters with a negative sign in the model. This could be explained by the fact that the middle income countries score negatively on average on each of the three major governance indicators reflecting negative governance outcomes (see Table 2).

Table 2. Summary Statistics for Governance Indicators for Middle Income Countries

Variable	Observations	Mean	Std. Dev.	Min	Max
Government Effectiveness	1284	-0.04827	0.617787	-2.22	2.51
Control of Corruption	1183	-0.10466	0.629829	-2.05	2.18
Rule of Law	1224	-0.02853	0.639356	-1.69	2.13

Following these regression results in Column (1), we conducted hypothesis tests to compare the individual coefficients of the three sources of financing (FDI, international Remittances, and ODA) similar to the method used by Trevino and Upadhyaya (2003, p. 128). We formed the following null and alternative hypothesis. Directional (one-tailed) tests were used for all analyses because the contribution of international remittances to economic growth of low income countries was hypothesized to be higher than that of FDI (7) and ODA (8) and the contribution of FDI to economic growth of low income countries was hypothesized to be higher than that of ODA (9).

$$H_0 : \beta_{RM} = \beta_{FDI}, \quad H_A : \beta_{RM} > \beta_{FDI}, \quad (7)$$

$$H_0 : \beta_{RM} = \beta_{ODA}, \quad H_A : \beta_{RM} > \beta_{ODA}, \quad (8)$$

$$H_0 : \beta_{FDI} = \beta_{ODA}, \quad H_A : \beta_{FDI} > \beta_{ODA}. \quad (9)$$

(The subscript ($_{RM}$), ($_{ODA}$), and ($_{FDI}$) refers to international remittances, official development assistance, and foreign direct investment respectively.)

Of all these hypothesis tests, only the difference between International Remittances and ODA coefficients is significant at the 0.05 significance level. This suggests that the contribution of international remittances on the economic growth rate of low income

countries is greater than that of ODA. Although the coefficient for international remittances (0.58) is greater than the FDI coefficient (0.41), the difference is not statistically significant. These results, partially, support our third hypothesis that the contribution of remittances to low income countries' economic growth is greater than that of ODA.

Estimations in Column (3) and Column (4) account for the intensity of FDI and debt, respectively, in low income countries through two dummies added separately to Equation (1): FDI Dependency and Indebtedness. Column (3) shows that the inclusion of "FDI dependency" as significant, although marginally at the 10% significance level. With a positive and significant coefficient, this would mean that low income countries that are highly dependent on FDI compared to countries that are less dependent on FDI have an economic growth 3.4 points higher, controlling for the other independent variables.

In addition, the effects of FDI, ODA, and International Remittances on the economic growth rate of low income countries hold when FDI dependency is taken into account. Importantly, when the "FDI dependency" dummy is included, the difference between International Remittances and FDI coefficients on one hand and International Remittances and ODA coefficients on the other hand are significant at the 0.01 significance level. This suggests that, under these given conditions, the contribution of international remittances on the economic growth rate of low income countries is greater than that of FDI and ODA. These results support, albeit conditionally, our third hypothesis that the contribution of remittances to low income countries' economic growth is greater than that of FDI and ODA.

Column (4) shows that the inclusion of "Indebtedness" as a dummy in Equation (1) proves significant at 1%. As expected, "Indebtedness" enters with a negative sign in the model. This would mean that low income countries that are highly indebted compared to countries that are less indebted have an economic growth almost 7 points lower, controlling for the other independent variables. Importantly, under these circumstances only ODA positively and significantly contribute to the economic growth rate of low income countries. This finding supports our second hypothesis that ODA would contribute the most to the economic growth rate of highly indebted countries.

4. SUMMARY AND POLICY RECOMMENDATIONS

The results presented on this research broadly confirm our hypotheses regarding the dominant contribution of international remittances on the economic growth rate of low income countries. The main substantive finding is that such contribution of international remittances is superior to that of ODA. Moreover, international remittances prove to be a greater contributor of economic growth than ODA and FDI even when countries are highly dependent on FDI. Accordingly, governments in destination and origin countries should stimulate international remittances by removing barriers to international

remittance transfers and implementing effective (but not restrictive) policies to encourage migrant participation in economic activities. These include:

Providing incentives to migrants not only to remit, but also to save and invest;

Encouraging further market entry and competition in the market of international remittance transfers; this would certainly help decrease remittance costs;

Supporting outreach programs “that assist in development of formal migrant associations and encourage their membership to remit and invest in their home countries” (Orozco, 2002);

Improving access to and use of financial services; this would certainly help bring remittances to the formal financial channels;

Providing reliable information to migrants on transfer services and their costs;

Offering training and counseling for returning migrants;

Encouraging further research and exchanging knowledge on this area of development financing.

With regard to middle income countries, it is apparent that openness of trade and governance are the decisive determinants of economic growth. Surprisingly, the effect of FDI has not been significant. This could be explained by the negative governance outcomes (see Table 2) which could have generated unfavorable FDI effects for the host countries. As the literature supports, worse governance, indicated by high corruption, forces the host countries to make less efficient use of funds, enact change or increase the overall host country welfare (Curvo-Cazurra, 2006). Prior studies have shown that highly perceived corruption of the host country discourages FDI (Wei, 2000; Zhao, Kim and Du, 2003).

The results of this research in regard to foreign aid are much closer to the predictions of Trevino and Upadhyaya (2003) and Burnside and Dollar (2000) that foreign aid could promote growth. We found that ODA is positively and significantly associated with growth in low income economies, particularly heavily indebted countries. These findings provide considerable evidence for the hypothesis that foreign aid could, under certain conditions and country characteristics, promote growth rate of low income countries. Hence, it would be necessary to find a way to make aid work in conjunction with private capital flows, particularly international remittances and foreign direct investments. Easterly (2006) recommends the establishment of a mechanism of “feedback and accountability” to evaluate the impact of foreign aid programs and to make aid agencies and recipient governments accountable. The expansion of public foreign aid risks crowding-out private investments and growth-driven initiatives. It is necessary, for developing countries to reduce their dependence on public foreign aid and seek other sources of development financing, particularly remittances and FDI which prove, as this research shows, to be a greater contributor of economic growth than ODA. We also suggest using foreign aid to encourage private participation in economic activities and consolidate the role of market-driven schemes such as microfinance and

international remittances.

However, this study is not without its limitations. One major limitation is that our models do not account for sectorial variations in FDI, ODA and remittance inflow. Future research would benefit from more fine-tuned additional analysis of differential impacts of these inflows in various sectors and their relation to growth. Thus, for low income developing economies, the inflow of FDI may serve to increase infrastructure while ODA may impact social needs such as health care and literacy. The role of these three inflows in impacting where growth occurs can serve to highlight their relevant efficiencies and impacts.

APPENDIX

Table A1. Summary Statistics for the Sample of Low Income Countries

Variable	Observations	Mean	Std. Dev.
Growth Rate of real GDP per capita	1140	1.33	9.81
FDI/GDP	1115	3.48	7.68
Remittances/GDP	818	4.47	7.34
ODA/GDP	1085	8.68	9.56
Openness	1092	71.95	37.65

Table A2. Summary Statistics for the Sample of Middle Income Countries

Variable	Observations	Mean	Std. Dev.
Growth Rate of real GDP per capita	1293	2.49	6.16
FDI/GDP	1261	4.93	7.65
Remittances/GDP	1072	4.59	7.11
ODA/GDP	1090	4.12	11.37
Openness	1236	93.61	42.20

Table A3. Correlations for the Sample of Low Income Countries

	1	2	3	4	5	6	7	8
FDI/GDP								
Remittances/GDP	0.13	1.00						
ODA/GDP	0.06	-0.11	1.00					
Governance	-0.05	-0.04	0.19	1.00				

Openness	0.36	0.34	0.18	0.16	1.00			
Lagged GDP per capita ($t-1$)	-0.03	0.09	-0.04	0.06	0.00	1.00		
Democracy	-0.01	0.11	0.24	0.44	0.17	0.10	1.00	
Inflation	-0.05	-0.04	-0.05	0.04	-0.06	0.09	0.07	1.00
Population growth	-0.31	-0.47	0.19	-0.11	-0.38	-0.02	-0.17	0.00

Table A4. Correlations for the Sample of Middle Income Countries

	1	2	3	4	5	6	7	8
FDI/GDP								
Remittances/GDP	0.11							
ODA/GDP	0.10	0.54						
Governance	0.16	-0.11	-0.15					
Openness	0.36	0.19	0.14	0.33				
Lagged GDP per capita ($t-1$)	-0.03	0.07	0.05	0.06	0.04			
Democracy	0.11	-0.04	-0.07	0.33	-0.03	0.19		
Inflation	-0.11	-0.07	-0.06	-0.01	-0.16	0.00	0.07	
Population growth	-0.27	0.07	0.20	0.02	0.02	0.04	-0.08	0.02

REFERENCES

- Adams, R.H. (2002), "Precautionary Saving from Different Sources of Income: Evidence from Rural Pakistan," Policy Research Working Paper, 2761, The World Bank.
- _____ (2006), "International Remittances and the Household: Analysis and Review of Global Evidence," *Journal of African Economies*, 15(2), 396-425.
- Adams, R.H., and J. Page (2003), "International Migration, Remittances, and Poverty in Developing Countries," Policy Research Working Paper, 3179, The World Bank.
- Adelman, I., and J.E. Taylor (1992), "Is Structural Adjustment with a Human Face Possible?" *Journal of Development Studies*, 26, 387-407.
- Arcelus, F.J., B. Sharma and G. Srinivasan (2005), "Foreign Capital Flows and the Efficiency of the HDI Dimensions," *Global Economy Journal*, 5(2), 1-14.
- Arellano, M., and S. Bond (1991), "Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equation," *Review of Economic Studies*, 58(2), 277-329.
- Arellano, M., and O. Bover (1995), "Another Look at Instrumental Variable Estimation of Error-Component Models," *Journal of Econometrics*, 68(1), 29-51.

- Bain, J.S. (1951), "Relationship of Profit Rate to Industry Concentration in American Manufacturing, 1936-1940," *Quarterly Journal of Economics*, 65, 293-324.
- Bandow, D., and I. Vásquez (1994), "Introduction: The Dismal Legacy and False Promise of Multilateral Aid," in Bandow, D., and I. Vásquez, eds., *Perpetuating Poverty: The World Bank, the IMF, and the Developing World*, Washington D.C.: Cato Institute, 1-12.
- Barro, R.J. (1998), *Determinants of Economic Growth: A Cross-Country Empirical Study*, Cambridge, Mass: MIT Press.
- Barro, R.J., and X. Sala-i-Martin, (1997) "Technological Diffusion, Convergence, and Growth," *Journal of Economic Growth*, 2(1), 1-26.
- Bauer, P. (1991), "Foreign Aid: Mend It or End It?" in Bauer, P., S. Siwatibauand, and W. Kasper, eds., *Aid and Development in the South Pacific*, Australia: Center for Independent Studies.
- Beck, T., and L. Laeven (2006), "Resolution of Failed Banks by Deposit Insurers: Cross-Country Evidence," Policy Research Working Paper, 3920, The World Bank, Washington D.C.
- Blomstrom, M., and A. Kokko (1998), "The Economics of Foreign Direct Investment Incentives," NBER Working Papers, Available at <http://www.nber.org/papers/w9489/>.
- _____ (2003), "Multinational Corporations and Spillovers," *Journal of Economic Surveys*, 12(2), 1-31.
- Blundell, R., and S. Bond (1998), "Initial Conditions and Moment Restrictions in Dynamic Panel Data Models," *Journal of Econometrics*, 87(1), 115-143.
- Boone, P. (1994), *The Impact of Foreign Aid on Savings and Growth*, Mimeo, London School of Economics.
- _____ (1996), "Politics and the Effectiveness of Foreign Aid," *European Economic Review*, 40, 289-329.
- Borensztein, E., J. De Gregorioand, and J.W. Lee (1998), "How Does Foreign Direct Investment Affect Economic Growth?" *Journal of International Economics*, 45(1), 115-135.
- Bourguignon, F. (2006), "Global Economic Prospects, 2006: Economic Implications of Remittances and Migration," The World Bank, Available at <http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTDECPROPK:1026834~pagePK:64167702~piPK:64167676~theSitePK:1026804,00.html/>.
- Buckley, P.J. (1990), "Problems and Developments in the Core Theory of International Business," *Journal of International Business Studies*, 21(4), 657-665.
- Burnside, C., and D. Dollar (2000), "Aid, Policies, and Growth," *American Economic Review*, 90(4), 847-868.
- Campos, N.F., and Y. Kinoshita (2002), "Foreign Direct Investment as Technology Transferred: Some Panel Evidence from the Transition Economies," *The Manchester School*, 70(3), 398-419.
- Carkovic, M., and R. Levine (2002), "Does Foreign Direct Investment Accelerate Economic Growth?" U of Minnesota Department of Finance Working Paper,

- Available at http://www.econ.brown.edu/fac/Ross_Levine/Publication/Forthcoming/Forth_moran_FDI_and_Growth.pdf/.
- Casson, M. (2007), "Multinational Enterprises: Their Private and Social Benefits and Costs," *World Economy*, 30(2), 308-328.
- CBO (2005), "Remittances: International Payments by Migrants," Congressional Budget Office Papers, Available at <http://www.cbo.gov/ftpdocs/63xx/doc6366/05-19-Remittances.pdf/>.
- Clarke, G., and S. Wallsten (2004), *Do Remittances Protect Households in Developing Countries Against Shocks? Evidence from a Natural Disaster in Jamaica*, Washington, D.C.: World Bank.
- Colen, L., M. Maertens, and J. Swinnen (2012), "Foreign Direct Investment as an Engine for Economic Growth and Human Development: A Review of the Arguments and Empirical Evidence," in De Schutter, O., J. Swinnen, and J. Wouters, eds., *Foreign Direct Investment and Human Development: The Law and Economics of International Investment Agreements*, Routledge: Abingdon, UK.
- Curvo-Cazurra, A. (2006), "Who Cares About Corruption?" *Journal of International Business Studies*, 37, 807-822.
- De Soto, H. (2000), *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*, New York: Basic Books.
- Dustmann, C., and O. Kirchamp (2001), "The Optimal Migration Duration and Activity Choice After Re-Migration," IZA Discussion Paper, 266, Institute for the Study of Labor (IZA).
- Easterly, W.R. (2006), "The White Man's Burden: Why the West's Efforts to Aid the Rest Have Done So Much Ill and So Little Good," *Economic and Statistics*, 82(1), 1-11.
- Eden, L. (2009), "Letter from the Editor-in-Chief: FDI Spillovers and Linkages," *Journal of International Business Studies*, 40(7), 1065-1069.
- Edison, H.J., R. Levine, L. Riccia, and T. Sløka (2002), "International Financial Integration and Economic Growth," *Journal of International Money and Finance*, 21(6), 749-776.
- Eicher, T., and T. Schreiber (2007), "Institutions and Growth: Time Series Evidence from Natural Experiments," Working Paper, 2007-15, University of Washington.
- Globerman, S., and D. Shapiro (1999), "The Impact of Government Policies on Foreign Direct Investment: The Canadian Experience," *Journal of International Business Studies*, 30, 513-532.
- _____ (2003), "Governance Infrastructure and US Foreign Direct Investment," *Journal of International Business Studies*, 34(1), 19-39.
- Government Accountability Office (2005), "International Remittances: Information on Products, Costs, and Consumer Disclosures," Report to the Committee on Banking, Housing, and Urban Affairs, U.S. Senate, GAO-06-204.
- Grabel, I. (2008), "The Political Economy of Remittances: What Do We Know? What Do We Need to Know?" Political Economy Research Institute Working Paper, 184,

- University of Massachusetts-Amherst, Available at <http://www.peri.umass.edu/236/hash/5b36e26901/publication/324/>.
- Griffin, K. (2000), "The Death and Rebirth of International Economic Cooperation," in Freedman, J., ed., *Transforming Development: Foreign Aid for a Changing World*, Toronto: University of Toronto Press, 101-113.
- Haddad, M., and A. Harrison (1993), "Are There Positive Spillovers from Direct Foreign Investment? Evidence from Panel Data for Morocco," *Journal of Development Economics*, 42(1), 51-74.
- Hsiao, C., and Y. Shen (2003), "Foreign Direct Investment and Economic Growth: The Importance of Institutions and Urbanization," *Economic Development and Cultural Change*, 51(4), 883-896.
- Hymer, S.H. (1970), "The Efficiency (Contradictions) of Multinational Corporations," *American Economic Review*, 60(2), 441-448.
- Jalles, J.T. (2011), "The Impact of Democracy and Corruption on the Debt-Growth Relationship in Developing Countries," *Journal of Economic Development*, 36(4), 41-72.
- Kaufmann, D., A. Kraay, and M. Mastruzzi (2009), "Governance Matters VIII: Aggregate and Individual Governance Indicators, 1996-2008," Policy Research Working Paper, 4978, The World Bank.
- Kim, E.J., and W. Shaw (2003), "Living Up to the Monterrey Commitments: Raising Aid and Ensuring Its Effectiveness," The World Bank, Available at <http://siteresources.worldbank.org/INTRGDF/Resources/GDF2003-Chapter6.pdf/>.
- Kosack, S., and J. Tobin (2006), "Funding Self-Sustaining Development: The Role of Aid, FDI and Government in Economic Success," *International Organization*, 60, 205-243.
- Lipton, M. (1980), "Migration from Rural Areas of Poor Countries: The Impact of Rural Productivity and Income Distribution," *World Development*, 8, 1-24.
- Lowell, B.L., and R.O. De la Garza (2002), "A New Phase in the Story of Remittances," in De la Garza, R., and B.L. Lowell, eds., *Sending Money Home: Hispanic Remittances and Community Development*, Lanham, MD: Rowman and Littlefield Publishers, 3-27.
- Marshall, M.G., and K. Jaggers (2005), *Polity IV Project: Political Regime Characteristics and Transitions, 1800-2004*, School of Public Policy, George Mason University.
- Mencinger, J. (2003), "Does Foreign Direct Investment Always Enhance Economic Growth?" *Kyklos*, 56(4), 491-508.
- Meyer, K. (2004), "Perspectives on Multinational Enterprises in Emerging Economies," *Journal of International Business Studies*, 35(4), 259-276.
- Meyers, D.W. (2002), "Migrant Remittances to Latin America: Reviewing the Literature," in Lowell, B.L., and R.O. De la Garza, eds., *Sending Money Home: Hispanic Remittances and Community Development*, Lanham, MD: Rowman and Littlefield Publishers, 53-81.

- Mirza, H., and A. Giroud (2003), "Regionalization, Foreign Direct Investment and Poverty Reduction," *Journal of the Asia Pacific Economy*, 9(2), 223-248.
- Mohamed, S.E., and M.G. Sidiropoulos (2010), "Another Look at the Determinants of Foreign Direct Investment in MENA Countries: An Empirical Investigation," *Journal of Economic Development*, 35(2), 75-95.
- Nunnenkamp, P., and R. Stracke (2008), "Foreign Direct Investment in Post-Reform India: Likely to Work Wonders for Regional Development," *Journal of Economic Development*, 33(2), 55-84.
- OECD (2007), *International Development Statistics*, Available at <http://stats.oecd.org/qwids/>.
- Orozco, M. (2002), "Remittances and Markets: New Players and Practices," in De la Garza, R., and B.L. Lowell, eds., *Sending Money Home: Hispanic Remittances and Community Development*, Lanham, MD: Rowman and Littlefield Publishers, 85-99.
- Peck, F.W. (1996), "Regional Development and the Production of Space: The Role of Infrastructure in Attraction of New Inward Investment," *Environment and Planning*, 28, 327-339.
- Penn World Table (2002), Version 6.1., http://pwt.econ.upenn.edu/php_site/pwt61_form.php/.
- Penrose, E. (1956), "Foreign Investment and the Growth of the Firm," *The Economic Journal*, 66(262), 220-235.
- Portes, L.S.V. (2009), "Remittances, Poverty and Inequality," *Journal of Economic Development*, 34(1), 127-140.
- Ratha, D. (2003), "Workers' Remittances: An Important and Stable Source of External Development Finance," The World Bank, Available at <http://siteresources.worldbank.org/INTRGDF/Resources/GDF2003-Chapter7.pdf/>.
- Roodman, D. (2006), "How to Do Xtabond2: An Introduction to 'Difference' and 'System' GMM in Stata," Center for Global Development Working Paper, 103, Available at http://www.cgdev.org/files/11619_file_HowtoDoxtabond6_12_1_06.pdf/.
- Russell, S.S. (1986), "Remittances from International Migration: A Review in Perspective," *World Development*, 14(6), 677-696.
- Rugman, A.M., and A. Verbeke (2009), "Multinational Enterprises and Public Policy," in Rugman, A., ed., *The Oxford Handbook of International Business 2nd*, Oxford University Press, 228-255.
- Sachs, J.D. (2003) "Institutions Don't Rule: Direct Effects of Geography on Per Capita Income," NBER Working Paper, 9490.
- Serino, M.N.V., and D. Kim (2011), "How Do International Remittances Affect Poverty in Developing Countries? A Quantile Regression Analysis," *Journal of Economic Development*, 36(4), 17-40.
- Shivani, P., and T. Rizema (1999), "Migrant Worker Remittances, Micro-Finance and the Informal Economy: Prospects and Issues," International Labor Organization Working Paper, 21, Washington, D.C.
- Trevino, L., and K.P. Upadhyaya (2003), "Foreign Direct Investment and Economic

- Growth: Evidence from Asian Countries,” *Transnational Corporations*, 12, 119-136.
- United Nations (2006), “International Migration and Development,” Report of the Secretary-General, Available at [http://www.un.org/esa/population/hldmigration/Text/Report%20of%20the%20SG\(June%2006\)_English.pdf/](http://www.un.org/esa/population/hldmigration/Text/Report%20of%20the%20SG(June%2006)_English.pdf/).
- UNCTAD (2007), “World Investment Report: Transnational Corporations, Extractive Industries and Development,” Available at http://unctad.org/en/Docs/wir2007_en.pdf.
- _____ (2011), “Foreign Direct Investment in LDCs: Lessons Learned from the Decade 2001-2010 and the Way Forward,” Available at http://www.unctad.org/en/docs/diaeia2011d1_en.pdf/.
- Wei, S. (2000), “How Taxing is Corruption in International Investors?” *The Review of Economic and Statistics*, 82(1), 1-11.
- Woodruff, C., and R. Zenteno (2001), “Remittances and Micro-Enterprises in Mexico,” The Santa Cruz Center for International Economics, Available at http://sccie.ucsc.edu/documents/working_papers/2001/Remittances_Mexico.pdf/.
- World Bank (2006), *Global Economic Prospects 2006: Economic Implications of Migration and Remittances*, Washington, D.C.: World Bank.
- _____ (2008), *World Development Indicators 2008 CD-ROM*, Washington, D.C.
- _____ (2010), “How We Classify Countries,” The World Bank, Available at <http://data.worldbank.org/about/country-classifications/>.
- Zhao, H. (1995), “Technology Imports and Their Impacts on the Enhancement of Chinas Indigenous Technological Capability,” *Journal of Development Studies*, 31(4), 585-602.
- Zhao, J.H., S.H. Kim, and J. Du (2003), “The Impact of Corruption and Transparency on Foreign Direct Investment: An Empirical Analysis,” *Management International Review*, 43, 41-62.

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