



Multilateral Foreign Aid, Bilateral Foreign Aid, and Foreign Direct Investment in Latin America

Rahim M. Quazi*, Wayne E. Ballentine, Farzana Bindu, Lois Blyden

College of Business, Prairie View A and M University, Prairie View, TX 77446, USA. *Email: rmquazi@pvamu.edu

Received: 31 December 2018

Accepted: 04 March 2019

DOI: <https://doi.org/10.32479/ijefi.7520>

ABSTRACT

This study analyzes the impact of foreign aid on foreign direct investment (FDI) in Latin America. Using the Feasible Generalized Least Squares panel estimation methodology with 1996-2017 panel data from 19 countries, this study finds that the impact of foreign aid on FDI in Latin America is insignificant. However, when total aid is disaggregated into bilateral aid and multilateral aid, it is found that multilateral aid significantly boosts FDI, but bilateral aid does not. These results lend credence to the hypothesis that multilateral aid (which is likely to be aligned with the non-political developmental orientation of the multilateral donor organizations) is channeled into legitimate development projects that raise the productivity of capital, which helps attract more FDI to the recipient countries. However, bilateral aid (which is often dictated by the geo-political strategic self-interests of the donor countries) can get funneled into non-productive projects. The study also finds that the other significant drivers of FDI in the sample countries include economic freedom, quality of governance, market size, rate of return, infrastructure, and human capital. These results appear robust across several model specifications.

Keywords: Foreign Aid, Foreign Direct Investment, Latin America

JEL Classifications: F35, F21

1. INTRODUCTION

In the post-World War II period, many donor countries and multilateral organizations have doled out billions of dollars in foreign aid (aka Official Development Assistance) to developing countries to assist them in their fight against poverty. According to the Organization for Economic Cooperation and Development (OECD), total net foreign aid flows from the Development Assistance Committee (DAC) countries to developing countries reached a staggering \$145 billion in 2016. Nearly 70% of these aid funds was distributed as bilateral aid (i.e., directly from donor countries to recipient countries or to multilateral organizations with donor-imposed restrictions), while the remaining 30% was distributed as multilateral aid (i.e., from multilateral donor organizations to recipient countries). This ratio of bilateral aid to multilateral aid (70:30) has been generally consistent since the late 1990s (OECD, 2017).

Two competing views have emerged in the economic development literature about the efficacy of foreign aid programs. The traditional pro-aid view, evolved in the 1950's and 1960's, holds that foreign aid complements the recipient economy's domestic resources, eases foreign exchange constraints, transfers modern know-how and managerial skills, and facilitates easy access to foreign markets (Chenery, 1965 and Papanek, 1972). This view was challenged by the radical anti-aid view, which grew out of the empirical revelation in the 1970's that economic growth in some of the aid recipient countries was less than satisfactory. The anti-aid view argues that foreign aid supplants domestic resources, worsens domestic income inequality, funds transfer of inappropriate technology, and in general helps sustain inefficient and corrupt governments in the recipient countries (Griffin and Enos 1970 and Weisskopf 1972).

Another type of foreign capital that has played a significant role in the growth dynamics of the developing countries is Foreign

Direct Investment (FDI) - capital from private investors and multinational corporations. The economic development literature holds that FDI can fill a number of developmental gaps in recipient economies, such as investment gap (by providing capital for domestic investment), foreign exchange gap (by providing foreign currency through investment), and tax revenue gap (by generating tax revenues through creation of economic activities). Furthermore, there are a number of additional ways FDI can benefit the recipient economies. For example, FDI can help generate domestic investment in matching funds, facilitate transfer of managerial skills and technological knowledge, increase local market competition, create modern job opportunities, and increase global market access for locally produced export commodities.

An important body of research has emerged in the last two decades that analyzes the relationship between foreign aid and FDI. This literature comprises two competing views – one view holds that foreign aid can raise the marginal productivity of capital in the recipient countries by funding projects that raise human capital and upgrade infrastructure, thus, attracting more FDI. The opposing view holds that the number of investment opportunities in developing countries is usually low and since foreign aid finances many of these investment projects, other types of investment (including FDI) is crowded out.

Many aid studies have analyzed the efficacy of bilateral aid vis-à-vis multilateral aid, and found that multilateral aid is more effective than bilateral aid in achieving developmental objectives in the recipient countries. Critics of bilateral aid point out that this type of aid is often dictated by the geo-political self-interests of the donor countries and historical/colonial relationships with their former colonies. Furthermore, the common practice of tying bilateral aid to conditionalities that the recipient countries use aid funds to purchase goods and technical expertise from the donor countries can make bilateral aid less cost-effective. On the other hand, multilateral aid is more likely to be aligned with the non-political developmental orientation of the multilateral donors (for example, World Bank, IMF, Inter-American Development Bank, etc.). The multilateral donors are often viewed as politically neutral, allowing them to leverage their aid funds to demand that the recipient countries undertake greater institutional reforms and effectively utilize aid money in legitimate development projects. Additionally, due to the many years of experience of supporting numerous development projects in developing countries all over the world, the multilateral donors enjoy economies of scale vis-à-vis the bilateral donors (Alesina and Dollar 2000, Burnside and Dollar 2000, Addison et al., 2015, and Chung et al., 2015).

The purpose of this study is to analyze the relationship between foreign aid and FDI in Latin America. The Feasible Generalized Least Squares (FGLS) panel estimation methodology is used for 1996-2017 panel data from 19 countries in Latin America¹. The estimated results suggest that the impact of foreign aid on FDI in the sample countries is insignificant. However, when total aid is disaggregated into bilateral aid and multilateral aid, it is found

that multilateral aid significantly boosts FDI, but bilateral foreign aid does not. The estimated results also suggest that FDI in Latin America is significantly affected by economic freedom, quality of governance, market size, rate of return, infrastructure, and human capital. These results appear robust across several model specifications.

The remainder of the paper is organized as follows: Section 2 presents a review of the literature, section 3 describes the methodology, data and estimation, section 4 discusses the results and policy implications, and section 5 provides concluding remarks.

2. LITERATURE REVIEW

A growing body of aid-FDI literature has evolved over the last two decades. Among the early aid-FDI studies, Karakaplan et al. (2005) empirically tested the hypothesis that aid can attract FDI, but only in the presence of good governance, solid investment environment and well-developed financial markets. The panel regression results provided robust support for this hypothesis, indicating that the mere presence of aid is not enough to attract FDI. Harms and Lutz (2006) used 1988-1999 panel data from 92 low-and middle-income countries to analyze whether any relationship exists between aid and private foreign investment (sum total of FDI and foreign portfolio investment) in developing countries. This study found that the marginal effect of foreign aid on private foreign investment is almost zero, but positive in countries with weak regulatory institutions. Using 1974-2001 panel data from 46 African countries, Chauvet and Mesplé-Somps (2006) found that foreign aid may compensate for weak flows of FDI received by African countries and total aid does not have any impact on FDI flows with a few exceptions. Kimura and Todo (2010) used a gravity equation type model to analyze the “vanguard effect” – the effect of foreign aid from a particular donor country on FDI from the same donor country, and found that in general the effect of aid on FDI is insignificant. Selaya and Sunesen (2012) used 1970-2001 panel data from 99 countries and found that the overall effect of foreign aid on FDI is positive. Donaubauer (2014) used panel data from 63 countries from 1970-2012 and found that foreign aid has slightly reduced FDI for this sample, although almost half of the individual countries showed a positive relationship between foreign aid and FDI. Quazi et al. (2014) used 1995-2012 panel data from East Asian and South Asian countries and found that foreign aid boosts FDI significantly, and FDI in the sample countries is significantly affected by corruption control, rate of return, infrastructure, human capital, market potential, and political stability.

Among the more recent studies in the aid-FDI literature, Arazmuradov (2015) analyzed the effects of development aid on FDI in five emerging economies in Central Asia (namely, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan). Using a panel regression model with 1993-2008 data, this study found that development aid had significant positive effects on FDI. The study further found that domestic investment crowds out FDI, but that positive marginal effect of development aid can help balance this adverse crowding out effect. The study concluded that even though development aid is often claimed as

1 These countries are: Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela.

wasteful, it may however improve the investment climate and thus ensure better deployment of FDI capital.

Amusa et al. (2016) studied the role of foreign aid in improving FDI inflows to 31 countries in Sub-Saharan Africa (SSA) between 1995 and 2012. The main findings of this study demonstrate that productive sector infrastructure aid (agriculture and forestry, industry, mining, and construction and tourism) is more important for SSA than socio-economic infrastructure aid (education and health, energy, transport, and communication). This study also found that the other drivers of FDI to the SSA countries include trade openness, population, governance, telephone infrastructure, and inflation.

Donaubauer et al. (2016) analyzed the possible complementarities between aid and FDI for all low- and middle-income countries that received aid during the 1990-2010 period. The study used the 3SLS regression methodology to account for dependencies between three structural equations on the allocation of sector-specific aid, the determinants of infrastructure, and the determinants of FDI. The estimated results provided robust evidence that aid in infrastructure improves the recipient countries' endowment with infrastructure, which is an important determinant of FDI.

In an interesting study of multilateral vs. bilateral aid channels, Gulrajani (2016) analyzed from the strategic perspective of donor countries what is potentially gained through the use of multilateral vs. bilateral channels, as well as what might be risked. Aid donors face growing demands to explain and justify the allocation choice between multilateral vis-à-vis bilateral aid channels. Among other reasons, this is because the aid disbursements of multilateral agencies appear, in many cases, quite similar to the disbursements of bilateral donors, offering aid on similar terms, within the same countries and to the same sectors. The possibility of substitution across these two channels creates a strategic opportunity for donors to direct funding through either bilateral or multilateral institutions. A number of trends in the aid landscape are pushing donors to think carefully about the nature of this choice. First, there are options to consider because official aid organizations exist in a crowded marketplace. The multilateral system includes over 210 major organizations and funds, as well as numerous smaller trust funds. Meanwhile, there are 28 bilateral donor members within the OECD's DAC, and a growing group of non-DAC donors. The growth of new donor actors and agencies has also created interest in organizational practices within more established donors.

Biscaye et al. (2017) analyzed results from 45 studies to investigate the difference between the effects of bilateral and multilateral developmental aid on three major markers of development -- GDP growth, increases in human development, and increases in private investment flows. The analysis shows that 13 studies found multilateral aid to be more effective than bilateral aid; nine studies found that bilateral aid is more effective than multilateral aid; 13 studies found that there is no statistical difference between the two, and the remaining 10 studies provided mixed conclusions. The findings of the research suggest that the effectiveness of aid may differ based on country, region, and type of aid distributed.

3. MODEL AND DATA

The theoretical underpinning of most empirical FDI models are grounded in the OLI paradigm developed by Dunning (1988). The OLI paradigm comprises three factors – (i) Ownership (O) factor considers the availability of firm-specific resources and capabilities; (ii) Location (L) factor addresses the search for new markets, efficiency, and strategic assets; and (iii) Internalization (I) factor is based on transaction and coordination costs. Incorporating the OLI framework and the current literature, this study formulates the following regression equation:

$$FDI_{i,t} = \alpha + \beta_1 \text{Foreign Aid}_{i,t} + \beta_2 \Delta FDI_{i,t-1} + \beta_3 \text{Corruption Control}_{i,t} + \beta_4 \text{Economic Freedom}_{i,t} + \beta_5 \text{Rate of Return}_{i,t} + \beta_6 \text{Infrastructure}_{i,t} + \beta_7 \text{Human Capital}_{i,t} + \beta_8 \text{Market Size}_{i,t} + \beta_9 \text{Quality of Governance}_{i,t} + \varepsilon_{i,t} \quad (1)$$

In the equation above, subscript i refers to countries and t refers to time as the equation estimates a panel model. A second equation is estimated where foreign aid is disaggregated into its two components: multilateral aid and bilateral aid.

The explanatory variables have been included in Equation (1) following the current literature. The lagged change in FDI ($\Delta FDI_{i,t-1}$) has been added following Noorbakhsh et al. (2001) and Quazi et al. (2014); corruption control has been added following Al-Sadig (2009), Ketkar et al. (2005) and Quazi et al. (2014); economic freedom has been added following Quazi et al. (2014); return on investment has been added following Edwards (1990), Jaspersen et al. (2000) and Quazi et al. (2014); infrastructure has been added following Loree and Guisinger (1995) and Quazi et al. (2014); human capital has been added following Hanson (1996), Noorbakhsh et al. (2001) and Quazi et al. (2014); market size has been added following Jaspersen et al. (2000), Wei (2000) and Quazi et al. (2014); and quality of governance has been added following Quazi and Alam (2015). These variables are explained next.

3.1. Model Rationale

3.1.1. Foreign aid

Foreign aid can facilitate FDI by funding projects that enhance human capital and build up infrastructure, which in turn raise the marginal productivity of capital. However, foreign aid can also crowd out FDI since the number of investment opportunities in developing countries is usually scarce. Thus, both foreign aid and FDI can compete against each other for limited investment opportunities. This study uses net foreign aid inflows to GDP ratio (AID/GDP) as a measure of foreign aid. The a priori expected sign of β_1 is uncertain, as either sign is a plausible outcome depending on which effect of foreign aid on FDI is stronger.

3.1.2. Lagged changes in FDI ($\Delta FDI_{i,t-1}$)

Countries that aspire to attract FDI should first establish a stable track record of receiving FDI, which can help alleviate the foreign investors' fear of investing in unfamiliar countries. Also, foreign investors at times stagger the dispersal of their FDI to test a new market. Both of these aspects of FDI should be captured by the lagged changes in FDI, which should positively

affect the current level of FDI. The a priori expected sign of β_2 is positive.

3.1.3. Corruption control

In theory, the effects of corruption on FDI can be uncertain. Per the grabbing hand hypothesis, corruption can reduce FDI by raising uncertainty and transaction costs. On the other hand, per the helping hand hypothesis, corruption can facilitate FDI by “greasing” the wheels of commerce when the regulatory framework in the host country is weak. This study uses the Control of Corruption indicator published by the Worldwide Governance Indicators (WGI) as a proxy measure of corruption control. This indicator “captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as ‘capture’ of the state by elites and private interests” (WGI 2018). The indicator grades countries from -2.5 (highly corrupt) to +2.5 (very clean), so a higher score reflects more corruption control. The a priori expected sign of β_3 is uncertain.

3.1.4. Economic freedom

The host countries’ locational appeal to foreign investors can be impacted by their overall business environment. This study uses the Economic Freedom Index (EFI), published by the Heritage Foundation, as a proxy for the overall business environment. This index is based on 12 factors of economic freedom, that are grouped into four broad categories: “(1) Rule of law (property rights, government integrity, judicial effectiveness); (2) Government size (government spending, tax burden, fiscal health); (3) Regulatory efficiency (business freedom, labor freedom, monetary freedom); and (4) Open markets (trade freedom, investment freedom, financial freedom)” (Heritage Foundation, 2018). A country’s overall EFI score is based on the average score of these 12 factors (graded on 0 to 100), and a higher EFI score reflects a better business environment. The a priori expected sign of β_4 is positive.

3.1.5. Rate of return on investment

Foreign investors should be drawn to countries that offer higher rate of return on their investment. Determining the rate of return on investment in developing countries is often challenging, since capital markets are typically underdeveloped there. Several studies (e.g., Edwards 1990 and Jaspersen et al., 2000) have addressed this challenge by using the inverse of per capita income as a proxy variable - the rationale is that return on investment in a country should be positively correlated with its marginal productivity of capital, which should be high in a capital-scarce poor country, where per capita income is low (or the inverse of per capita income is high). This study uses the natural log of the inverse of per capita real GDP (adjusted for purchasing power parity) as a proxy measure for the rate of return on investment. The a priori expected sign of β_5 is positive.

3.1.6. Infrastructure

The host countries’ locational appeal to foreign investors can be greatly enhanced by the availability of high-quality infrastructure (e.g., electricity, telecommunication networks, roads, highways, railways, ports, etc.). This study uses the natural log of mobile

cellular subscriptions per 100 people as a proxy for the availability of infrastructure². A priori expected sign of β_6 is positive.

3.1.7. Human capital

Another factor that can boost the locational appeal of host countries to foreign investors is higher level of human capital, which is a good indicator of the presence of skilled workers. This study uses the adult literacy rate as a proxy for human capital³. The a priori expected sign of β_7 is positive.

3.1.8. Market size

An important determinant of the “market-seeking” type of FDI (where the primary focus of the foreign investors is to serve the host market) is the market demand of foreign investors’ product in host countries, which should be determined by the purchasing power of the local consumers. This study uses the natural log of per capita real GDP as a proxy for the market size. The a priori expected sign of β_8 is positive.

3.1.9. Quality of governance

The quality of governance should be an important determinant of the locational appeal of a host country to foreign investors. Good governance can create an overall favorable climate in a country boosting the foreign investors’ confidence in that country. This study uses an indicator based on the governance indicators from the WGI. The WGI indicators report six dimensions of governance -- political stability and absence of violence, voice and accountability, government effectiveness, regulatory quality, rule of law and control of corruption. Each dimension of governance is graded on a scale of -2.5 to +2.5, and a country’s overall quality of governance score is based on the average of these scores. The a priori expected sign of β_9 is positive.

3.2. Data Sources

The panel regression model is estimated with 1996-2017 data from 19 countries in Latin America. Data on annual FDI inflow, different types of foreign aid (total aid, multilateral aid and bilateral aid), per capita real GDP, infrastructure, and human capital are collected from the World Development Indicators (World Bank, 2018), EFI is collected from the Index of Economic Freedom (Heritage Foundation, 2018), and Control of Corruption index and Quality of Governance index are collected from the (WGI 2018). The next section discusses the estimated results and policy implications.

4. RESULTS

The regression Equation (1) is estimated with the FGLS panel methodology. A total of eight regression models are estimated -- models 1.1-1.4 (Table 1) show the effects of foreign aid on FDI with four slightly different versions of Equation (1), and Models

2 A second proxy variable for infrastructure (natural log of per capita electricity use in kilowatt hours) was also included in alternative model specifications, but the results turned out with unsatisfactory statistical properties.

3 Two other proxy variables for human capital (natural log of per capita healthcare expenditures and share of GDP spent on healthcare expenditures) were also included in alternative model specifications, but neither one turned out with satisfactory statistical properties.

Table 1: FGLS regressions (impact of foreign aid on FDI in Latin America)

Variable	Model 1.1		Model 1.2		Model 1.3		Model 1.4	
	Coeff	Z Stat	Coeff	Z Stat	Coeff	Z Stat	Coeff	Z Stat
Constant	-1.09	-0.70	-1.96	-1.25	-19.72	-2.80	-42.21	-5.68
ΔFDI_{t-1}	0.03	0.75	0.03	0.73	0.03	0.75	0.02	0.34
Foreign aid	0.09	1.46	0.03	0.35	0.002	0.03	-0.34	-1.38
Corruption control	-0.78	-1.51	-0.77	-1.49	-1.25	-2.37**	0.09	0.16
Economic freedom	0.06	2.69**	0.06	2.36**	0.07	2.97**	0.07	3.04**
Quality of governance	2.36	3.35**	2.60	3.52**	2.91	4.14**	1.46	1.77*
Infrastructure	0.27	2.92**	0.36	3.73**	0.35	3.75**	0.40	3.84**
Rate of return			0.94	1.99**	0.26	3.10**	0.56	6.06**
Market size					1.74	2.64**	2.53	4.54**
Human capital							0.13	3.50**
Diagnostic statistics								
Sample size	340		340		340		116	
Wald χ^2	85.04		75.11		118.95		612.50	
P-value	0.00		0.00		0.00		0.00	
Log likelihood	-642.68		-642.70		-641.93		-182.49	

**Coefficient statistically significant at 5%; *Coefficient statistically significant at 10%

Table 2: FGLS regressions (impact of multilateral aid and bilateral aid on FDI)

Variable	Model 2.1		Model 2.2		Model 2.3		Model 2.4	
	Coeff	Z Stat	Coeff	Z Stat	Coeff	Z Stat	Coeff	Z Stat
Constant	-1.83	-1.23	-2.10	-1.40	-15.31	-2.05	-33.35	-4.52
ΔFDI_{t-1}	0.03	0.84	0.03	0.83	0.03	0.84	0.08	1.30
Bilateral aid	-0.10	-1.07	-0.13	-1.38	-0.14	-1.42	-0.26	-1.10
Multilateral aid	0.88	4.15**	0.78	3.18**	0.69	2.69**	1.06	1.91*
Corruption control	-0.65	-1.27	-0.63	-1.23	-0.99	-1.84*	0.57	1.05
Economic freedom	0.07	3.20**	0.07	2.80**	0.08	3.24**	0.10	4.33**
Quality of governance	2.11	3.04**	2.26	3.13**	2.49	3.53**	0.57	0.70
Infrastructure	0.31	3.50**	0.34	3.76**	0.34	3.70**	0.23	1.97**
Rate of return			0.49	1.01	0.18	1.87*	0.36	3.37**
Market size					1.28	1.84*	2.01	3.79**
Human capital							0.10	2.53**
Diagnostic statistics								
Sample size	340		340		340		116	
Wald χ^2	102.85		99.50		129.74		1251.44	
P-value	0.00		0.00		0.00		0.00	
Log likelihood	-641.45		-641.62		-641.03		-166.70	

**Coefficient statistically significant at 5%; *Coefficient statistically significant at 10%

2.1-2.4 (Table 2) re-estimate these models by disaggregating foreign aid into multilateral aid and bilateral aid.

Models 1.1-1.4 show that the coefficients of foreign aid came out statistically insignificant in each version. However, when foreign aid is disaggregated into multilateral aid and bilateral aid in Models 2.1-2.4, the coefficients of bilateral aid consistently came out statistically insignificant and negative, but the coefficients of multilateral aid came out statistically significant and positive in every version. These results validate the hypothesis that multilateral aid is utilized efficiently vis-à-vis bilateral aid that helps attract FDI. These results also explain when the opposing effects of multilateral aid and bilateral aid on FDI are combined, the net effect of foreign aid on FDI turns out small and insignificant.

The coefficients of economic freedom, quality of governance and infrastructure turned out statistically significant with the correct a priori signs, but the coefficients of the incremental lagged changes in FDI and corruption control turned out to be mostly insignificant. In Models 1.2-1.4, three other explanatory variables (market size,

rate of return, and human capital) are added separately to Model 1.1. Each one of these variables came out statistically significant with the correct a priori sign. The same results generally hold up in Models 2.1-2.4 where foreign aid is disaggregated into bilateral aid and multilateral aid. The estimated results generally show robust coefficients of the explanatory variables and particularly for different types of aid. The overall diagnostic statistics (measured by Wald χ^2 statistics and log likelihood) came out satisfactory for all eight models.

The estimated results offer several policy implications. First, this study finds that multilateral foreign aid is a significantly positive determinant of FDI in Latin America, but bilateral foreign aid is not. This result lends credence to the hypothesis that multilateral aid-funded projects raise the marginal productivity of capital in the Latin American countries, which helps attract more FDI to these countries. However, bilateral aid is likely funneled to non-productive projects.

Economic freedom and higher quality of governance are found to significantly boost FDI in Latin America. Furthermore, market

size, return on investment, human capital and infrastructure are also found to be significant determinants of FDI in the sample countries. Therefore, in order to enhance their locational appeal to foreign investors, these countries should formulate appropriate long-term strategies (i.e., encourage donor countries/agencies to consider more multilateral aid in lieu of bilateral aid, nurture economic freedom and higher quality of governance, invest more heavily in human capital and infrastructure, etc.).

5. CONCLUSIONS

There is a general consensus in the development economics literature that foreign aid and FDI can both play important roles in the growth dynamics of the developing countries. The aid-FDI literature also holds that foreign aid can either promote FDI by funding projects (human capital, infrastructure, etc.) that raise the marginal productivity of capital, or crowd out FDI since the number of investment opportunities in developing countries is typically limited. Furthermore, analyzing the efficacy of bilateral aid vis-à-vis multilateral aid, many aid studies have concluded that multilateral aid (which is likely to be aligned with the non-political developmental orientation of the multilateral donor organizations) is more effective than bilateral aid (which is often dictated by the geo-political strategic self-interests of the donor countries) in achieving developmental objectives in the recipient countries.

This study analyzes the impact of foreign aid on FDI inflows in selected countries in Latin America. Several regression equations are estimated with the FGLS panel estimation methodology using 1996-2017 panel data from 19 countries. The estimated results suggest that foreign aid does not significantly affect FDI flows in the sample countries. However, multilateral aid is found to significantly boost FDI, but bilateral aid is found to be ineffective. The results also suggest that the other significant determinants of FDI in the sample countries include economic freedom, quality of governance, market size, rate of return, infrastructure, and human capital.

The principal policy recommendations from this study are that in order to boost their locational appeal to foreign investors, the aid-recipient Latin American countries should formulate appropriate long-term strategies, which include urging the donor countries/agencies to consider more multilateral aid rather than bilateral aid, promoting economic freedom, fostering higher quality of governance, investing more heavily in human capital, and building up infrastructure, etc. While these results are generally in line with the results found in the aid-FDI literature, finding multilateral aid a robust and significantly positive determinant of FDI in Latin America is a new contribution to the literature. These results advance our knowledge of the aid-FDI dynamics in Latin America, which is important for formulating effective economic development strategies in that region.

REFERENCES

- Addison, T., Niño-Zarazúa, M., Tarp, F. (2015), Aid, social policy and development. *Journal of International Development*, 27, 1351-1365.
- Alesina, A., Dollar, D. (2000), Who gives foreign aid to whom and why? *Journal of Economic Growth*, 5, 33-63.
- Al-Sadig, A. (2009), The effects of corruption on FDI inflows. *Cato Journal*, 29(2), 267-294.
- Amusa, K., Monkam, N., Viegi, N. (2016), Foreign aid and foreign direct investment in Sub-Saharan Africa: A panel data analysis. *Economic Research Southern Africa (ERSA)*, 612, 1-23.
- Arazmuradov, A. (2015), Can development aid help promote foreign direct investment? Evidence from central Asia. *Economic Affairs*, 35(1), 123-136.
- Biscaye, P., Reynolds, T., Anderson, C. (2017), Relative effectiveness of bilateral and multilateral aid on development outcomes. *Review of Development Economics*, 21(4), 1425-1447.
- Burnside, C., Dollar, D. (2000), Aid, policies, and growth. *American Economic Review*, 90, 847-68.
- Chauvet, L., Mesplé-Somps, S. (2006), Foreign Direct Investment and Aid in Africa: Can FDI Substitute for Foreign Aid? Working Paper.
- Chenery, H.B. (1965), Trade, Aid and Economic Development. In: Robock, A., Soloman, C., editors. *International Development*. New York: Oceana Publications.
- Chung, S., Eom, Y., Jung, H.J. (2015), Why untie aid? An empirical analysis of the determinants of South Korea's untied aid from 2010 to 2013. *Journal of International Development*, 28, 552-568.
- Donaubauer, J. (2014), Does foreign aid really attract foreign investors? New evidence from panel cointegration. *Applied Economics Letters*, 21(15), 1094-1098.
- Donaubauer, J., Meyer, B., Nunnenkamp, P. (2016), Aid, infrastructure, and FDI: Assessing the transmission channel with a new index of infrastructure. *World Development*, 78, 230-245.
- Dunning, J. (1988), The eclectic paradigm of international production: A restatement and some possible extensions. *Journal of International Business Studies*, 19(1), 1-31.
- Edwards, S. (1990), Capital Flows, Foreign Direct Investment, and Debt-Equity Swaps in Developing Countries. NBER Working Paper No. 3497.
- Griffin, K., Enos, J. (1970), Foreign assistance: Objective and consequences. *Economic Development and Cultural Change*, 18(3), 313-326.
- Gulrajani, N. (2016), Bilateral Versus Multilateral Aid Channels: Strategic Choices for Donors. ODI Development Strategy and Finance, Overseas Development Institute. Available from: <https://www.odi.org/sites/odi.org.uk/files/resource-documents/10393.pdf>.
- Hanson, J. (1996), Human capital and direct investment in poor countries. *Explorations in Economic History*, 33, 86-106.
- Harms, P., Lutz, M. (2006), Aid, governance and private foreign investment: Some puzzling findings for the 1990s. *Economic Journal*, 116, 773-90.
- Heritage Foundation. (2018), Index of Economic Freedom. Washington, DC: Heritage Foundation. Available from: <https://www.heritage.org/index>.
- Jaspersen, F., Aylward, A., Knox, A. (2000), The effects of risk on private investment: Africa compared with other developing areas. In: Collier, P., Pattillo, C., editors. *Investment and Risk in Africa*. New York: St. Martin's Press. p71-95.
- Karakaplan, M., Neyapti, B., Sayek, S. (2005), Aid and Foreign Investment: International Evidence. Departmental Working Paper. Turkey: Bilkent University.
- Ketkar, K., Murtuza, A., Ketkar, S. (2005), Impact of corruption of foreign direct investment and tax revenues. *Journal of Public Budgeting Accounting and Financial Management*, 17(3), 313-340.
- Kimura, H., Todo, Y. (2010), Is foreign aid a vanguard of foreign direct investment? A gravity-equation approach. *World Development*, 38, 482-497.
- Loree, D., Guisinger, S. (1995), Policy and non-policy determinants of US equity foreign direct investment. *Journal of Business Studies*,

26(2), 281-299.

Noorbakhsh, F., Paloni, A., Youssef, A. (2001), Human capital and FDI inflows to developing countries: New empirical evidence. *World Development*, 29, 1593-1610.

OECD. (2017), Total Net Flows from DAC Countries by Type of Flow (Table 2). *Statistics on Resource Flows to Developing Countries*, OECD. Available from: <http://www.oecd.org/dac/stats/statisticsonresourceflowstodevelopingcountries.htm>.

Papanek, G. (1972), The effect of aid and other resource transfers on savings and growth in less developed countries. *Economic Journal*, 82, 934-950.

Quazi, R., Alam, A. (2015), Foreign aid and quality of governance in developing countries: An econometric case study of South Asia and East Asia. *International Business Research*, 8(9), 16-26.

Quazi, R., Williams, M., Baldwin, R., Vesey, J., Ballentine, W. (2014), Impact of foreign aid on foreign direct investment in South Asia and East Asia. *International Business Research*, 7(12), 44-52.

Selaya, P., Sunesen, E. (2012), Does foreign aid increase foreign direct investment? *World Development*, 40, 2155-2176.

Wei, S. (2000), How taxing is corruption on international investors? *Review of Economics and Statistics*, 82, 1-11.

Weisskopf, T. (1972), The impact of foreign capital inflow on domestic savings in underdeveloped countries. *Journal of International Economics*, 2(1), 25-38.

WGI. (2018), *Worldwide Governance Indicators*. Available from: <http://www.info.worldbank.org/governance/wgi/#home>.

World Bank. (2018), *World Development Indicators*. Washington, DC: World Bank.