Does foreign direct investment reduce poverty? The case of Latin America in the twenty-first century

Pablo Quiñonez, Joselin Sáenz, Jéssica Solórzano

Faculty of Economic Sciences, University of Guayaquil, Republic of Ecuador

corresponding e-mail: pablo(dot)quinonezr[at]ug(dot)edu{d}ec
address: Ciudadela Universitaria "Salvador Allende", Av. Delta y Av. Kennedy, Guayaquil, Ecuador

Abstract: Over the last decades, foreign direct investment flows to Latin America have grown dramatically. Yet, there is no consensus on whether the region has actually benefited from such trend or not. Specifically, regarding the expected positive effect of foreign direct investment on poverty reduction, empirical evidence is scant and ambiguous. In this context, this paper examines the effect of foreign direct investment on Latin America's poverty incidence. For doing so, a panel data analysis was conducted, considering 13 economies from the region during the 2000-2014 period. We found that FDI is not significantly associated with the reduction of poverty in Latin America, in contrast with macroeconomic stability, infrastructure, human capital development and financial development which are significantly associated with the reduction of poverty in the region.

1. Introduction

Coherently with the spreading of neoliberalism throughout the world, international financial flows, including foreign direct investment (henceforth FDI), have grown dramatically during the last decades. The developing world, which since the final decades of the twentieth century has shifted from inward-looking strategies (import substitution, for instance) to more outward-looking schemes, received $1.4 trillion of external financial flows in 2016. Of these flows, FDI remained as the largest and one of the least volatile (UNCTAD, 2017).

Latin America and the Caribbean has not been an exception for this trend. In 2011 the flows of FDI to the region reached a record high, after an accelerated growth that started on the early 1990s and, as Petras & Veltmeyer (2013) explain, a stable inflow of capital into the natural resources sector during the first decade of the new millennium. In 2016, despite the less impressive results of recent years, FDI inflows to Latin America and the Caribbean were equivalent to 3.6% of the region's GDP, while the global average was 2.5%, evidencing the relevance of transnational corporations (TNCs) for the economies of the region (ECLAC, 2017).

In the last decades, Latin America has shown a great openness to FDI. Conventional theory suggests that such growing trend in inward FDI flows should have supported development processes in the region. However, Latin America's experience has been rather poor in comparison with other regions such as East Asia which is often proposed as an example of the success of FDI on promoting development (Lall, Albaladejo, & Moreira, 2004). Similarly, there have been serious doubts on the role of FDI promoting growth (Alvarado, Iñiguez, & Ponce, 2017) and equality in the distribution of income in the region (Herzer, Hühne, & Nunnenkamp, 2014). With respect to the relationship between FDI and poverty in the region, the evidence is scant and ambiguous.

These results may be explained by the fact that from the years of the structural adjustment process, most Latin American governments have adopted a passive role towards FDI, not exerting enough control over the FDI inflows nor over the operations of the TNCs' subsidiaries. This phenomenon was specially notorious during the 1990s privatisation processes in the region when a great extent of the FDI inflows was focused on merges and acquisitions of already existing firms (Calvo & Hernandez, 2006). According to Agosin & Machado (2005) this absence of an appropriate screening process in Latin America, is partly responsible of the crowd-out of domestic investment caused by the inward flows of FDI in the region. In addition, Mortimore & Vergara (2004) argue that the lack of regulation and adequate development planning has caused thin globalisation processes, like in Mexico, where the FDI-driven export success has not generated correspondent links with the domestic economy. These problems may have overshadowed the potential benefits of FDI in the region.

Within this debate, this paper examines the effect of FDI on poverty reduction in 13 Latin American countries during the first years of the XXI century (the period between 2000 and 2014) through a panel data study. Our aim is to elucidate whether the poor have directly benefited from the growing entrance of foreign direct investment to the region or not.

This document is organized as follows: the second section reviews existing literature, the third section discusses the data and empirical techniques used, the fourth section presents and analyses the results, while the last section presents the concluding remarks.

2. Literature review

2.1. Is foreign direct investment always beneficial for development?

The prevailing enthusiasm about FDI is often based on the neoclassical idea of developing economies deficient on physical capital investment. Therefore, if we follow the Solow savings-centred theory, increasing FDI can be viewed as an evident opportunity for economic growth (Cypher & Dietz, 2009). Furthermore, several studies have analysed the relationship between FDI and economic growth

Business and Economic Horizons

to assess whether FDI has an impact on economic development, assuming that growth increases welfare, as explained by Gohou & Soumaré (2012).

The traditionally recognised channels through which FDI can benefit developing economies are both direct and indirect. The former are related to capital inflows, increased tax revenues, and higher employment levels, while the latter are related to the access to foreign markets and technology and knowledge spill overs (Reiter & Steensma, 2010).

Thus, FDI could be thought as a "composite bundle of capital stocks, know-how, and technology" whose impact on growth "is expected to be manifold" (De Mello, 2012) and that offers some exceptional advantages compared to other forms of external financing (Nunnenkamp, 2004).

However, the existent empirical evidence questions the idea that an unselective entry of FDI can always reports benefits for the host country. Even for the expected elementary positive relationship between FDI and economic growth the results are inconclusive (Reiter & Steensma, 2010). This reinforces the argument of Lipsey & Sjöholm (2005) about the inexistence of universal relationships on this field because of the high importance of industry and country differences. For Latin America, Alvarado, Iñiguez, & Ponce (2017) found that the effect of FDI on economic growth is not significant in an aggregated form and that it has been positive only for high-income countries in the region.

In a broader context, several studies tend to identify governments' different policies and attitudes towards FDI as the main determinants on the success or failure of foreign investment on benefiting the recipient economies (see, for example, Chang, 2004; Agosin & Machado, 2005). The latter point becomes particularly important if we understand the real nature of FDI: it is mainly driven by Transnational Corporations, which key objective—like any other company—is to maximise profits and reduce costs, something that in practice is not always concordant with the development objectives of a country, mainly in developing nations.

Additionally, there have also been serious concerns about the redistributive effects of FDI on recipient economies. For instance, Basu & Guariglia (2007) argued that despite the positive effects of FDI on economic growth they found, there were also negative effects for equality. Lessmann (2013) found that FDI inflows were associated with increased regional inequality in low and middle-income countries. Specifically, for Latin America, Herzer, Hühne, & Nunnenkamp (2014) found robust evidence that inward FDI stocks had contributed to the wide income gaps in the region.

2.2. Foreign direct investment and poverty

The relationship between FDI and poverty reduction has not been widely explored by empirical research. As Fowowe & Shuaibu (2014) explain, there are various

arguments for this phenomenon: on the one hand, it has been argued that FDI is only expected to affect growth but not poverty, while on the other hand, the implicit assumption that if FDI is good for growth, then it is good for poverty too has often been made. Additionally, the difficulty inherent to the measurement of poverty and welfare has been mentioned as another obstacle (Gohou & Soumaré, 2012).

The theoretical links between FDI and poverty are consistently articulated in the literature, though. As Calvo & Hernandez (2006) explain, FDI can affect poverty through the following channels: the expansion of the capital stock, forward and backward linkages, and knowledge transfers.

The first channel is related to the expansion of capital stock as a result of the establishment of local subsidiary companies of a TNC. This process is accompanied by employment creation and increasing tax revenues for the government. These phenomena are expected to support poverty reduction. However, without an appropriate regulation body, FDI inflows do not always result in new capital formation. Instead, the ownership of the already existent capital may be transferred to foreign investors. The denationalisation process observed in various Latin American countries is a good example of this phenomenon, as described by Gereffi & Evans (1981). Still, it can be argued that despite of the absence of new capital formation, TNCs are more competitive than local firms, enhancing the competitiveness of the economy; and there is some evidence that support this argument, but there is also evidence of TNCs crowding out local firms, especially in Latin America (Agosin & Machado, 2005).

The second one refers to the increased output of both supplier and buyer firms with which the TNC subsidiary interacts in the host economy. These linkages can work backwards or forwards. The former are related to the growth of production and efficiency due to the subsidiary's demand for intermediate goods, while the latter are related to the cheaper inputs and goods that foreign firms can provide to domestic firms and consumers. As Calvo & Hernandez (2006) argue, backward linkages are more important for poverty reduction, because an increase in FDI is expected to raise the productivity of local firms as well as the host economy's wage rates.

Finally, the third channel refers to the transfer of knowledge and new technologies from the subsidiaries to local firms and workers, leading to technological development in the host economy and fostering growth. However, the presence of these externalities does not necessarily imply that the host economy can internalise them. It has been argued that the host nation should have the appropriate absorptive capacity to take advantage of the mentioned spill overs, and this, in turn, depends on various factors such as its educational and institutional development (Nunnenkamp, 2004), infrastructure (Ozturk, 2007), the firms' organizational structure (Spencer, 2008) and technology (Barrios, Dimelis, Louri, & Strobl, 2004). In addition, Hermes & Lensink (2003) argue that a developed financial system favours the process of technological diffusion related to FDI. Nevertheless, it has also been noticed that the TNCs tend to transfer only the

results of their innovations, but not their innovative capacities (Cypher & Dietz, 2009), complicating the spill over effects of FDI on the recipient nation.

2.3. Foreign direct investment and poverty: Empirical evidence

As for the relationship between FDI and a broad concept of development, empirical evidence on the relationship between FDI and poverty is ambiguous. A literature survey clearly shows us that generalisations are not appropriate when addressing such relationship. For instance, Jalilian & Weiss (2012), conducted an analysis for 26 countries, using the growth of the income of the bottom 20% as dependent variable, and found that there was no direct link between FDI and poverty reduction for the overall sample, except for the 5 ASEAN economies considered in the sample, where FDI was poverty reducing. Likewise, Sarisoy & Koc (2012), through a panel regression analysis of 40 developing and developed economies, concluded that FDI did not contribute considerably to poverty reduction and that the poor received a lower share of the income created by FDI than the rich.

Other authors have even found a negative association between FDI and poverty reduction. For instance, Bharadwaj (2014), using a panel data analysis of 35 developing economies, found that FDI inflows have had an adverse effect on the incidence of poverty and on the poverty gap of those countries. Similarly, for a sample of 12 middle-income countries from East Asia and Latin America Huang, Teng, & Tsai (2010) found that FDI adversely affected the income of the poorest 20% of the population, even if the host country as a whole was benefited.

On the contrary, Fowowe & Shuaibu (2014) found that FDI inflows had significantly contributed to poverty reduction in African countries. In the same way, Calvo & Hernandez (2006) showed that for 20 Latin American countries both foreign and domestic investments were negatively related to poverty. However, the impact of FDI was found to be different across groups and reduced poverty only under certain circumstances. Similarly, Nunnenkamp, Schweickert, & Wiebelt (2007) showed through a simulation that FDI boosted growth and reduced poverty in Bolivia, even though it also broadened income disparities between rural and urban areas.

3. Methodology and data

3.1. Model specification and methodology

To explore the relationship between FDI and poverty, we specify a model based on Fowowe & Shuaibu (2014), as shown in Equation [1]. However, we differ in measuring FDI through FDI inflows as a percentage of GDP instead of FDI inflows per capita, and in measuring macroeconomic stability through inflation instead of debt as a percentage of GDP:

$$POV_{it} = \beta_0 + \beta_1 FDI_{it} + \beta_2 MACRO_{it} + \beta_3 INFR_{it} + \beta_4 INST_{it} + \beta_5 HC_{it} + \varepsilon_{it} \quad (1)$$

where *POV* is poverty, *FDI* is foreign direct investment, *MACRO* represents macroeconomic stability, *INFR* is infrastructure, *INST* institutional quality, and *HC* is human capital development. Countries are denoted by *i*, while *t* denotes years.

Unlike several studies that use the income of the poorest 20% of population as dependent variable, we preferred to use the poverty headcount index, because despite the criticism that could arise over the latter, the former can "hardly be justified as a coherent line of separation between poor and non-poor incomes" since it uses an arbitrary threshold, which ends up being highly relative (Foster & Szekely, 2008). The poverty headcount index is measured as the proportion of the population living on less than $3.20 a day at 2011 international prices. With regard to the other variables, FDI is measured as foreign direct investment inflows as a percentage of GDP, macroeconomic stability is proxied through inflation as measured by the annual growth rate of the GDP implicit deflator (*INF)*, infrastructure is measured as fixed and mobile phone subscriptions per 100 inhabitants (*PHONE)*, institutional quality is proxied through the Corruption Perception Index *(CPI)* and, finally, human capital development is measured as the life expectancy at birth, in years (*LEB)*. Thus, Equation [1] can be rewritten as follows:

$$POV_{it} = \beta_0 + \beta_1 FDI_{it} + \beta_2 INF_{it} + \beta_3 PHONE_{it} + \beta_4 CPI_{it} + \beta_5 LEB_{it} + \varepsilon_{it} \quad (2)$$

Because of the nature of the data and as we are focusing on a specific set of countries and the inference is restricted to their specific behaviour, the use of a fixed effects model can be considered as more appropriate (Baltagi, 2005). To evaluate this a test of overidentifying restrictions (Schaffer & Stillman, 2016) was run and confirmed that fixed effects should be preferred over random effects. The necessity of including time fixed effects was discarded after a joint F-test. We used robust standard errors to account for heteroscedasticity - detected through the modified Wald test. In addition, due to the detected autocorrelation, we considered a cross-sectional time-series FGLS regression (*xtgls* command in Stata) and heteroskedastic-panels corrected standard errors Prais-Winsten regression (*xtpcse* command in Stata). However, because of the tendency of *xtgls* to produce optimistic standard error estimates, as stated by Hoechle (2007), we prefer the latter. Results can be seen in Table 2. Results for different specifications, including an interaction between financial development (CRED) and FDI, are shown in Table 3.

<div style="text-align: right;">Business and Economic Horizons</div>

3.2. Data

This paper contains data from 13 Latin American economies in a period between 2000 and 2014, grouped in an unbalanced panel. The countries considered are: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, El Salvador, Mexico, Paraguay, Peru, Uruguay, and Venezuela. The variables and sources of data are described in the Table 4 of the Appendix. The Table 1 shows the descriptive statistics for the variables used.

TABLE 1. DESCRIPTIVE STATISTICS FOR LATIN AMERICAN COUNTRIES, 2000-2014

VARIABLE		MEAN	STD. DEV	MIN	MAX	OBSERVATIONS
	Overall	16.11	8.96	1.40	42.00	N=155
POV	Between		7.30	2.58	26.12	n= 13
	Within		6.06	3.29	32.10	T-bar=11.92
	Overall	3.38	2.07	-2.50	8.77	N=155
FDI	Between		1.65	1.15	6.39	n=13
	Within		1.46	-3.00	8.97	T-bar=11.92
	Overall	8.58	8.18	-2.42	45.19	N=155
INF	Between		6.39	2.84	26.23	n=13
	Within		6.19	-10.39	43.18	T-bar=11.92
	Overall	84.54	47.50	11.50	192.47	N=155
PHONE	Between		27.84	50.40	154.07	n=13
	Within		40.66	8.90	171.05	T-bar=11.92
	Overall	3.77	1.32	1.60	7.40	N=155
CPI	Between		1.60	2.19	7.18	n=13
	Within		0.31	2.97	4.450	T-bar=11.92
	Overall	73.08	3.60	60.69	79.42	N=155
LEB	Between		3.52	64.68	78.37	n=13
	Within		1.15	69.08	76.74	T-bar=11.92

Source: Own elaboration.

In the 15-year period between 2000 and 2014 Costa Rica was the country from our sample that received, on average, the greatest amount of FDI inflows as percentage of its GDP per year (5.58%), while Paraguay received the smallest amount (a yearly average of 1.16%). The mean for the region was of 3.38%. Interestingly, both the maximum and minimum inflows of FDI as % of GDP in the region were registered in Bolivia in 2000 and 2005, respectively.

Regarding poverty, the maximum headcount ratio was observed in Bolivia in 2000 (42% of the population living under $3.20 a day). However, Bolivia is also the country that has reduced poverty the most: by 2014, a 13.3% of the population was living under the mentioned poverty line. On the other hand, the minimum level of poverty was observed in Uruguay in 2014 (1.4% of the population). The average for the considered countries was of 16.11% in the whole period. The evolution of inward FDI flows to the region (expressed as a % of Latin American countries GDP), and of the poverty headcount ratio can be observed in Figure 1:

FIGURE 1. EVOLUTION OF FDI AND POVERTY IN 13 LATIN AMERICAN ECONOMIES
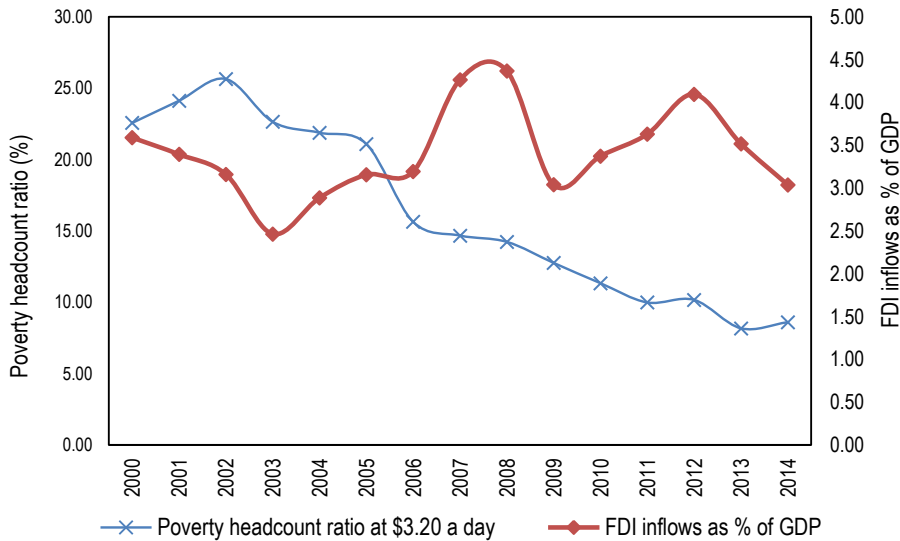
Source: UNCTAD (2017), World Bank (2018).

4. Analysis of results

In this section the results of the procedures described in section 3 are presented. Table 2 contains the results for an entity fixed effects regression [1], a random effects GLS regression [2], a cross-sectional time-series FGLS regression [3], and a heteroskedastic-panels corrected standard errors Prais-Winsten regression [4]. Robust standard errors are considered in regressions [1] and [2]. Regressions [3] and [4] account for heteroskedastic panels and consider a common AR(1) coefficient for all panels.

As can be seen in Table 2, despite the negative sign of its coefficient, FDI inflows are not significant in explaining poverty reductions in any of the regressions. This result remains unchanged for different specifications (as can be seen in Table 3), for a different FDI measure (FDI inflows per capita in USD), for alternative measures of the other regressors, or even if we use a $1.90 a day poverty line or a poverty gap measure as dependent variables (results not shown).

Regarding the other regressors, inflation (as a measure of macroeconomic stability) is significant and positively associated with the poverty levels of the region, while infrastructure (measured as fixed and mobile phone subscriptions per 100 inhabitants) and human capital development (measured as the life expectancy at birth) are significant in explaining the poverty reduction in the region. Conversely, institutional quality (measured through the Corruption Perception Index) is not significantly associated with the poverty headcount ratio of Latin American economies.

Business and Economic Horizons

TABLE 2. FOREIGN DIRECT INVESTMENT AND POVERTY - PANEL REGRESSION RESULTS

INDEPENDENT VARIABLES	DEPENDENT VARIABLE: POVERTY HEADCOUNT RATIO			
	[1]	[2]	[3]	[4]
FDI	-0.2848 (0.1868)	-0.1429 (0.2218)	-0.1494 (0.1316)	-0.2252 (0.1675)
INF	0.1147 (0.0535)	0.1268[*] (0.0548)	0.0916[**] (0.0336)	0.1119[**] (0.0384)
PHONE	-0.0465[*] (0.0209)	-0.0761[***] (0.0143)	-0.0772[***] (0.0088)	-0.0940[***] (0.0110)
CPI	-0.3741 (1.1043)	0.1220 (0.6342)	-0.0821 (0.3616)	0.2539 (0.3726)
LEB	-3.1552[***] (0.5309)	-1.9662[***] (0.2320)	-1.5254[***] (0.1888)	-1.2284[***] (0.1937)
_cons	251.9973[***] (35.8199)	165.4519[***] (15.5848)	134.2704[***] (12.9425)	112.5829[***] (13.2649)
N	155	155	155	155
Within R^2	0.8149			
Overall R^2		0.7347		0.7382
Prob>F	0.0000			
Prob>chi^2		0.0000	0.0000	0.0000

Source: Own elaboration, with data from UNCTAD (2017) and World Bank (2018).
Note: Standard errors in parentheses. [*] $p < 0.05$, [**] $p < 0.01$, [***] $p < 0.001$.

TABLE 3. FOREIGN DIRECT INVESTMENT AND POVERTY - PANEL REGRESSION RESULTS

INDEPENDENT VARIABLES	DEPENDENT VARIABLE: POVERTY HEADCOUNT RATIO			
	[1]	[2]	[3]	[4]
FDI	0.8478 (0.6037)	-2.4505 (2.9834)	0.5571 (0.4324)	-0.2230 (0.1655)
CRED	0.0598 (0.0575)		0.1317[***] (0.0398)	0.0505[**] (0.0180)
FDI*CRED	-0.0221[*] (0.0105)		-0.0132 (0.0074)	
LEB		-1.9334[***] (0.3190)		-1.1406[***] (0.1798)
FDI*LEB		0.0307 (0.0413)		
INF			0.0926[*] (0.0370)	0.1109[**] (0.0382)
PHONE			-0.1302[***] (0.0125)	-0.1017[***] (0.0104)
CPI			-1.4950[***] (0.4233)	-0.2017 (0.3691)
_cons	13.7655[***] (3.2434)	158.3599[***] (23.3737)	25.6057[***] (2.6512)	106.0548[***] (12.3338)
N	155	155	155	155
R^2	0.4041	0.5651	0.6764	0.7506
Prob>chi^2	0.0229	0.0000	0.0000	0.0000

Source: Own elaboration, with data from UNCTAD (2017) and World Bank (2018).
Note: Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 3 shows the results for different specifications, including interaction terms for FDI and CRED as well as FDI and LEB. As can be seen, despite the alternative specifications, foreign direct investment remains insignificant in explaining poverty reductions in the region. Financial development, measured through the amount of domestic credit provided by financial sector is significantly associated with poverty reduction.

5. Conclusions

From the years of structural adjustment, Latin America has shown a great openness to FDI, but with meagre development results if compared to other regions such as East Asia. This coincides with the available empirical evidence that has questioned the idea that the indiscriminate entry of FDI can always be beneficial to the host country. Within this debate, this paper has examined the effects of foreign direct investment on the incidence of poverty in Latin America in the new millennium.

The conducted literature survey revealed that the relationship between FDI and poverty is ambiguous and that generalisations on these matters are not appropriate. Through a panel data study for 13 Latin American economies over the period 2000-2014, we found that FDI is not significantly associated with the reduction of poverty in the region. Conversely, our results showed that macroeconomic stability, infrastructure, human capital development and financial development are significantly associated with poverty reduction in Latin America.

Despite the commonly extended enthusiasm—and rhetoric—about the benefits of FDI, the results we found are not surprising. As the literature survey revealed, there is evidence of foreign firms crowding out indigenous firms, thin globalisation processes, and insufficient absorptive capacity in the region, weakening the positive effects that growing FDI inflows could have had on the expansion of capital stock, on the creation of linkages with domestic firms, and on the transfer of knowledge.

The fact that the poor have not benefited directly from the great amount of FDI flows that have arrived to the region in the last decades must put into question the passive role towards FDI that most Latin American governments have exerted since neoliberalism started spreading throughout the region.

References

Agosin, M. R., & Machado, R. (2005). Foreign investment in developing countries: Does it crowd in domestic investment? *Oxford Development Studies*, *33*(2), 149-162. https://doi.org/10.1080/13600810500137749

Alvarado, R., Iñiguez, M., & Ponce, P. (2017). Foreign direct investment and economic growth in Latin America. *Economic Analysis and Policy*, *56*, 176-187. https://doi.org/https://doi.org/10.1016/j.eap.2017.09.006

Baltagi, B. (2005). *Econometric analysis of panel data* (3rd ed.). John Wiley & Sons, Ltd.

Barrios, S., Dimelis, S., Louri, H., & Strobl, E. (2004). Efficiency spillovers from foreign direct investment in the EU periphery: A comparative study of Greece, Ireland, and Spain. *Review of World Economics*, *140*(4), 688-705. https://doi.org/10.1007/BF02659620

Basu, P., & Guariglia, A. (2007). Foreign direct investment, inequality, and growth. *Journal of Macroeconomics*, *29*(4), 824-839. https://doi.org/10.1016/j.jmacro.2006.02.004

Bharadwaj, A. (2014). Reviving the globalization and poverty debate: Effects of real and financial integration on the developing world. *Advances in Economics and Business*, *2*(1), 42-57. https://doi.org/10.13189/aeb.2014.020107

Calvo, C., & Hernandez, M. (2006). Foreign direct investment and poverty in Latin America. *Paper Delivered at the Globalisation and Economic Policy Fifth Annual Postgraduate Conference. University of Nottingham.*

Chang, H. J. (2004). Regulation of foreign investment in historical perspective. *European Journal of Development Research*, *16*(3), 687-715. https://doi.org/10.1080/0957881042000266660

Cypher, J. M., & Dietz, J. L. (2009). *The process of economic development*. Routledge.

De Mello, L. (2012). Foreign direct investment in developing countries and growth : A selective survey. *Journal of Development Studies*, *34*(1), 1-34. https://doi.org/10.1080/00220389708422501

Economic Commission for Latin America and the Caribbean (ECLAC). (2017). *La Inversión Extranjera Directa en América Latina y el Caribe*. Santiago de Chile.

Foster, J., & Szekely, M. (2008). Is economic growth good for the poor? Tracking low income using general means. *International Economic Review*, *49*(4), 1143-1172. https://doi.org/10.1111/j.1468-2354.2008.00509.x

Fowowe, B., & Shuaibu, M. I. (2014). Is foreign direct investment good for the poor? New evidence from African countries. *Economic Change and Restructuring*, *47*(4), 321-339. https://doi.org/10.1007/s10644-014-9152-4

Gereffi, G., & Evans, P. (1981). Transnational corporations , dependent development, and state policy in the semiperiphery: A comparison of Brazil and Mexico. *Latin American Research Review*, *16*(3), 31-64.

Gohou, G., & Soumaré, I. (2012). Does Foreign Direct Investment Reduce Poverty in Africa and are There Regional Differences? *World Development*, *40*(1), 75-95. https://doi.org/10.1016/j.worlddev.2011.05.014

Hermes, N., & Lensink, R. (2003). Foreign direct investment, financial development and economic growth. *Journal of Development Studies*, *40*(1), 142-163. https://doi.org/10.1080/00220380412331293707

Herzer, D., Hühne, P., & Nunnenkamp, P. (2014). FDI and income inequality-Evidence from Latin American economies. *Review of Development Economics*, *18*(4), 778-793. https://doi.org/10.1111/rode.12118

Hoechle, D. (2007). Robust standard errors for panel regressions with cross-sectional dependence. *Stata Journal*, *7*(3), 281-312. https://doi.org/The Stata Journal

Huang, C.-H., Teng, K.-F., & Tsai, P.-L. (2010). Inward and outward foreign direct investment and poverty: East Asia vs. Latin America. *Review of World Economics*, *146*(4), 763-779.

Jalilian, H., & Weiss, J. (2012). Foreign direct investment and poverty in the ASEAN region. *ASEAN Economic Bulletin*, *19*(3), 231-253.

Lall, S., Albaladejo, M., & Moreira, M. M. (2004). *Latin American industrial competitiveness and the challenge of globalization*. Buenos Aires: IDB-INTAL.

Lessmann, C. (2013). Foreign direct investment and regional inequality: A panel data analysis. *China Economic Review*, *24*(1), 129-149. https://doi.org/10.1016/j.chieco.2012.12.001

Lipsey, R. E., & Sjöholm, F. (2005). The impact of inward FDI on host countries: why such different answers? In E. Graham, T. Moran, & M. Blomström (Eds.), *Does Foreign Direct Investment Promote Development* (pp. 23-43). Washington D.C.: Peterson Institute for International Economics.

Mortimore, M., & Vergara, S. (2004). Targeting winners: Can foreign direct investment policy help developing countries industrialise? *The European Journal of Development Research*, *16*(3), 499-530. https://doi.org/10.1080/0957881042000266606

Nunnenkamp, P. (2004). To what extent can foreign direct investment help achieve international development goals? *The World Economy*, *27*(5), 657-677.

Nunnenkamp, P., Schweickert, R., & Wiebelt, M. (2007). Distributional effects of FDI: How the interaction of FDI and economic policy affects poor households in Bolivia. *Development Policy Review*, *25*(4), 429-450. https://doi.org/10.1111/j.1467-7679.2007.00379.x

Ozturk, I. (2007). Foreign direct investment - growth nexus: A review of the recent literature. *International Journal of Applied Econometrics and Quantitative Studies*, *4*(2), 79-98.

Petras, J., & Veltmeyer, H. (2013). *Imperialism and capitalism in the twenty-first century: a system in crisis*. Ashgate Publishing.

Reiter, S. L., & Steensma, H. K. (2010). Human development and foreign direct investment in developing countries: The influence of FDI policy and corruption. *World Development*, *38*(12), 1678-1691. https://doi.org/10.1016/j.worlddev.2010.04.005

Sarisoy, I., & Koc, S. (2012). The effect of foreign direct investment on poverty : Panel regression analysis for 40 selected underdeveloped and developing countries. *Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, *21*(3), 225-240.

Schaffer, M., & Stillman, S. (2016). XTOVERID: Stata module to calculate tests of overidentifying restrictions after xtreg, xtivreg, xtivreg2, xthtaylor. Retrieved from https://econpapers.repec.org/RePEc:boc:bocode:s456779

Spencer, J. W. (2008). The impact of multinational enterprise strategy on indigenous enterprises: Horizontal spillovers and crowding out in developing countries. *Academy of Management Review*, *33*(2), 341-361. https://doi.org/10.5465/amr.2008.31193230

UNCTAD. (2017). *World Investment Report 2017 - Investment and the Digital Economy*. *United Nations Publications*. Retrieved from http://unctad.org/en/PublicationChapters/wir2017ch3_en.pdf

World Bank. (2018). World Development Indicators

Business and Economic Horizons

Appendix

TABLE 4. VARIABLES DESCRIPTION AND DATA SOURCES

VARIABLE	DESCRIPTION	SOURCE
Poverty (POV)	Proportion of the population living on less than $3.20 a day at 2011 international prices.	World Bank's World Development Indicators
Foreign direct investment (FDI)	Foreign direct investment inflows as a percentage of GDP.	United Nations Conference on Trade and Development (UNCTAD)
Inflation (INF)	Annual growth rate of the GDP implicit deflator.	World Development Indicators
Phone lines (PHONE)	Fixed and mobile phone subscriptions per 100 inhabitants.	World Development Indicators
Corruption Perceptions Index (CPI)	Index that assigns a value of 1 to the most corrupt country and of 10 to the most transparent one.	World Development Indicators (Data provided by Transparency International)
Life expectancy at birth (LEB)	Life expectancy at birth, in years.	World Development Indicators
Credit (CRED)	Domestic credit provided by the financial sector (% of GDP).	World Development Indicators
FDI * CRED	Interaction of FDI and CRED.	Computed based on data obtained from World Development Indicators and UNCTAD.
FDI * LEB	Interaction of FDI and LEB.	Computed based on data obtained from World Development Indicators and UNCTAD.