



Remittances and HDI

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INTRODUCTION

This paper's purpose is to evaluate how remittances compare to other sources of aid, namely foreign direct investment (FDI) and official developmental assistance (ODA), in its effect on the Human Development Index (HDI) of countries.

In 2018, recorded annual remittance flows to low-income and middle-income countries reached \$529 billion, per the World Bank's Migration and Development Brief, representing a 9.6 percent increase over the previous year. Regionally, remittance flows into Latin America and the Caribbean in 2018 totaled \$88 billion.

Remittances, unlike the foreign aid provided by governments, are voluntarily sent by individuals to their family members or other loved ones. Hence, because of the characteristics of remittances, namely being large, voluntary, and effective, remittances could be considered private foreign aid.

DATA

The data used in the paper were sourced from the World Data Bank World Development Indicators database. The dependent variable, HDI, assesses the development of a country by analyzing developmental factors other than economic growth alone. Independent variables include: remittances, FDI, healthcare and education expenditure, and gross capital formation expressed as percentage of GDP. ODA, on the other hand, is expressed as a percentage of GNI as the World Bank does not provide data on this variable as a percentage of GDP.

Only the data corresponding to a sample of 18 countries will be used. These countries are: Belize, Bolivia, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela. Moreover, the time period of interest runs from 2000-2016 as the World Bank's data on healthcare expenditure, which is a crucial human capital factor for the model, is limited to that timeframe.

Figure 1: Personal remittances, received (current US\$)



MODEL

Fixed-Effects Model

For this analysis, a fixed-effects annual panel data estimation procedure for the 2000 to 2016 period, on 18 Latin American countries, is used to estimate the impact of remittances on HDI relative to the impact of namely foreign direct investment (FDI) and official developmental assistance (ODA), in its effect on the Human Development Index (HDI) of countries. The model used is the following:

$$HDI_{it} = \beta_1 + \beta_2 \left(\frac{Rem_{it}}{GDP_{it}} \right) + \beta_3 X_{it} + \delta_i + \tau_t + \varepsilon$$

Where HDI is the human development index for country "i" in year "t" and (Rem/GDP) is equal to total remittances of country "i" (listed under the data section) in year "t" as percentage of the country i's GDP, and where X_i is a vector of the following explanatory variables: FDI, healthcare and education expenditure, and gross capital formation as percentage of GDP, and ODA, though this one variable is expressed as a percentage of GNI. This model also includes a country fixed-effect, δ_i , to account for homogeneous effects, for all countries, that do not vary over time. A time fixed-effect, τ_t , is also included to account for year effects that are common to all countries.

RESULTS

The results suggest that the impact of remittances on human development indicators is negative. FDI and ODA are found to be statistically insignificant and to have no impact on HDI. Human capital indicators (education and health expenditure) are found to have a larger, and positive impact on HDI than remittances. The results indicate that remittances are not conducive to long-term economic development as they do not expand people's capabilities.

Human capital indicators have a larger impact on HDI than REMI. A 1 percent increase in HEASPEN translates to a 0.002 increase in HDI, while a 1 percent increase in EDUSPEND translated to a 0.001 increase in HDI. While HEASPEN is statistically significant at the 5 percent level, EDUSPEND is only significant at the 15 percent level.

RESULTS

Table 2: Fixed-effects regression

HDI	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig	
REMI	-0.001	0.000	-2.54	0.012	-0.001	0.000	**
EDUSPEND	0.001	0.001	1.58	0.116	0.000	0.003	
HEASPEN	0.002	0.001	2.28	0.024	0.000	0.004	**
FDI	0.000	0.000	0.48	0.632	0.000	0.001	
ODA	0.000	0.000	1.04	0.300	0.000	0.001	
CAPFORM	0.000	0.000	1.46	0.145	0.000	0.001	
Constant	0.631	0.007	85.27	0.000	0.616	0.645	***
Mean dependent var		0.690	SD dependent var			0.056	
R-squared		0.927	Number of obs			195.000	
F-test		89.567	Prob > F			0.000	
Akaike crit. (AIC)		-1381.508	Bayesian crit. (BIC)			-1306.229	

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

Conclusion

The conclusion of this study affirms that remittances have a negative impact on the HDI of Latin American countries. Remittances, however, are found to have a higher explanatory power than official flows of capital, namely FDI and ODA. Most importantly, the study also finds that the aforementioned official sources of capital have no impact on the HDI of Latin American countries.

Unlike the sources of capital previously discussed, spending in health and education does lead to an increase in HDI. Remittance flows, after all, primarily reduce short-term poverty, they do not help expand people's capabilities, unlike health and education spending. Official flows of capital, on the other hand, must go through bureaucratic government organs, where some of the money will be inevitably lost to corruption.