The Role of Foreign Aid and Foreign Direct Investment in Reducing Poverty

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ABSTRACT

We examine the role of foreign aid and foreign direct investment (FDI) in reducing poverty in less developed countries (LDCs). Using panel data, our analyses suggest the effectiveness of foreign aid in reducing poverty depends on the measure of aid, the type of data analyzed, and the method of analysis employed. Overall, our findings suggest that FDI is largely ineffective in reducing poverty, and that U.S. agricultural aid has a small but significantly negative effect on reducing poverty in LDCs.

BACKGROUND

Globally, about 2.7 billion people (over 40% of the world’s population) live on less than $2 per day (World Bank, 2014). The vast majority of the poor lives in LDCs, suffers from poor health, malnutrition and illiteracy, and often lacks political representation. Eradicating poverty is generally deemed necessary for achieving sustainable social and economic growth and development, so it is a key objective of many governments and non-governmental organizations (NGOs).

Many LDCs receive foreign aid from developed countries. In part to help reduce poverty, aid may be provided in the form of multilateral contributions funneled through international aid agencies, or as bilateral, humanitarian, and military aid. LDCs can also benefit from international capital flows to finance poverty alleviation policies through FDI, which may serve to fill the gap between LDCs’ optimal rate of investment and domestic savings.

We examine the contribution of official development assistance (ODA) and FDI in reducing poverty in LDCs. In particular, we explore the role of ODA and FDI in reducing poverty in LDCs, and all regions.

RESULTS

We first applied a pooled OLS regression to gain a preliminary understanding of the data. We recognize its limitations for panel data analysis, in that it fails to account for cross-sectional specific characteristics, may suffer from endogeneity issues, and produce biased and inconsistent results. The pooled OLS results indicate that aid is negatively related to poverty, but also suggest a significant U-shaped association between aid and poverty. (A U-shaped relation suggests that aid reduces poverty, but only up to some poverty threshold. Conversely, an inverted U-shaped relationship suggests aid reduces poverty beyond a minimum poverty level threshold.)

Subsequently, we estimated a first differences version of the statistical model, in efforts to eliminate country-specific characteristics and endogeneity effects.

\[
\Delta \text{Poverty}_{i,t} = \beta_1 \Delta \text{AID}_{i,t} + \beta_2 \Delta \text{FDI}_{i,t} + \beta_3 \Delta \text{GDP}_{i,t} + \beta_4 \Delta \text{ENROL}_{i,t} + \beta_5 \Delta \text{MORT}_{i,t} + \beta_6 \Delta \text{GINI}_{i,t} + \beta_7 \Delta \text{TRANSPARENCY}_{i,t} + \mu_t
\]

where subscripts i and t refer to country and time, respectively. Variables AID and FDI represent foreign assistance and foreign direct investment, respectively. GDP, ENROL, MORT, and GINI denote per capita GDP, primary school enrollment, infant mortality rate, and the Gini index, respectively, and are included to control for income, education, health, and inequality. The TRANSPARENCY variable represents institutional quality. The sum of \(\beta\), representing country-specific characteristics, and \(\mu_t\), an idiosyncratic error term, corresponds to the error term in the classical model.

In this model specification, we directly assess the relationship between poverty, aid, and FDI. This is in contrast to most studies on the role of foreign aid and FDI in reducing poverty, which employ similar regression specifications, but they use GDP growth as dependent variable, suggesting that aid and FDI increase growth and reduce poverty.

Finally, we used a U.S. aid to agriculture variable to test the effectiveness of aid to agriculture. However, data on both poverty and U.S. agricultural aid are only available for three regions: the Middle East and North Africa, Latin American Caribbean, and Sub-Saharan Africa. The Table to the right reports the results of applying the fixed effect estimator to model (2). The results show that U.S. agricultural aid (USAGAID) is significant and inversely related to poverty, but FDI is not significant and also has an inverted U-shaped relationship with poverty. Per capita GDP is significant and negatively related to poverty, enrolment, and per capita GDP is significant and negatively related to poverty, infant mortality, and transparency.

The fit of the model applied to the two aggregated dataset is excellent, with adjusted \(R^2\) of 0.83 and 0.88, respectively.

RESULTS

Conclusions

Consistent with findings in the literature, our research indicates that the role of foreign aid and FDI in reducing poverty in LDCs is mixed, complex, and difficult to assess. Clearly, poverty reduction requires far more than effective aid and FDI. Per capita GDP, education, health, and inequality are all variables that were significant in most specifications. Additional variables not included in our analysis may also determine the success of any poverty alleviation policy. Key contributions of our work are the U-shape and inverted U-shape forms of the role of aid and FDI in reducing poverty and the associated specific threshold levels.

REFERENCES