Measuring the displacement and replacement of government health expenditure: a panel analysis

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Abstract

Background Government health expenditure is a primary means of financing health services in many countries. Research assessing the relation between government health expenditure and development assistance for health channelled to governments (DAH-G) has produced contradictory conclusions. This research aims to credibly estimate displacement and measure if the DAH-G effect is symmetric or if increases and decreases in DAH-G have distinct effects.

Methods This study measures the effect of DAH-G on government health expenditure as source (GHE-S). We construct a panel of financial flows data spanning 107 countries and 16 years. General method of moments and two-stage least squares provide evidence that DAH-G causes the displacement of GHE-S. Furthermore, we show that GHE-S is dynamic, meaning that the current level of GHE-S is a function of past levels. To explain why, we disaggregate the average effect of DAH-G by separately identifying the effects of increases versus decreases in DAH-G.

Findings In the short-run, US$1 of DAH-G displaces on average $0·62 (95% CI 0·21 to 1·02) of GHE-S, leaving only $0·38 (–0·02 to 0·79) of DAH-G additional. Furthermore, the effects of DAH-G shocks persist over time. Disaggregating increases and decreases in DAH-G; we find that a $1 year-over-year increase in DAH-G leads to a $0·68 (95% CI 0·21 to 1·15) decrease in GHE-S, while a $1 year-over-year decrease in DAH-G does not have an effect on GHE-S that is statistically different from zero (–0·15 to 0·79). Simulation shows that the irregular disbursement of DAH-G between 1995 and 2010 led to exacerbated displacement, foregoing 26% of DAH-G, roughly $11·6 billion of resources.

Interpretation Short-run fluctuations in DAH-G have long-run implications for the amount of government resources available for health. This research highlights the importance of predictable and stable development assistance. Sporadic aid disbursement leads to fewer resources available for health in the long run.

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Contributors
JLD designed and implemented all analyses and wrote both the first and last drafts. MH evaluated and reviewed the analysis, methods, and both the first and final drafts.

Conflicts of interest
We declare that we have no conflicts of interest.

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