

**INTERNATIONAL MONETARY FUND AND
AID DISPLACEMENT**

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Several recent papers find evidence that global health aid is being diverted to reserves, education, military, or other sectors, and is displacing government spending. This is suggested to occur because ministers of finance have competing, possibly corrupt, priorities and deprive the health sector of resources. Studies have found that development assistance for health routed to governments has a negative impact on health spending and that similar assistance routed to private nongovernmental organizations has a positive impact. An alternative hypothesis is that World Bank and IMF macro-economic policies, which specifically advise governments to divert aid to reserves to cope with aid volatility and keep government spending low, could be causing the displacement of health aid. This article evaluates whether aid displacement was greater when countries undertook a new borrowing program from the IMF between 1996 and 2006. As found in existing studies, for each \$1 of development assistance for health, about \$0.37 is added to the health system. However, evaluating IMF-borrowing versus non-IMF-borrowing countries reveals that non-borrowers add about \$0.45 whereas borrowers add less than \$0.01 to the health system. On average, health system spending grew at about half the speed when countries were exposed to the IMF than when they were not. It is important to take account of the political economy of global health finance when interpreting data on financial flows.

In a recent paper in the *Lancet*, Lu and colleagues (1) showed that donor aid has only a limited impact on government health spending in recipient countries. In so doing, they join a growing number of authors reporting a weak association between overseas development assistance for health and actual health spending.

For example, an earlier estimate by Farag and colleagues (2) found that each US\$1 of overseas development assistance for health was associated with only about 37 cents of additional health spending in middle-income countries, with a process of displacement diverting the remainder elsewhere. The work by Lu and colleagues adds to our knowledge by showing that funding going to countries through private nongovernmental organizations (such as the Gates Foundation) did not displace health spending in the same way as did aid through governments. In an accompanying commentary, Sridhar and Woods (3) cautioned against drawing two provocative conclusions:

1. Development assistance given directly to governments has a negative effect on government spending on health, and therefore funding for health should not be routed through governments.
2. On the other hand, development assistance given to private nongovernmental organizations (NGOs) has a positive effect on government spending, and therefore funding should be routed through private channels.

These recommendations come at a time when there is serious concern about the failure to achieve global health goals to reduce child and maternal mortality and reverse the spread of HIV, tuberculosis, and malaria—the Millennium Development Goals (MDGs) (4). Originally, the designers of the MDGs estimated that the financing package needed to achieve the goals would require development assistance of 0.25 percent of donor gross domestic product in 2003, increasing to 0.44 percent in 2006 and 0.54 percent in 2015, providing approximately US\$120 billion each year of aid (5). This had been achieved by 2007, the most recent year with available data, when \$22 billion of the overall international development assistance bill of \$120 billion was allocated to health (6).

Recognizing this failure to meet the health goals might be expected to raise doubts about the fundamental premises of the approach to achieving MDGs and the strategies to finance them. Previously, the two main explanations for failure to make progress in development were (a) a lack of funds for “pushing” countries out of poverty traps and (b) corrupt governments that prevent the money from reaching the poor (5, 7–9). This evidence about government displacement of funds offers a new rationale that reconciles the failure to achieve the MDGs, despite increasing funding, with these existing explanations. More specifically, in the presence of such displacement, the sum needed to achieve the MDGs was grossly underestimated—funding would need to triple—unless, that is, based on the authors’ conclusions, the existing money is directed through private sources and bypasses inefficient governments.

Yet, as suggested by Ooms and coauthors (10, 11), there are several explanations for the statistical association between higher aid to governments and lower government spending on health, other than the Lu and coauthors’ conclusion that “development assistance for health is a key factor *leading to* a decline

in government spending on health” (emphasis added)—which should not be concluded from merely correlative statistics. One hypothesis identified by Lu and colleagues is that countries lack the capacity to implement the newly provided resources, which reflects the weakness of health systems in recipient countries (although the reasons for the chronic weakness of health systems are not specified).

An alternative hypothesis, consistent with a growing body of economic research, may explain the finding that increased aid was *associated with* lower spending when given to governments as opposed to private organizations (in addition to low absorptive capacity in a chronically underfunded public health sector). Namely, a particular macroeconomic policy framework has been in force in 7 of the past 10 years (12) that enforces strict monetary policies on recipient countries, limiting government spending rather than increasing it when additional aid becomes available.

Specifically, when countries receive funds through the largest international financing mechanism—the Bretton Woods System, and particularly the International Monetary Fund (IMF)—they are explicitly advised to divert aid to reserves (11, 13). This is intended to reduce the likelihood of financial instability, on the assumption that aid is unpredictable (13, 14). In this article we test whether aid displacement is greater when countries initiate and sustain borrowing from the IMF, compared with countries at similar levels of income that are not borrowing.

METHODS

To test the effects of external influences on short-term aid displacement, we first make methodological adjustments to the model used by Lu and colleagues (1). These authors used a model that correlates overall health spending with absolute levels of aid, which can produce spurious findings given that displacement of government spending by aid is actually a short-run process. The appropriate statistical model in this circumstance is to analyze the association between *changes* in government spending and *changes* in aid (15).

In addition, the model used by Lu and colleagues is scaled to gross domestic product (GDP), but local estimates of GDP vary considerably depending on the method used, potentially inflating or deflating estimated effects. Hence we use per capita spending estimates adjusted for purchasing-power parity in international dollars, based on National Health Accounts data as in previously established methodology (2).

After addressing these methodological issues, we can investigate our alternative hypothesis that macroeconomic policy can explain the association between aid and spending, using data from the World Health Organization (16), applying the regression:

$$\Delta\text{Total health spending} = \beta_1 \Delta\text{Donor health aid} + \beta_2 \Delta\text{GDP} + \text{Other sources}$$

We need to be aware of known discrepancies between the WHO's National Health Accounts data and the reporting by the IMF (i.e., the two datasets are only moderately correlated, $r < 0.7$) (3). Thus, we use the WHO data, which are considered by the global health community to be the most reliable source and which preserve comparability with the other major studies of this topic.

We also set up a cohort of countries that were not borrowing from the IMF in the early 1990s, so as to avoid potential bias that would arise from studying only countries with long-term borrowing under Structural Adjustment Programs. This step reflects changes in IMF policies with the development of its Poverty Reduction Growth Facility, which is argued to have rectified past policies that reduced funding for the health sector. Also, in view of some implausibly large fluctuations in donor aid and health spending (such as one-year fluctuations in health spending of greater than the absolute value of US\$300 per capita), we removed potential outliers by using a conservative cut-point of the 75th percentile in year-to-year changes. For brevity, we have not presented results before these latter adjustments were made but note that they do not affect our overall conclusions.

RESULTS

In theory, each additional \$1 of donor aid should correspond to \$1 of overall health spending, if there is no displacement of funds. Unfortunately, and consistent with the prior findings, we find that each \$1 of new aid is associated with only \$0.37 of increased health spending (Table 1). Could this be explained by macroeconomic policy recommendations from financial institutions, rather than the causative claim by Lu and colleagues (1) that aid per se is “leading to” reduced spending?

When we stratified our analysis by comparing countries that initiated borrowing from the IMF versus those that did not, we found that in IMF-borrowing countries there was essentially no additional benefit of external health aid—each additional \$1 of aid resulted, on average, in less than \$0.01 added to the health system (complete displacement). In countries that did not borrow from the IMF, however, each additional \$1 of aid resulted, on average, in about \$0.45 added to the health system ($p < 0.0001$).

Additionally, as shown by the constant in the model, the average growth of health system spending in non-IMF-borrowing countries was twice as high as in IMF-borrowing countries (Table 1). As further shown in Table 1, the health systems in IMF-borrowing countries were about four times more susceptible to fluctuations in growth, both positively and negatively.

To account for the full effects of these processes, as well as the statistical uncertainties and confidence intervals around these findings, we performed a series of simulations. Figure 1 shows the results of simulations of 1,000 coefficients of our models, which we used to create 1,000 estimates of a health system's

Table 1

Diversion of donor health funds under IMF programs, non-IMF baseline,
1995/1996–2005/2006 (all available data)

	Model 1 All countries	Model 2 Non-IMF- borrowing countries	Model 3 IMF-borrowing countries
\$1 additional donor health funding	0.37*** (0.11)	0.45*** (0.11)	0.002 ^d (0.22)
\$1 additional national income	0.010** (0.004)	0.008* (0.004)	0.035*** (0.006)
Average health system spending growth	12.77*** (1.50)	13.84*** (1.76)	7.03*** (1.73)
Number of countries	119	101	34
Number of country-years	912	643	269
R ²	0.07	0.06	0.21

Source: Health spending data from the World Health Organization Statistical Information System 2009 edition (16).

Note: Robust standard errors in parentheses, clustered by country. Countries included in the sample that were not borrowing from the IMF at year of first observation. Models also robust to controlling for a set of country and year indicator variables. Units are purchasing-power parity in international dollars.

^dTest for heterogeneity of effect across models shows the coefficients in models 2 and 3 differ significantly, $\chi^2(1) = 4.12$; $p = 0.0423$.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

growth in the current year when receiving \$10 of additional donor funding but experiencing zero economic growth. As shown in the figure, under an IMF program, countries would be expected to increase health system spending overall by about \$7, about \$0.60 of which would come from donor funding. In countries not borrowing from the IMF, health systems would be expected to grow by about \$18, about \$5.05 of which would come from the additional donor funds. These differences were statistically significant at $p < 0.0001$.

We also tested whether the countries that were IMF borrowers prior to the 1995 start date (when external financing data were available from the WHO) showed differing degrees of displacement. We found that, in these countries, displacement rates were lower than in more recent borrowers, with about \$0.40 displacement for each \$1 added by donors (results not shown). This difference could reflect changes in IMF policies—such as its Poverty Reduction Growth Facility, established in 1999—or it may reflect differing impacts on long-term borrowers. Either way, this observation

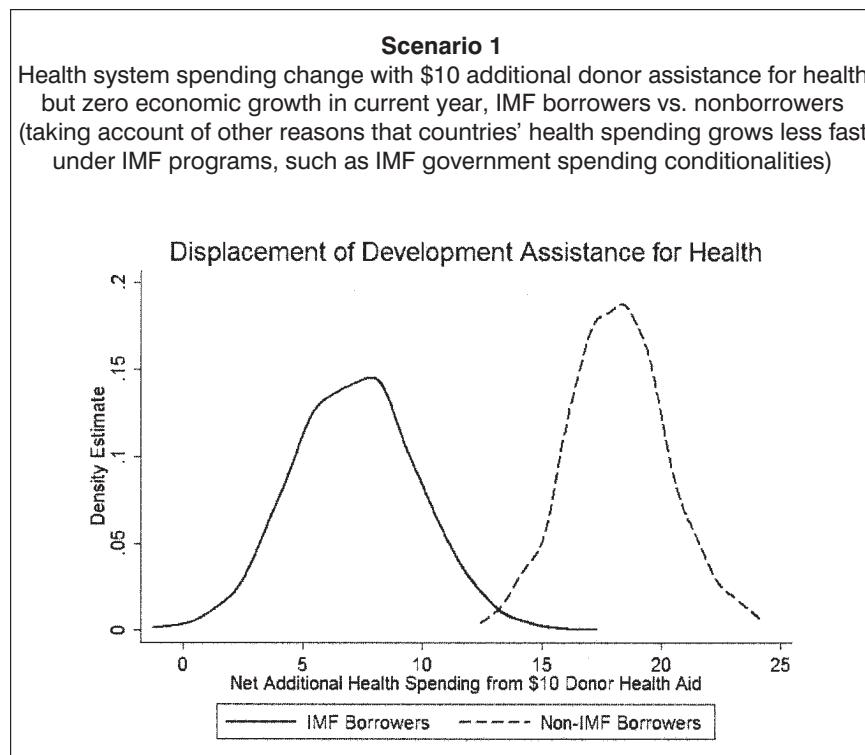


Figure 1. Simulations of health system spending changes with donor assistance, IMF-borrowing versus non-IMF-borrowing countries. *Note:* Mean differences between borrowers and nonborrowers are significant at $p < 0.001$ (based on two-tailed, two-sample unpaired and unequal variance (t -tests)). Scenario 1 includes a constant in the model; scenario 2 does not.

strengthens the argument that aid displacement by the IMF is a more recent and therefore avoidable phenomenon.

As a final series of robustness checks, we included controls for country-specific differences (using a set of indicator variables for each country) and time fixed effects. None of our basic results were changed. We also adjusted for the country's level of income per capita, which also did not affect the observed patterns. As a further step, we replicated our findings using constant 2000 U.S. dollars as the currency unit. Although displacement under the IMF did not change, we estimated a lower magnitude of displacement for countries not borrowing from the IMF, with each US\$1 of development assistance for health associated with \$0.67 additional health spending (results not shown).

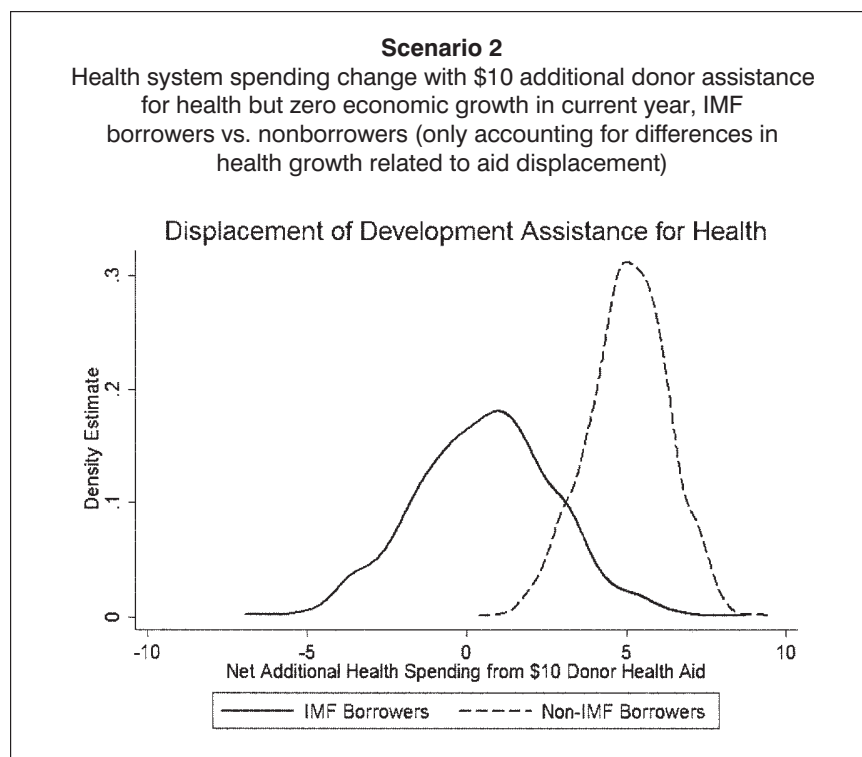


Figure 1. (Cont'd.)

INTERPRETATION

We might be tempted to conclude that borrowing from the IMF is a major (but incomplete) reason that health aid is not reaching the poor. Consistent with our findings, Lu and colleagues do state that “the motivations of ministries of finance might be external—e.g. caused by loan conditions imposed by global financial institutions.” However, they later conclude that “DAH [development assistance for health] to the non-governmental sector had a positive and significant effect on domestic government health spending,” suggesting: “Should donors follow the lead of the US government and channel an increasing share of DAH through NGOs? From a purely health expenditure perspective, the answer might be yes . . . integration of NGO activities into an overall health strategic plan might provide mechanisms for enhanced additionality and health-system strengthening” (1). External policy frameworks can explain the authors’ findings that aid directed to

private NGOs is not displaced, as NGO funds are not subjected to the macroeconomic policies of the IMF.

Before interpreting these findings further, we must note several limitations of our study, as well as the genesis of our research. In the past two years, we were reluctant to publish these findings, not because of the conclusion of Lu and colleagues that to do so would be controversial, but because we had reservations about drawing potentially far-reaching conclusions from the data, given the inevitability of the headlines that would be generated.

As Easterly and Pfütze note, “the data are terrible” (17). Where global health aid money is coming from and going to is highly unclear; only about one of every three dollars allocated to health can be assigned an identifiable purpose (6). Further, the datasets used by Lu and colleagues are extensively imputed (44% missing data for low-income countries).

The validity of the data is also weak. They are known to contain massive heterogeneity, include very suspect and often highly misclassified data points, and often rely on commitments rather than disbursements (the wrong variable) (18). In particular, the extent to which private NGO money is funneled through governments cannot be clearly ascertained with the current method of data collection, making it possible to attribute spurious benefits to private sources of aid. Therefore, above all else, we urge caution in extrapolating from these highly limited data any policy advice to encourage further health system privatization, and suggest that making policy recommendations based on these correlative statistics is hazardous at best.

Beyond the issue of displacement, there is also a growing body of evidence that the health priorities set by private donors misalign with measures of actual health need (6, 19, 20). To rectify this issue, donors agree that national governments’ priorities offer the closest approximation to an acceptable process for setting priorities. These agreements have been repeatedly affirmed through the Paris Declaration and Accra Agenda (3). Thus, even if Lu and colleagues were correct that private NGOs are more efficient at mobilizing resources, there is stronger evidence that they lack efficiency in allocating them.

A final important point is that countries seeking IMF support are likely to differ from countries that are not, and a request for an IMF loan is often associated with severe economic problems. Nonetheless, even in such circumstances, it is reasonable to expect aid from donors to have at least some positive impact on health funding, especially given that health needs are often greatest at such times.

The choices of ministers of finance are never completely free, as they are made within macroeconomic frameworks and circumstances determined to a great extent by the international financial community and institutions. This is especially the case in periods of borrowing and conditionality. A task of the public health community is to identify these pressures on finance ministers and attempt

to provide fiscal space for those who do wish to support public health projects and systems that can reduce avoidable diseases. Greater research is needed to establish public accountability and transparency.

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