Predictability of Aid: Do Fickle Donors Undermine Aid Effectiveness?

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Would you like to be the Finance Minister of Mali?

Mali

Actual minus Projected Budget
Aid/GDP

Mali

Percent of budget aid disbursements
Outline

- Why does predictability matter?
- Measuring Predictability
- OECD DAC Data
- Predictability in IMF Program Data
- How do Countries Adjust?
- Summary of Findings
- Policy Implications
Predictability ≠ Volatility

- Predictability: Difference between expected and actual aid flows for a given time period
- Volatility: ex-post measure of fluctuations in aid flows
- Volatility in aid may not be a problem if it offsets other economic fluctuations, some evidence for that from Chauvet and Guillaumont (2007)
- Predictability the more appealing concept to measure “surprises” but harder to measure
Predictability vs. Volatility in Africa
Effects of Low Predictability

- Low-income countries cannot access international capital markets, no incentive for large precautionary savings (see Deaton, 1991)

→ Lower-than-expected aid flows may result in sharp expenditure adjustments (e.g., lower spending on investments)

→ Larger-than-expected aid flows may not be spent productively (e.g., higher consumption)
Aid is less predictable in the poorest countries

The chart shows the relationship between the poverty head count (% population) of people living on less than $1 a day and the disbursements-commitments (percent of GDP).
## When Are Donors Fickle?

<table>
<thead>
<tr>
<th>Reason for lack of predictability</th>
<th>Budget aid</th>
<th>Project aid</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Major shift in policy or country circumstances, including emergencies</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2) Slow project implementation speed</td>
<td>N/a</td>
<td>No</td>
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<td>3) Specific conditionality not met</td>
<td>Possible</td>
<td>Possible</td>
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<tr>
<td>4) Difficulties meeting donor-specific project disbursement procedures</td>
<td>N/a</td>
<td>Possible</td>
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<td>5) Administrative delays and slow response by donors</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>6) Aid re-allocation or additions to aid envelopes for political or donor-related reasons</td>
<td>Yes</td>
<td>Yes</td>
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</table>
Measuring Predictability

- Two sources for this paper: OECD-DAC and database constructed from IMF programs
- Neither data can give reasons for low predictability → need statistical inference
- OECD-DAC is more comprehensive (time, countries) but only *donor-reported* commitments and disbursements, no split budget vs. project aid
- IMF-based data *measures government disbursement expectations and allows tracing adjustments* to “aid surprises” in a macro-consistent framework, has information on budget and project aid
Commitments and Disbursements in OECD-DAC data

- Data are adjusted by excluding those donors who never report any commitments.
- On an annual basis, and averaged over time, African countries receive 1 percent of GDP more in disbursements than were committed; countries in other regions receive between 0.2 and 1.1 percent of GDP less than committed.
- Both disbursement shortfalls and excess disbursements are important to gauge predictability issues.
Predictability in OECD-DAC data

- Predictability is low: On average, the absolute deviation of annual disbursements from commitments ranges from 1.7 percent (MNA) to 3.4 percent of GDP (Sub-Saharan Africa), albeit with some improvement over time.

- These numbers are particularly staggering for post-conflict cases such as Sierra Leone (9 percent), Mozambique (4.7 percent), but also very high in Zambia (6.5 percent), a country with difficult donor relations/uneven policy implementation.

- Results robust to changes in assumptions – for example if we assume committed resources are disbursed over 3 years rather than 1 year.
Low Predictability: Justified Caution or Fickle Donors?

- Length under IMF programs matters
**Simple Regression of Absolute Deviations, Disbursement Shortfalls, Excess Disbursements (% of GDP)**

<table>
<thead>
<tr>
<th></th>
<th>Years in IMF</th>
<th>IMF Program</th>
<th>Dummy</th>
<th>Governance (-1)</th>
<th>Net Aid (%GDP) (-1)</th>
<th>Emergency Aid (% GDP)</th>
<th>Negative TOT Shocks</th>
<th>Positive TOT Shocks</th>
<th>Constant</th>
<th>R-Squared</th>
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<tbody>
<tr>
<td></td>
<td>-0.201**</td>
<td>-0.173</td>
<td>-0.242**</td>
<td>-0.164</td>
<td>0.139***</td>
<td>0.547***</td>
<td>0.012</td>
<td>-0.022</td>
<td>1.558</td>
<td>0.23</td>
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<td></td>
<td>[0.082]</td>
<td>[0.118]</td>
<td>[0.115]</td>
<td>[0.397]</td>
<td>[0.408]</td>
<td>[0.124]</td>
<td>[0.021]</td>
<td>[0.014]</td>
<td>[1.373]</td>
<td>444</td>
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<td></td>
<td>0.18</td>
<td>1.151</td>
<td>0.395</td>
<td>0.079*</td>
<td>-0.596</td>
<td>0.22</td>
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<td>254</td>
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</table>
Some lack of predictability is associated with factors related to aid effectiveness considerations

- Less predictable when less stable relationship with donors as approximated by length of IMF program (but not when entering or existing IMF program)
- Less predictable when large emergency aid disbursements

Both factors seem reasonably close to cases where donors may not/cannot be predictable if they care about effectiveness

But: leaves a large part of lack of predictability unexplained that could come from technical factors (project aid) and conditionality (budget aid)
Robustness

- Instrumentation of governance and net aid with standard instruments (settler mortality, colonial history, UN votes).
- Use of country fixed effects

- Findings robust to IV, but IMF effect absorbed into country fixed effects
- Even with these additions, large unexplained part of aid predictability
Predictability in IMF-based data

- IMF reports allow to identify expected project and budget aid disbursements and outturns.
- Projections used are typically the last available before start of the budget year.
- Need long-term IMF program engagement for data → performing similar regression analysis on this more limited data yields no longer significant results regarding IMF, emergency aid matters for project aid disbursements.
- Projections and outturns are embedded in an internally consistent set of macro variables → can trace where adjustments are being made.
## Budget Aid and Taxes: How well are they projected?

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</thead>
<tbody>
<tr>
<td><strong>Average Budget Aid</strong></td>
<td>2.95</td>
<td>2.88</td>
<td>2.92</td>
<td>1.85</td>
<td>3.44</td>
<td>3.04</td>
<td>3.07</td>
<td>7.20</td>
<td>5.82</td>
<td>5.97</td>
<td>3.08</td>
<td>3.92</td>
<td>3.46</td>
<td>3.16</td>
<td>3.42</td>
<td>3.31</td>
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<tr>
<td><strong>Average Deviation</strong></td>
<td>-1.08</td>
<td>0.06</td>
<td>-0.55</td>
<td>-0.28</td>
<td>0.35</td>
<td>0.19</td>
<td>-2.21</td>
<td>1.10</td>
<td>0.00</td>
<td>-1.46</td>
<td>-0.51</td>
<td>-0.19</td>
<td>-0.36</td>
<td>-0.42</td>
<td>-0.04</td>
<td>-0.20</td>
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<tr>
<td><strong>Mean Absolute Deviation</strong></td>
<td>1.40</td>
<td>0.44</td>
<td>0.96</td>
<td>0.28</td>
<td>0.84</td>
<td>0.70</td>
<td>2.21</td>
<td>1.22</td>
<td>1.55</td>
<td>2.66</td>
<td>0.58</td>
<td>0.52</td>
<td>0.55</td>
<td>1.21</td>
<td>0.97</td>
<td>1.07</td>
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<tr>
<td><strong>Average Tax Revenue</strong></td>
<td>10.25</td>
<td>11.00</td>
<td>10.60</td>
<td>15.31</td>
<td>18.93</td>
<td>18.02</td>
<td>9.68</td>
<td>11.71</td>
<td>11.03</td>
<td>11.19</td>
<td>12.67</td>
<td>11.39</td>
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<td>0.31</td>
<td>-0.71</td>
<td>0.78</td>
<td>0.41</td>
<td>-0.48</td>
<td>0.49</td>
<td>0.17</td>
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<td><strong>0.91</strong></td>
<td><strong>0.70</strong></td>
<td><strong>0.81</strong></td>
<td><strong>0.71</strong></td>
<td><strong>1.26</strong></td>
<td><strong>1.12</strong></td>
<td><strong>1.54</strong></td>
<td><strong>0.91</strong></td>
<td><strong>1.12</strong></td>
<td><strong>0.70</strong></td>
<td><strong>1.38</strong></td>
<td><strong>0.46</strong></td>
<td><strong>0.96</strong></td>
<td><strong>0.89</strong></td>
<td><strong>0.89</strong></td>
<td><strong>0.89</strong></td>
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</tbody>
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Where and How Do Countries Adjust to Budget Aid Shocks?

Revenue and financing adjustments

- Budget Aid Shortfall
- Tax Revenue Shortfall
- Excess Dom. Bank Financing
- Other
- Excess Current Expenditure
- Dom. Fin. Investment Shortfall
- Net Debt Service and Arrears Clearance

Expenditure adjustments
Common Features

- Need not only to absorb aid shock, but often tax shock goes in the same direction, particularly when aid shortfall (Tanzania and Ghana have practically identical tax revenue and aid shortfalls).

- Current expenditure overruns are present whether in case of excess aid or aid shortfalls, but are twice as large when in cases of excess aid disbursements.
Key Patterns

- Budget aid shortfalls are absorbed through higher domestic financing or new arrears and cuts in domestically financed investment spending.
- Investment spending does not accelerate in times of excess budget aid, instead recurrent expenditure increases.
- Excess budget aid disbursements result in reduction of domestic debt and higher current spending.
Budget Aid and Domestic Bank Financing Deviations

The scatter plot shows the relationship between budget aid deviations and domestic bank financing over a range of values. The data points are scattered across the plot, with a trend line indicating a negative correlation between the two variables. The x-axis represents budget aid deviations, while the y-axis represents domestic bank financing deviations.
Investment Deviations and Budget Aid Shortfalls
Current Expenditure Deviations and Aid Excesses

The scatter plot illustrates the relationship between current expenditure deviations and budget aid excesses. The points on the graph represent individual data points, with each point's position indicating the level of current expenditure deviation and budget aid excess for a particular observation. The red line is a linear regression fit through the data, suggesting a positive correlation between the two variables.
Current Expenditure Deviations and Aid Shortfalls

![Graph showing the relationship between current expenditure deviations and budget aid shortfalls. The graph includes a scatter plot with data points and a trend line indicating a negative correlation.](image-url)
Summary of Messages (1)

- Aid is not very predictable but low predictability results by both shortfalls and excess disbursements.
- Some of the lack of predictability can be explained with country factors/stability of policy implementation and/or the occurrence of emergencies, which generally could be seen as justifiable reason to be unpredictable.
- However, according to our regressions, important elements cannot be explained by fundamentals.
Summary of Messages (2)

- Even where the country environment is stable, budget aid is unpredictable (with about 1 percent of GDP or 1/3 of average budget aid at risk each year)
- Budget aid is less predictable than tax revenue
- Low predictability of aid, particularly budget aid, is disruptive for budget management and leads to permanent losses of domestic investment spending
Policy Implications

- Identify explicitly under which circumstances lack of predictability is acceptable for aid effectiveness reasons
- Focus on those types of aid for which predictability is an essential ingredient (budget aid, aid that finances recurrent costs)
- Improve the measurement of predictability in particular adapt the OECD survey on the Paris declaration to identify aid types and draw on recipient projections
- Move to longer-term mechanisms of aid allocation à la Eifert-Gelb (2006) linked to country characteristics → longer-term commitments of aid beyond 1-3 year windows