Aid, Institutions and Economic Growth in Sub-Saharan Africa

Heterogeneous Donors and Heterogeneous Responses

Hassen A. Wako

Maastricht University
&
United Nations University - Maastricht Economic and Social Research Institute on Innovation and Technology (UNU-MERIT)

wako@merit.unu.edu

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Outline

1. Introduction

Justifications for Development Aid

Focus on development aid as opposed to military or humanitarian/disaster aid, though the borders are blurred.

Aid for:

- Physical Capital
- Human Capital
- Governance, Institutions
- Trade

In general, aid is needed to give LDCs a 'big-push' out of poverty-trap.

In practice, recipient needs, donor political & commercial interests, shared benefits of development in LDCs and recipient performance, all matter.

The Effectiveness Debate

Debate goes back to its early days.

Generations of the aid-effectiveness debate:

- Aid $\rightarrow$ Saving/Investment ($\rightarrow$ Growth): Cross-sectional; Linear relationship; aid taken as exogenous.
- Aid $\rightarrow$ Growth: similar to the first
- Aid $\rightarrow$ Growth (but also (rarely) Education, Infant Mortality): Panel data; endogeneity; non-linearity; deep parameters (policy, institutions, geography).
- Aid $\rightarrow$ Intermediatory variables $\rightarrow$ Growth: 'Opening the black box'.

The Effectiveness Debate

Unconditionally effective:

Crosswell (1998), Blair et al. (2005), Karras (2006), Tarp (2006), Minoiu & Reddy (2010), Arndt et al. (2010, 2011)

Conditionally effective:

World Bank (1998), Burnside & Dollar (2000), Denkabe (2004), Radelet (2006), Collier (2006), Alvi et al. (2008), Ghimire (2013), Bearce et al. (2013)

Ineffective

Kanbur (2000), Easterly (2003, 2005), Ranis (2006), Rajan & Subramanian (2008), Nowak-Lehmann et al. (2012)

Harmful

Moss et al. (2006), Fielding (2007), Killick & Foster (2007), Moyo (2009).

Research Gaps

Three (3) issues:

- Aid (donor) heterogeneity,
- Recipient heterogeneity,
- Institutional intermediation: Aid $\rightarrow$ Institutions $\rightarrow$ Growth

Research Gaps

i) Aid (donor) heterogeneity:

Differences in the nature of aid:

- Clemens et al. (2004): 'short-impact' & 'long-impact' aid

Differences between donors:

- Heterogeneity within the 'traditional' donors
  - Wako (2011): Bilateral vs. Multilateral Donors
  - Okada & Samreth (2012): US, UK, Japan, France & multilateral aid
  - Brazys (2013): Aid for Trade (AfT) from 19 OECD-members. No recipient from SSA
- Differences between 'Old' and 'New' donors
  - McCormick (2008): China & India vs. 'Old' donors (Potential!)
  - Moyo (2009): Compares China & the West

Research Gaps

ii) Recipient heterogeneity:

- Common practice: including regional dummies.
- Heterogeneity in slope parameters:
  Tan (2009), Asteriou (2009), Ndambendia & Njoupouognigni (2010)
  - Aid $\rightarrow$ Income, not interested in the reverse relationship
  - not interested in the role of institutions.
  - ignored order of integration of variables – possibility of spurious results.

iii) Intermediary variables:

- Bourguignon & Sundberg (2007): Aid $\rightarrow$ Policy, governance, institutions $\rightarrow$ Growth – Theoretical!
- Arndt et al. (2011): considered investment and human capital, not seen the roles of policy, institutions and governance.

2. Methodology

Model Specification

ARDL: a dynamic relationship

$$\text{gGDPPC}_{it} = \alpha_{0i} + \sum_{l=1}^{p} \alpha_{1li}\text{gGDPPC}_{it-l} + \sum_{l=0}^{p} \alpha_{2li}\text{Aid}_{it-l} + \sum_{l=0}^{p} \alpha_{3li}\text{Inst}_{it-l} + \eta_{it} \tag{1}$$

$$\text{Inst}_{it} = \beta_{0i} + \sum_{l=1}^{p} \beta_{1li}\text{Inst}_{it-l} + \sum_{l=0}^{p} \beta_{2li}\text{gGDPPC}_{it-l} + \sum_{l=0}^{p} \beta_{3li}\text{Aid}_{it-l} + \varepsilon_{it} \tag{2}$$

$$\text{Aid}_{it} = \gamma_{0i} + \sum_{l=1}^{p} \gamma_{1li}\text{Aid}_{it-l} + \sum_{l=0}^{p} \gamma_{2li}\text{gGDPPC}_{it-l} + \sum_{l=0}^{p} \gamma_{3li}\text{Inst}_{it-l} + \zeta_{it} \tag{3}$$

Model Specification

Rearranging Equation 1 gives an ECM representation:

$$\Delta gGDPPC_{it} = \gamma_{0i} + \alpha_i \left(gGDPPC_{it-1} - \beta_{2i} Aid_{it-1} - \beta_{3i} Inst_{it-1} \right) + \sum_{l=1}^{p-1} \gamma_{1li} \Delta gGDPPC_{it-l} + \sum_{l=0}^{p-1} \gamma_{2li} \Delta Aid_{it-l} + \sum_{l=0}^{p-1} \gamma_{3li} \Delta Inst_{it-l} + \mu_{it}. \quad (4)$$

The *Aid* and *Institution* equations are similarly reparameterized.

Estimation Techniques

- Three techniques for non-stationary, cross-sectionally dependent dynamic panels:
  1. Dynamic Fixed Effects – all parameters assumed homogenous
  2. Pooled Mean Group – short-run parameters and error-correction coefficient are heterogenous
  3. Mean Group – all parameters heterogenous (not much better than running separate time-series)
- Hausman test applied to the pairs: MG & DFE, and MG & PMG.
- Dynamic Common Correlated Effects estimator also used to better account for CD.

3. Data

1. Definition of Variables and Data Source:
   - Economic Growth:
     grGDPPC$_t$ = 100*[Real GDPPC$_t$ - Real GDPPC$_{t-1}$]/Real GDPPC$_{t-1}$.
     World Bank: WDI
   - Aid: NAT = NODA - Interest repayments - Cancellation of Non-ODA loans. (Share of GDP).
     Roodman (2005)
   - Institutional Quality: Average of Civil Liberties & Political Rights.
     Freedom House
2. Coverage: 1980-2013, 43 SSA countries

4. Results

Stationarity & Cointegration Tests

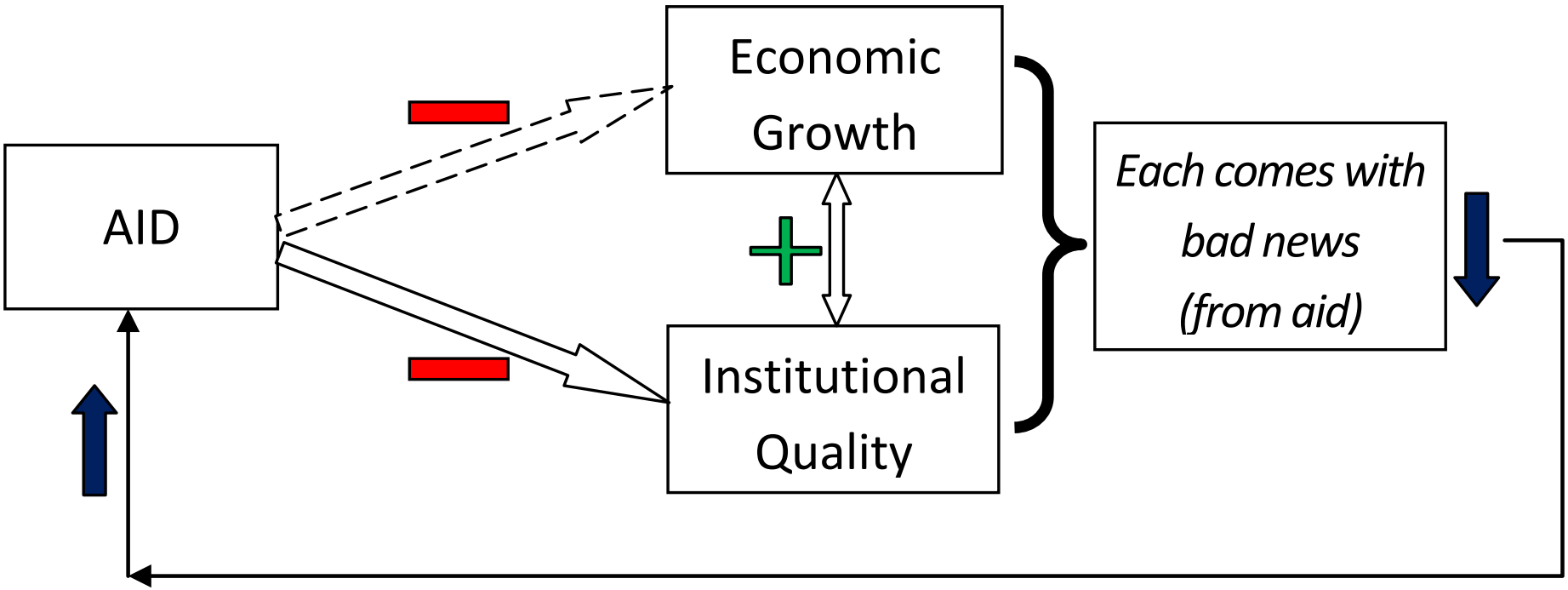
Stationarity:

- grGDPPC, NAT & Institution are mix of I(0) & I(1).
- RGDPPC is a mix of I(1) & I(2).

Cointegration:

- grGDPPC, NAT & Institution are cointegrated.
- The use of GDPPC in level entails spurious results!

Aggregate Aid from DAC-Donors



From 'Poverty-Trap' to 'Aid-Poverty Trap'

Heterogeneity within DAC-Donors

Donor	*grGDPPC*	*Institution*	*Total Effect**
France	−	−	−
Canada	−	−	−
Germany	−	−	−
Italy	−	0	−
Finland	−	0	−
Japan	−	0	−
Luxembourg	0	−	−
Austria	0	0	0
Spain	0	0	0
Denmark	0	0	0
Sweden	+	−	?
Belgium	+	−	?
Australia	+	−	?
Portugal	−	+	?
UK	+	0	+
USA	+	0	+
Netherlands	0	+	+
Norway	0	+	+
Switzerland	0	+	+
Ireland	+	+	+
New Zealand	+	+	+

Heterogeneity within DAC-Donors

These results are related to the following 'aid quality' donor ratings:

- Birdsall et al. (2010): maximizing efficiency, transparency & learning, fostering institutions, reducing the burden on recipients.
- Ghosh and Kharas (2011): Transparency
- Knack et al. (2011): selectivity, alignment, harmonization, specialization
- Easterly and Williamson (2011): Aid agency practices
- CGD: Commitment to Development Index (CDI)

Heterogeneity within DAC-Donors

Highly consistent with donor-quality literature:

- Ireland, Netherlands, Norway
- France, Canada, Italy, Finland

Less clear but reconcilable:

- UK, Australia, Portugal, Sweden, New Zealand, Switzerland
- Japan, Luxembourg, Germany,
- Spain, Austria, Belgium

Difficult to reconcile:

- Denmark, USA

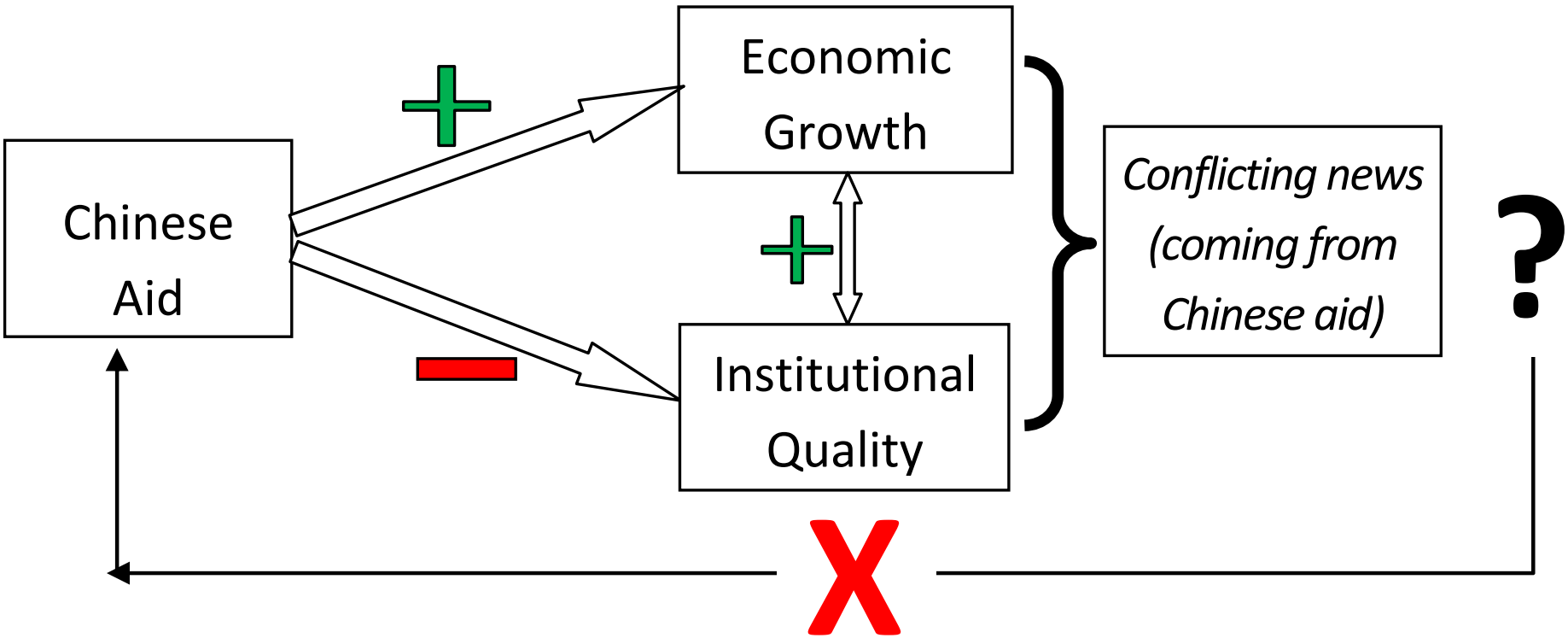
Chinese Aid

Data:

- From media reports, not from official sources
- Not NAT
- Ambiguity in what constitutes aid
- Short time span (2000-2012)
- Small sample size (10 recipients).

Source: Strange et al. (2013).

Chinese Aid


Chinese Aid
Economic Growth
Institutional Quality
Conflicting news (coming from Chinese aid)
?
X

5. Conclusion

1. Aggregate aid from 'traditional' donors has:
   - a robust non-positive growth effect.
   - a robust negative institutional quality effect.
2. Disaggregation reveals mixed results:
   - + Ireland, Netherlands, Norway, New Zealand, Switzerland, UK, USA
   - − France, Canada, Finland, Italy, Japan, Luxembourg, Germany
   - **0** Denmark, Spain and Austria
   - **?** Sweden, Australia, Portugal, Belgium
3. Chinese aid: positive growth effect, negative institutional effect. Similar to Australian, Swedish and Belgian aid.

A universal/outright praise or disapproval of aid is wrong!

Policy Implications

- Generally, smaller donors performed better than the bigger ones.
  $\Rightarrow$ Quality matters more than quantity

- Comparing performances of donors with mixed quality scores, **specialization** and **alignment** seem to matter more than other dimensions of quality.

Thank You!