

Welcome and Overview

*"Research and Communication on Foreign Aid"
(ReCom)*

*1st Results Meeting
27 January 2012*

By Finn Tarp
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What is ReCom?

- ✦ A **joint** research, documentation and communications initiative (initiated in early 2011)
- ✦ A **partnership** involving Danida, Sida and UNU-WIDER
- ✦ And a series of **research collaborators** in the North and South (ex. AERC, DIIS, Sweden), and the global UNU-WIDER network of researchers and policy makers
- ✦ Motivated by the desire to understand better four **key questions** about aid:

- ✦ What works?
- ✦ What could work?
- ✦ What is scalable?
- ✦ What is transferrable?

Five thematic focus areas

- ✦ Growth and employment
- ✦ Governance and fragility (including freedom, democracy and human rights)
- ✦ Gender equality
- ✦ Environment and climate
- ✦ Social sectors

Note: Poverty and associated human development issues will be addressed throughout

Immediate Goals/Promises

- ✦ Get the overall programme **set up** and underway
- ✦ Initiate a process leading to five authoritative **overview papers**
- ✦ Set the **aid-growth** record straight
- ✦ Bring out what we can say about aid's "average" impact on poverty and **other key outcome variables**
- ✦ Move the debate about aid, **private sector development** and "industrial policy" in Africa forward in a decisive manner

- ✦ Aid, **growth** and macroeconomic management
- ✦ Is it an **important** issue? Sure it is:
 - ✦ For example for employment
- ✦ At the same time: the **macro** literature seems elusive
 - ✦ Many **critical** voices
- ✦ And we talk of a micro-macro **paradox**?
- ✦ But is it true that the impact of aid **evaporates** as we move from the project (micro) level up to the macro economy – or can we say more on balance?

I have a prior

- ✦ Is aid always a **waste**? No – absolutely not
 - ✦ I have seen it working in many different contexts – not just some sort of idealistic belief
 - ✦ And what does macro economic (growth) theory suggest?
- ✦ Also please look first at the big **non-econometric** picture evidence
 - ◆ Many countries that used to get lots of aid have “**graduated**” (e.g. Korea, India, Vietnam)
 - ◆ Lots of **development going on** out there! Also in Africa

I have a second prior

- ✦ Is some aid **wasted**? Sure.
 - ✦ I have seen that happening as well! Aid can do **better**
- ✦ No **well-informed** individual believes that aid has been beneficial in all places at all times
- ✦ This does not, however, undermine the case for the **principles** underlying aid. Rather, it points to a need for redoubling our efforts to learn what works and could work – a central objective of ReCom

Why is it so difficult?

- ✦ Aside from **ideological** debates
- ✦ **Data**
- ✦ An key **econometric** challenge: attribution elusive
 - ✦ More growth is **associated** with less aid
 - ✦ **Causality** not so easy to establish – how to do it is far from simple?

Why is it so difficult? (cont.)

- ✦ A key point: what does lack of **statistical significance** mean?
- ✦ In this context, an insignificant parameter is **“absence of evidence”** NOT **“evidence of absence”**
- ✦ Just because we as economists have had a **hard time** at the macro level does not prove aid impact is not there
- ✦ And time has been passing and the **macro-evidence** now piling up – and, yes we can say quite a lot – based on ReCom research?

Today's programme

- ✦ What is the aggregate impact of aid on growth?: Channing Arndt
- ✦ Unpacking the impact of aid – how does aid work?: Sam Jones
- ✦ Insights from meta-analysis: Tseday Jemaneh Mekasha
- ✦ Time-series analysis of 36 African countries: Katarina Juselius
- ✦ Development interventions, export sectors and the poor: Henrik Nielsen, DIIS
- ✦ Macroeconomic management of aid – key challenges: Tony Addison

- ✦ Moderator: Prof. Holger Bernt Hansen

Key questions (see our teaser)

- ✦ Why are some countries poor?
- ✦ How much foreign aid is out there?
- ✦ Does aid support or harm economic growth and development?
- ✦ What do we know about aid, investment, human capital and poverty reduction?
- ✦ Does aid work in Africa?
- ✦ When does aid to export sectors lead to pro-poor growth?
- ✦ What are the challenges in the macroeconomic management of aid?

- ✦ Aid is diverse and complex
- ✦ No single individual can encompass it all
- ✦ Hence the purpose of ReCom: to bring it all together relying on a global network of researchers, policy makers and others

Look out for:



<http://www.wider.unu.edu/recom>



Aid and Growth

Channing Arndt

Q. Why are some countries poor?

A. Poor countries produce very little.

Q. Why do poor countries produce so little?

A. Poor countries employ rudimentary technology, possess limited stocks of human and physical capital, and have poorly functioning institutional structures.

Q. Why do poor countries lack the wherewithal to produce?

A. Poor countries have failed to accumulate.

Growth is a long run and fragile process of accumulation.

Recent Cross Country Literature

- Rajan and Subramanian (2008) [RS08] published a cross country analysis over multiple time periods.
- Conclude: No detectable impact of aid on growth.
- Micro-macro paradox revived:
 - Positive project evaluations
 - Positive impact evaluations
 - Positive sector evaluations
 - Yet, no detectable impact on growth

Positive Contributions of RS08

- Establish a clear prior using modern growth theory.
 - If aid is 1% of GDP, then the per capita growth rate should increase by about .1 percentage points.
- Take a long run perspective.
 - Approach and data.
- Set the standard for addressing the “endogeneity” issue.
 - Faster growing countries eventually receive less aid.

What have we done?

- Start from RS08
 - Same data
 - Same approach
 - Reproduce their results exactly
- Make three sets of improvements:
 - (1) Develop a treatment/control *estimator*
 - (2) Improve the *specification*
 - (3) Strengthen the *instrument*

Results for 1970-2000

		Estimator	
Instrument	Specification	RS08	AJT
RS08	RS08	0.10	.15*
	AJT	0.10	.10*
AJT	RS08	.22*	.21*
	AJT	.25**	.13***

Note: *, **, and *** indicate significantly different from zero for 90%, 95% and 99% confidence intervals respectively.

Conclusions

- On average and over time, aid contributes positively to growth at levels predicted by growth theory.
- There is no micro-macro paradox.

Arndt, Channing, E. Samuel Jones and Finn Tarp. "Aid and Growth: Have We Come Full Circle?" *Journal of Globalization and Development*. 1(2011): Article 5.



Unpacking how aid works

Sam Jones

Motivation

- Majority of past studies ask whether aid increases growth?
 - Aggregate focus on a single outcome
- BUT many possible paths linking aid to growth
 - Which ones matter?
- We want to open the ‘black box’
 - Identify key drivers
 - Non-growth outcomes important *per se*
 - *E.g., poverty reduction, human capital etc. (MDGs).*

What have we done?

1. Quantify causal impact of aid on a range of final outcomes
 - Replicate aid-growth result with extended dataset (1970-2007)
2. Quantify causal impact of aid on a range of intermediate outcomes
 - Example: aid → education
3. Unpack aggregate aid effectiveness [1] into key channels via intermediate variables [2]
 - Example: aid → health → growth

Our approach

- Pay careful attention to causality
 - Address endogeneity of aid
 - Address endogeneity of intermediate outcomes
- Inspiration taken from latest aid-growth literature (AJT10)
 - Focus on long-period cross section (1970-2007)
 - Same controls & sample follow to enhance comparability
 - Aid measured at an aggregate level
- Systems estimators used for structural model

Results: Impact of aid

Outcome	Baseline	+\$25 p.c./year
GDP per capita growth rate	1.7	2.2
Poverty headcount at \$1.25 / day	21.7	18.2
Agriculture (% GDP)	20.7	13.2
Investment (% GDP)	17.2	18.7
Av. years total schooling, 15+	4.9	5.3
Life expectancy at birth (years)	61.0	62.3

Note: baseline is a the observed median of the outcome variables

Results: transmission channels

- Aid → Investment → Growth (75%)
- Aid → Education ≠ Growth
- Aid → Health → Growth (25%)

Channel (Y)	Aid → Y	Y → Growth	Aid → Growth
Investment	0.41	0.52	0.21
Education	0.27	-0.07	-0.02
Health	0.11	0.56	0.06
Overall		1.01	0.26

Conclusions

- Highly consistent and coherent pattern of results across meso- and macro-outcomes
- Cumulative (long-run) impact of aid, NO quick wins
- Internal rate of return from aid (to growth) = 16%
- Link from aid to physical investment and human capital as building-blocks for growth
- Ambiguous link from education to growth is not surprising
 - but we find a positive impact of aid on education

Aid and Growth: What META Analysis Reveals

*"Research and Communication on Foreign Aid"
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Tseday Mekasha
and
Finn Tarp

1. Background: About Meta-Analysis



- Is commonly applied in medical science research ;

◆ Main Idea:

- To quantitatively combine empirical results from a range of independent studies & get a single effect estimate;
- In doing so, one can either allow for or ignore the heterogeneity (differences) among studies...

1. Background- About Meta-Analysis Contd...



❑ Ignoring heterogeneity

- There is only one single true effect (of aid on growth) that all the papers target to estimate
- Any Variation = only due to chance/sampling error

❑ Allowing for heterogeneity

- Each paper targets to estimate a different true effect
- Variation = chance + true variation in effect size

2. Motivation and Objective



- Over the last decades, the empirical evidence on aid and growth has accumulated;
- But results are mixed: “it works”; “it doesn’t”; “works but conditional on ...”; “works but the effect is *modest*”
- In recent years, positive, yet modest, and significant results are emerging... but the debate is still on;
- And at times there is also strong pessimism...

2. Motivation and Objective Continued....



- ✦ Given this, it is interesting to ask:
 - “what the accumulated empirical evidence, **on average**, has to say about the effect of aid on growth”
 - We have addressed this question using “**meta-analysis**”

2. Motivation and Objective Continued....



- ◆ Particularly, we address two questions that are standard to any Meta-Analysis,
 1. Whether the overall empirical effect (of aid on growth) is different from zero when one combines the existing empirical evidence;
 2. If so, is the effect genuine or an artefact of publication selection (bias)- "*File Drawer Problem*"

3. Data and Methodology



- Rely on a database of 68 aid-growth empirical studies identified by Doucouliagos and Paldam (2008) henceforth DP08...
- DP08, using a meta-analysis of the 68 aid-growth studies reach at a pessimistic conclusion...
- We thus make a careful assessment of their analysis and fully replicate their results;

3. Data and Methodology continued...



- We identify three major concerns with DP08 analysis
 1. Problems with econometric model choice
 2. Inappropriate statistical choice....
 3. Errors in data entry and coding

The conclusions of a meta analysis are only as valid as the methods used to code and analyze the data

3. Data and Methodology Continued....



- ◆ Follow more appropriate methods:
 - That better reflect the econometric, statistical and data challenges at hand;
 - Also in line with best practices and guidelines in meta-analysis methodology;
 - What did we find?

4. Results



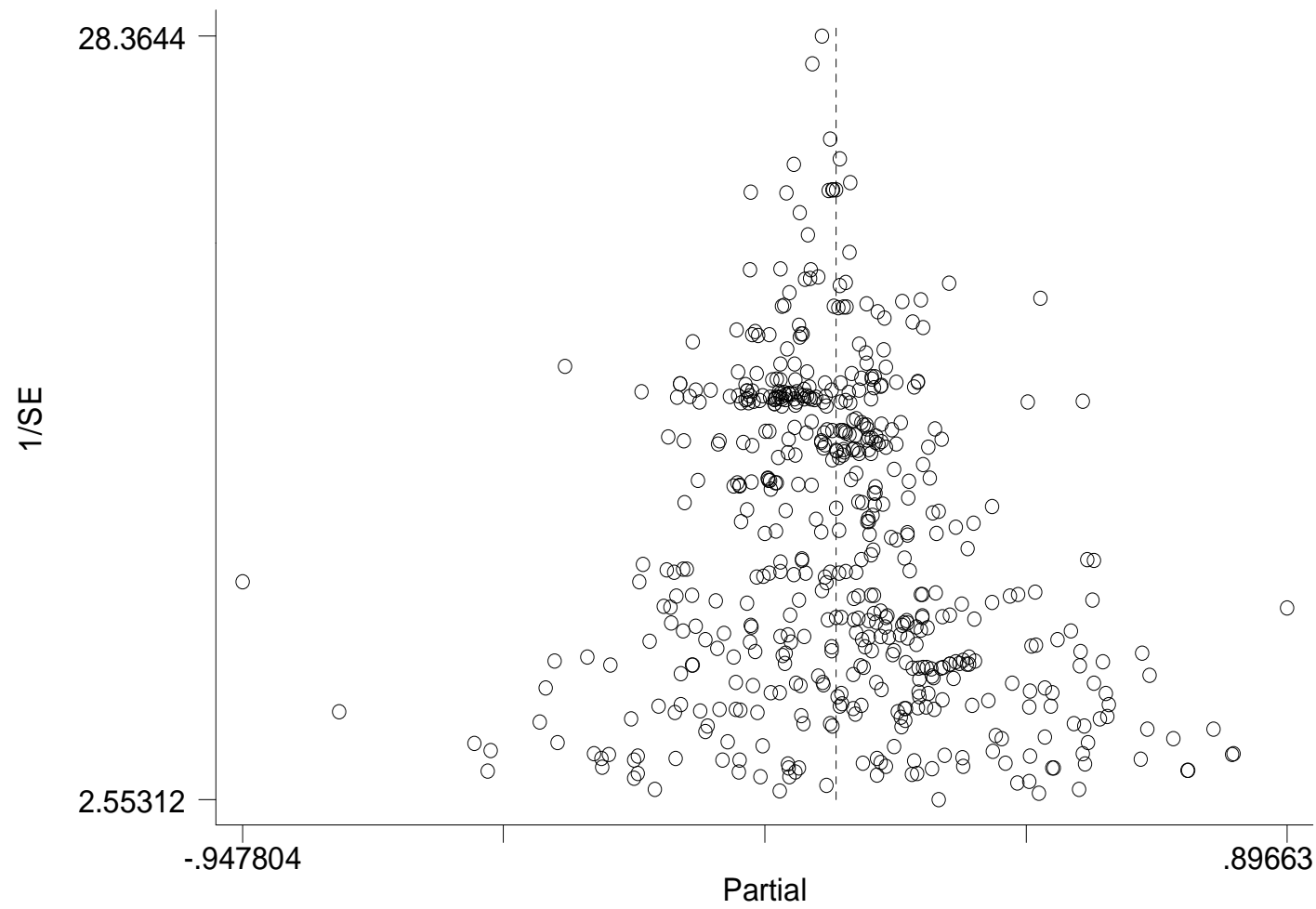
- The assumption of heterogeneity in the true effect of aid on growth across studies is confirmed...
 - ✓ statistical tests + graphical tools
- After controlling for heterogeneity, weighted average effect of aid on growth is found to be positive & statistically significant
- Our results are in stark contrast to DP08...

4. Results continued...



- Is the effect genuine or an artefact of publication bias?
- Visual inspection of a simple graph called Funnel Plot-
plots the measure of study precision against effect size
- **Main Idea:**
- No publication bias = an inverted funnel shape

Funnel Plot of the Aid-Growth Literature



4. Results continued...



- The absence of publication bias is also confirmed by multivariate regression based tests in meta analysis;
- Moreover, our multivariate meta regression analysis also confirm the presence of an authentic positive effect of aid on growth;
- The conclusion of DP08 is exclusively based on a bivariate regression (fails to control for study characteristics);

5. Conclusion



- The existing aid-growth literature, on average, shows a positive & statistically significant effect;
- This effect appears to be genuine – and not an artefact of publication selection;
- But, this is not the whole story about aid effectiveness-
 - Aid has multifaceted objectives; growth being only one;
 - The need to improve the design and implementation of foreign aid programmes.



The long-run impact of foreign aid in 36 African countries

Katarina Juselius

Niels Framroze Møller

Finn Tarp

How does aid work? Evidence from time-series data

- Many **different conclusions** based on the use of basically the same publicly available data bases
- Such differences have to be due to the choice of econometric methods
 - Exogeneity/endogeneity assumptions
 - Data transformations
 - Single equation contra a system approach

The purpose of the study

- To offer an **econometrically coherent and transparent picture** of how aid has worked in Sub Saharan Africa, one of the poorest areas of the world
- To **assess previous results in the literature** within our econometrically broad framework
- To address the **widespread misuse of 'statistical insignificance'** as an argument for aid ineffectiveness

The econometric approach

The Cointegrated VAR model

- A **system approach**
- The empirical model specification is **a broad statistical characterization of the data** and is sequentially reduced by simplification testing
- Provides **broad confidence intervals** within which empirically relevant claims should fall

Summary results

	Aid has a long-run effect on the macroeconomy	Aid does not have a long-run effect on the macroeconomy
The macroeconomy affects aid	Endogeneity between aid and the macrovariables 20 countries	Aid are adjusting to the macroeconomy 7 countries
The macroeconomy does not affect aid	Exogeneity of aid 7 countries	Aid is unrelated to the macroeconomy 2 countries

Major conclusions

- Aid has a **positive long-run effect** on key macrovariables (GDP, investment, consumption) for the vast majority of countries
- Only in **3 out of 36** countries is there a negative effect of aid on GDP or investment
- The transmission of aid on the macroeconomy has been quite heterogeneous. Hence **a country-specific approach is vital**

Some econometric conclusions

It seems critical to

- distinguish between the effect of aid in the **short run** and the **long run**
- use a **system** approach
- account for **changes in political government, wars, conditionalities, major reforms** as well as droughts and floods, etc.

Macro-Economic Management of Aid – Key Challenges

Tony Addison

UNU-WIDER

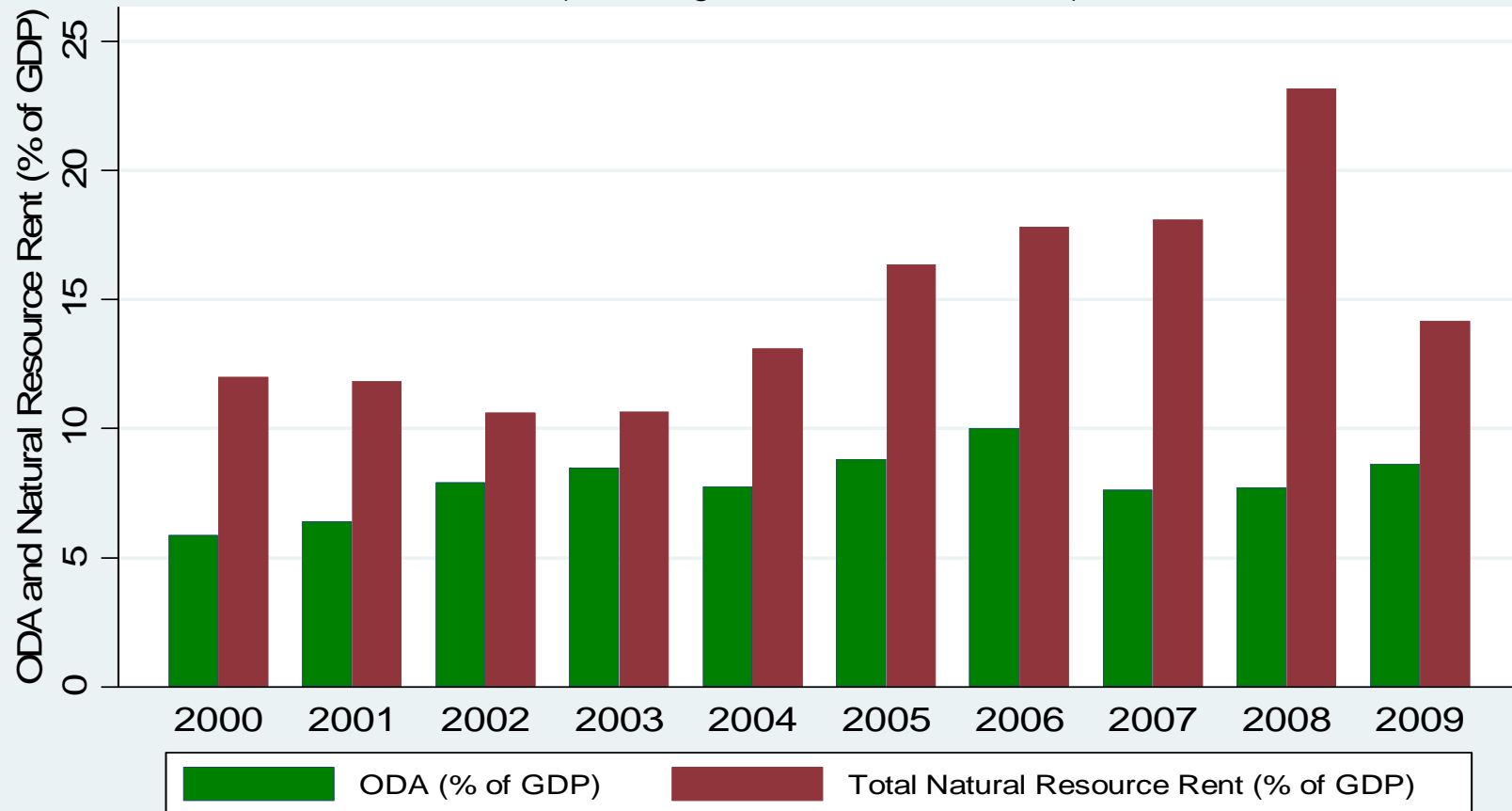
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Why is This Important?

- ✦ Macro-Economic Management – taxing & spending (fiscal policy), public debt, exchange rate & monetary policy
- ✦ Growth & employment benefits of aid depend on the macro-economic framework within which it is used
- ✦ Scaling-up of aid – depends on a good macro framework
- ✦ Criticism of aid – alleges that aid distorts structure of the economy, leading to less growth & employment
- ✦ Capital flows – understanding aid-macro helps understand impact of other flows (e.g. natural resource revenues)
- ✦ Bigger macro-picture for many aid-recipients is changing – result of better export-earnings, more domestic revenues & more FDI

ODA v Natural Resource Rent

ODA and Natural Resource Rents in Sub Saharan Africa
(Percentage of GDP from 2000-2009)



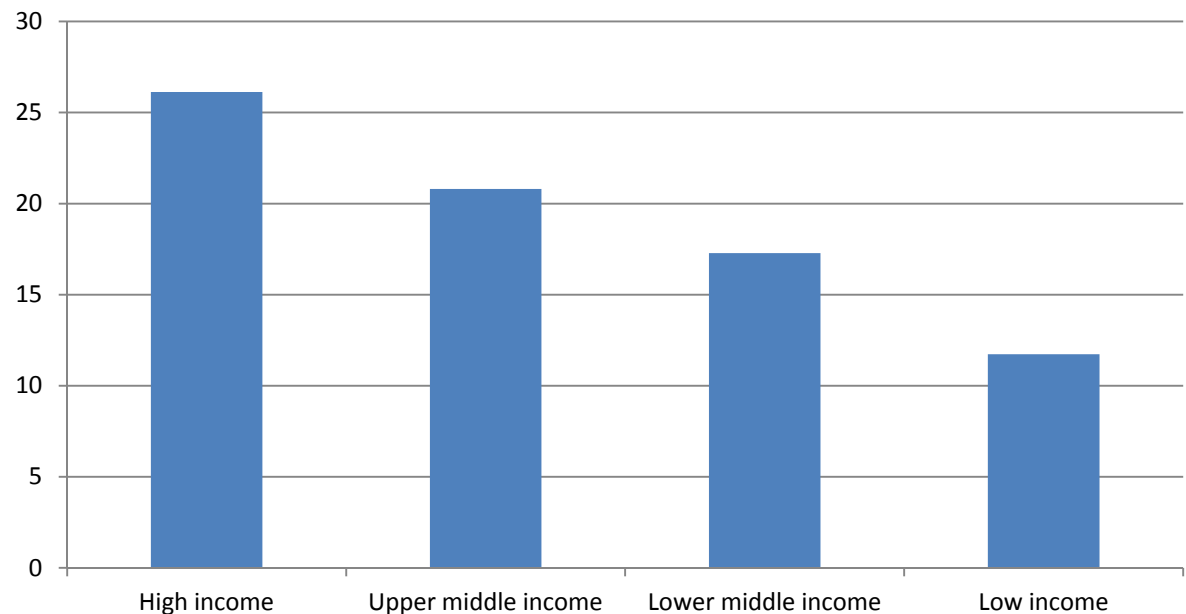
Tax Revenues

Tax revenues as % of GDP have grown modestly among low income countries, to about 11% in the end of 2000s

Constraints associated with:

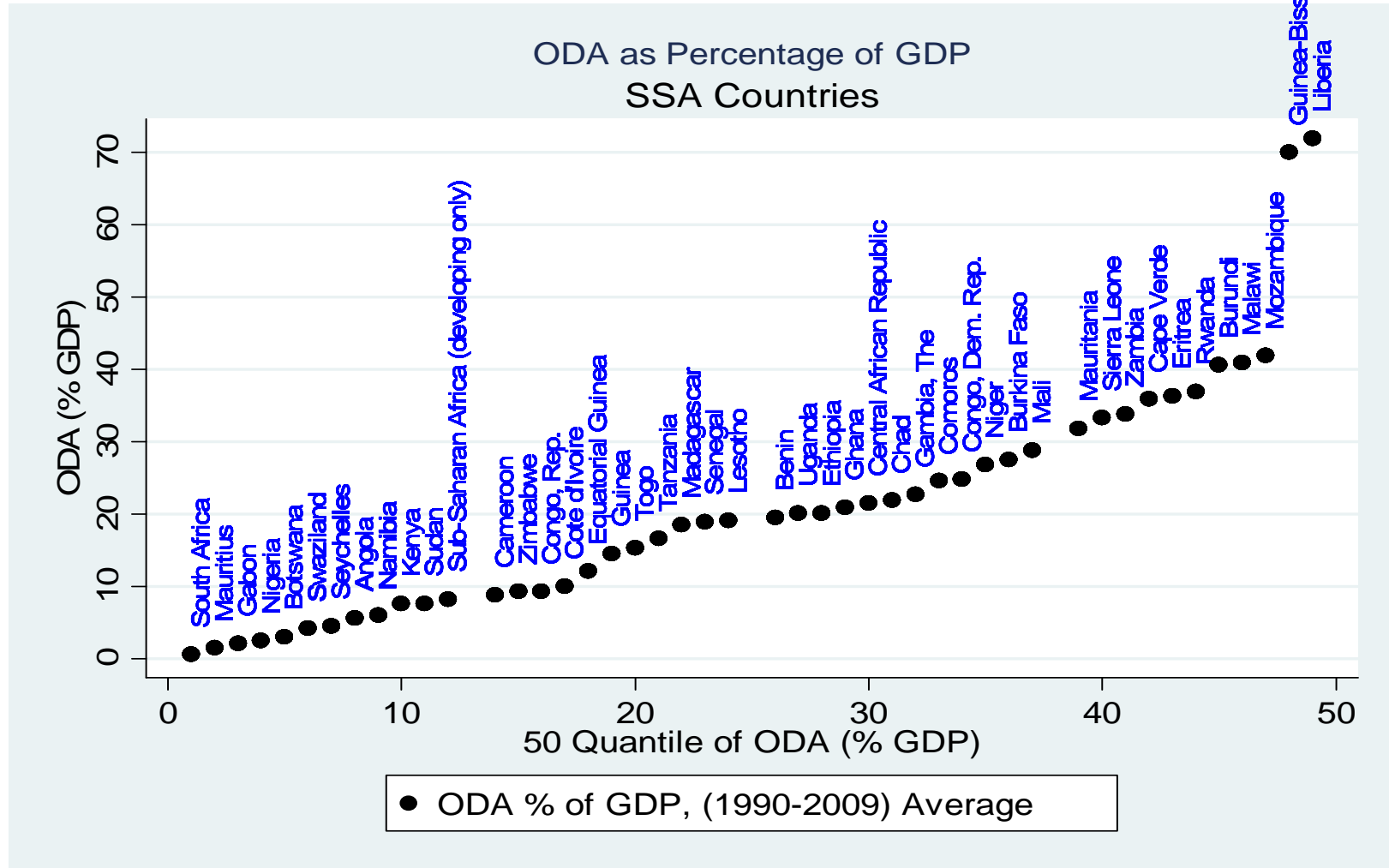
- ✦ **The structure of the economy** – the rural subsistence economy and the informal sector are difficult to tax
- ✦ **Administrative capacity** of revenue authorities
- ✦ **Political economy factors**
weak governance

**Revenues as % of GDP
(excluding grants)**



Progress in Macro-Management

- ✦ Many countries are now less reliant on aid – their financing is more diverse (FDI, bonds etc)
- ✦ Public spending frameworks improved & some success in generating more revenue (stronger growth has also raised revenue base)
- ✦ ministries of finance & central banks put an effective macro-economic framework around aid & other capital flows (partly due to donor technical assistance)
- ✦ Uganda now less aid dependent (aid is 5% of GDP down from peak of 19%; oil will add 30% to public revenue)
- ✦ Ghana has gone from low-income to middle-income status: FDI now equals aid (& its bonds are attractive – post HIPC)



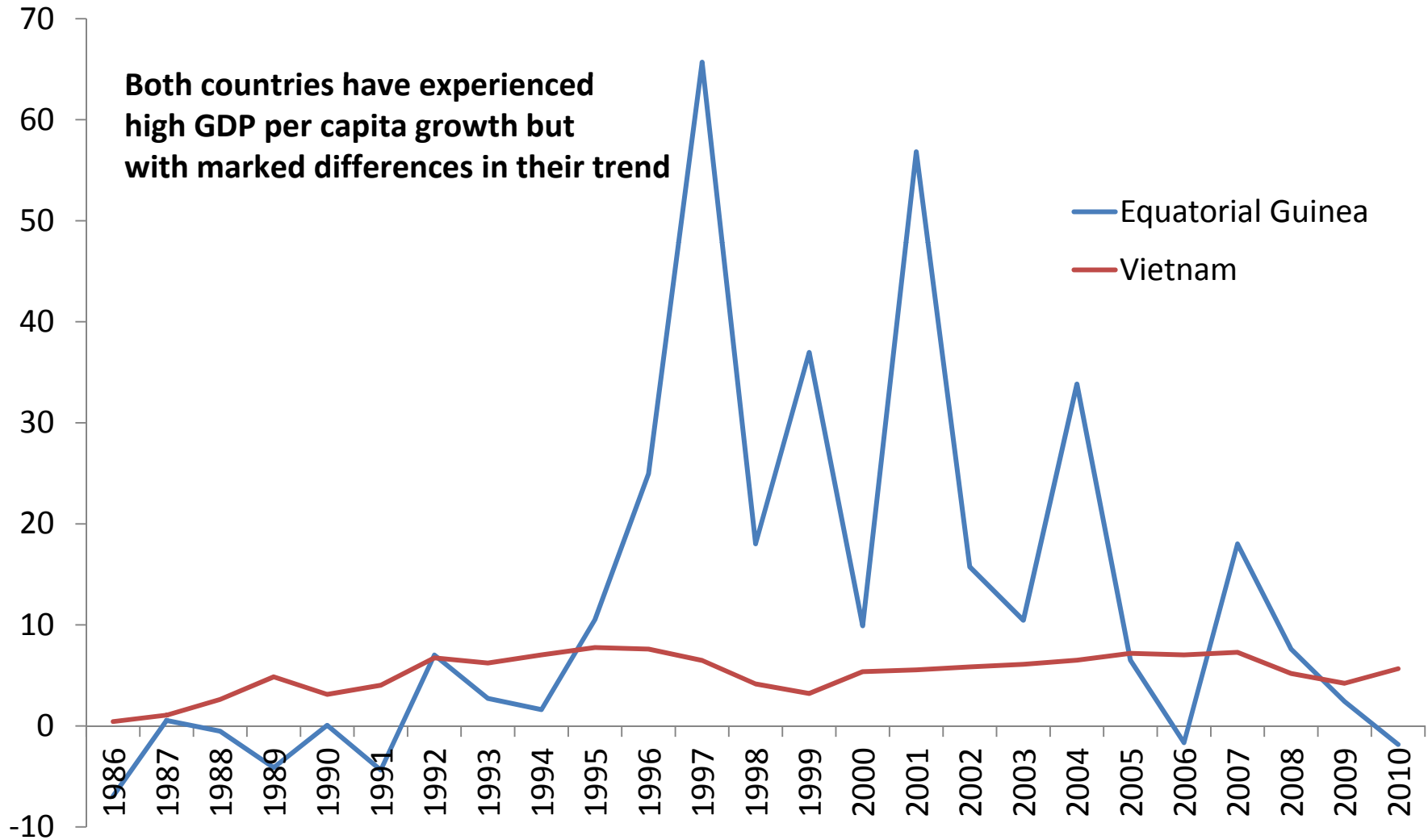
Challenges

- ✦ In Ghana et al. donors need to help countries get more out of their resource boom & associated FDI to achieve faster structural transformation & poverty reduction (greater use of national plans – Botswana success)
- ✦ More focus on technical assistance + more dialogue with civil society, parliamentarians on use of resource revenues (e.g. for social protection) + retain some budget support (welcomed by many national technocrats to maintain effective budgetary management & head of ill-thought out ‘political projects’)
- ✦ Biggest challenge is fragile states – the small & poor (Malawi, Guinea Bissau, Liberia) and/or conflict affected (DRC etc.)
- ✦ Still, Bangladesh shows what can be done in very unpromising conditions

Real Economy & Aid

- ✦ Aid is a resource inflow (so too are: remittances & revenues from natural resources such as oil, copper etc)
- ✦ Such inflows increase the **level of demand** in the economy (by how much depends on the policy framework)
- ✦ Rising demand leads to a **supply response** – from domestic producers as well as imports
- ✦ Some domestic producers are able to respond by raising their output (e.g. **large-scale farmer** with capital), others find it difficult (e.g. **smallholder farmers**, especially poor **women**)
- ✦ Infrastructure, remoteness, weak institutions, conflict – all hinder the response of the **real economy** to rising demand
- ✦ Growth can be high but is often volatile

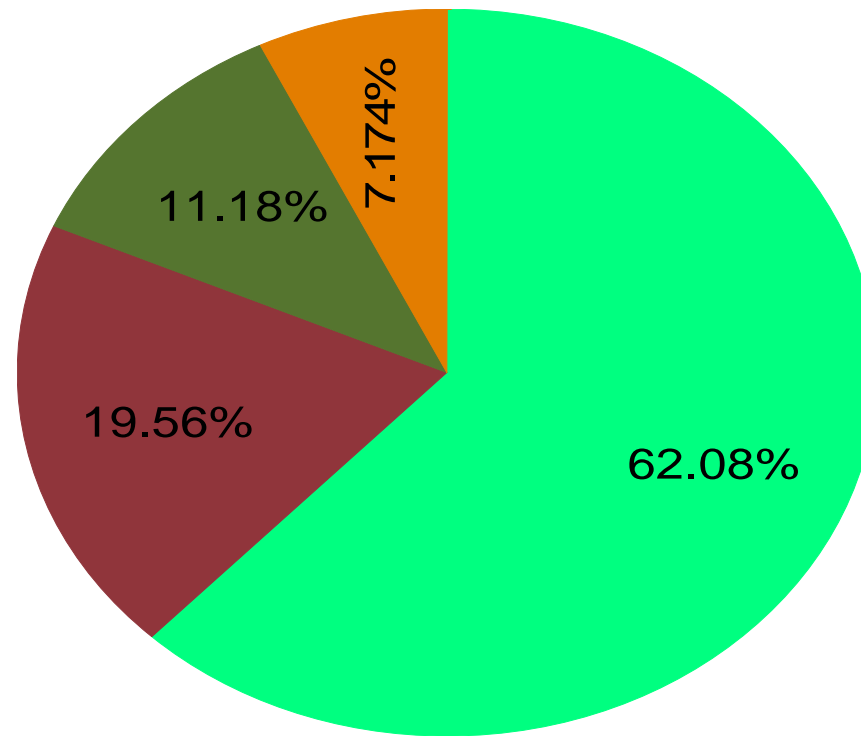
Steady growth, as relevant as a high GDP rate



Aid & the Supply Side

- ✦ Aid works to improve the economy's supply-side – infrastructure investment, institutional reform, support to post-conflict reconstruction, human capital formation
- ✦ Some impacts quick (rebuilding a bridge after a war)
- ✦ Some impacts not felt for many years (rebuilding primary education eventually yields a more productive workforce)
- ✦ Some impacts easier to achieve (e.g. easier to build bridges than build better institutions)
- ✦ Improvement is difficult when conflict persists
- ✦ Aid at least tries to achieve these impacts – oil & other natural resource revenues often do not - e.g. Ghana (aid) v Equatorial Guinea (oil)

ODA Disbursement in SSA by Sector (Share of Total Sector Allocable)
(2002-2009)



Social Infrastructure & Services

Production Sectors



Economic Infrastructure

Multi Sectors

Managing Aid's Impact

- ✦ Worry that inflow (aid, oil, remittances) will cause economy to lose international competitiveness, leading to lower real growth (**Dutch Disease** & 'real' exchange-rate appreciation)
- ✦ Big concern with oil – e.g. Nigeria (agriculture contracted with oil discoveries of the 1970s)
- ✦ Key issue: investing the inflow (aid, oil etc) in improving the economy's supply side to offset any loss of real competitiveness from exchange-rate appreciation
- ✦ Invest in sectors with biggest spillovers for growth (both 'tradables' & 'non-tradables') & diversification into high value-added sectors (especially those linked to poverty reduction)

Trend in SSA Export Performance



Conclusions

- ✦ Macro-economic management improved since crises of the 80s & 90s
- ✦ Growth is raising public revenues – need to ensure these are well-invested
- ✦ Success & graduation from aid but many ‘hard cases’ (fragile states remain) which have least capacity to manage resource inflows well (‘peace building is good economics’)
- ✦ Small & poor countries still remain vulnerable to shocks from global economy



Conclusion

- ✦ So, just a few key messages – many more
- ✦ Visit www.wider.unu.edu for more **ReCom**
- ✦ Thank you!

