Is Aid Allocation Consistent with Global Poverty Reduction? A Cross-Donor Comparison

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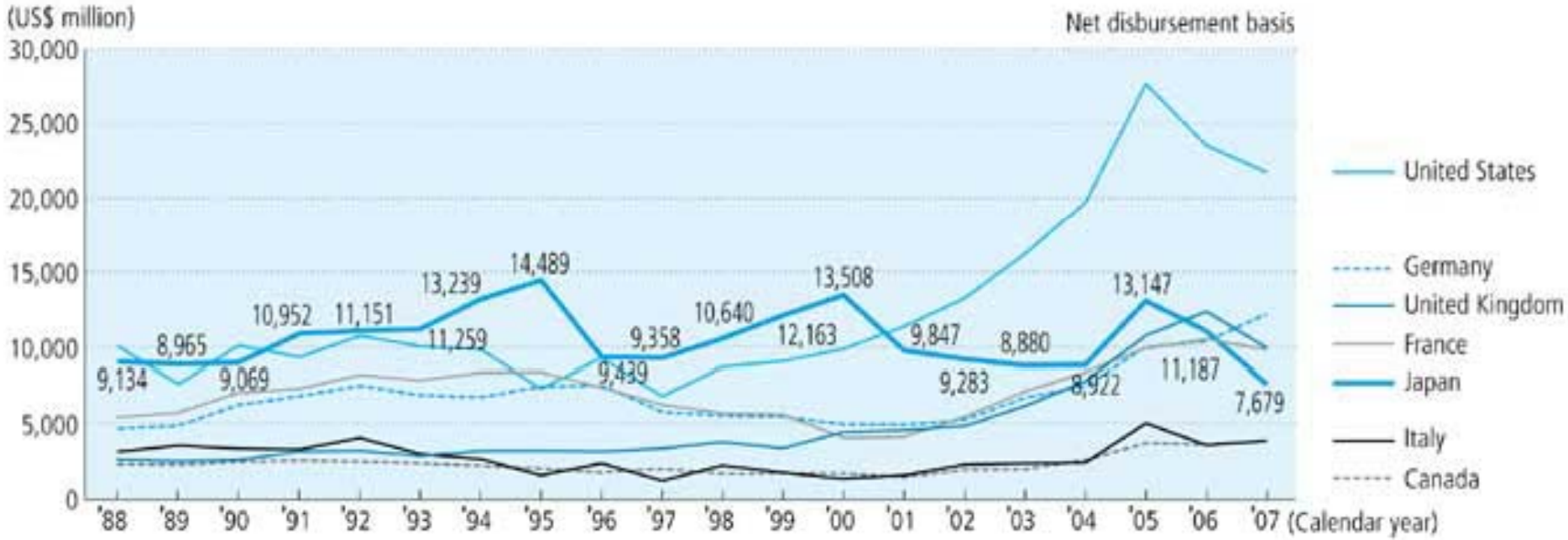
Background

- The MDGs, particularly Target 1, as the agreed criteria of global poverty reduction by the year 2015.
- Tsunami of aid studies:
  - Renewed empirical studies on aid effectiveness (BD, 2000; Hansen and Tarp, 2000, 2001; ELR, 2004; Roodman, 2004, and Rajan and Subramanian, 2008).
  - New theories of foreign aid (Azam and Laffont, 2003; Svensson, 2005; Torsvik, 2005; Knack and Rhaman, 2006; Hagen, 2006)
  - Donor's aid allocation (Alesina and Dollar, 2000, Lahiri and Raimondos-Moller, 2000).
  - Other issues such as proliferation, coordination, and GBS.

ODA increased since the start of MDG but only marginally; The recent decrease is a concern.

(Source: Japanese M.of F.A., *ODA White Paper 2008*)

Chart III-5. Trends in the ODA of Major DAC Countries (Net Disbursement)



Source: DAC Press Release 2008; *Development Co-operation Report 2007*

Notes: (1) Excluding assistance to Eastern Europe and graduated countries.
(2) US figures for 1990-1992 exclude military debt relief.
(3) Provisional value for 2007, except Japan.

The Purpose of Our Study

- Investigate the gap between the first goal of MDGs and the actual ODA grant allocation in the late 1990s and the early-2000s by major donors and international institutions.
- Construct a theory of the global poverty targeting, extending Besley and Kanbur (1988) and Sawada (1995).
- With cross country data, test whether grant allocation of each donor and int'l institution is consistent with the global poverty targeting criteria.

A Preview of the Results

- Both in the late-1990s and the early-2000s, grant allocations from Canada, France, Japan, the Netherlands, and UK were consistent with the necessary conditions of optimal poverty targeting. Other donors need to adjust their aid allocation in order to contribute MDG 1.
- A recent improvement in coordination among major donors in reducing global poverty.
- As for multilateral donors, allocation patterns were consistent with the theory of poverty targeting (except IBRD and UNHCR).
- A robust and negative population scale effect for aid allocations, suggesting that strategic motives may also exist.

Presentation Plan

1. Introduction
2. A sketch of the theoretical model and econometric specification
3. Data
4. Empirical results
5. Concluding remarks

2. A sketch of the theoretical model and econometric specification

- ***P(alpha)*: The global FGT poverty measure, which should be the objective to be minimized under the MDG Target 1**
  - ***P(alpha)* is the population weighted sum of individual LDCs, using the common poverty line *z* (one 1985 PPP dollar per person per day).**
  - **Donor *d* gives grant aid to recipient *r*, whose amount is m_{dr} (in per capita of country *r*).**
  - **Personal income of the poor in the recipient country *r* is incremented by x_r through aid.**
  - **There is an agency issue between the donor and the recipient: The donor cannot control x_r directly, but only affects x_r through m_{dr} and other political relations.**

Three cases of donor's optimal aid allocation

- ***Case 1: Globally optimal aid allocation***
  - **Donors collectively allocate aid to minimize the global FGT poverty measure.**
  - **F.O.C.=> Marginal impact of aid on reducing poverty is totally equalized.**
- ***Case 2: Unilateral aid allocation w/o strategic purpose***
  - **Failure of international coordination.**
  - **F.O.C.=> Marginal impact of aid on reducing poverty is equalized only across recipients.**
- ***Case 3: Unilateral aid allocation w/ strategic purpose***
  - **Donors' objective is the mixture of global poverty reduction and strategic consideration.**
  - **F.O.C.=> Shifters of strategic impacts matter.**

Empirical strategy

- ***A log-linearized estimation equation of the F.O.C.***
  - Dep.var.= $\ln(1+m_{dr})$
  - Expln.var.= $\ln(PovertyGap_r)$, X_r, X_{dr}.
  - Key parameter= b_{1d} on $\ln(PovertyGap_r)$, response elasticity of donor *d*'s aid to recipient *r*'s poverty
- **Statistical tests**
  - $b_{1d} = 0$ vs. $b_{1d} > 0$ (Whether donor *d*'s allocation is consistent with global poverty reduction)
  - If $b_{1d} > 0$, $b_{1d} = b_1$ for all *d* (Case 1 of globally efficient allocation supported?)
  - Strategic variables in X_r, X_{dr} significant? (Case 1 or 2 vs. Case 3), focusing on recipient's population size, colonial history, and UN voting patterns.

3. Data

3.1 Dependent variable

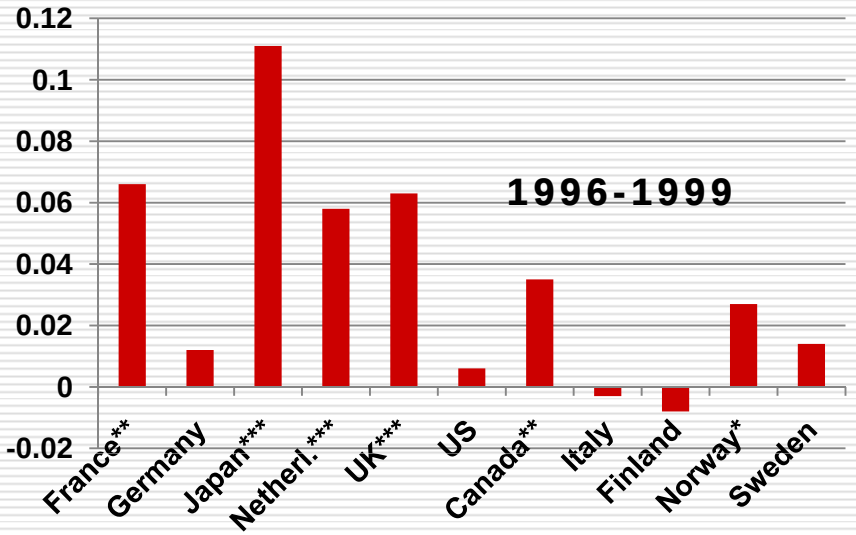
- logged values of per capita gross grant (plus one), i.e., total ODA/OA grant from OECD aid data, averaged over 1996-1999 and 2001-2004.
- 11 donor countries (France, Germany, Japan, the Netherlands, U.K., U.S.A., Canada, Italy, Finland, Norway, and Sweden)
- Per capita gross disbursements of 6 international institutions (IBRD, IDA, UNDP, UNFPA, UNHCR, and UNICEF)
- 98 aid-recipient countries (Table 1), covering 92.9 percent of the total population in developing countries, 1999
- Type I Tobit model to control for zero values and SUR to test cross-equation restrictions.

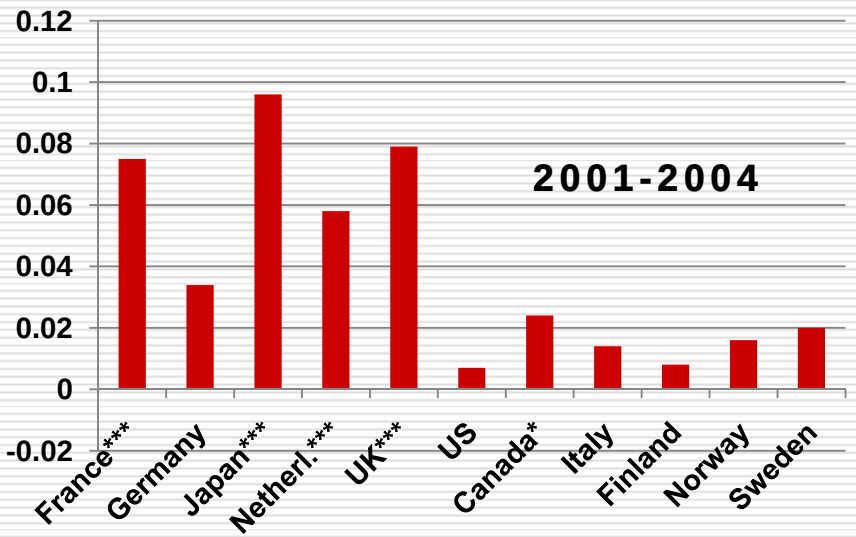
3.2 Explanatory variables in or around 1995 and 2000

- **Poverty gap index** with the one dollar poverty line (**PovcalNet** data of World Bank).
- **Freedom House** (2000)'s **political rights index** in 1995 and 2000
- **KKZ**'s **government effectiveness index** in 1996 and 2000.
- Log of total **population** of a recipient country, which may capture the one-country one-vote principle of UN (WDI, World Bank).
- Number of **years as a colony** of the donor and as the number of years as a colony of any country other than the donor since 1900 (**CIA data**)
- The **UN-Voting Similarity** variable of **Gartzke et al.** (1999) and **Voeten** (2006).

4. Empirical Results.

Parameter b_{1d} (response of aid to poverty):





- Other controls = X_r (Political Rights, Government Effectiveness, Population)
- $b_{1d}>0$ is required for global poverty reduction: France, Japan, Netherlands, UK, and Canada satisfies this in both periods.
- $b_{1d} = b_1$ for all d?

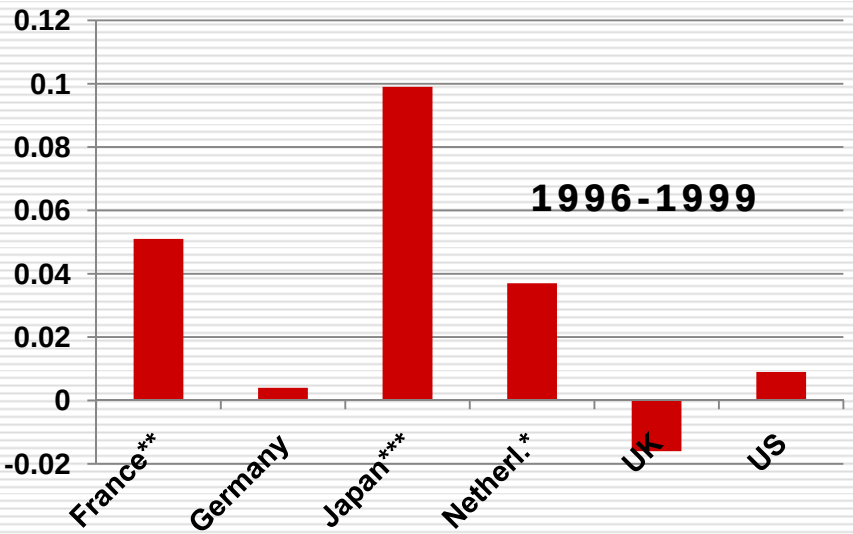
  1996-99: p-value = 0.000***

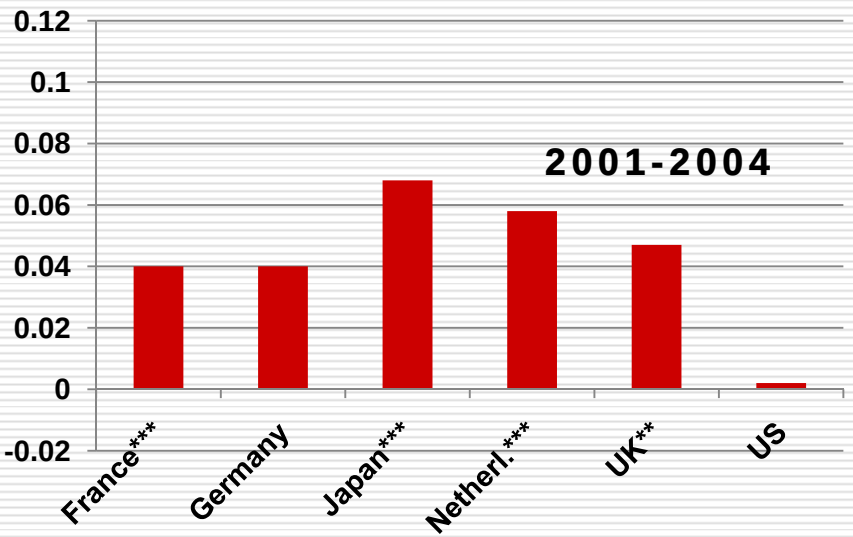
  2001-2004: p-value = 0.057*

  Weak improvement in global coordination.

Parameter b_{1d} (response of aid to poverty):

Case of 6 largest donors using a model with more political controls





- Other controls = X_r and X_{dr} (UN Voting similarity, Years of this donor's colony, Years of other donor's colony)
- $b_{1d}>0$ satisfied for France, Japan, and Netherlands in both periods
- $b_{1d} = b_1$ for all d?

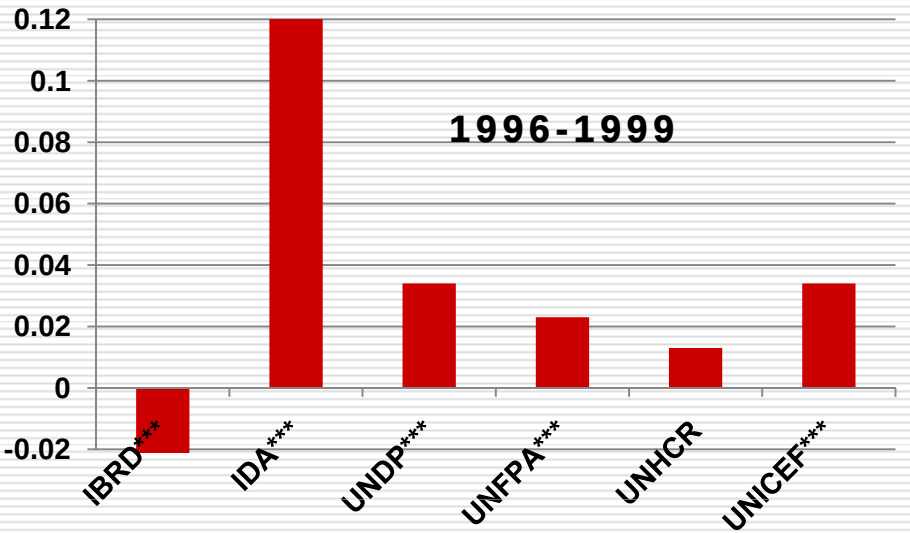
  1996-99: p-value = 0.003***

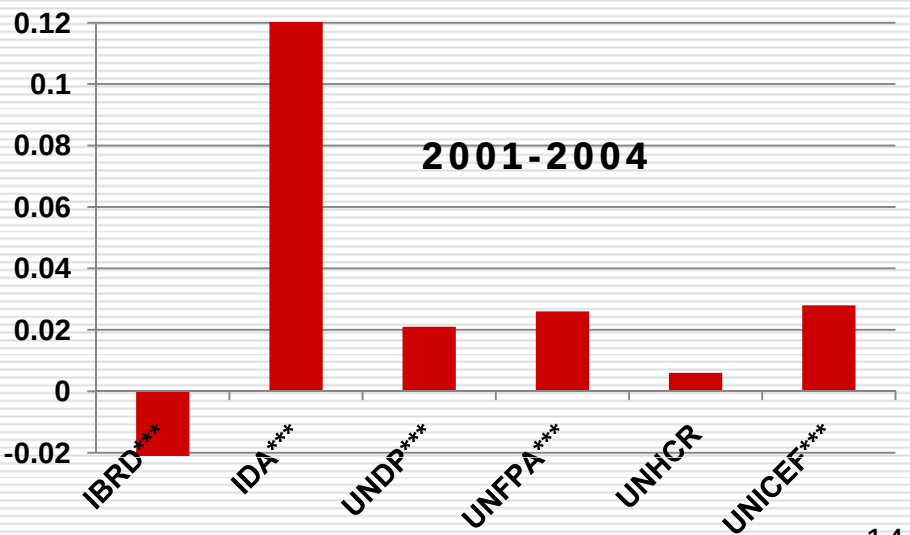
  2001-2004: p-value = 0.400 (n.s.)

  Strong improvement in global coordination

Parameter b_{1d} (response of aid to poverty):
6 international financial institutions

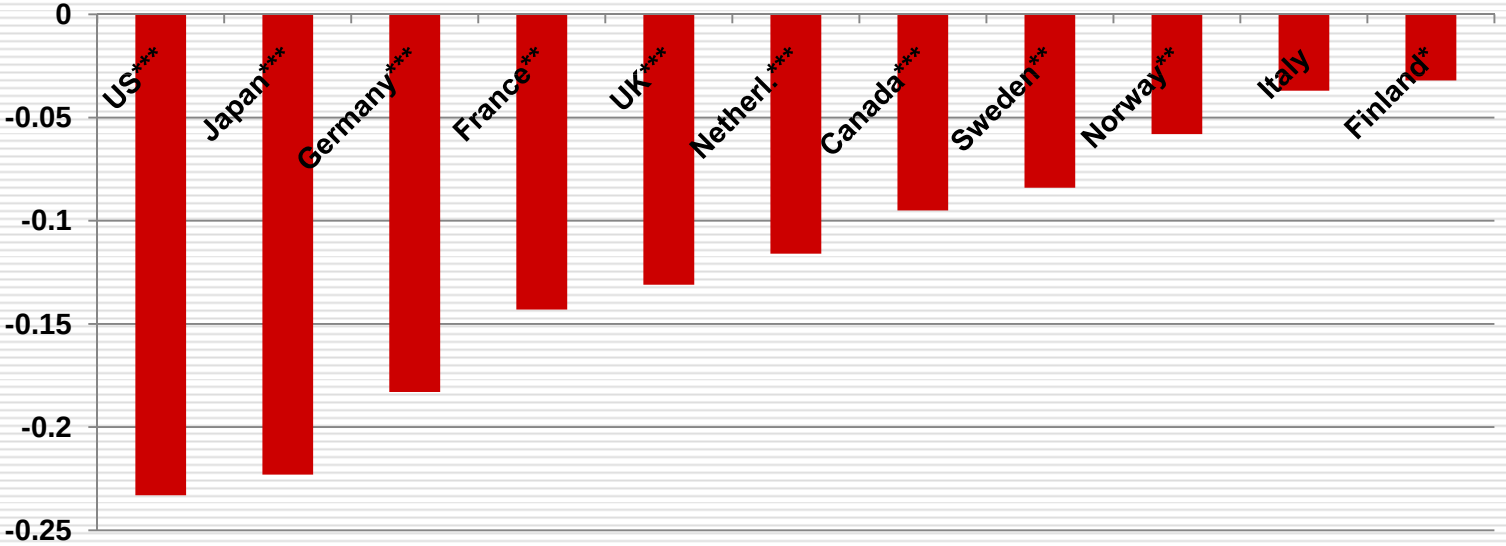
- Other controls = X_r.
- IBRD and IDA bars are truncated. IBRD: -0.209 and -0.170; IDA: 0.243 and 0.347.
- b_{1d}>0 satisfied for IDA, UNDP, UNFPA, and UNICEF in both periods.
- IBRD and UNHCR allocate aid based on different motivation.



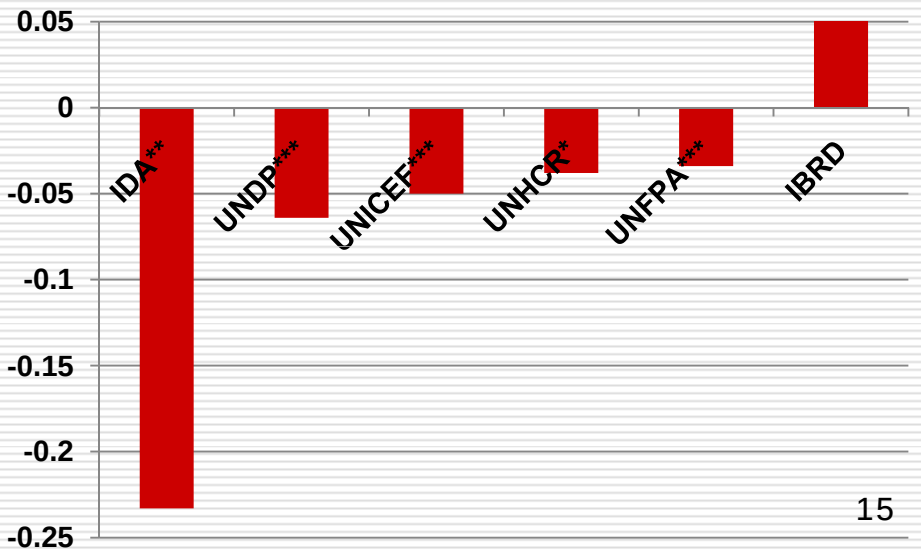


Does strategic motive matters?

Response of aid to population size of the recipient



- 2001-04 period with X_r as control.
- *Small country bias* found except for Italy and IBRD
- Strategic motive of individual donors suggested (1 country 1 vote in UN)



Further evidence on the strategic motive: Colonial past and political alliance

Empirical model: 6 largest donors with poverty gap, X_r, and X_{dr} (UN Voting similarity, Years of this donor's colony, Years of other donor's colony) as explanatory variables.

- **UN Voting similarity: ++ for France in 1996-99 and Japan in 2001-04 (-- for Netherlands in 1996-99)**
- **Years of this donor's colony: ++ for France, Japan, and UK both in 1996-99 and 2001-04**

Little effect on aid allocation of political rights/governance of recipient countries

- **Political rights**:
  - No donor's aid allocation was found responsive.
  - Among international organizations, IDA, UNDP, UNFPA, UNICEF allocated more aid to countries with better political rights in 2001-04, while IBRD did the opposite.
- **Government effectiveness**:
  - + for Japan in 1996-99, - for UK in 1996-99 and US in 2001-04 but not robust.
  - No international organization was found responsive.

5. Concluding Remarks

- $b_{1d} > 0$ for Canada, France, Japan, the Netherlands, the UK, and multilateral donors except IBRD and UNHCR, consistent w/ global poverty targeting.
- With 1996-99 data, b_{1d} is different among d (Case 2 or 3 supported); but for 2001-2004, $b_{1d} = b_1$ for all d across the 6 major donors, suggesting that the allocation pattern is coming closer to Case 1 w/ globally efficient aid allocation.
- Robust negative population scale effects, suggesting the effect of the one-country one-vote principle in UN; and significant colonial coefficients. Suggesting Case 3 (strategic motive).
- Almost no donor nor multilateral institution was sensitive to political rights or governance of recipient countries, consistent with the finding by Alesina and Weder (2002).