European University Institute

MAX WEBER PROGRAMME FOR POSTDOCTORAL STUDIES

MEDAM

Mercator Dialogue on Asylum and Migration

UN-WIDER Conference

ACCRA, 05-06 October 2017

The Impact of Foreign Aid on Migration - Revisited

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Outline

- Introduction
- Stylized Facts
- Theory and Empirical Literature
- Our contribution: Estimates
- Conclusions & Further Research

Impact of Foreign Aid on Migration Flows

Topic: Why it's relevant

(i) The influence of overseas development aid on emigration is an issue of some intrinsic interest, but its intellectual interest is dwarfed by its relevance to the policy debate over the last twenty years (Parsons Winters (2014))

(ii) Nowadays, with the refugee crises and the arrival of thousands of migrants on the South-European coasts, a new migration policy has become a political priority for the EU and there's growing pressure to find a way to effectively and collectively manage the migration flows.

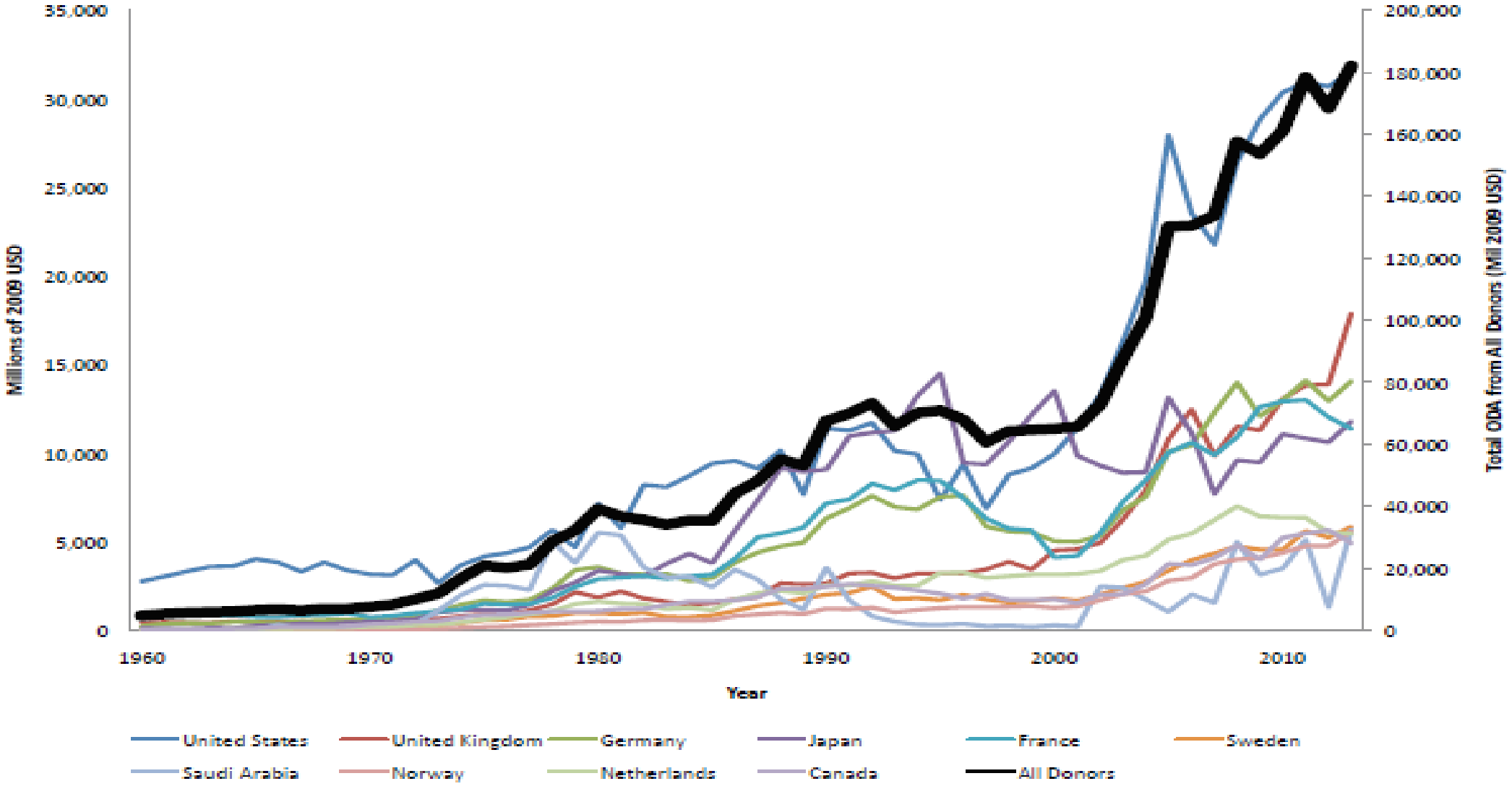
(iii) In this context, increasing foreign aid is seen by some politicians in several EU countries as a key recipe to stem migration flows from developing countries.

Britain needs to spend more of its budget on helping stabilise countries so that it doesn't have to fish migrants out of Mediterranean (June 2015 the UK Defence Secretary; The Guardian, 21st June 2015).

We must also continue our political and development action to improve the living conditions in the countries of origin, working with them there, so that people do not have to flee their homes (Jose Manuel Barroso 9th October 2013, EU Commission)

Stylized Facts (1) – Aid is Increasing

Source: OECD data, Qian (2014)



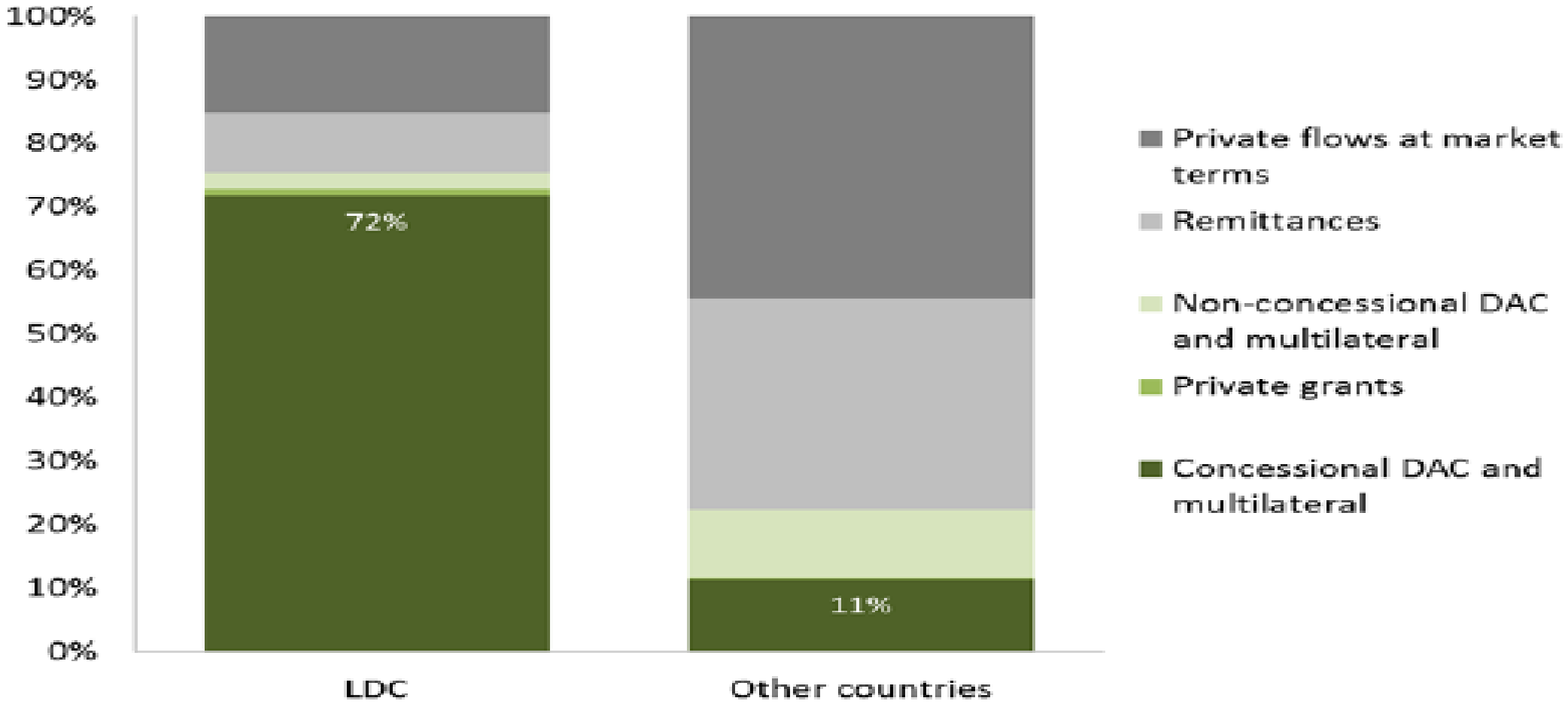
Stylized Facts (2) – Aid Allocation / Interests of Donors
Source: Qian (2014)

	Dependent Variable: Ln ODA			
	(1)	(2)	(3)	(4)
Ln Population	-0.498	-0.952	-1.638	-1.824
	(0.00107)	(0.000)	(0.0325)	(0.0319)
Lag Log GDP	1.372	1.866	1.423	1.718
	(0.000)	(0.000)	(0.000)	(0.000)
Lag Growth	0.00345	-0.0226	0.0112	0.0264
	(0.932)	(0.618)	(0.497)	(0.257)
Lag Conflict Incidence	0.0273	0.0172	0.00222	0.000203
	(0.164)	(0.280)	(0.786)	(0.982)
Small Natural Disaster	-0.0486	-0.0843	0.0212	0.0255
	(0.254)	(0.129)	(0.0628)	(0.0583)
Large Natural Disaster	0.00963	0.0162	-0.00398	-0.00951
	(0.507)	(0.386)	(0.636)	(0.397)
Controls				
Year FE	N	Y	N	Y
Country FE	N	N	Y	Y
Observations	1,081	1,081	1,081	1,081
R-squared	0.85	0.89	0.89	0.95

Stylized Facts (3) – Aid Dependency

Source: OECD

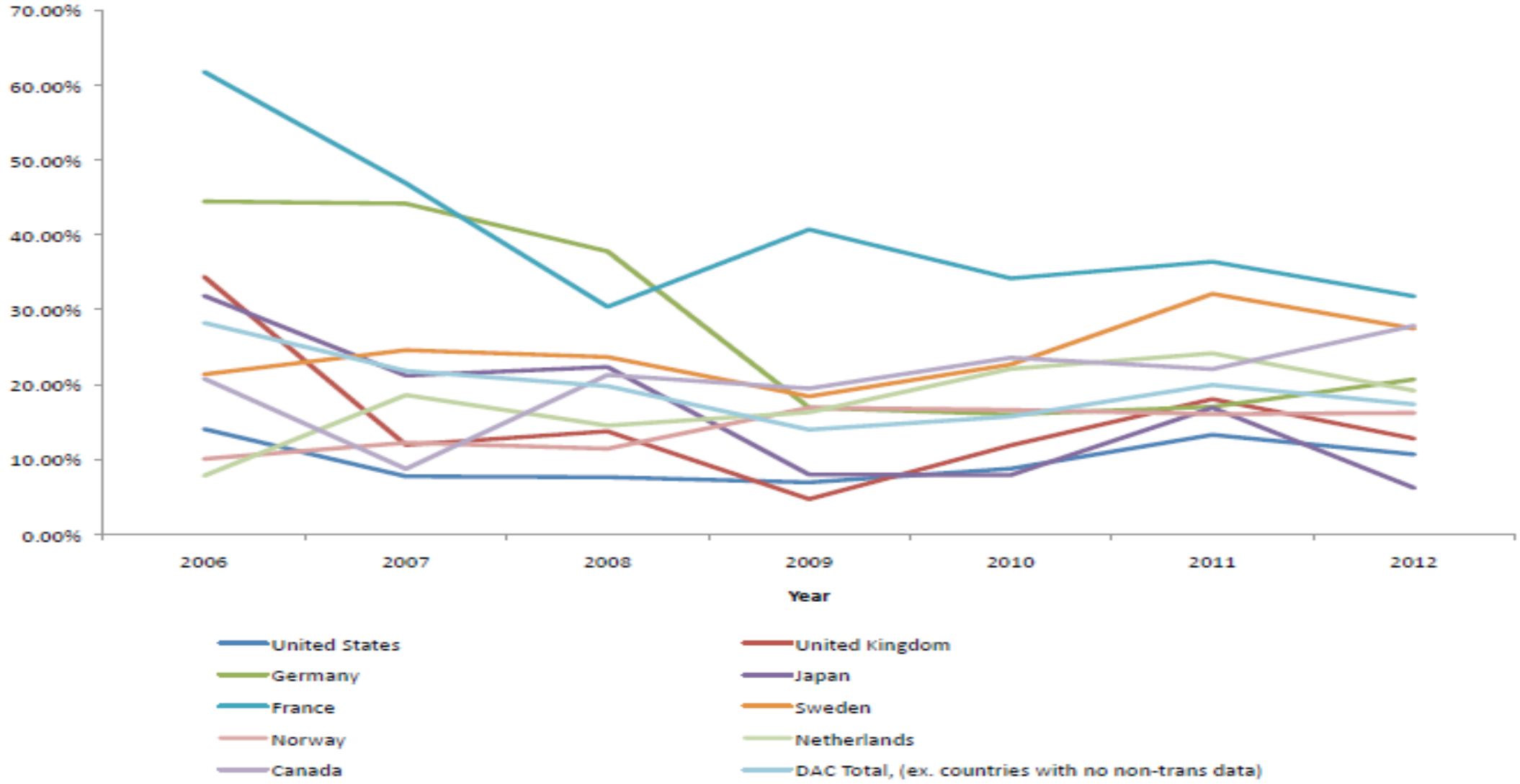
Composition of external finance in LDCs and other countries



Source: OECD DAC statistics and World Bank data on remittances

Stylized Facts (4) – Aid is Heterogeneous

Non-Transferred Aid Source: OECD data, Qian (2014)



Aid as Determinant of Migration

<u>But Foreign Aid does actually reduce migration flows?</u>

Theory: the impact of foreign aid on migration is subject to contrasting forces and its net effect in practice is not clear cut.

- 1 Income (or welfare) Channel (-)
- 2 Budgetary Constraint Channel (+)

Empirics: In the empirical literature there seems to be some agreement on the positive effect of foreign aid on migration flows i.e. the results confirm the hypothesis of the view that foreign aid doesn't reduce migration flows in poor countries.

Empirical Literature

(i) Faini and Venturini (1993) postulates that income growth (induced by aid inflows) may fail to stem emigration because it relaxes credit constraints, which tend to be especially binding in poorer contexts. Inverted U shape hypothesis.

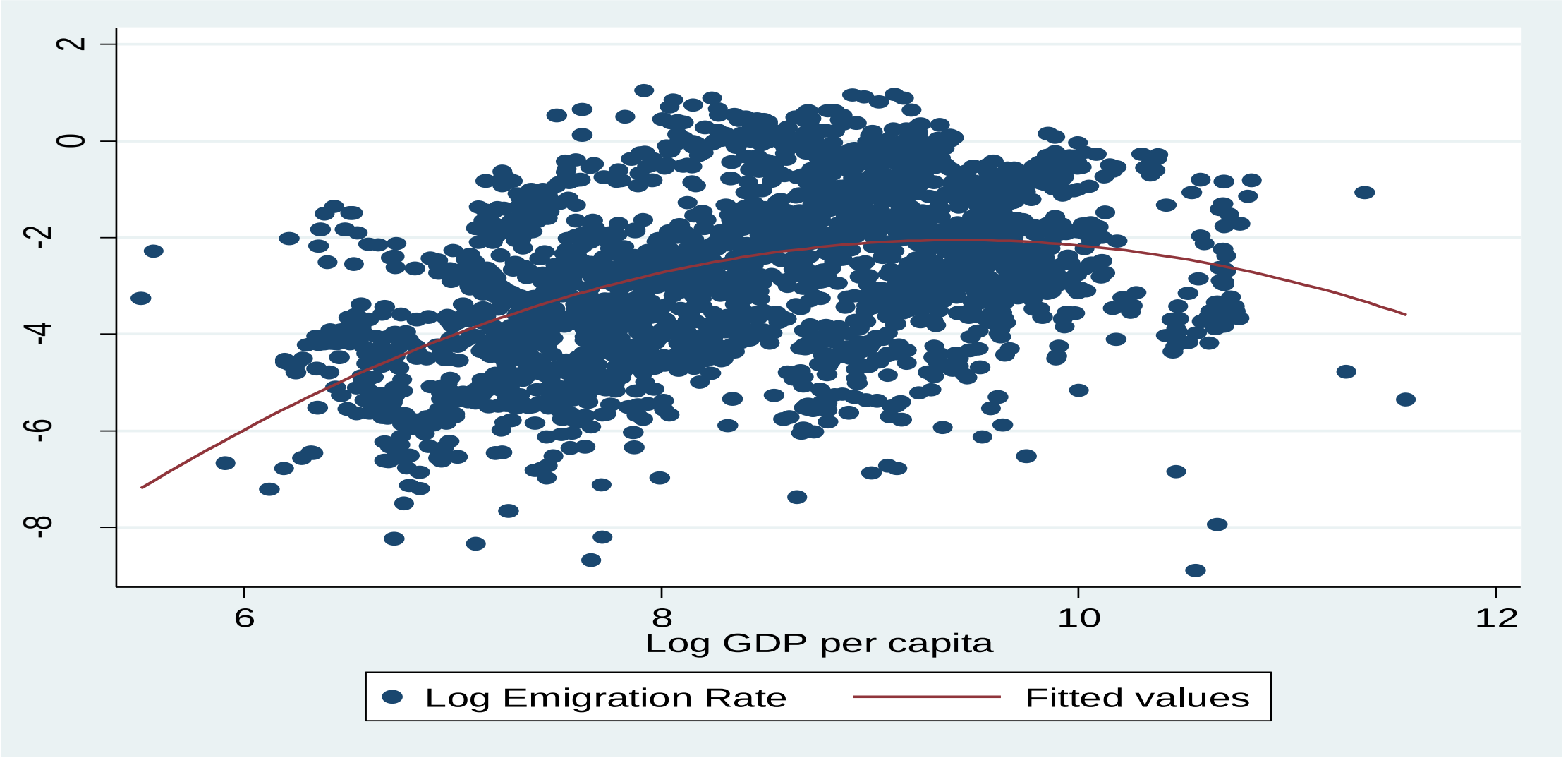
(ii) Lucas (2005) At a global level, Lucas (2005) estimates a regression of aid inflows per head on emigration together with a few control variables, on a sample of 77 developing countries over 1995-2000. He shows a significantly positive relationship.

(iii) Berthelemy et al. (2009): cross section with both bilateral aid (*Network Channel, or attraction effect*) and recipient's total aid, have significantly positive impacts on migration.

(iv) Moullan (2013) who examines the impact of foreign health aid on the emigration rates of physicians found a negative impact of health aid on emigration. This is still in line with the concept of hump-shaped migration patterns.

Migration Hump

Authors'estimates



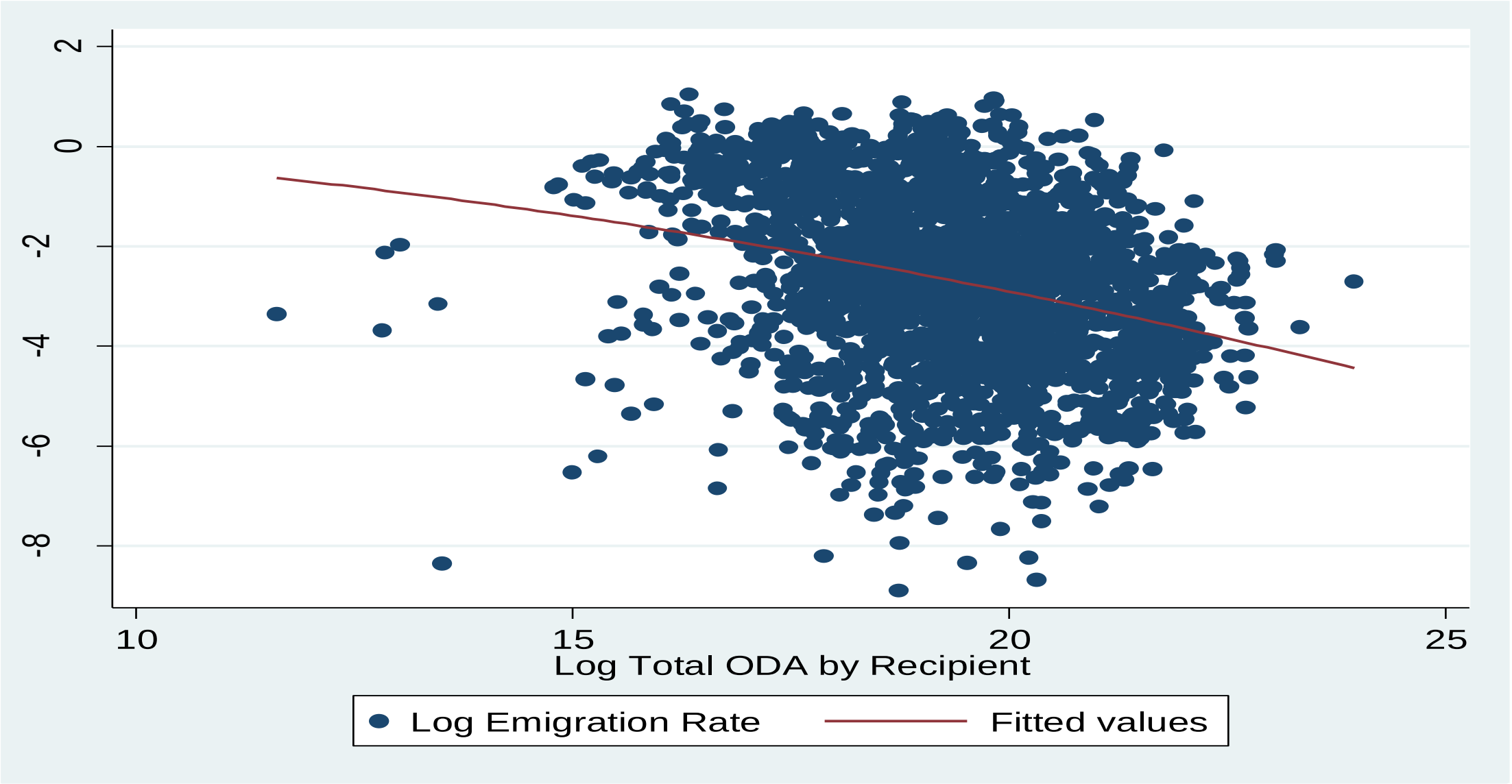
Our Contribution

Building on Berthelemy et al. (2009), but improving it in many respects:

- Pooling time-series and cross-section data instead of using a pure cross section, which attenuates econometric problems concerning the identification of causal effects (multilateral resistance of migration)
- Migrant flows rather than stocks in the dependent variable. These stocks are inserted as additional regressor to better identify the network channel.
- We derive our econometric specification from a gravity model of international migration (microfoundation, Beine and Parsons (2015)).
- We run separate regressions for poorer and richer recipient countries, which enables us to test whether the budgetary constraint channel is indeed relevant at low levels of per capita income.
- We control for time-varying, origin-specific covariates of migration decisions, such as environmental factors and the presence of conflicts.

ODA and Emigration – Whole Sample

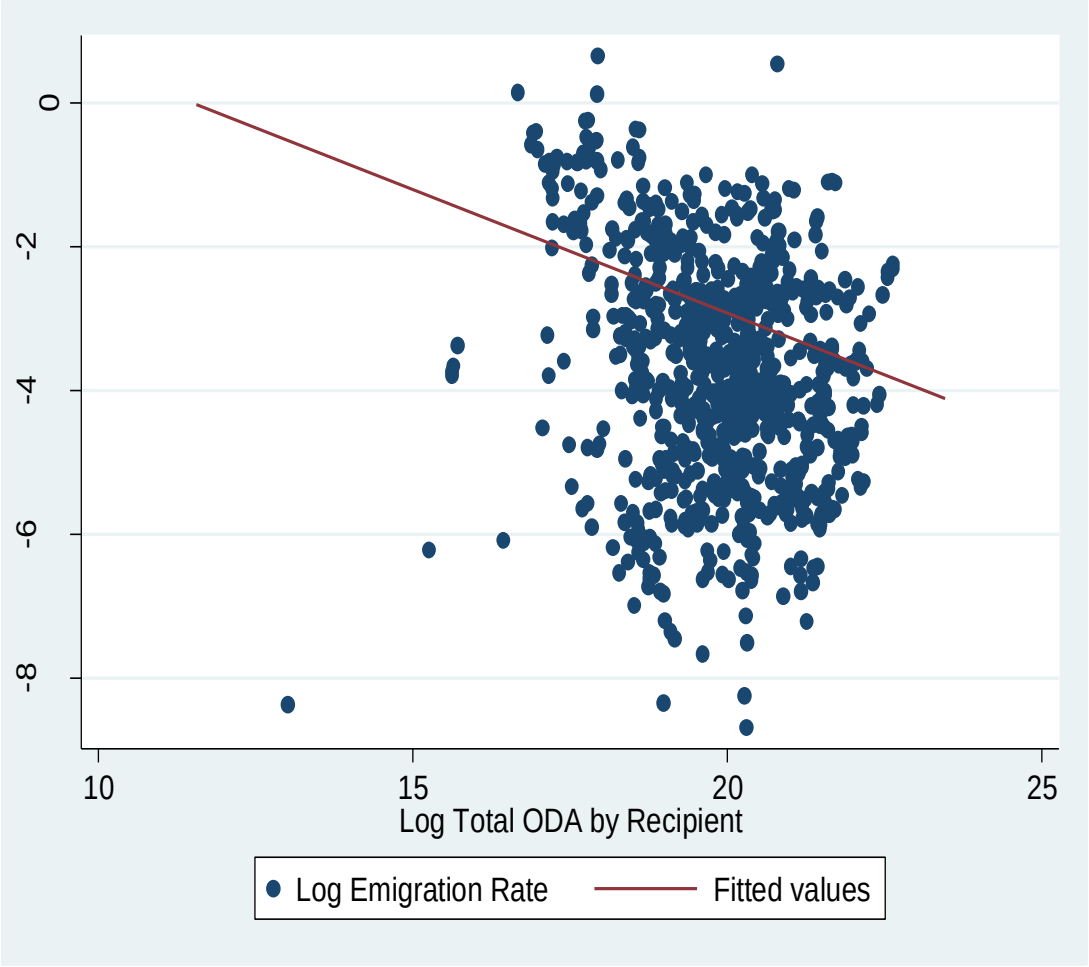
Authors'estimates



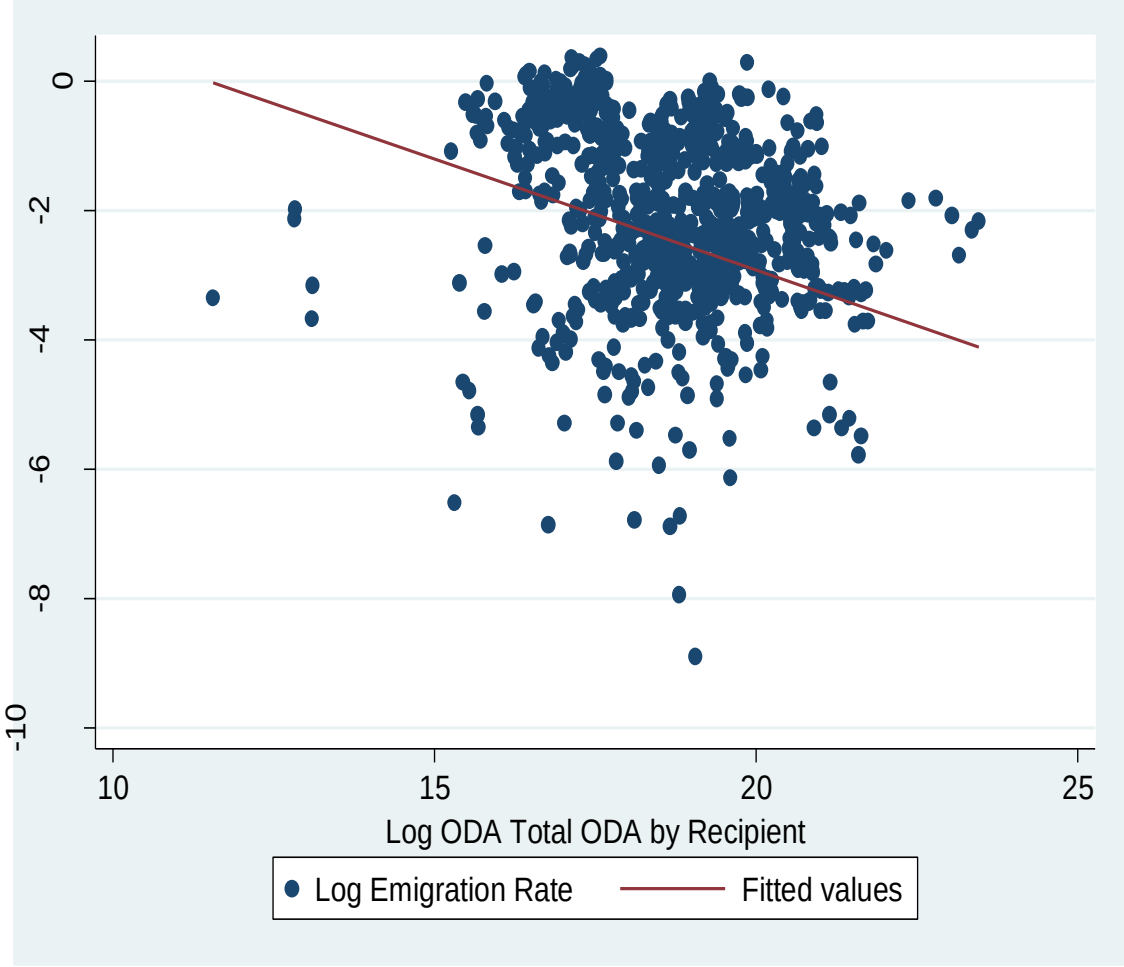
ODA and Emigration – by Classes of GDP

Authors'estimates

Below Median (0-50th)



Above Median (51th-100th)



Gravity Model for International Migration

Building on Beine and Parsons (2015): bilateral migration rates as function of proxies for bilateral migration costs and time varying origin specific determinants of migration.

Because our primary focus is upon Aggregate ODA at origin, we use appropriate fixed effects and dummies to capture the impact of destination-specific factors and time-invariant origin factors.

$$(8)\ ln\left(\frac{N_{in,t}}{N_{nn,t}}\right) = \beta_1 ln\left(\frac{w_{i,t}}{w_{n,t}}\right) + a_{i,t} + a_n + \beta_2 \ln(\text{AggAid}_{n,t-1}) + \beta_3(\text{Conflict}_{n,t-1}) +$$

$$\beta_4(\text{Governance}_{n,t-1}) + \beta_5(\text{Dependency}_{n,t-1}) + \beta_6(\text{NatDis}_{n,t-1}) + \beta_7 \ln(1 + \text{MigStock}_{in,t-1}) +$$

$$\beta_8 ln(\text{dist}_{ni}) + \beta_9(\text{Colony}_{ni}) + \beta_{10}(\text{LangDist}_{ni}) + \beta_{11} \ln(\text{BilAid}_{ni,t-1}) + \varepsilon_{ni,t}$$

Benchmark Estimates

Class of Income	(1) $\ln(EMrate_{in,t})$ $0^{th}-100^{th}$	(2) $\ln(EMrate_{in,t})$ $0^{th}-100^{th}$	(3) $\ln(EMrate_{in,t})$ $0^{th}-100^{th}$	(4) $\ln(EMrate_{in,t})$ $0^{th}-50^{th}$	(5) $\ln(EMrate_{in,t})$ 50^{th}-100^{th}
$\ln(BilAid_{ni,t-1})$	0.135***	0.099***	0.093***	0.106***	0.096***
	(17.95)	(15.97)	(16.91)	(12.93)	(12.53)
$\ln(AggAid_{n,t-1})$	-0.735***	-0.591***	-0.092***	-0.126***	-0.106***
	(-54.84)	(-42.19)	(-4.45)	(-4.54)	(-3.11)
$\ln(GDP_{i,t-1}/GDP_{n,t-1})$	0.257***	0.211***	-0.054	-0.235**	0.264*
	(14.30)	(12.10)	(-0.85)	(-2.69)	(2.11)
$\ln(MigStock_{in,t-1})$	0.675***	0.503***	0.599***	0.627***	0.561***
	(89.75)	(49.19)	(40.28)	(27.48)	(27.19)
$\ln(dist_{ni})$	-0.598***	-0.838***	-0.351***	-0.302***	-0.394***
	(-35.58)	(-45.72)	(-13.22)	(-5.22)	(-13.03)
$Colony_{ni}$	0.072	0.509***	0.481***	0.296***	0.701***
	(1.40)	(8.66)	(9.99)	(3.48)	(11.04)
$LangProx_{ni}$	0.992***	0.827***	0.445***	0.408***	0.552***
	(20.41)	(18.14)	(10.68)	(7.16)	(5.94)
$Dependency_{n,t-1}$	-0.004***	-0.007***	-0.008***	-0.004	-0.004
	(-5.40)	(-8.89)	(-3.69)	(-1.43)	(-1.12)
$PolStability_{n,t-1}$	0.162***	0.156***	-0.043*	-0.031	-0.034
	(9.30)	(10.05)	(-1.99)	(-1.00)	(-1.08)
$Conflict_{n,t-1}$	-8.327***	-7.674***	1.780***	2.723***	0.960
	(-15.84)	(-15.50)	(3.38)	(3.53)	(1.31)
$AggAid_{n,t-1}Conflict_{n,t-1}$	0.394***	0.368***	-0.084***	-0.126***	-0.050
	(15.58)	(15.46)	(-3.31)	(-3.40)	(-1.42)
$NatDis_{n,t-1}$	-0.082***	-0.070	0.002	-0.002	0.001
	(-30.28)	(-25.94)	(1.11)	(-0.46)	(0.27)
N	14154	14155	14154	7065	7082
a_n			X	X	X
$a_{i,t}$		X	X	X	X
R_{sq}	0.76	0.81	0.91	0.89	0.92

t statistics in parentheses. $^{*}p<0.05$, $^{**}p<0.01$, $^{***}p<0.001$

Disaggregating

	(1) $\ln(EMrate_{ln,t})$	(2) $\ln(EMrate_{ln,t})$	(3) $\ln(EMrate_{ln,t})$
$\ln(BilAid_{ni,t-1})$	0.093***	0.092***	0.095***
	(16.91)	(16.59)	(17.23)
$\ln(AggAid_{n,t-1})$	-0.092***	-0.084***	-0.218***
	(-4.45)	(-3.92)	(-7.48)
$\ln(ShareHuman_{n,t-1})$		0.028**	
		(3.28)	
$\ln(ShareTechCoop_{n,t-1})$			-0.179***
			(-6.58)
$\ln(GDP_{i,t-1}/GDP_{n,t-1})$	-0.054	-0.086	-0.121
	(-0.85)	(-1.31)	(-1.86)
$\ln(MigStock_{ln,t-1})$	0.599***	0.609***	0.600***
	(40.28)	(40.56)	(40.34)
$\ln(dist_{ni})$	-0.351***	-0.329***	-0.346***
	(-13.22)	(-12.85)	(-13.05)
$Colony_{ni}$	0.481***	0.490***	0.477***
	(9.99)	(10.08)	(9.90)
$LangProx_{ni}$	0.445***	0.413***	0.448***
	(10.68)	(10.04)	(10.77)
$Dependency_{n,t-1}$	-0.008***	-0.008***	-0.007***
	(-3.69)	(-3.87)	(-3.54)
$PolStability_{n,t-1}$	-0.043*	-0.033	-0.039*
	(-1.99)	(-1.52)	(-1.77)
$Conflict_{n,t-1}$	1.780***	1.711***	1.110*
	(3.38)	(3.25)	(2.09)
$AggAid_{n,t-1}Conflict_{n,t-1}$	-0.084***	-0.081***	-0.050*
	(-3.31)	(-3.19)	(-1.98)
$NatDis_{n,t-1}$	0.002	0.002	0.002
	(1.11)	(0.84)	(1.02)
N	14154	14154	14154
a_n	X	X	X
$a_{i,t}$	X	X	X
R_{sq}	0.91	0.90	0.91

t statistics in parentheses. $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

Yearly Cross Sections

Estimator		OLS	3SLS	OLS	3SLS
		(1)	(2)	(3)	(4)
Year	Coefficient	$\ln(EMrate_{in,t})$	$\ln(EMrate_{in,t})$	$\ln(MigStock_{in,t-1})$	$\ln(MigStock_{in,t-1})$
2014:	$\ln(AggAid_{n,t-1})$	-0.510***	-0.506***	0.441***	0.334***
2013:	$\ln(AggAid_{n,t-1})$	-0.483***	-0.456***	0.573***	0.380***
2012:	$\ln(AggAid_{n,t-1})$	-0.624***	-0.569***	0.564***	0.427***
2011:	$\ln(AggAid_{n,t-1})$	-0.658***		0.520***	
2010:	$\ln(AggAid_{n,t-1})$	-0.670***	-0.677***	0.603***	0.609***
2009:	$\ln(AggAid_{n,t-1})$	-0.634***	-0.638***	0.540***	0.512***
2008:	$\ln(AggAid_{n,t-1})$	-0.602***	-0.600***	0.430***	0.313***
2007:	$\ln(AggAid_{n,t-1})$	-0.595***	-0.601***	0.413***	0.244**
2006:	$\ln(AggAid_{n,t-1})$	-0.481***	-0.499***	0.320***	0.231**
2005:	$\ln(AggAid_{n,t-1})$	-0.528***	-0.485***	0.447***	0.317***
2004:	$\ln(AggAid_{n,t-1})$	-0.524***	-0.485***	0.495***	0.339**
2003:	$\ln(AggAid_{n,t-1})$	-0.544***	-0.578***	0.415***	0.284**
2002:	$\ln(AggAid_{n,t-1})$	-0.606***	-0.573***	0.365***	0.284**
2001:	$\ln(AggAid_{n,t-1})$	-0.524***	-0.529***	0.408***	0.147
2000:	$\ln(AggAid_{n,t-1})$	-0.777***	-0.814***	0.331**	0.185
1999:	$\ln(AggAid_{n,t-1})$	-0.531***	-0.471***	0.403***	0.279*
1998:	$\ln(AggAid_{n,t-1})$	-0.692***	-0.613***	0.578***	0.490***
1997:	$\ln(AggAid_{n,t-1})$	-0.685***		0.577***	0.350***
1996:	$\ln(AggAid_{n,t-1})$	-0.776***		0.703***	

t statistics in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Conclusions

- In contrast to the previous literature, our empirical results point to a robust negative relationship between aggregate aid received and emigration rates.
- We also find that, at the level of individual donors, (positive) network effects and (negative) income effects of aid on migration tend to cancel out, which suggests that (negative) spillovers from one donor's aid to another donor's immigration rates play a significant role.
- Taken together, this gives the impression that policymakers in rich countries are right to view foreign aid as an appropriate instrument to curb the flow of migrants, but that they would have to act collectively.

Limits

- It has to be noted, that the aggregate results presented here can only provide a very rough guide for policymaking, because of the heterogeneous impacts of different types of foreign aid, which we illustrate by drawing a distinction between the effects of humanitarian and non-humanitarian aid.
- We are focusing on Legal Migration (for data availability), which still provides an indication of the change in the decision to migrate but leaves out all the cross country irregular flows as well as internal migration.

Further Research

Next topic is to focus on **donors**, in particular:

(1) How their commitment in terms of ODA allocation is reacting to the migration crises, especially whether the pattern of ODA allocation is changing according to the number of hosted refugees.

(2) The role of migrants' networks in exerting political pressure for aid allocation.

Thanks

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