Remittances and Taxation in Developing Countries

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Introduction

The policy puzzle:

- Remittances have grown in importance for developing countries.
- Many of those countries face serious shortage of public goods.
- There is no straightforward mechanism to tax remittances.
- How do countries harness remittances?

Research questions

I aim to answer the following questions:

- What is the impact of remittances on the capacity of states in developing countries to collect taxes?
- How do political institutions influence the link between remittances and taxation?

Scope:

- **The empirical exercise is limited to estimating the average net effect of remittances on taxation.**

Theory and hypotheses

- Micro channel: Remittances tend to discourage labor supply as they smooth or increase consumption.
  - The relative share of consumption in the tax base increases $\rightarrow$ increase in tax/GDP ratio
- Policy channel: Governments might be keen to moderate the impact of remittances on inequality via taxation.
- The share of direct taxes in total taxes declines with remittances in the short-run.
- Democratic legitimacy augments the positive effect of remittances on tax revenue.

Measuring fiscal capacity

- Tax-to-GDP ratio is the most common and accessible measure of fiscal capacity.
  - But it conflates conscious policy effort with structural differences in tax base.
- I use "tax effort" as an alternative measure of fiscal capacity
  - Tax effort $= \frac{\text{Actual tax revenue}}{Predicted\ \ tax\ \ revenue}$

Estimation strategy

- Estimate the following reduced-form specification with y as tax/GDP ratio or tax effort:

$$y_{it} = \beta r_{it} + X_{it}\gamma + \alpha_i + u_{it} \tag{1}$$

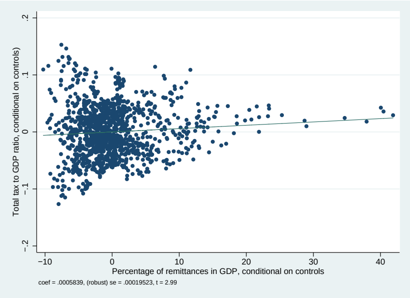
- Estimation technique: instrumental variables with fixed effects
  - Fixed effects help remove unobserved historical factors shaping fiscal capacity.
  - Instrumental variables reduce the effect of endogeneity
  - Two instruments are used: **proximity to global economic hubs** & **average income of colonial network**
    - Proximity to global economic hubs is computed as:

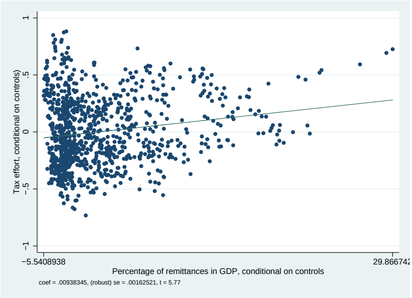
$$q_{it} = \frac{\sum_{j=1}^{n-1} \left(1/d_{ij}\right) y_{jt}}{n-1} \tag{2}$$

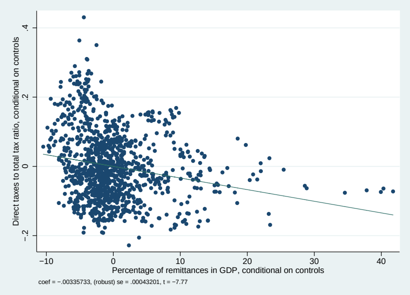
Data

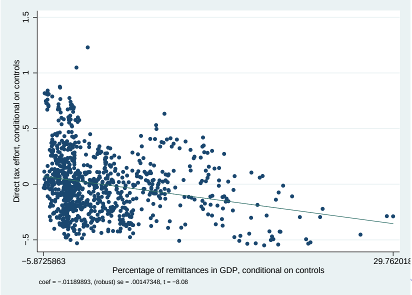
- Government Revenue Database (ICTD)
- Other secondary sources including WDI and QoG.
- Data to construct instruments are from Mayer and Zignago (2011).
- A sample of developing countries, excluding resource rich and small countries (population $<$1 million)
- Panel years: 1980-2014

Baseline correlations









Results: remittances and total tax revenue

Dep Variable	Tax-GDP ratio	Tax effort
Share of remittances in GDP	**0.350*** **	**3.91*** **
	(.089)	(.981)
Controls	GDP per capita Share of agriculture Share of natural resources Openness Employment ratio Population Growth Urbanization Right wing party	GDP per capita Democracy index Quality of government index
	Year dummies	Year dummies
First stage F stat	41.68	30.02
Sargan-Hansen P-value	0.895	0.539
Observations	1726	1375

Results: remittances and direct taxes

Dep Variable	Direct tax ratio	Direct tax effort
Share of remittances in GDP	-0.045	-1.47
	(.244)	(1.02)
Controls	GDP per capita	GDP per capita
	Share of agriculture	Democracy index
	Share of natural resources	Quality of government index
	Openness	
	Employment ratio	
	Population Growth	
	Urbanization	
	Right wing party	
	Year dummies	Year dummies
First stage F stat	29.24	27.07
Sargan-Hansen P-value	0.000	0.000
Observations	1498	1191

Results: emigrant selectivity

- Possible motivation for governments to intensify taxation as remittances increase: offsetting the impact of remittances on inequality
- The educational selectivity of emigrants might serve as an indicator for potential impact on inequality.
- Suggestive evidence regarding the role of selectivity:

	Dependent variable	Remittances coefficient	SE
Low emigrant selectivity	Tax-GDP ratio	-0.126	0.096
	Tax effort	0.633	0.778
High emigrant selectivity	Tax-GDP ratio	0.874***	0.244
	Tax effort	8.95***	3.03

Results: institutions

- The working hypothesis is that democratic legitimacy and state capacity enable governments to tax more with increasing remittances

	Dependent variable	Remittances coefficient	SE
Non-democracy	Tax-GDP ratio	0.212**	0.096
	Tax effort	5.45***	1.66
Democracy	Tax-GDP ratio	0.002	0.289
	Tax effort	2.14	1.40
Low government quality	Tax-GDP ratio	0.069	0.120
	Tax effort	0.042	0.737
High government quality	Tax-GDP ratio	0.975***	0.242
	Tax effort	5.65***	1.99

Summary and conclusion

This paper represents an attempt to take a first crack at exploring the link between remittances and fiscal capacity in developing countries.

Causal evidence:

- In general, remittances have a positive impact on tax-to-GDP ratio and tax effort

Suggestive evidence:

- Governments might be motivated to intensify taxation as remittances rise in order to moderate the inequality-increasing effects of selective emigration.
- Democracy does not seem to play any role in enabling governments tax more as remittances increase.
- State capacity seems to have a positive role for increasing tax revenue with remittances.