

The Words that Keep the People Apart. Official Language, Accountability and Fiscal Capacity

Adelaide Baronchelli

University of Verona

Alessandra Foresta

University of York

Roberto Ricciuti

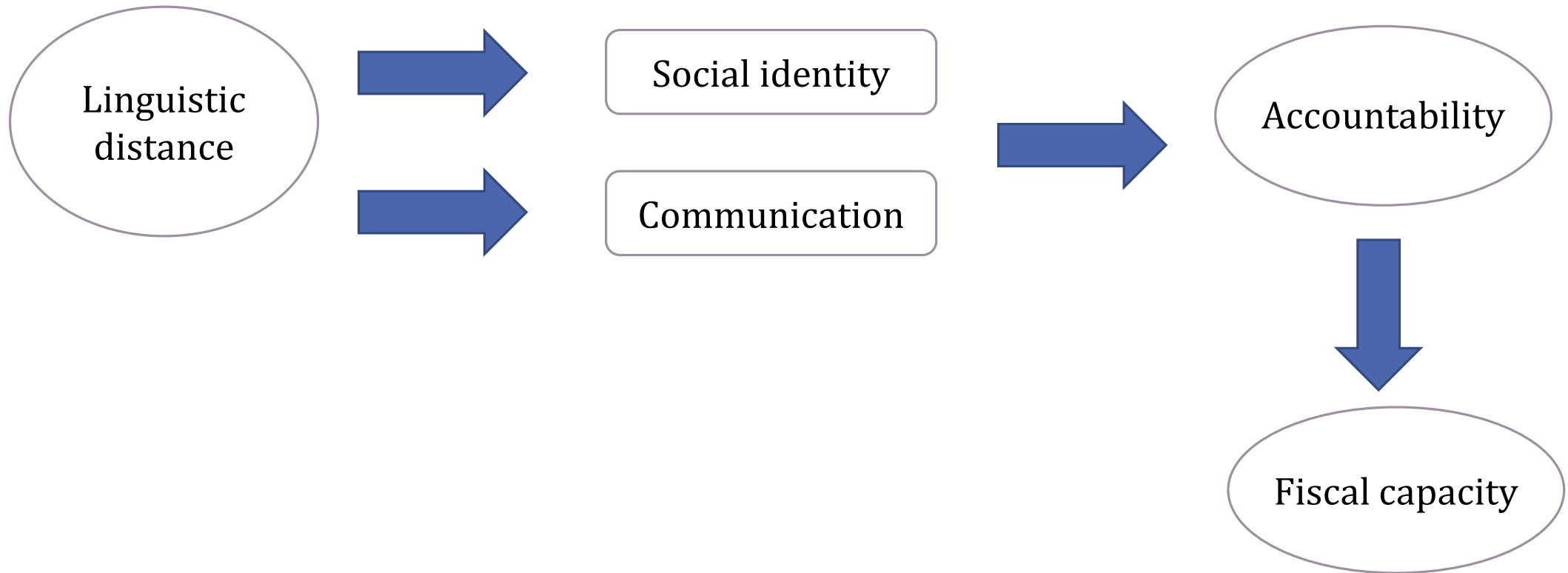
University of Verona and CESifo

AISSEC Virtual Conference

Object

- We investigate a new causal channel linking accountability with fiscal capacity. We argue that when the official language, used by the elite, is distant from the language spoken by the people, a gap is created between these two groups. The average citizen, unable to relate to the government, loses interest and trust in its functioning while the elite isolates itself more and more from the population, resulting in the selection of bad policies.
- **ENDOGENEITY ISSUE:** accountable institutions are likely to occur in rich countries, which are able to raise higher taxes.
- We propose a channel relating fiscal capacity and accountability that runs through the **OFFICIAL LANGUAGE** of the country.
- We test our hypothesis on a **CROSS SECTION** of 147 countries using an instrumental variable approach.

Our hypothesis



Language as an identity maker

- The official language shapes the SOCIAL IDENTITY of the elite, which is defined as the part of an individual's self-concept deriving from the consciousness of his membership of a social group (Landa and Duell, 2015).
- Whorf (1956) & Sapir (1970) advanced the hypothesis that language functions as a constraint on the development of cultural norms. Hill & Mannheim (1992) pointed out that grammatical categories implicitly reinforce specific cognitive or social categories. Nisbet (2003) shows that the same question in different languages produces different outcomes, arguing that each language reflects a specific interpretation of the world.
- We argue that the higher the distance between the official language and those spoken by the population, the higher the distance between the social identities of the elites and the citizens.

Language as a tool of communication

- The official language is a key element in the functioning of a state since it allows communication between the state and its citizens.
- Countless activities are normed in this language, from registering as a business to drafting an employment contract, from patenting an idea to paying taxes, accessing health services and settling a lawsuit in court, to name only a few.
- Translation is very costly.
- Therefore, the inability to speak the official language of the state can exclude people from full citizenship in their own country.

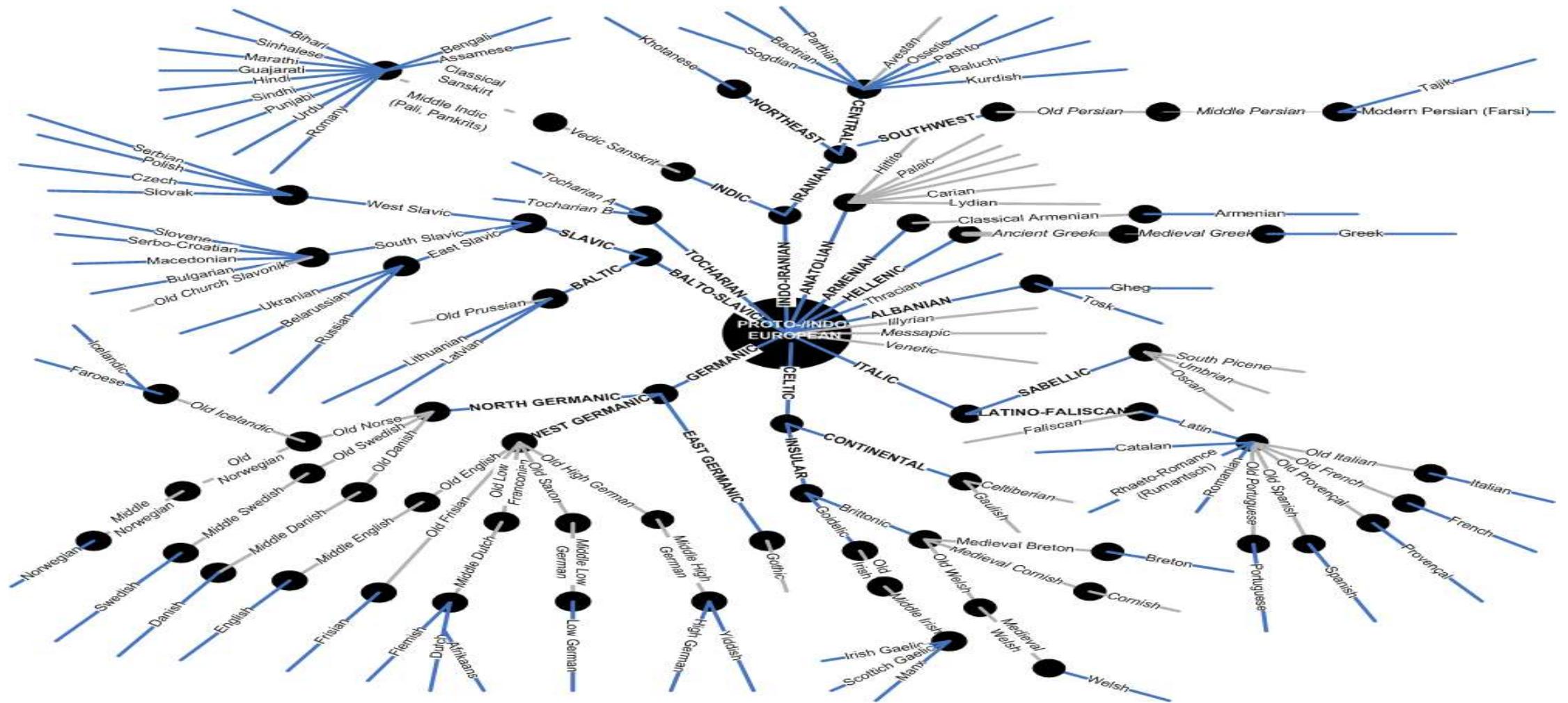
Language as a tool of communication II

- Several studies have highlighted that language acts as a barrier to the comprehension of key information and access to many public services.
- Language is crucial to the success of many health programs and individual health outcomes (Djité, 2008).
- In a field experiment conducted in Kenya, evidence from Translators Without Borders (2015) shows that providing medical information in Swahili in Tanzania instead of English enormously increases the awareness of how Ebola is transmitted.
- Gomes (2014) shows that in Africa the higher the individual linguistic distance from neighbors, the higher the child mortality.

Language as a tool of communication III

- This is evident in some former colonies which adopted the colonizer's language as the state language.
- Albaugh (2014) reports that in Sub-Saharan African countries, on average, only 18.7% of the population can speak the official language of the state, with a minimum of 4.5% in Niger and 5% in Guinea.
- We argue that the linguistic distance between the people and the elite may severely impact on accountability. When citizens do not understand the official language, they are prevented from accessing many services. Hence, they have no instruments to monitor the actions of the ruling elite and they are not able to hold the government and the elite to account.

Measuring linguistic distance: the linguistic tree



The Average distance from the Official Language (ADOL)

- To measure the distance between the language spoken by the different linguistic groups within a country and the official language, we use the measure proposed by Laitin & Ramachandran (2016).
- We compute the linguistic distance of every language existing in a country from the official language. Formally,

$$d_{ab} = 1 - \left(\frac{\text{no.of common nodes between } a \text{ and } b}{\frac{1}{2}(\text{no.of nodes for language } a + \text{no.of nodes for language } b)} \right)^\lambda$$

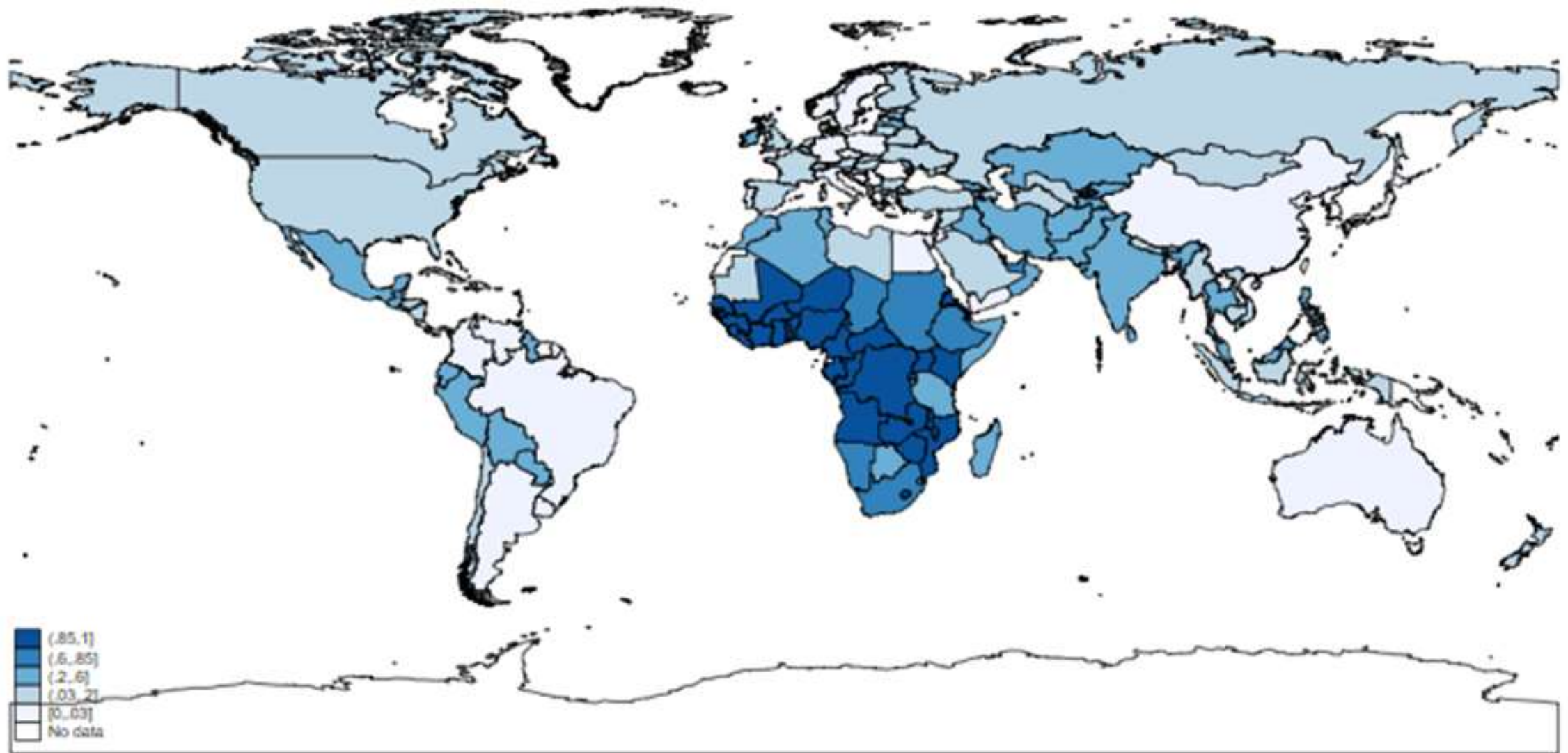
where d_{ab} is equal to one when the difference between two languages is maximal i.e., there are no common nodes between the two languages.

- We combine the distances with the different population shares present in each country i .

$$ADOL_i = \sum_{j=1}^n P_{ij} d_{jo}$$

where n represents the number of linguistic groups in the country, P_{ij} is the population share of the group j in country i . d_{jo} represents the distance measured for the distance of the language of the group j with respect to the official language o .

ADOL across the world



Method and data

- To test our hypothesis, we implement an IV regression following the 2SLS methodology.

$$A_i = \beta_0 + \beta_1 ADOL_i + \beta_2 X_i + \varepsilon_i \quad (1)$$

$$FC_i = \delta_0 + \delta_1 A_i + \delta_2 X_i + \varepsilon_i \quad (2)$$

where FC_i is our dependent variable, the average of our measure of Fiscal capacity, A_i is our proxy for accountability and X_i represents our set of controls.

- FISCAL CAPACITY we use a classical measure of fiscal capacity, which is the overall amount of taxes divided by the GDP at the country level (per 100) (Besley & Persson, 2009; Dincecco & Prado, 2012). The source of these data is the UN dataset called the “*Government revenue dataset*”. We use an average measure between 1995 and 2017 at the country level.
- ACCOUNTABILITY: we use a variable of institutional quality at the country level proposed by the World Bank. This index belongs to the World Governance Indicators and it is called “*Voice and Accountability*”. We averaged this index over years 1995-2017 at the country level.
- OTHER CONTROL: Legal origins, population, GDP, arable land, oil reserves, external conflict, fractionalization

Descriptive statistics

Variables	count	mean	sd	min	max
Mean tax	146	19.96	11.00	0.80	46.18
Avg. executive constraints	146	4.92	1.89	1.00	7.00
mean WGI	146	-0.18	0.98	-2.04	1.61
ADOL (delta 0.5)	146	0.37	0.37	0.00	1.00
Population	146	4.5e+07	1.5e+08	6.9e+05	1.3e+09
Avg. GDP	146	1.1e+08	5.9e+08	1492.61	5.1e+09
Avg. ln(Arable land area)	145	14.45	2.03	6.46	18.87
Avg. perc. oil reserves	146	4.27	9.84	0.00	47.61
Avg. external conflict	146	0.01	0.04	0.00	0.35
Linguistic fractionalization	146	0.32	0.21	0.00	0.73
British legal or.	146	0.29	0.45	0.00	1.00
Socialist legal or.	146	0.21	0.41	0.00	1.00

Results: first stage

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	mean WGI	mean WGI	mean WGI	mean WGI	mean WGI	mean WGI	mean WGI	mean WGI
ADOL	-0.937***	-1.211***	-1.252***	-1.220***	-1.364***	-1.274***	-1.271***	-1.297***
	(0.176)	(0.183)	(0.188)	(0.191)	(0.186)	(0.175)	(0.178)	(0.227)
Socialist legal origin		-0.577***	-0.620***	-0.622***	-0.801***	-0.865***	-0.863***	-0.870***
		(0.221)	(0.217)	(0.216)	(0.214)	(0.197)	(0.197)	(0.202)
British legal origin		0.168	0.159	0.134	0.230	0.0773	0.0691	0.0645
		(0.165)	(0.168)	(0.169)	(0.159)	(0.152)	(0.156)	(0.158)
Ln (Population)			-0.0746	-0.0277	-0.238***	-0.186**	-0.186**	-0.189**
			(0.0482)	(0.0595)	(0.0790)	(0.0810)	(0.0814)	(0.0830)
Ln (mean Gdp)				-0.0367	-0.0432	-0.0395	-0.0397	-0.0388
				(0.0298)	(0.0290)	(0.0275)	(0.0276)	(0.0283)
Avg. ln(Arable land area)					0.196***	0.147***	0.143***	0.144***
					(0.0438)	(0.0443)	(0.0448)	(0.0451)
Avg. perc. oil reserves						-0.0346***	-0.0356***	-0.0358***
						(0.0072)	(0.0076)	(0.0076)
Avg. external conflict							1.004	1.011
							(1.297)	(1.296)
Linguistic fractionalization								0.0770
								(0.403)
Constant	0.167	0.344**	1.588*	1.333	2.101**	2.082**	2.136**	2.146**
	(0.119)	(0.138)	(0.825)	(0.840)	(0.837)	(0.832)	(0.844)	(0.846)
Observations	147	147	147	147	146	146	146	146
F-Stat	28.45	43.89	44.31	40.63	53.59	53.21	50.73	32.56

Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Results: second stage

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Mean tax	Mean tax	Mean tax	Mean tax	Mean tax	Mean tax	Mean tax	Mean tax
mean WGI	13.19***	8.888***	8.890***	8.685***	9.240***	9.295***	9.320***	7.071***
	(2.397)	(1.463)	(1.416)	(1.480)	(1.470)	(1.539)	(1.557)	(2.152)
Socialist legal origin		8.982***	8.981***	8.836***	8.452***	8.550***	8.556***	7.320***
		(1.820)	(1.853)	(1.870)	(1.948)	(2.001)	(2.012)	(2.048)
British legal origin		-1.874	-1.875	-2.049	-1.903	-1.787	-1.715	-1.061
		(1.285)	(1.277)	(1.280)	(1.314)	(1.311)	(1.340)	(1.344)
Ln (Population)			-0.00437	0.359	-0.523	-0.553	-0.548	-0.662
			(0.419)	(0.523)	(0.740)	(0.742)	(0.742)	(0.695)
Ln (mean Gdp)				-0.297	-0.263	-0.264	-0.261	-0.451
				(0.297)	(0.309)	(0.309)	(0.310)	(0.318)
Avg. ln(Arable land area)					0.762	0.792	0.820	1.054**
					(0.494)	(0.501)	(0.506)	(0.527)
Avg. perc. oil reserves						0.0290	0.0394	-0.0224
						(0.0840)	(0.0901)	(0.0902)
Avg. external conflict							-9.099	-7.695
							(12.22)	(9.542)
Linguistic fractionalization								-8.369**
								(4.132)
Constant	22.37***	20.20***	20.27***	18.54***	21.59***	21.49***	20.95***	24.72***
	(0.972)	(0.881)	(7.027)	(6.979)	(7.374)	(7.434)	(7.662)	(7.237)
Observations	147	147	147	147	146	146	146	146
R2	0.174	0.553	0.553	0.560	0.551	0.551	0.551	0.594

Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Robustness checks: using executive constraints

PANEL A: First stage regressions				Avg. executive constraints				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ADOL	-1.627***	-1.952***	-1.974***	-1.961***	-2.243***	-2.018***	-2.008***	-1.869***
	(0.349)	(0.358)	(0.370)	(0.371)	(0.358)	(0.309)	(0.316)	(0.446)
Constant	5.513***	5.676***	6.351***	6.247***	7.733***	7.694***	7.849***	7.801***
	(0.216)	(0.250)	(1.796)	(1.798)	(1.795)	(1.717)	(1.752)	(1.764)
F-stat								
PANEL B: Second stage				Mean Tax				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Avg. executive constraints	7.469***	5.481***	5.597***	5.379***	5.600***	5.849***	5.877***	4.915***
	(1.600)	(1.099)	(1.101)	(1.105)	(1.052)	(1.115)	(1.134)	(1.484)
Socialist legal origin		6.983***	6.833***	6.697***	6.443***	7.081***	7.085***	6.474***
		(2.310)	(2.404)	(2.366)	(2.471)	(2.533)	(2.542)	(2.439)
British legal origin		-2.061	-2.144	-2.434	-2.503	-1.674	-1.540	-1.125
		(1.693)	(1.677)	(1.656)	(1.699)	(1.728)	(1.769)	(1.673)
Ln (Population)			-0.411	0.227	-0.289	-0.501	-0.490	-0.577
			(0.524)	(0.718)	(1.034)	(1.085)	(1.091)	(1.000)
Ln (mean Gdp)				-0.510	-0.471	-0.485	-0.481	-0.573
				(0.372)	(0.389)	(0.392)	(0.392)	(0.374)
Avg. ln(Arable land area)					0.390	0.596	0.647	0.834
					(0.640)	(0.710)	(0.724)	(0.714)
Avg. perc. oil reserves						0.215*	0.235*	0.161
						(0.121)	(0.124)	(0.137)
Avg. external conflict							-16.78	-14.57
							(16.35)	(14.37)
Linguistic fractionalization								-5.672
								(5.024)
Constant	-16.77**	-7.885	-1.679	-3.759	-2.588	-4.417	-5.537	1.344
	(7.882)	(5.588)	(10.01)	(9.912)	(10.59)	(10.88)	(11.36)	(12.88)
Observations	146	146	146	146	145	145	145	145
R2	-0.248	0.229	0.216	0.257	0.222	0.220	0.220	0.332

Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Robustness checks: excluding group of countries/continents

PANEL A: First stage regressions		Mean WGI			
	(1)	(2)	(3)	(4)	
ADOL	-1.634**	-0.556**	-1.658**	-1.317**	
	(0.437)	(0.227)	(0.248)	(0.238)	
Constant	3.399**	1.450*	0.818	2.333**	
	(0.946)	(0.868)	(1.013)	(1.016)	
F-stat	13.95	6.001	44.56	30.67	
PANEL B: Second stage		Mean Tax			
	(1)	(2)	(3)	(4)	
mean WGI	14.66**	-2.906	7.158**	8.612**	
	(3.600)	(5.762)	(1.846)	(2.103)	
British legal origin	-0.203	2.023	-0.910	-2.752**	
	(1.837)	(1.884)	(1.637)	(1.392)	
Socialist legal origin	14.53**	7.915**	8.775**	5.348**	
	(4.031)	(2.373)	(2.287)	(2.280)	
Ln (Population)	1.170	-1.278	-0.223	-1.056	
	(1.123)	(0.907)	(1.299)	(0.783)	
Ln (mean Gdp)	-0.129	-0.776*	-0.471	-0.185	
	(0.512)	(0.413)	(0.457)	(0.369)	
Avg. ln(Arable land area)	0.451	1.223**	0.573	0.902	
	(0.678)	(0.622)	(1.002)	(0.568)	
Avg. perc. oil reserves	0.266	-0.217	0.106	-0.00756	
	(0.199)	(0.139)	(0.135)	(0.0944)	
Avg. external conflict	-31.95**	-10.97	4.220	-9.145	
	(12.45)	(12.62)	(15.85)	(10.77)	
Linguistic fractionalization	1.564	-11.97**	-9.821**	-9.142*	
	(5.948)	(5.186)	(4.317)	(4.820)	
Constant	-7.842	32.44**	25.12**	31.75**	
	(14.43)	(10.66)	(9.693)	(8.121)	
Observations	103	119	105	125	
R2					
Excluding	Africa	OECD	Asia	Latin America	

Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Conclusions

- Our analysis confirm our hypothesis that if the official language is different from the language used every day by people, this creates a distance between the ruling elite and the people, insulating the former from the latter.
- Therefore, on one side, the average citizens will be less involved in government activity, decreasing the level of control on the elites.
- On the other side, the elite could take advantage of this situation and implement policies more favorable to them, generating new obstacles for the average citizen to keep them accountable.