

Constitutions and Economic Performance

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1. Introduction

Combine lessons from two research programs

political economics: constitutions and policy

macroeconomics of development: history, policy and growth

Constitutions and policy

theory: electoral rules, forms of government
shape incentives for policymaking

empirics: test for predicted effects
simultaneity due to non-random selection

Figure 1

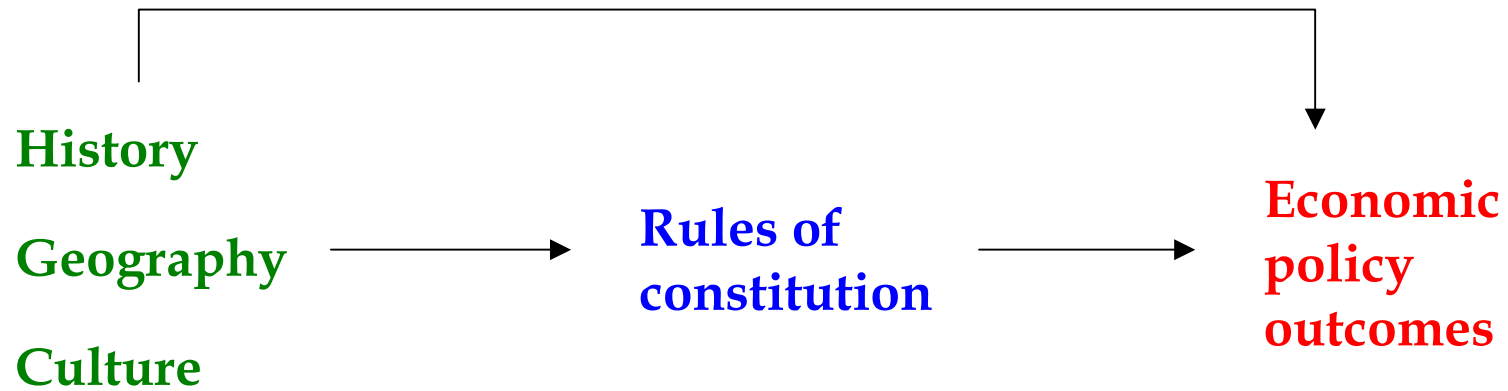


Figure 1
Constitutions and policy

Results

systematic effects on fiscal policy and corruption

Persson-Tabellini (*MIT Press*, 2003; *AER*, 2004)

Persson-Tabellini-Trebbi (*JEEA*, 2003)

Persson (*JEEA*, 2004), Persson-Tabellini (*JEP*, 2004)

History, policy and growth

theory: policy in broad terms shapes economic performance

empirics: find policy (clusters) conducive to long-run growth

simultaneity due to reverse causation (measurement error)

Figure 2

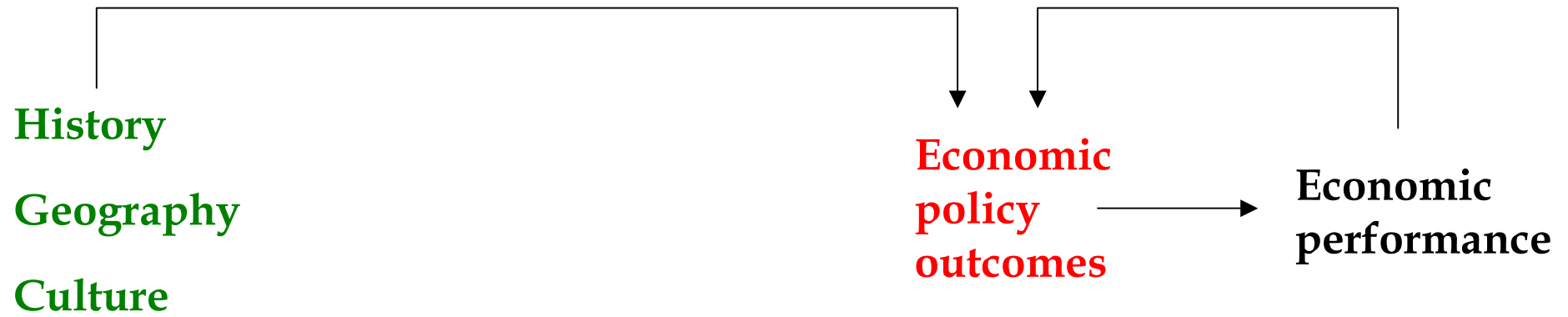


Figure 2
History, policy and growth

Results

cluster of structural (regulatory and trade) policies crucial
instrument by Western European, colonial influence

Hall-Jones (*QJE*, 1999)

use conditions for colonial settlers in early 1800s

Acemoglu-Johnson-Robinson (*AER*, 2001)

Vague lesson

“good institutions” critical for economic performance

but what are these institutions – beyond historical destiny?

e.g., no robust effect of democracy on income, or growth

This presentation

constitutional rules, i.e., the *form of* democracy, may be
tangible, institutional link between history and performance

briefly, motivate why this is plausible hypothesis

mainly, ask what the data say

build on Persson-Tabellini (2003), Persson (2004)

Figure 3

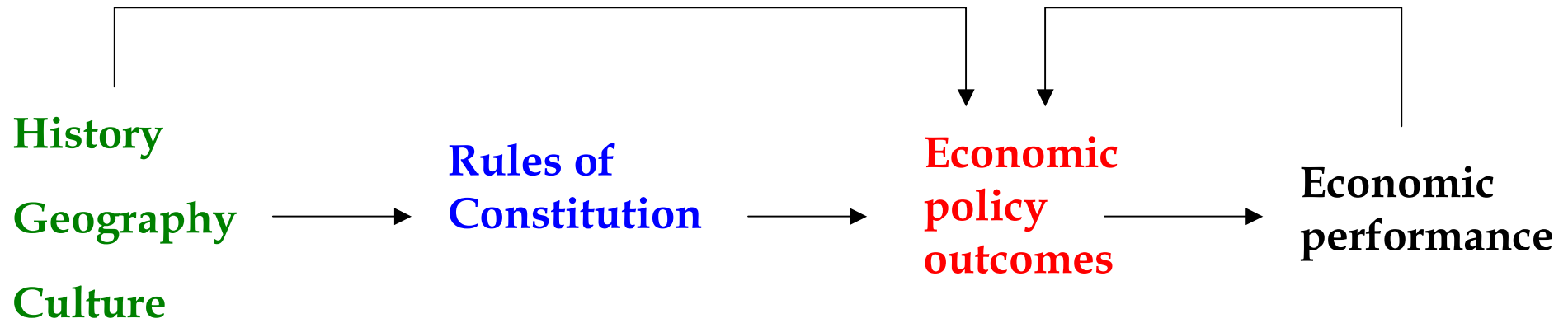


Figure 3

Constitutions: a link between history and current economic performance?

Road-map

2. Data
3. Replicating earlier results
4. Constitutions, structural policy and performance
5. History, constitutions and structural policy
6. Constitutional reforms
7. Where now?

2. Data

Size and scope of data set

largely follow Hall-Jones

some differences

- (i) data more recent: 1990s cross section ($N \sim 100$), not 1988
- (ii) no imputed data,
- (iii) collect panel data ($T \sim 17$) as well

Growth-promoting policy

defined as in Hall-Jones

$$\textit{structural policy} = (GADP + YRSOPEN)/2$$

GADP: index for anti-diversion policy (prop rights protection)

YRSOPEN: Sachs-Warner index of open borders, since 1950
continuous measure (0 to 1)

Performance

output/worker (log of labor productivity)

defined as in H-J (no adjustment for mining)

(log) *TFP*, as in H-J

(log) *GDP per capita*, Penn Tables

Constitutional rules

democracy (binary: 0, 1), *age of democracy* (continuous: 0-1)

parliamentary dem, *proportional dem* (both binary: 0,1)

defined as in Persson-Tabellini (various sources)

Instruments for structural policy (Western influence)

as in H-J: *pred. trade share, European speakers*

(English speakers, latitude)

as in A-J-R: *(log) settler mortality*

constitutional rules

Instruments for constitutional rules

settler mortality

as in P-T: *constitutional birth 21-50, 51-80*

Controls

indicators for continents, and identity of colonial rulers

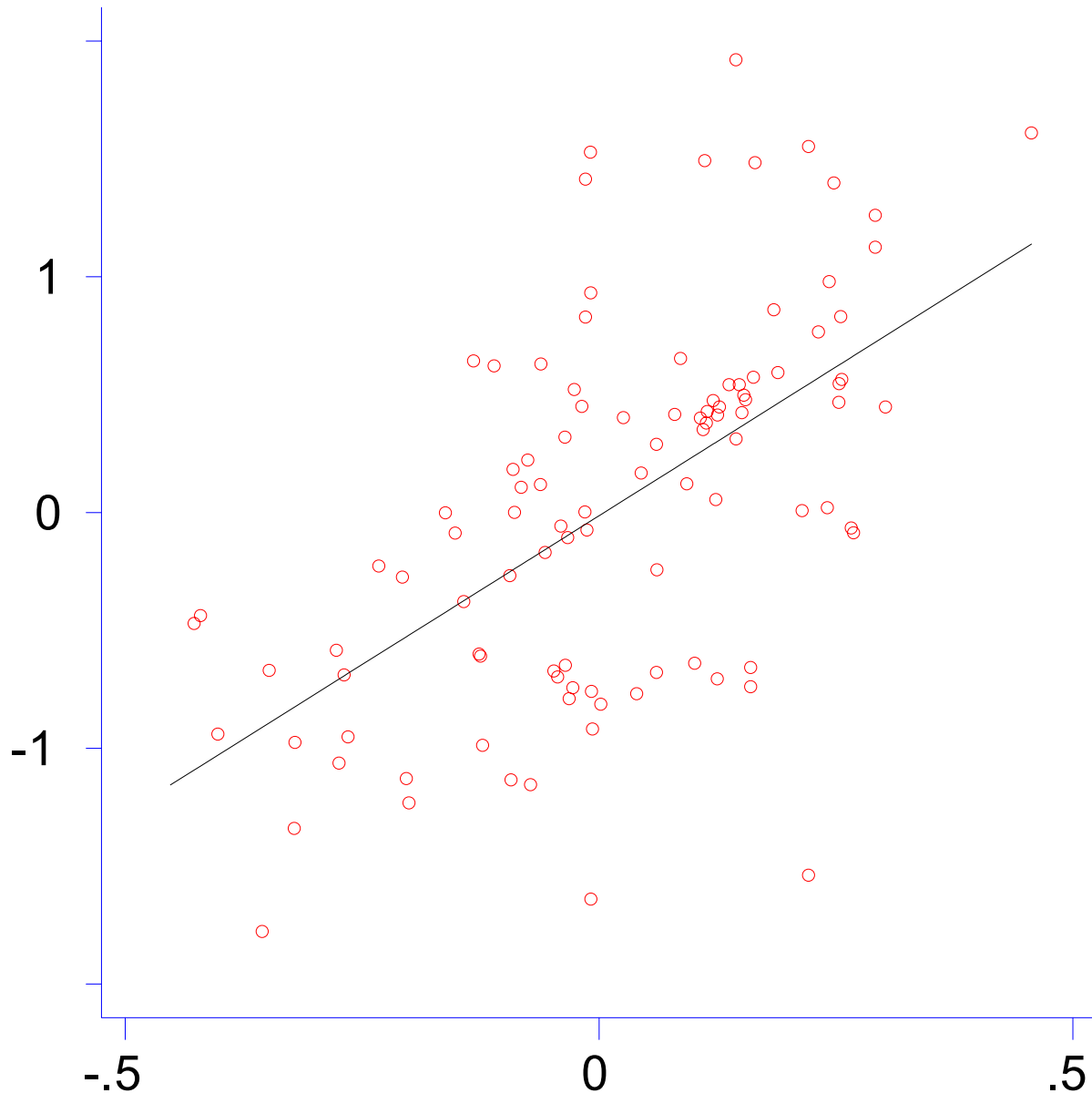
3. Replicating earlier results

Full 1990s cross section (~ 100 obs.)

certainly strong (partial) correlation between
structural policy and *output/worker*

Figure 4

Residuals of *output/worker*



Residuals of *structural policy*

But are they causally related ?

use IV strategy a la Hall-Jones

isolate exogenous variation in *structural policy*

Figure 5

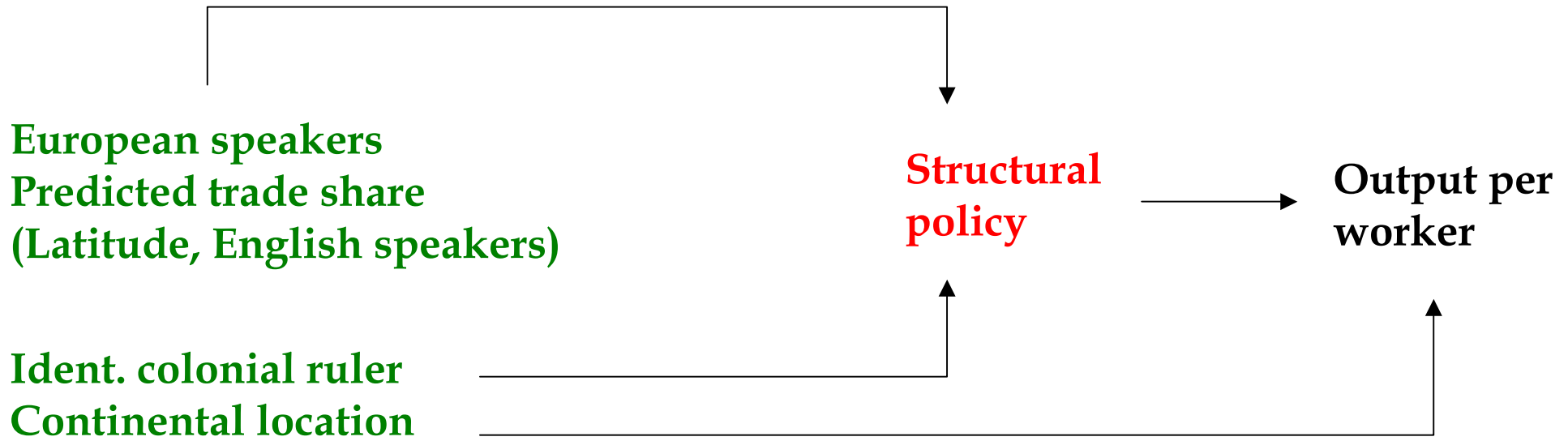


Figure 5
Replicating Hall and Jones

Results in full cross section

H-J findings, largely, hold up

two of instruments pass test for relevance, exogeneity
structural policy has strong effect on *output/worker*

Results similar for *GDP per capita* or *TFP*

Table 1

**Table 1 Cross sectional (GMM) estimates
History and structural policy shape economic performance**

Cross section	Full data set
Dep. variable	<i>structural policy</i>
<i>European speakers</i>	0.21*** (0.06)
<i>predicted trade share</i>	0.09*** (0.03)
Excl. instr., F	11.01***
N. obs	98

**Table 1 Cross sectional (GMM) estimates
History and structural policy shape economic performance**

Cross section	Full data set	
Dep. variable	<i>structural policy</i>	<i>output/worker</i>
<i>structural policy</i>		3.81*** (0.66)
<i>European speakers</i>	0.21*** (0.06)	
<i>predicted trade share</i>	0.09*** (0.03)	
Excl. instr., F	11.01***	
Over-id (df), chi-2		2.39(1)
N. obs	98	98

Settler mortality cross section (~ 60 obs.)

same specification

\Rightarrow similar results

Acemoglu-Johnson-Robinson *settler mortality* sole instrument

\Rightarrow results stronger

Table 1, again

**Table 1 Cross sectional (GMM) estimates
History and structural policy shape economic performance**

Cross section	Full data set		Settler mortality data set	
Dep. variable	<i>structural policy</i>	<i>output/worker</i>	<i>structural policy</i>	<i>output/worker</i>
<i>structural policy</i>		3.81*** (0.66)		5.17*** (1.06)
<i>European speakers</i>	0.21*** (0.06)		0.33*** (0.09)	
<i>predicted trade share</i>	0.09*** (0.03)		0.05 (0.04)	
Excl. instr., F	11.01***		6.82***	
Over-id (df), chi-2		2.39(1)		0.61(1)
N. obs	98	98	58	58

**Table 1 Cross sectional (GMM) estimates
History and structural policy shape economic performance**

Cross section	Full data set		Settler mortality data set			
Dep. variable	<i>structural policy</i>	<i>output/worker</i>	<i>structural policy</i>	<i>output/worker</i>	<i>structural policy</i>	<i>output/worker</i>
<i>structural policy</i>		3.81*** (0.66)		5.17*** (1.06)		9.00*** (2.57)
<i>European speakers</i>	0.21*** (0.06)		0.33*** (0.09)			
<i>predicted trade share</i>	0.09*** (0.03)		0.05 (0.04)			
<i>settler mortality</i>					-0.06** (0.02)	
Excl. instr., F	11.01***		6.82***		5.98**	
Over-id (df), chi-2		2.39(1)		0.61(1)		
N. obs	98	98	58	58	59	59

Lessons of these results ?

structural policies do shape long-run economic performance

Western influence \Rightarrow better policies via “good institutions”

Suggestive, but vague

little guidance for reform

4. Constitutions, structural policy and performance

How think about growth-promoting structural policies ?

benefits to broad groups in population

benefits stable over time

What does theory suggest ?

certain constitutional rules better promote such policies

parliamentary governments (serve broad, stable majorities)

proportional elections (serve broad majorities)

perhaps, democracy as such (allows wide participation)

natural to see effects on whole clusters of policies

What do data suggest ?

P-T (2003) studied cross section of democracies only
extend with richer data: non-democracies and panel

Empirical strategy

cross section: Are indicators for constitutional rules

Q1 significantly related to *structural policy*
and exogenous to *output/worker* (*GDP*, *TFP*) ?

Q2 plausible links from history to current policy ?

panel: Do constitutional reforms

Q3 change *structural policy*, and performance ?

Do constitutions shape structural policy?

add indicators alongside two H-J instruments

Figure 6

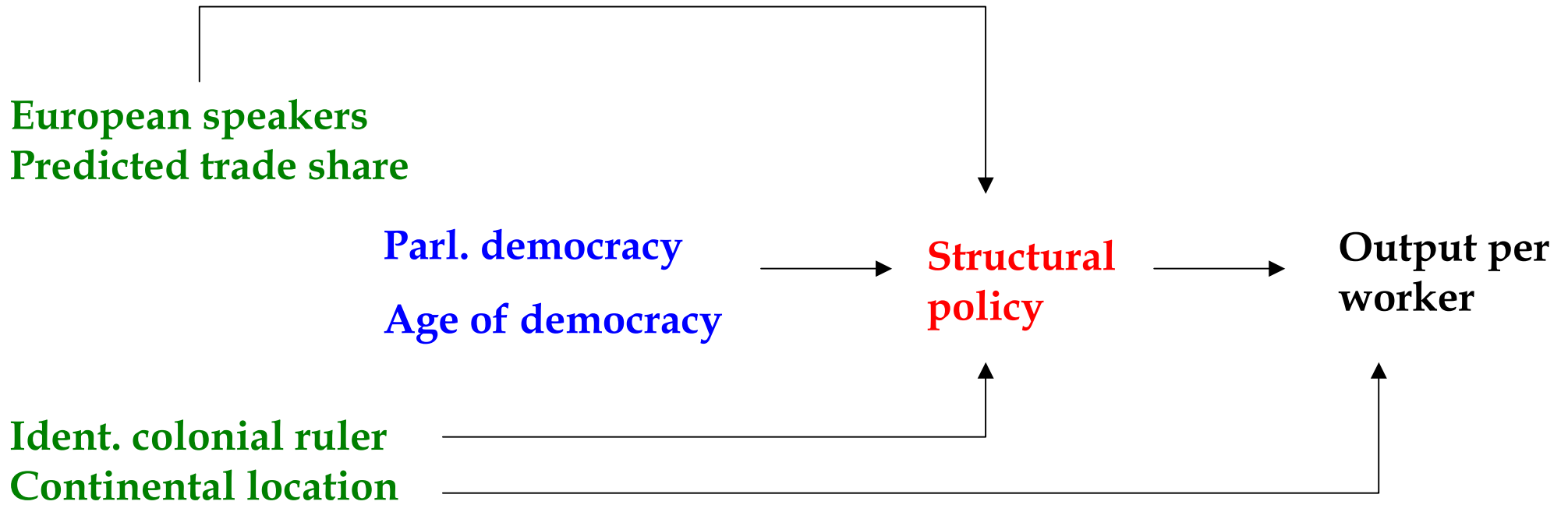


Figure 6
Do constitutions shape structural policy ?

Results (Q1)

parliamentary dem. and age of dem.

do have significant effect on *structural policy*

effect on output/worker of *parl. dem.* > 50%

exogeneity (over-id) tests do not reject

similar results for all performance measures

Table 2

**Table 2 Cross sectional (GMM) estimates
Constitutions too shape current policy and performance**

Cross section	Full data	set
Dep. variable	<i>structural policy</i>	<i>output/ worker</i>
<i>structural policy</i>		3.59*** (0.64)
<i>parliamentary democracy</i>	0.10** (0.05)	
<i>age of democracy</i>	0.32*** (0.09)	
Excl. instr.	10.50***	
Over-id (df, all-1)		3.03(3)
Over-id (df, con)		0.68(2)
N. obs	97	97

**Table 2 Cross sectional (GMM) estimates
Constitutions too shape current policy and performance**

Cross section	Full data set			
Dep. variable	<i>structural policy</i>	<i>output/worker</i>	<i>GDP per capita</i>	<i>TFP</i>
<i>structural policy</i>		3.59*** (0.64)	3.91*** (0.70)	1.88*** (0.39)
<i>parliamentary democracy</i>	0.10** (0.05)			
<i>age of democracy</i>	0.32*** (0.09)			
Excl. instr.	10.50***			12.68***
Over-id (df, all-1)		3.03(3)	4.45(3)	2.35(3)
Over-id (df, con)		0.68(2)	0.89(2)	1.34(2)
N. obs	97	97	97	86

**Table 2 Cross sectional (GMM) estimates
Constitutions too shape current policy and performance**

Cross section	Full data set				Settler mortality data set			
Dep. variable	<i>structural policy</i>	<i>output/worker</i>	<i>GDP per capita</i>	<i>TFP</i>	<i>structural policy</i>	<i>output/worker</i>	<i>GDP per capita</i>	<i>TFP</i>
<i>structural policy</i>		3.59*** (0.64)	3.91*** (0.70)	1.88*** (0.39)		4.78*** (0.86)	5.22*** (0.85)	2.05*** (0.56)
<i>parliamentary democracy</i>	0.10** (0.05)				0.17** (0.08)			
<i>age of democracy</i>	0.32*** (0.09)				0.34** (0.15)			
Excl. instr.	10.50***			12.68***	5.88***			5.11**
Over-id (df, all-1)		3.03(3)	4.45(3)	2.35(3)		1.94(3)	2.47(3)	1.84(3)
Over-id (df, con)		0.68(2)	0.89(2)	1.34(2)		1.39(2)	1.64(2)	0.98(2)
N. obs	97	97	97	86	57	57	57	48

5. History, constitutions and structural policy

Do constitutions link history to current policy ?

instrument for constitutional rules by

settler mortality and

constitutional birth 21-50, 51-80

when explaining *structural policy*

Figure 7

Settler mortality
Constitutional birth



Parl. democracy
Age of democracy



Structural
policy

Ident. colonial ruler
Continental location



Figure 7
Do constitutions link history to current policy ?

Results (Q2)

indicate that form of democracy links history and policy
can't reject *settler mortality* shapes current policy only
through *parliamentary dem.* and *age of dem.*

Table 3

Table 3 Cross sectional (GMM) estimates
Constitutions: a missing link between history and structural policy?

Cross section	Settler mortality data set	
Dep. variable	<i>parliamentary democracy</i>	<i>structural policy</i>
<i>parliamentary democracy</i>		0.31** (0.16)
<i>age of democracy</i>		0.38*** (0.14)
<i>settler mortality</i>	-0.10** (0.04)	
<i>constitutional birth 51-80</i>	0.25** (0.11)	
Excl. instr.	4.75**	
Over-id (df)		0.31(1)
N. obs	57	57

Table 3 Cross sectional (GMM) estimates
Constitutions: a missing link between history and structural policy?

Cross section	Settler mortality data set			
Dep. variable	<i>parliamentary democracy</i>	<i>structural policy</i>	<i>age of democracy</i>	<i>structural policy</i>
<i>parliamentary democracy</i>		0.31** (0.16)		0.18** (0.08)
<i>age of democracy</i>		0.38*** (0.14)		0.64** (0.30)
<i>settler mortality</i>	-0.10** (0.04)		-0.05** (0.02)	
<i>constitutional birth 51-80</i>	0.25** (0.11)		0.15*** (0.06)	
Excl. instr.	4.75**		4.73**	
Over-id (df)		0.31(1)		0.58(1)
N. obs	57	57	57	57

Table 3 Cross sectional (GMM) estimates
Constitutions: a missing link between history and structural policy?

Cross section	Settler mortality data set						
Dep. variable	<i>parliamentary democracy</i>	<i>structural policy</i>	<i>age of democracy</i>	<i>structural policy</i>	<i>parliamentary democracy</i>	<i>age of democracy</i>	<i>structural policy</i>
<i>parliamentary democracy</i>		0.31** (0.16)		0.18** (0.08)			0.49*** (0.19)
<i>age of democracy</i>		0.38*** (0.14)		0.64** (0.30)			-0.05 (0.25)
<i>settler mortality</i>	-0.10** (0.04)		-0.05** (0.02)		-0.08** (0.04)	-0.04* (0.02)	
<i>constitutional birth 51-80</i>	0.25** (0.11)		0.15*** (0.06)		0.23** (0.11)	0.07 (0.05)	
<i>constitutional birth 21-50</i>					-0.26 (0.17)	0.26*** (0.09)	
Excl. instr.	4.75**		4.73**		2.96**	5.61***	
Over-id (df)		0.31(1)		0.58(1)			0.03(1)
N. obs	57	57	57	57	57	57	57

6. Constitutional reforms

Exploit time variation around reforms

many switches into (and out of) democracy

difference-in-difference (IV) estimates

hold constant quality of democracy, *Gastil score* (0-1)

Results (Q3)

reforms introducing *parl. dem.*

do raise performance via *structural policy*

do appear exogenous to performance

Table 4

Table 4 Panel estimates
Constitutional reforms improve growth-promoting policies

Panel	Yearly	
Dep. variable	<i>structural policy</i>	<i>output/worker</i>
<i>structural policy</i>		1.80*** (0.58)
<i>parliamentary</i>	0.05*** (0.01)	
<i>democracy</i>	-0.03*** (0.01)	
<i>Gastil score</i>	0.06*** (0.01)	0.00 (0.04)
Over-id(df)		0.45(1)
Estimation	FEIV	
N. obs (countries)	1428 (102)	

Table 4 Panel estimates
Constitutional reforms improve growth-promoting policies

Panel	Yearly		
Dep. variable	<i>structural policy</i>	<i>output/worker</i>	<i>output/worker/</i>
<i>structural policy</i>		1.80*** (0.58)	1.80 (1.38)
<i>parliamentary</i>	0.05*** (0.01)		
<i>democracy</i>	-0.03*** (0.01)		
<i>Gastil score</i>	0.06*** (0.01)	0.00 (0.04)	0.00 (0.02)
Over-id(df)		0.45(1)	
Estimation	FEIV		country clusters
N. obs (countries)	1428 (102)		

Table 4 Panel estimates
Constitutional reforms improve growth-promoting policies

Panel	Yearly				
Dep. variable	<i>structural policy</i>	<i>output/worker</i>	<i>output/worker/</i>	<i>GADP</i>	<i>output/worker</i>
<i>structural policy</i>		1.80*** (0.58)	1.80 (1.38)		
<i>GADP</i>					0.68** (0.29)
<i>parliamentary</i>	0.05*** (0.01)			0.13*** (0.02)	
<i>democracy</i>	-0.03*** (0.01)			-0.05*** (0.01)	
<i>Gastil score</i>	0.06*** (0.01)	0.00 (0.04)	0.00 (0.02)	0.04** (0.02)	0.05* (0.03)
Over-id(df)		0.45(1)			2.43(1)
Estimation	FEIV		country clusters	FEIV	
N. obs (countries)	1428 (102)			1505 (116)	

Table 4 Panel estimates
Constitutional reforms improve growth-promoting policies

Panel	Yearly				5-year		
Dep. variable	<i>structural policy</i>	<i>output/worker</i>	<i>output/worker/</i>	<i>GADP</i>	<i>output/worker</i>	<i>structural policy</i>	<i>output/worker</i>
<i>structural policy</i>		1.80*** (0.58)	1.80 (1.38)				2.26** (1.15)
<i>GADP</i>					0.68** (0.29)		
<i>parliamentary</i>	0.05*** (0.01)			0.13*** (0.02)		0.05** (0.02)	
<i>democracy</i>	-0.03*** (0.01)			-0.05*** (0.01)		-0.06*** (0.01)	
<i>Gastil score</i>	0.06*** (0.01)	0.00 (0.04)	0.00 (0.02)	0.04** (0.02)	0.05* (0.03)	0.10*** (0.01)	-0.07 (0.10)
Over-id(df)		0.45(1)			2.43(1)		0.02(1)
Estimation	FEIV		country clusters	FEIV		FEIV	
N. obs (countries)	1428 (102)			1505 (116)		380 (102)	

7. Where now ?

Empirical work

check robustness of results here

alternative data, specifications, and methods

study more detailed constitutional measures

temporary vs. permanent, gradual vs. sudden, reforms

Theoretical work

generate new, sharper predictions

model structural policy choice under different constitutions

endogenize choice of constitution, and when to reform

General message

combining insights from political economics and development
may teach us important lessons about institutions and growth