Economic Development, Institutions and Democracy

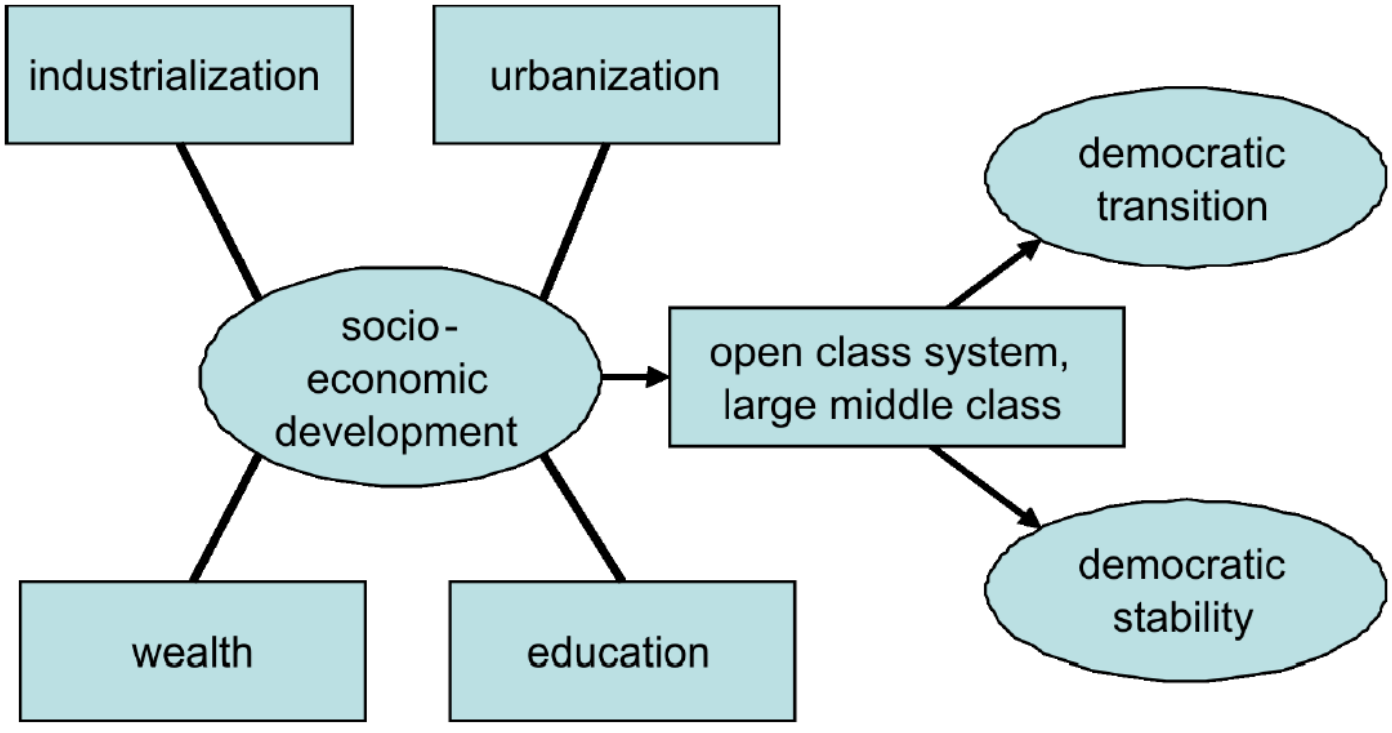
Petros G. Sekeris
TBS Business School

IOEA 2026
Carghèse, April 8, 2026

Income and Democracy - a debated question

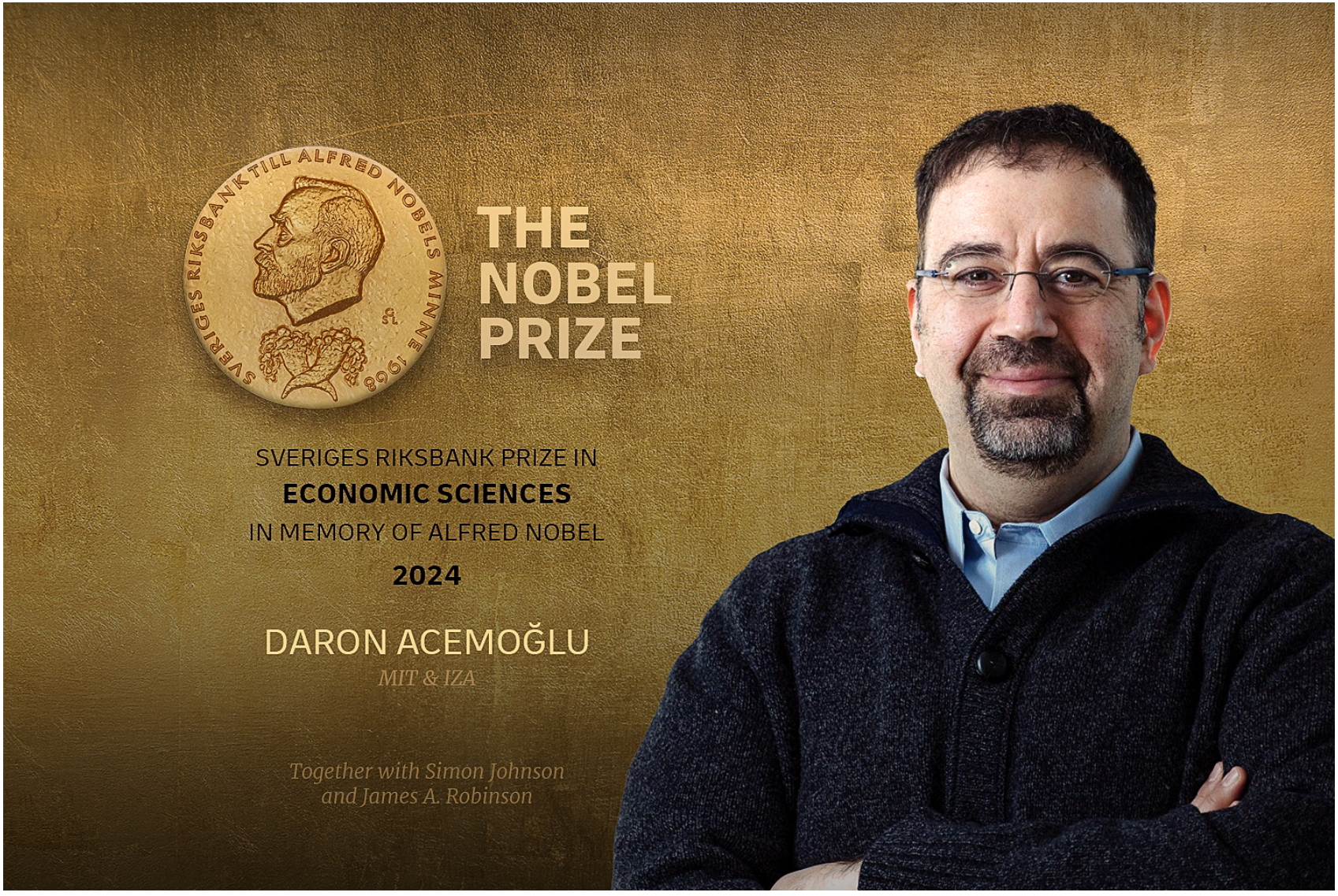
- Can economic development bring about 'political development'/democratization?
- Question that has preoccupied thinkers at least as far back as Aristotle
- Lipset (APSR 1959) builds on these ideas to propose the **modernization hypothesis**:
  "*The more well-to-do a nation, the greater the chances that it will sustain democracy*" (p.75)
- What is the mechanism?
  - Socio-economic development creates a combination of *industrialization*, *urbanization*, *wealth*, and *education* giving rise to an 'active' middle class

The Modernization Hypothesis (Lipset)



Source: Wucherpfennig and Deutsch, 2009

“Institutionalist” view



"Institutionalist" view

- Political developments rooted in institutions ("critical junctures" of Acemoglu and Robinson)
  - Geography and climate of colonies determined early institutions + institutional persistence (Acemoglu and co-authors)
  - Type of crops $\Rightarrow$ collectivist *vs* individualistic society (Ang et al. 2021)
  - Colonial duration $\Rightarrow$ current democratic levels (Olsson 2009)
- Relatedly, culture matters for explaining democracy (Alesina and Giuliano 2015, Gorodnichenko and Roland 2021)

$\Rightarrow$ If institutions are accounted for, modernization hypothesis could be disproved

"Institutionalist" view

- Political developments rooted in institutions ("critical junctures" of Acemoglu and Robinson)
  - Geography and climate of colonies determined early institutions + institutional persistence (Acemoglu and co-authors)
  - Type of crops $\Rightarrow$ collectivist *vs* individualistic society (Ang et al. 2021)
  - Colonial duration $\Rightarrow$ current democratic levels (Olsson 2009)
- Relatedly, culture matters for explaining democracy (Alesina and Giuliano 2015, Gorodnichenko and Roland 2021)

$\Rightarrow$ If institutions are accounted for, modernization hypothesis could be disproved

"Institutionalist" view

- Political developments rooted in institutions ("critical junctures" of Acemoglu and Robinson)
  - Geography and climate of colonies determined early institutions + institutional persistence (Acemoglu and co-authors)
  - Type of crops $\Rightarrow$ collectivist *vs* individualistic society (Ang et al. 2021)
  - Colonial duration $\Rightarrow$ current democratic levels (Olsson 2009)
- Relatedly, culture matters for explaining democracy (Alesina and Giuliano 2015, Gorodnichenko and Roland 2021)

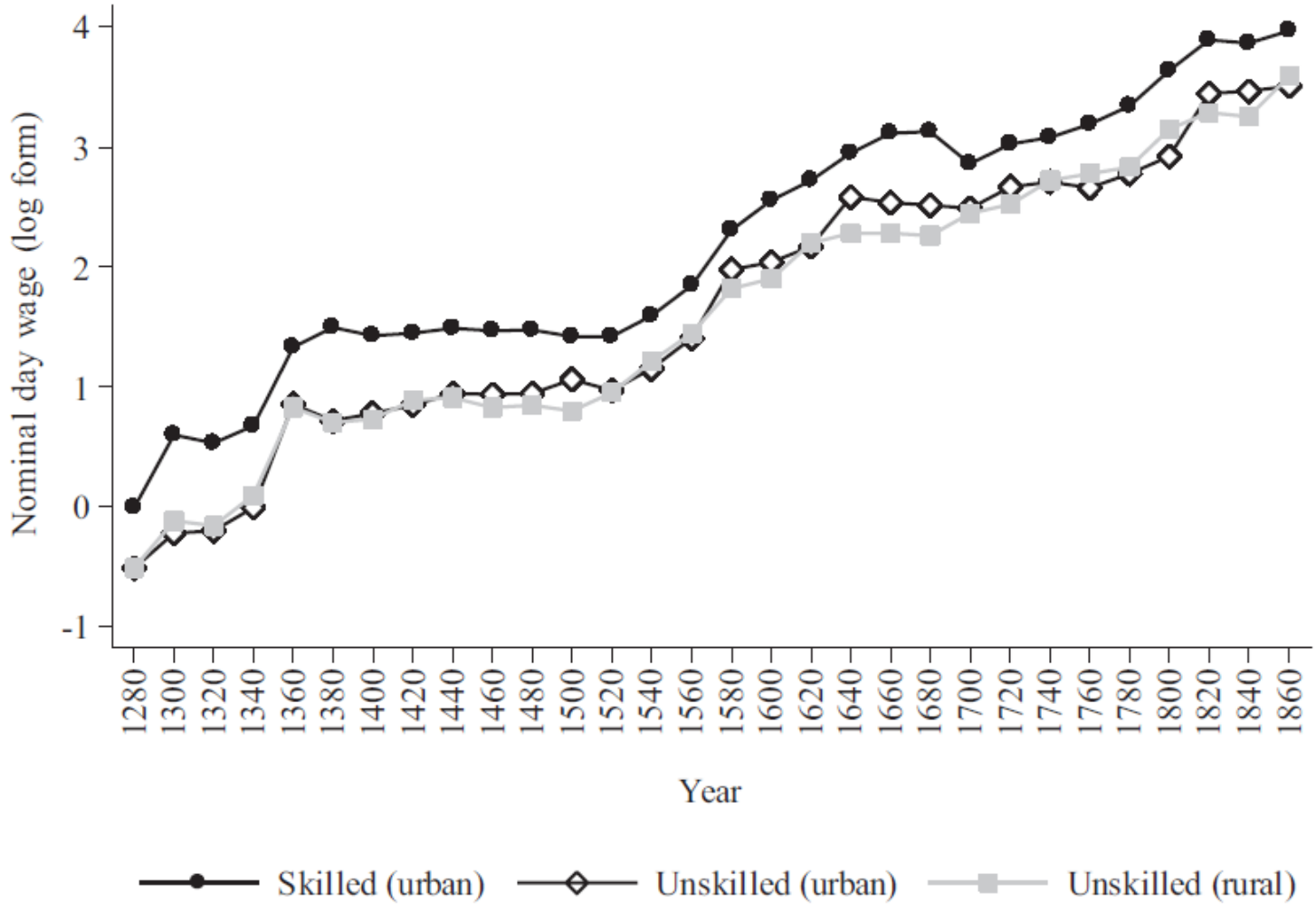
$\Rightarrow$ If institutions are accounted for, modernization hypothesis could be disproved

Empirical evidence - a contrasted story

"Income" $\Rightarrow$ regime type

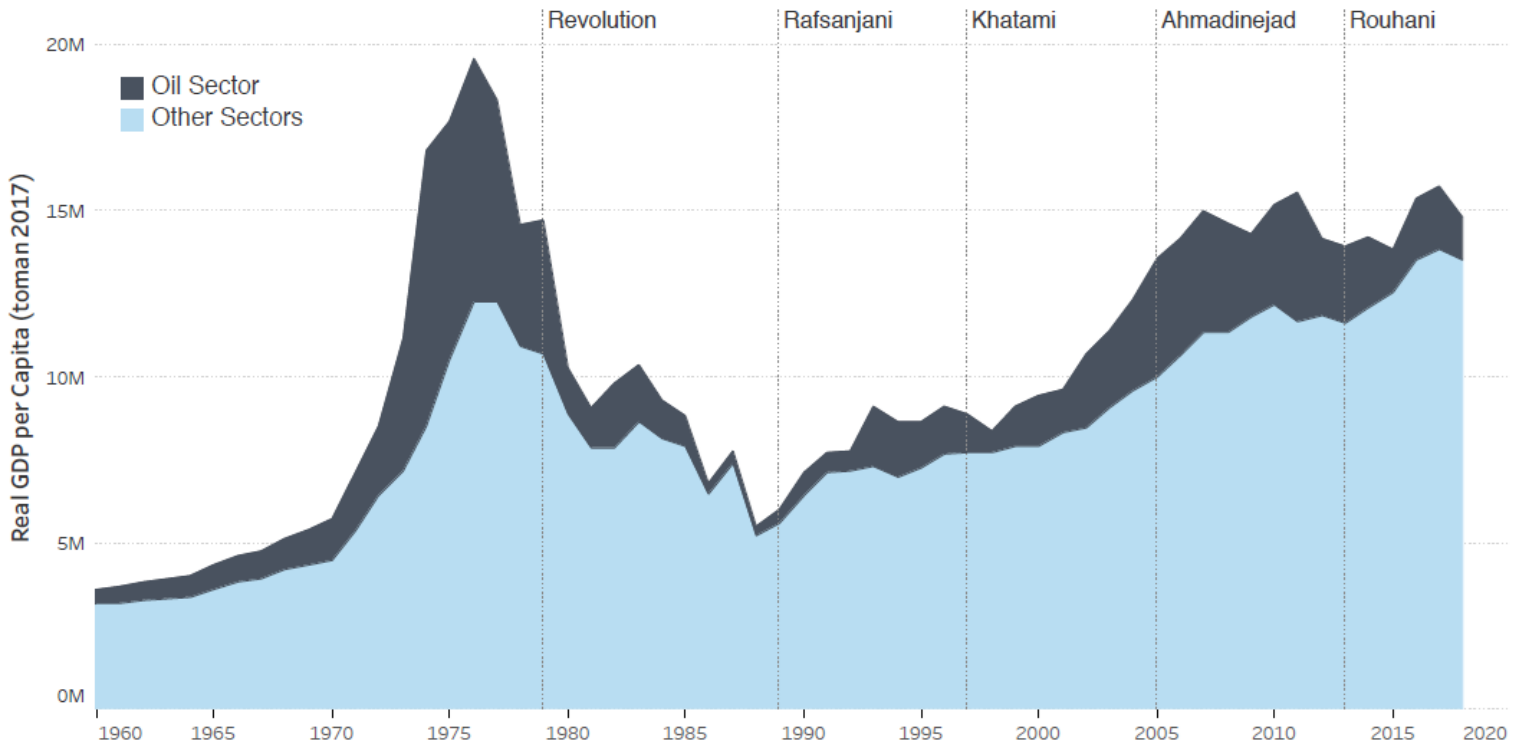
- causal link: Barro (JPE 1999), Treisman (ARPS 2020)
- 'semi-causal' link: Przeworski and Limongi (World Politics 1997)
- **no causal link**: Acemoglu et al. (AER 2008, JME 2009)
- re-establishment of causal link: Benhabib et al. (EL 2013), Cervelatti et al. (AER 2014), Che et al. (JCE 2013)
- "reverse sign" causal link: Burke and Leigh (AEJ:Macro 2010), Aidt and Jensen (EER 2014), Franck (REStat 2016)

The French revolution - 1789



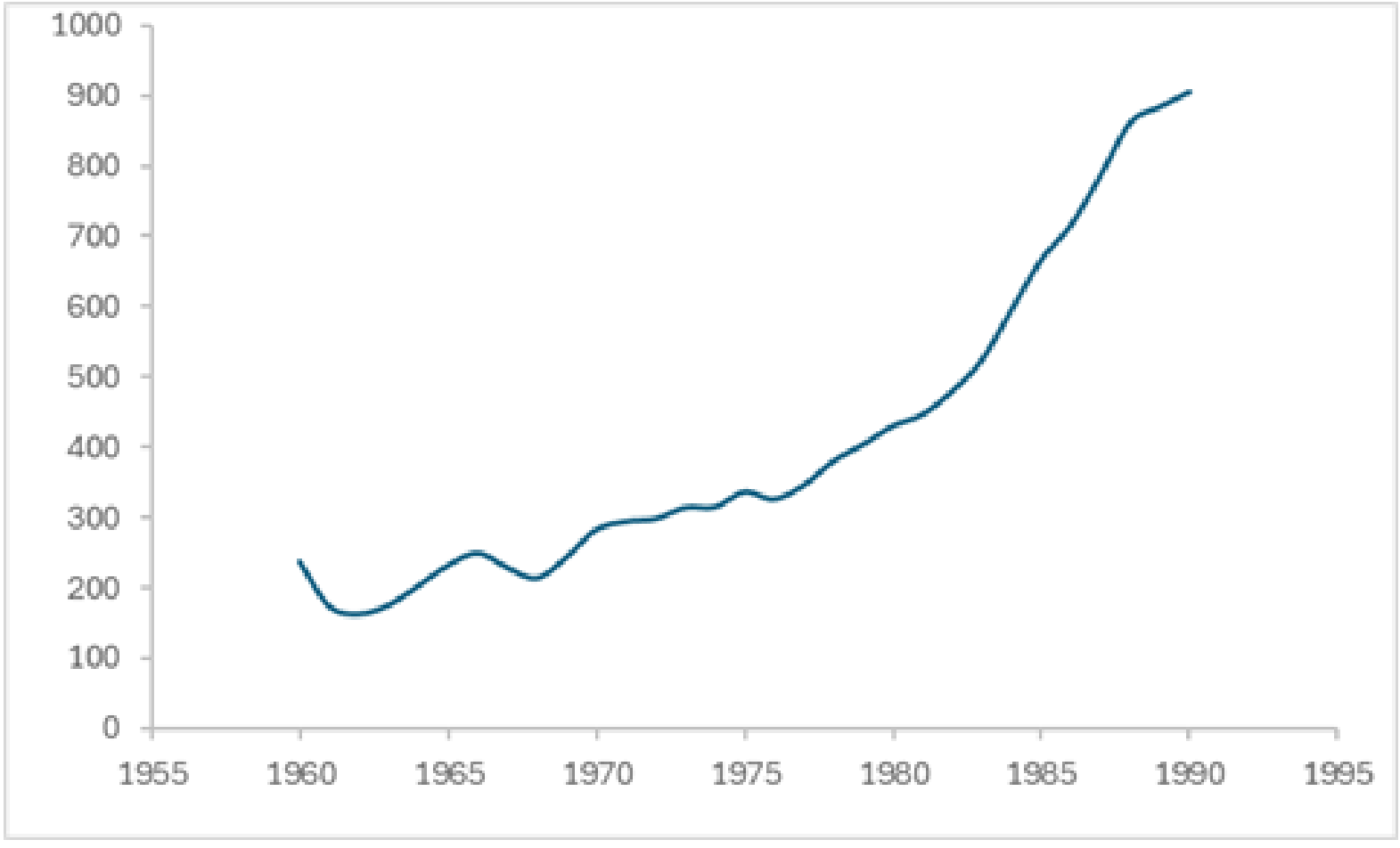
Source: Ridolfi 2019

The Iranian revolution - 1979



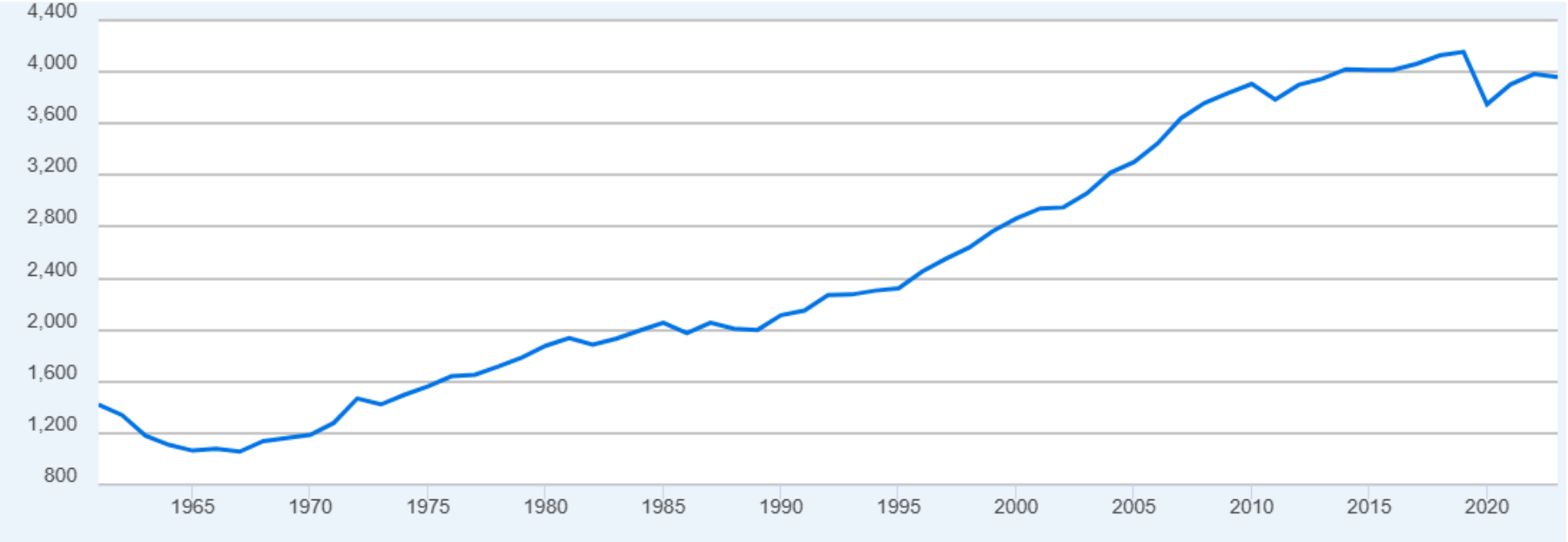
Source: Azadi 2019

Tienanmen square protest - 1989



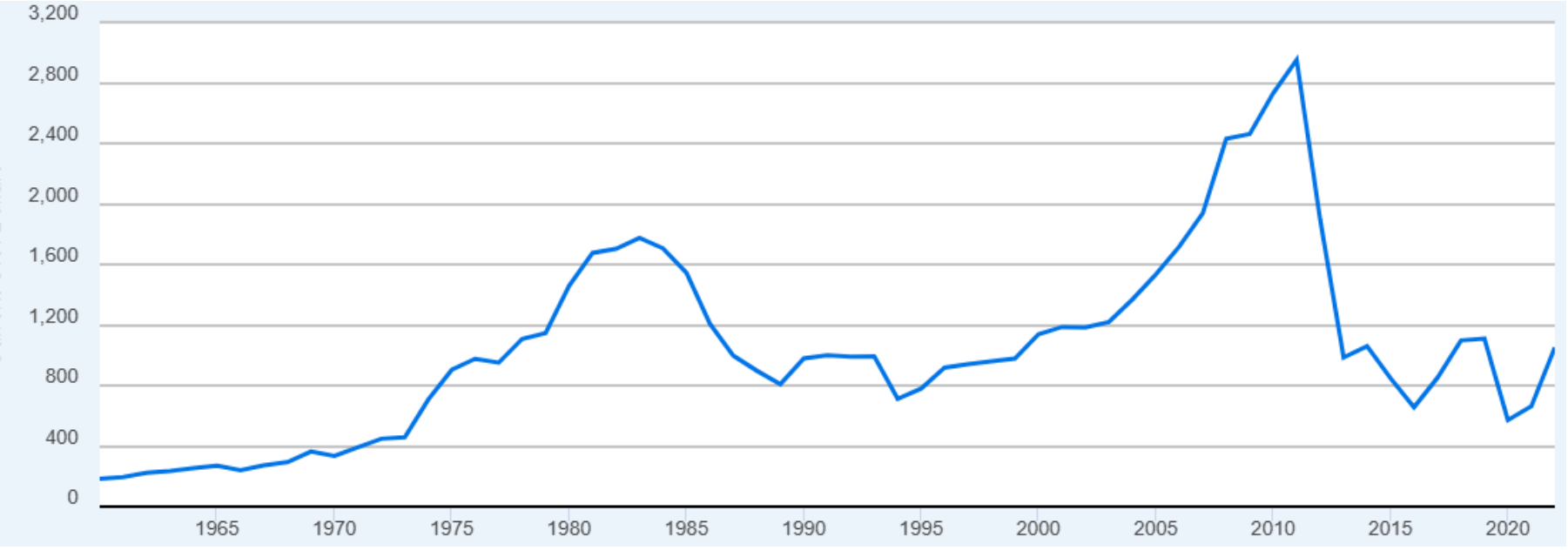
Source: FRED (Federal Reserve of St Louis) - GDP/cap in 2010 US $

Tunisia's Jasmin revolution - 2011



Source: FRED (Federal Reserve of St Louis) - GDP/cap in 2010 US $

Syrian revolution - 2011



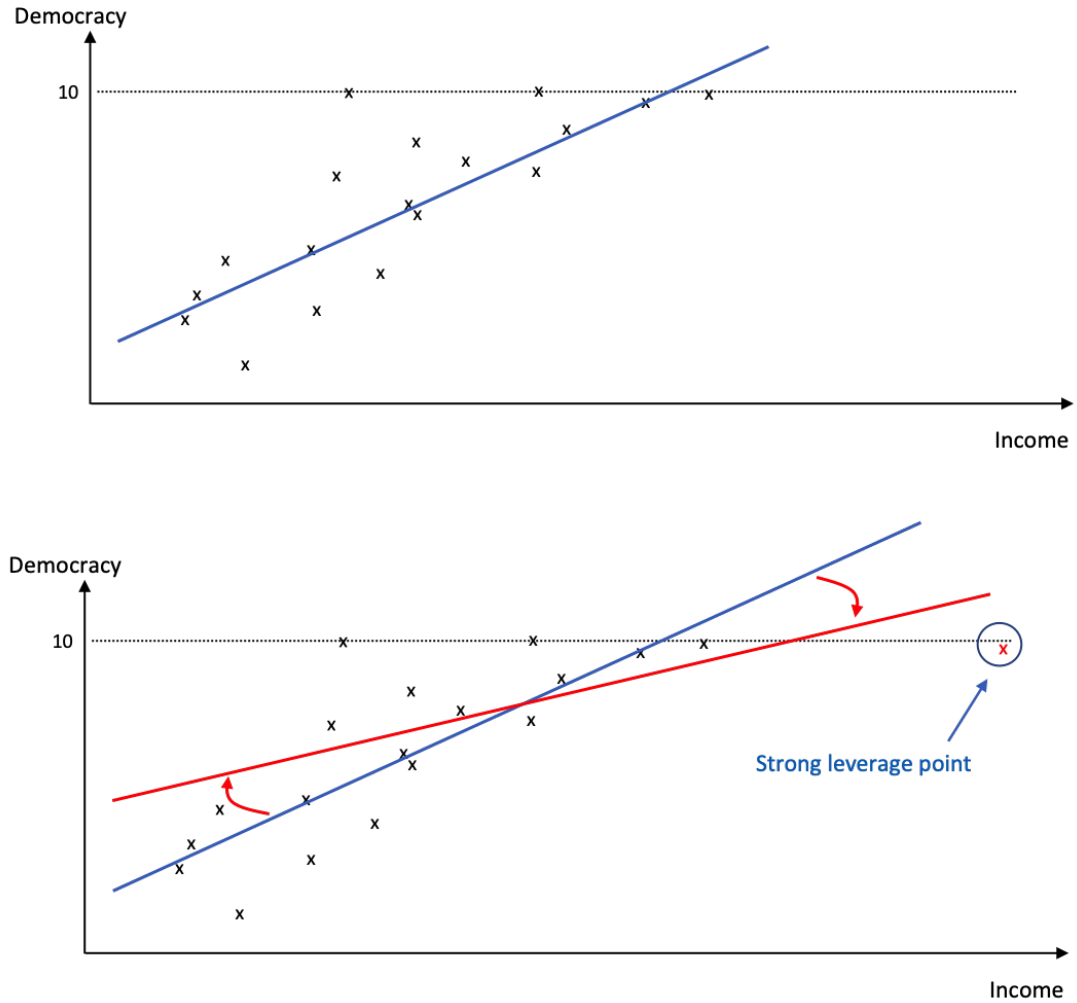
Source: FRED (Federal Reserve of St Louis) - GDP/cap in 2010 US $

Is it so difficult to test effect of income on democracy?

Potential concerns

- Data limitations: data before 1960 is less frequent; and yet "long run" effects
- Important endogeneity concerns (Acemoglu et al. 2019 on Democracy $\Rightarrow$ Income)
- Identification issues:
  - democracy score is capped (next slide)
  - effect may not be monotonic (our approach)

Some empirical considerations - Cap on the 'democracy score'



Leverage effect: see Dehon et al. (Oxf Bulletin of Econ. and Stat. 2009)

Accounting for limitations of earlier analyses

Accounting for "cap on democracy"

- Partially solved with logs, but Benhabib et al. (2013) show that correctly accounting for this re-establishes link

A longer view of history

- The above effect will be particularly present if data does not go back enough in the past
- Adopting a "long run analysis" is shown to re-establish the validity of the Modernization hypothesis by extending dataset to before 1960 (Gundlach and Paldam 2009, Murtin and Wacziarg 2014, Barro 2015)

Accounting for limitations of earlier analyses

Accounting for "cap on democracy"

- Partially solved with logs, but Benhabib et al. (2013) show that correctly accounting for this re-establishes link

A longer view of history

- The above effect will be particularly present if data does not go back enough in the past
- Adopting a "long run analysis" is shown to re-establish the validity of the Modernization hypothesis by extending dataset to before 1960 (Gundlach and Paldam 2009, Murtin and Wacziarg 2014, Barro 2015)

A dearth of theory

- Two types of theories to support or disprove the modenization hypothesis
  1. Logical theories to motivate empirics (education, urbanization and collective action…)
  2. Formal models: you fight for **monetary gains**
     - Acemoglu and Robinson (AER 2005): negative shocks and commitment issues
     - Kotschy and Sunde (SJE 2019): negative shocks in unequal societies lead to democratization
     - Huang (IER 2012): economic growth gives power to different groups in society and thus democratization

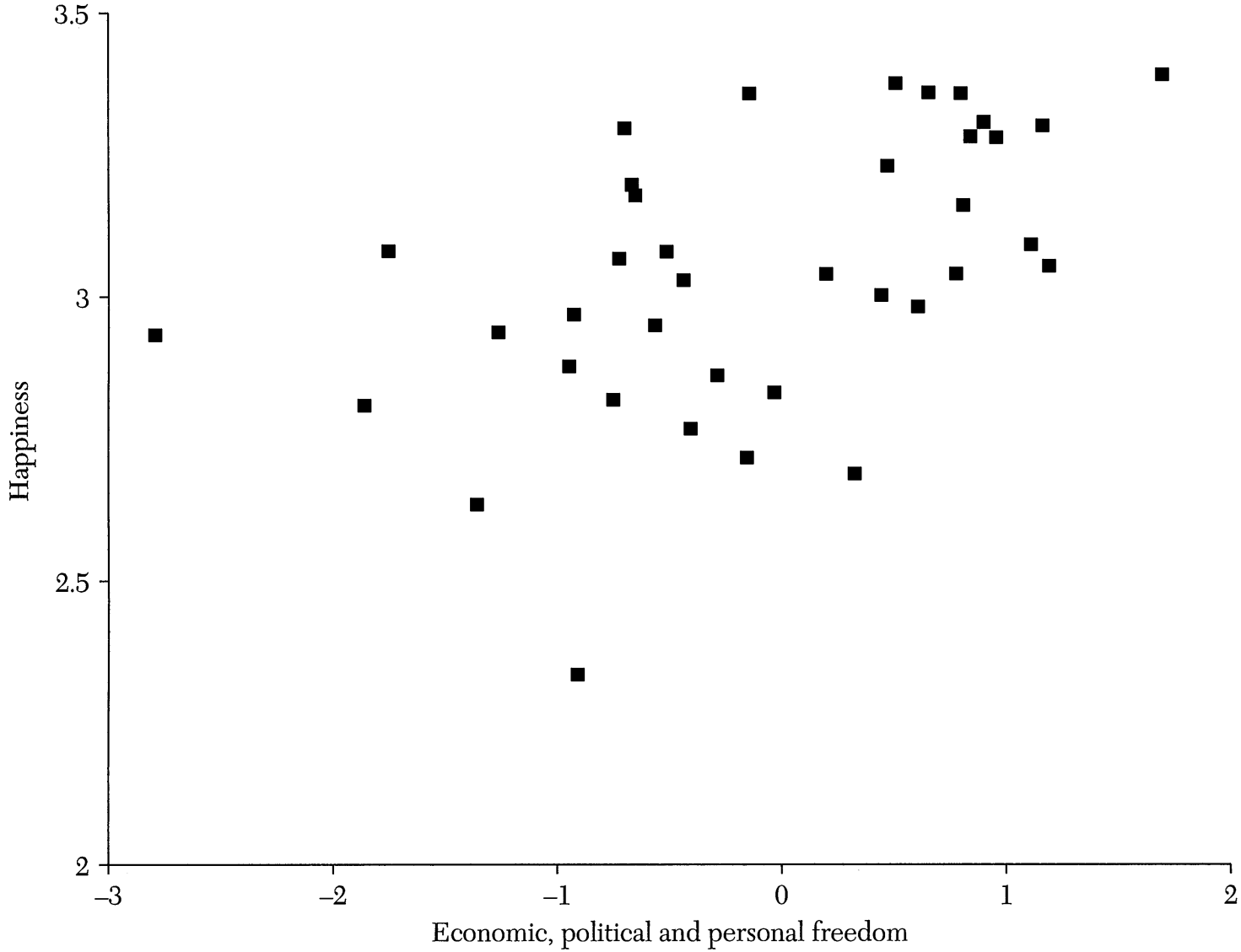
A dearth of theory

- The approach of economics (and formal political science) of seeing in politics only economic questions is quite reductive
- Political scientists have had a wider understanding of 'democratic rights': material *vs* non-material goods (Welzel 2007, Inglehart and Welzel 2010):
  - You value democratic rights *per se*
  - Being able to express political opinions, to decide on non-economic issues (type of education, gender issues, drive left/right, guns laws etc. . .) brings you satisfaction
- This is recognized in some pieces in econ: Besley and Persson (AERi 2019), Gratton and Lee (REStud 2024), Enke et al. (JEEA 2025)

A dearth of theory

- The approach of economics (and formal political science) of seeing in politics only economic questions is quite reductive
- Political scientists have had a wider understanding of 'democratic rights': material *vs* non-material goods (Welzel 2007, Inglehart and Welzel 2010):
  - You value democratic rights *per se*
  - Being able to express political opinions, to decide on non-economic issues (type of education, gender issues, drive left/right, guns laws etc. . .) brings you satisfaction
- This is recognized in some pieces in econ: Besley and Persson (AERi 2019), Gratton and Lee (REStud 2024), Enke et al. (JEEA 2025)

Freedom and happiness



Source: Frey and Sultzer 2002

Our contribution

Debowicz, D., et al. (2025), "**Income and the (Eventual) Rise of Democracy**", *Public Choice*.

- Develop a theoretical model to understand the link
- Test our theory with data
- Uncover a non-monotonic effect of income on democracy

Quiz time!

- Assume citizens value material goods, m and non-material goods, p (i.e. democratic rights, party preference, policy preference...).
- Which utility function seems the most reasonable?

$u(m,p) = \mu(m)f(m) + (1-\mu(m))g(p)$, where $\mu'(m) > 0$

$u(m,p)$ where $u_1, u_2 > 0$, $u_{11}, u_{22} \leq 0$

$u(m,p) = v(m,p) + s(m,p)$ where $v_2 > 0$ and $s_2 > 0$ (for concerned citizens)

Our model

- A representative citizen has utility $U(m,p)$, m the material good, p the democratic rights
- Citizens enjoy utility from democratic rights per se: freedom of expression, policies on non-material matters more aligned with own preferences (type of education, gay rights, religious rights...)

$$U_m > 0 \ , \ U_{mm} < 0 \ , \ U_p > 0 \ , \ U_{pp} < 0 \ , \ U_{mp} \geq 0$$

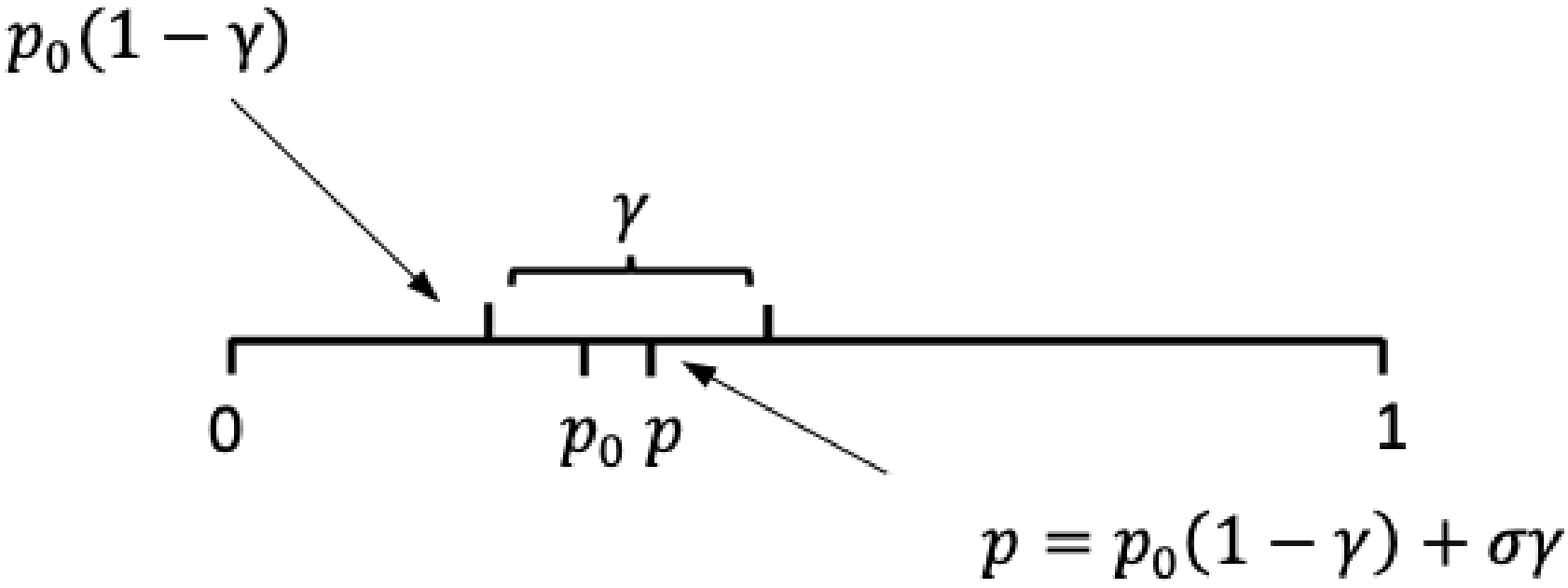
- Complementarity between m and p most natural scenario:
  - Being wealthier w\o democratic rights brings little satisfaction
  - Living in a perfect democracy but being poor brings little satisfaction
  - Veenhoven (2000) indirectly confirms this
- We do not allow for the goods to be adverse

The model

Democratic rights: p

- Unit of democratic rights that are shared between elites and citizens (i.e. bargaining power)
- Initial rights: p_0 rights to citizens, $(1 - p_0)$ to elites
- Contestable rights γ: you can increase your rights by an increment of the existing rights
- You can protest/lobby to increase rights $\sigma = \frac{x}{x+y}$.

Political rights



The model

Material goods: m

- Opportunity cost of lobbying/protesting/fighting: $w[e - x]$
- We also allow for democratic rights to influence redistribution of public wealth/allocation of public goods: pR
  - R are the public resources/rents to redistribute
  - p stands for the share controlled by the citizens
- combining all the ingredients:

Utility of the citizen

$$U = U(w[e - x] + pR, p)$$

Utility of the elites

$$V = (1 - p)R - y$$

The model

Benchmark: only fight for political rights [robust to relaxing that]

Utility of the citizen

$$U = U(w[e - x] + \cancel{pR}, p)$$

Utility of the elites

$$V = (1 - p)R - y$$

The model - equilibrium

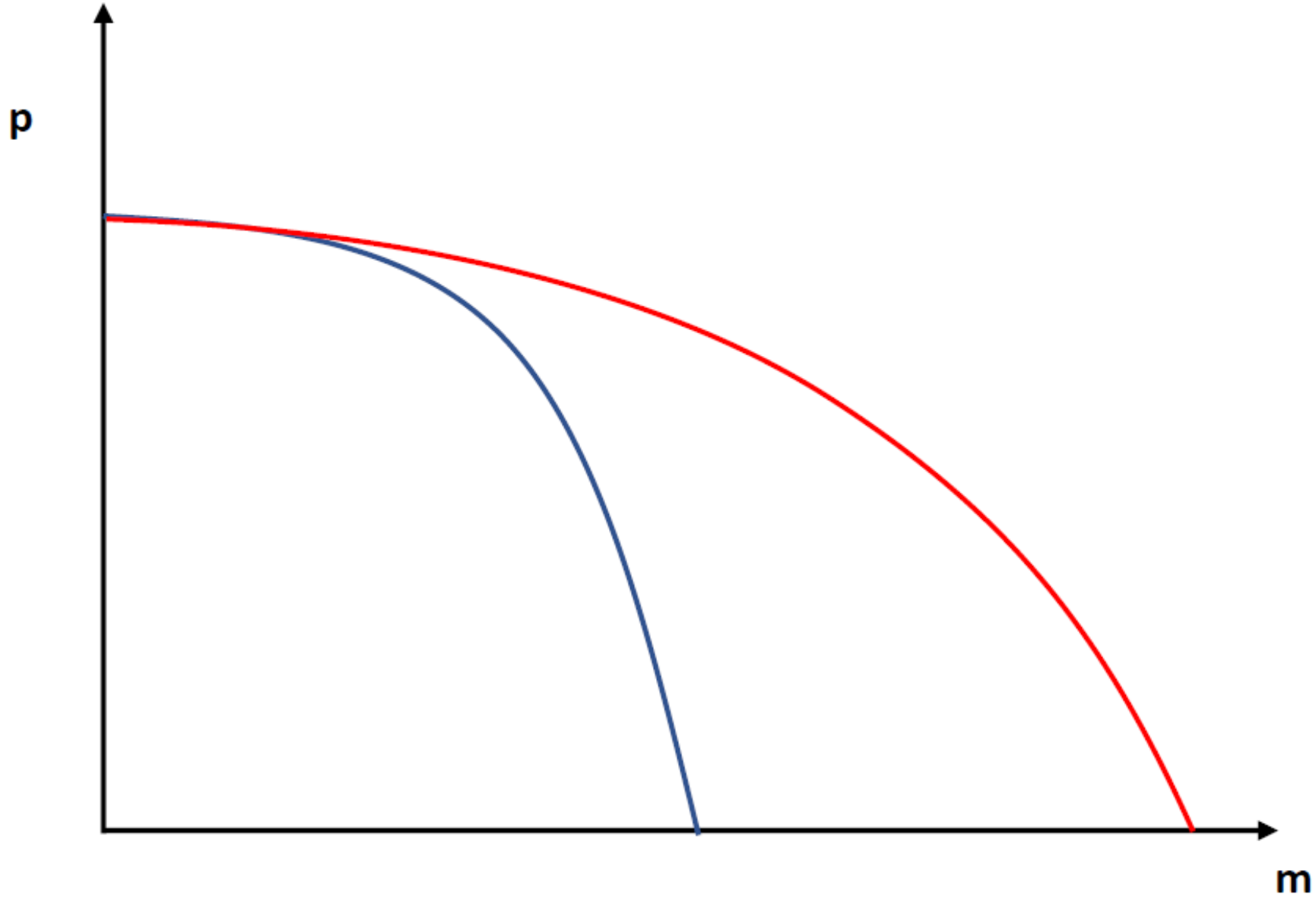
$$\frac{dV}{dy} = 0 \Rightarrow y(x) = [\gamma R x]^2 - x$$

$$\frac{dU}{dx} = \underbrace{\frac{y}{(x+y)^2}\gamma U_p}_{\text{Mgl non-mat. gain}} + \underbrace{-wU_m}_{\text{O.C. of contest}} = 0$$

Or

$$\frac{U_m}{U_p} = |MRS_{mp}| = \frac{y}{(y+x)^2}\frac{\gamma}{w} \quad \{\text{Kind of MRT}\}$$

PPF - increasing w reduces "MRT" (fixed y)



The model - equilibrium

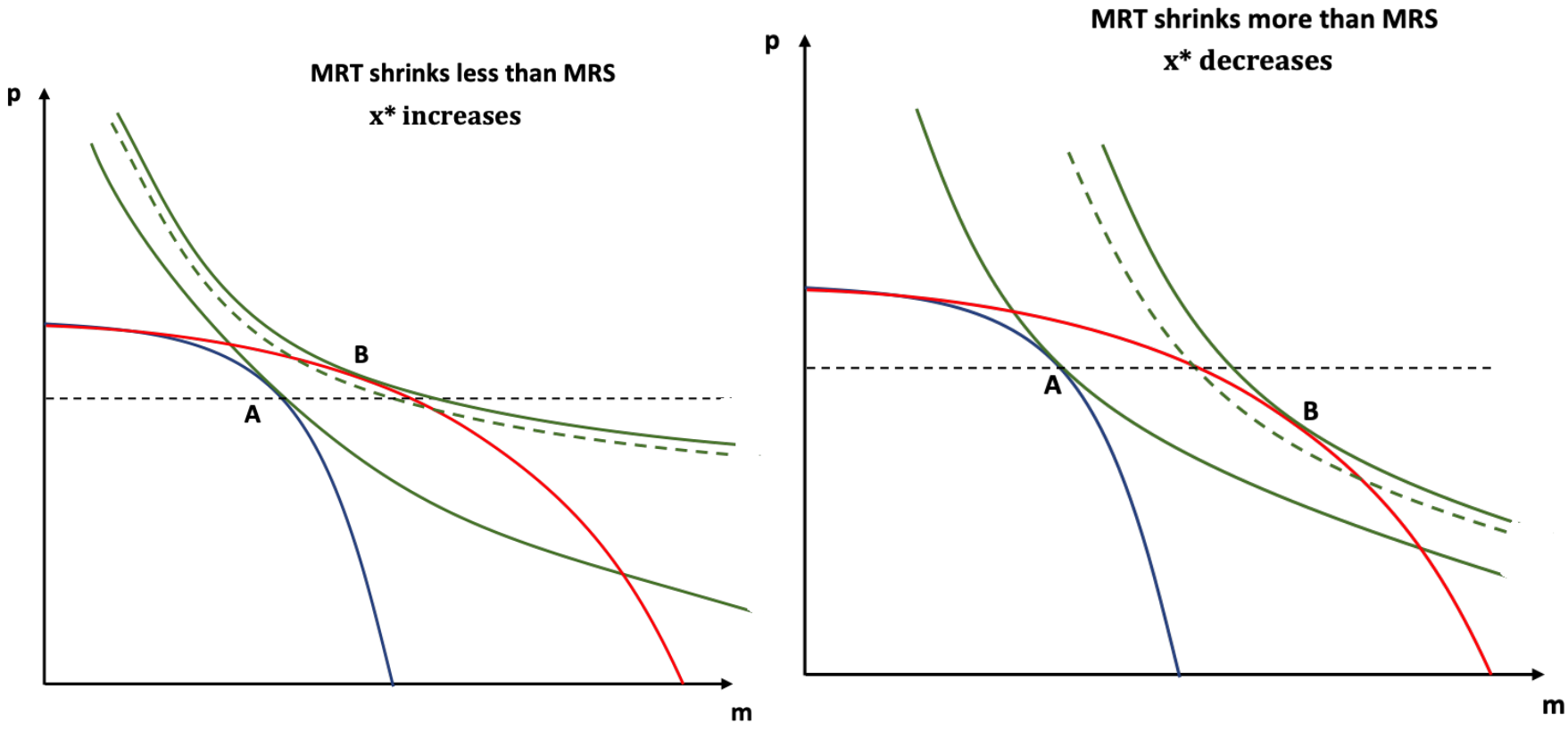
$$\left|MRS_{mp}\right| = \frac{y}{(y+x)^2}\frac{\gamma}{w} \quad \{\text{Kind of MRT}\}$$

Conditions jointly define the equilibrium: x^*, y^*, σ^*, p^*

$$p^* = p_0(1-\gamma) + \gamma\sigma^*$$
$$\sigma^* = \left[\frac{x^*}{\gamma R}\right]^{1/2}$$

$\Rightarrow$ Political rights move monotonically with political activism
$\Rightarrow$ How does political activism vary with w?

Comparative statics: the effect of modernization; ↗ w



Comparative statics: the effect of modernization; $\nearrow w$

$$sign\left[\frac{dx^*}{dw}\right] = -sign\left[m^* MRS_m + MRS\right]$$

$$\frac{\partial x^*}{\partial w} \lessgtr 0 \iff \frac{m\left[U_{mm}U_p - U_m U_{mp}\right]}{\left[U_p\right]^2} + \frac{U_m}{U_p} \gtrless 0.$$

Assume (for clarity) $U_{mp} = 0$

Poor countries (low m) more likely to experience a drop in democracy:

- Low m
- High MRS (since high U_m)
- If m is really 'scarce', then MU likely not to drop too quickly: MRS_m not too negative

Rich countries more likely to experience an increase in political activism

$\Rightarrow$ U-shaped relationship between income and democracy

Comparative statics: the effect of modernization; $\nearrow w$

$$sign\left[\frac{dx^*}{dw}\right] = -sign\left[m^* MRS_m + MRS\right]$$

$$\frac{\partial x^*}{\partial w} \lessgtr 0 \iff \frac{m\left[U_{mm}U_p - U_m U_{mp}\right]}{\left[U_p\right]^2} + \frac{U_m}{U_p} \gtrless 0.$$

Assume (for clarity) $U_{mp} = 0$

Poor countries (low m) more likely to experience a drop in democracy:

- Low m
- High MRS (since high U_m)
- If m is really 'scarce', then MU likely not to drop too quickly: MRS_m not too negative

Rich countries more likely to experience an increase in political activism

$\Rightarrow$ U-shaped relationship between income and democracy

Empirical validation

- Our theory predicts a U-shaped relationship between income and democracy:
  - In poor countries, increases in wages/income push towards a *substitution* of political activism with 'work'; comparable to wage-labour trade-off for low wages
  - In rich countries, increases in wages/income imply that citizens can afford to reduce work; still earn more, and also devote more time to activism; comparable to a strong income effect in labour economics

Income and Democracy - Acemoglu et al. AER 2008

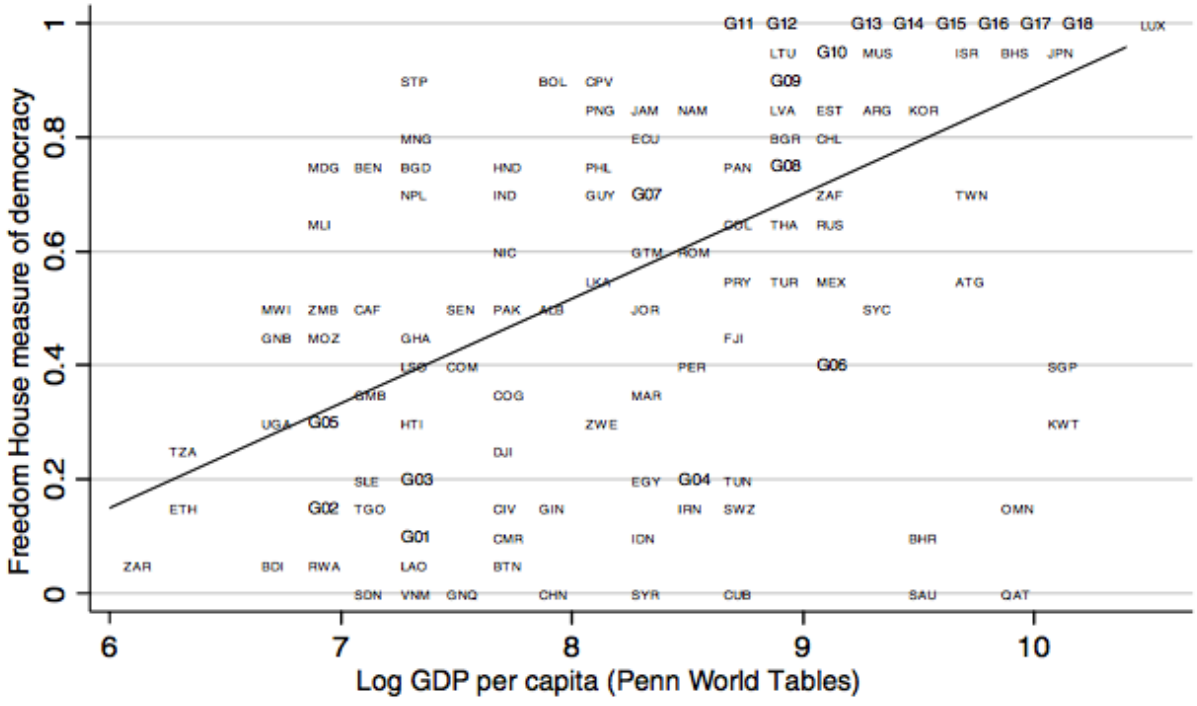


FIGURE 1. DEMOCRACY AND INCOME, 1990S

Estimations with fixed effects

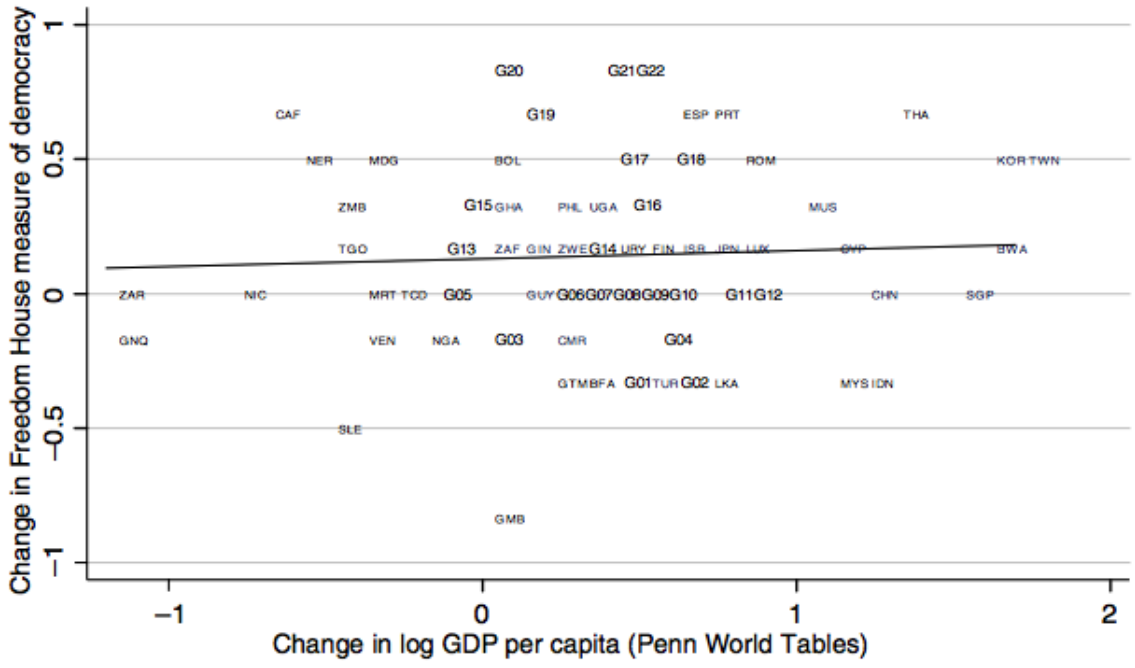


FIGURE 2. CHANGE IN DEMOCRACY AND INCOME, 1970–1995

Estimations with fixed effects

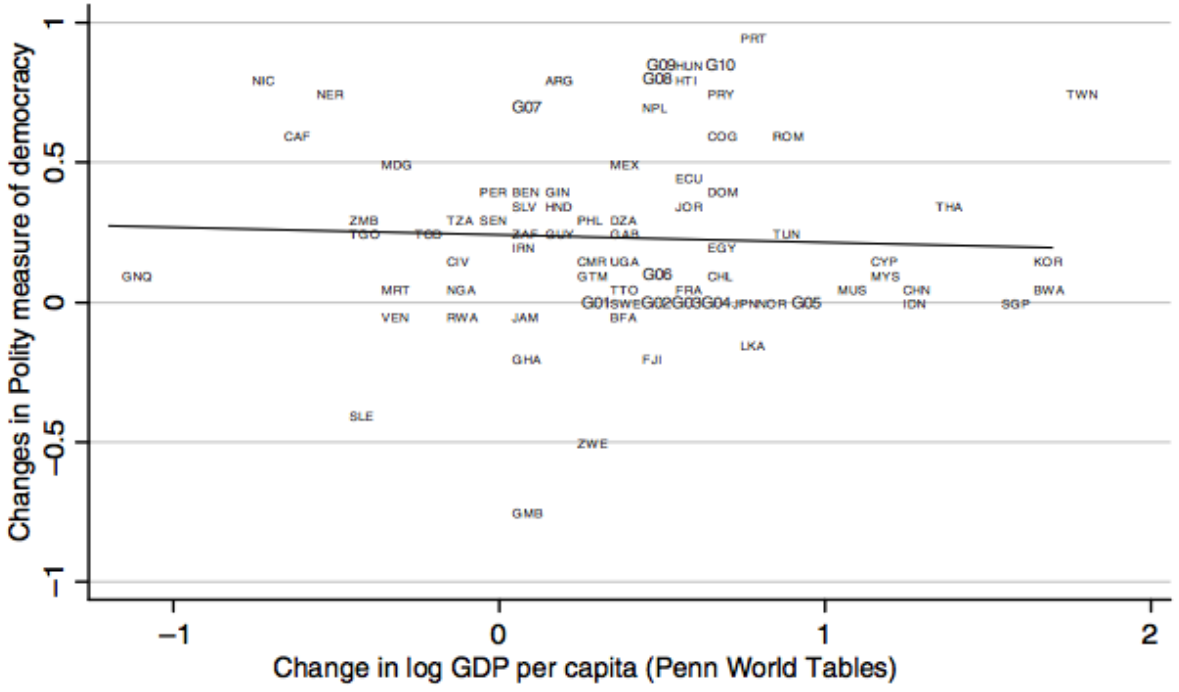
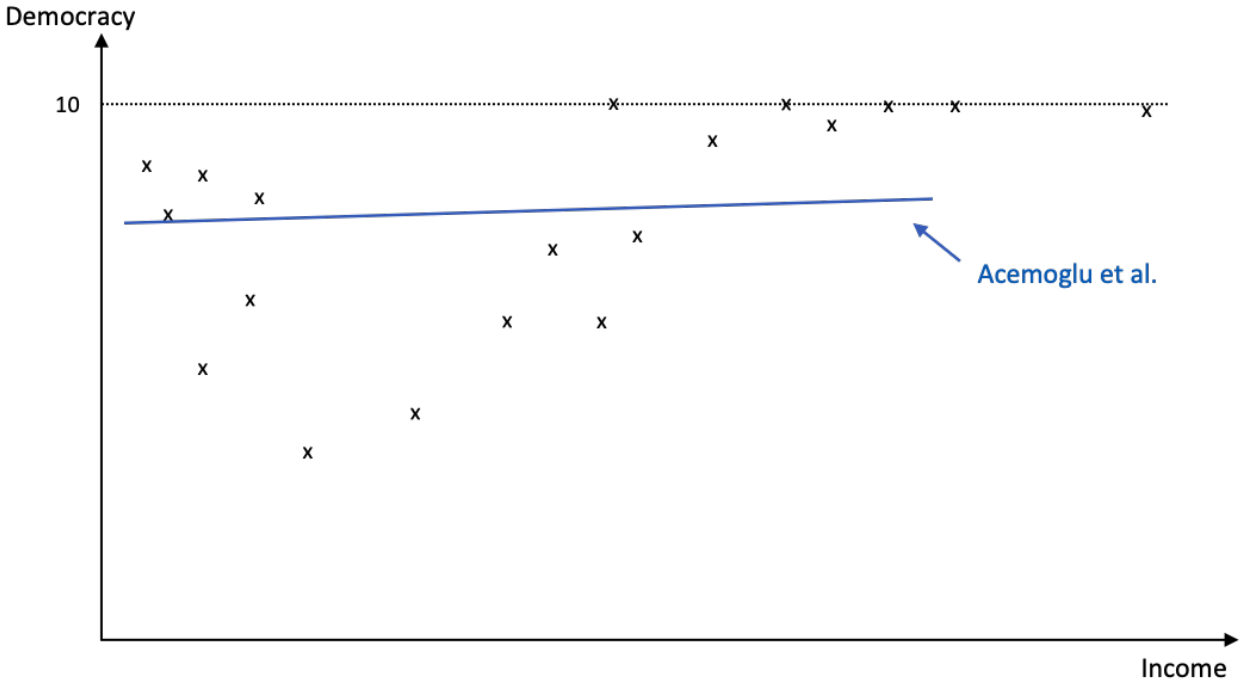
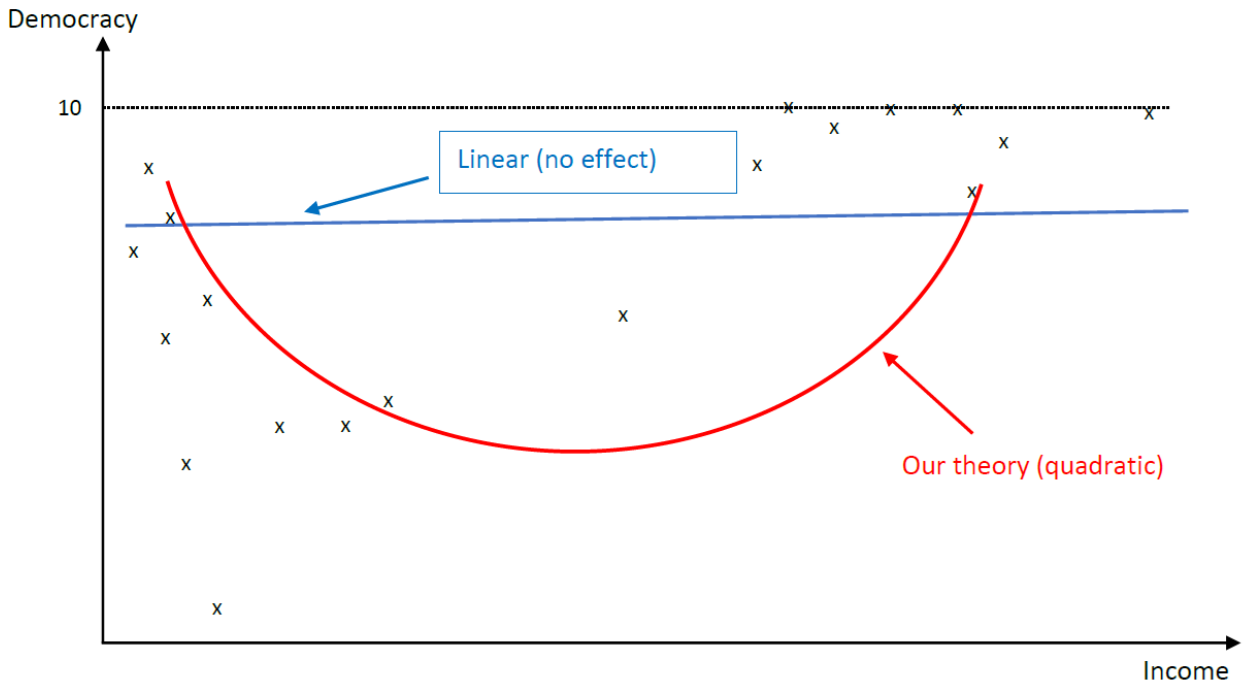


FIGURE 3. CHANGE IN DEMOCRACY AND INCOME, 1970–1995

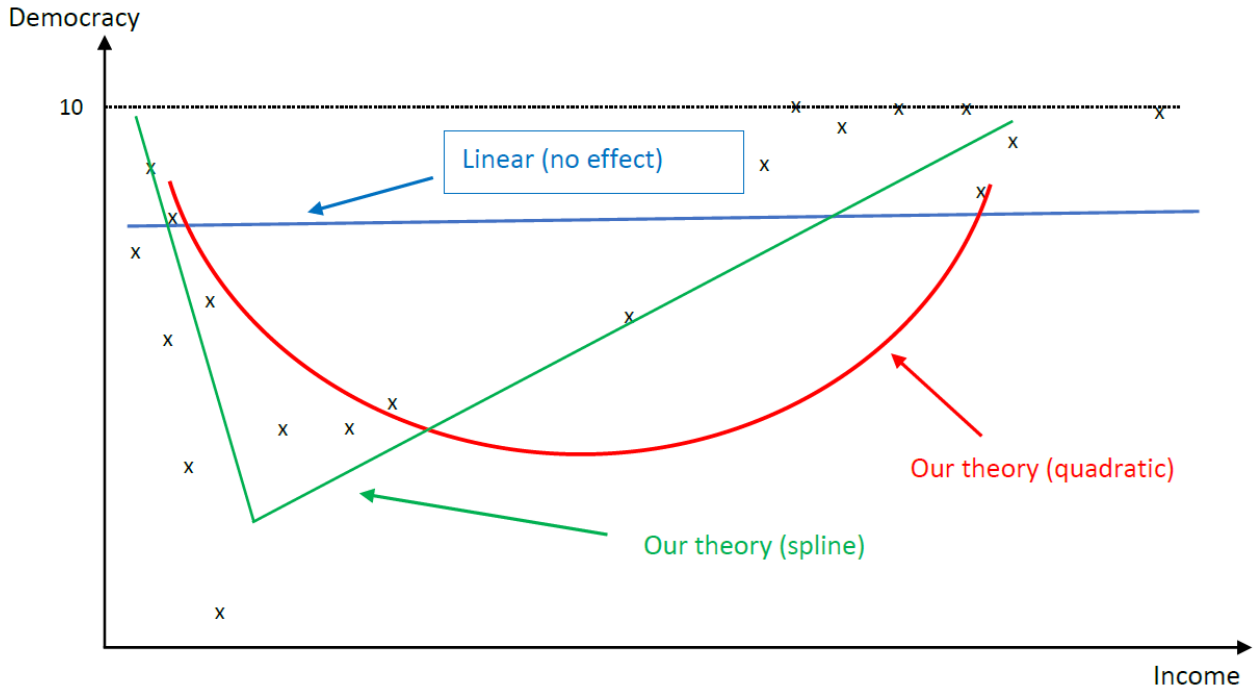
Income and Democracy - An alternative possibility



Income and Democracy - An alternative possibility



Income and Democracy - An alternative possibility



Data

- Our data covers period 1960-2010 (unlike Acemoglu et al.; 1960-2000): important nuance since we have a mechanism that requires time for fluctuations to be observed.
- Democracy is captured by the Polity IV 'polity2' index for panel data, with values normalized to [0,100].
- **Observe** that Freedom House only dates back to 1968, hence our choice of Polity IV
- Per capita income from the Penn World Tables (PWT10.0), at constant prices of 2017.
  - $\Rightarrow$ unbalanced panel of 1200 country-year observations on 150 countries (five-year panel).
  - $\Rightarrow$ around $\frac{1}{3}$ additional observations in relation to Acemoglu et al (2008).
- Covariates: national saving rates (PWT), population size and age structure (WDI), colonial past, human capital, income labour share, and a socialist dummy.

Data

- Our data covers period 1960-2010 (unlike Acemoglu et al.; 1960-2000): important nuance since we have a mechanism that requires time for fluctuations to be observed.
- Democracy is captured by the Polity IV 'polity2' index for panel data, with values normalized to [0,100].
- **Observe** that Freedom House only dates back to 1968, hence our choice of Polity IV
- Per capita income from the Penn World Tables (PWT10.0), at constant prices of 2017.
  - $\Rightarrow$ unbalanced panel of 1200 country-year observations on 150 countries (five-year panel).
  - $\Rightarrow$ around $\frac{1}{3}$ additional observations in relation to Acemoglu et al (2008).
- Covariates: national saving rates (PWT), population size and age structure (WDI), colonial past, human capital, income labour share, and a socialist dummy.

Data

- Our data covers period 1960-2010 (unlike Acemoglu et al.; 1960-2000): important nuance since we have a mechanism that requires time for fluctuations to be observed.
- Democracy is captured by the Polity IV 'polity2' index for panel data, with values normalized to [0,100].
- **Observe** that Freedom House only dates back to 1968, hence our choice of Polity IV
- Per capita income from the Penn World Tables (PWT10.0), at constant prices of 2017.
  - $\Rightarrow$ unbalanced panel of 1200 country-year observations on 150 countries (five-year panel).
  - $\Rightarrow$ around $\frac{1}{3}$ additional observations in relation to Acemoglu et al (2008).
- Covariates: national saving rates (PWT), population size and age structure (WDI), colonial past, human capital, income labour share, and a socialist dummy.

Methodology - income squared

- We use income rather than its natural logarithm to provide a closer match to the theory.
- Following Acemoglu et al (2008), we control for country- and year- fixed effects (FE).
- We consider the fit of a quadratic function for democracy on the (first) lags of democracy and income.

$$\text{Acemoglu et al.} : d_{it} = \alpha d_{it-1} + \beta \ln(y_{it-1}) + \mu_t + \delta_i + \epsilon_{it}.$$

$$\text{Our study} : d_{it} = \alpha d_{it-1} + \beta y_{it-1} + \gamma y_{it-1}^2 + \mu_t + \delta_i + \epsilon_{it}.$$

Methodology - spline regression

- The second estimation consists in running a piece-wise linear regression that would capture:
  - a negative relationship between income and democracy for low levels of income (below some threshold $\bar{y}$)
  - a positive relationship between income and democracy for high levels of income (above $\bar{y}$)

$$d_{it} = \alpha d_{it-1} + \beta_1 y_{it-1|y_{it-1}<\bar{y}} + \beta_2 y_{it-1|y_{it-1}>\bar{y}} + \mu_t + \delta_i + \epsilon_{it}.$$

- We expect $\beta_1 < 0$ and $\beta_2 > 0$.

Income and Democracy - Testing the *U*

Table: Benchmark quadratic specification with Polity IV

	(1) OLS lin-log	(2) OLS linear	(3) OLS quadratic	(4) FE lin-log	(5) FE linear	(6) FE quadratic	(7) AH quadratic	(8) AB quadratic
L.pol	0.8385***	0.8607***	0.8498***	0.5242***	0.5222***	0.5156***		0.5482***
	(0.0241)	(0.0181)	(0.0210)	(0.0396)	(0.0399)	(0.0412)		(0.0735)
LD.pol							0.5571***	
							(0.1026)	
L.inclog	1.6007**			-1.1677				
	(0.6808)			(1.7466)				
L.inc		0.0064	0.1182		-0.1163	-0.3827**		-0.6942**
		(0.0404)	(0.0759)		(0.1088)	(0.1504)		(0.2752)
LD.inc							-1.0067**	
							(0.4502)	
L.inc_sq			-0.0008**			0.0014***		0.0023***
			(0.0004)			(0.0005)		(0.0008)
LD.inc_sq							0.0032**	
							(0.0014)	
N	1299	1299	1299	1299	1299	1299	1145	1145
N_g				151	151	151		151
j								143
r2	0.79	0.79	0.79	0.51	0.51	0.52	.	
hansenp								0.29
ar2p								0.55

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Income and Democracy - Testing the *U*

Table: Benchmark quadratic specification with Polity IV

	(1) OLS lin-log	(2) OLS linear	(3) OLS quadratic	(4) FE lin-log	(5) FE linear	(6) FE quadratic	(7) AH quadratic	(8) AB quadratic
L.pol	0.8385***	0.8607***	0.8498***	0.5242***	0.5222***	0.5156***		0.5482***
	(0.0241)	(0.0181)	(0.0210)	(0.0396)	(0.0399)	(0.0412)		(0.0735)
LD.pol							0.5571***	
							(0.1026)	
L.inclog	1.6007**			-1.1677				
	(0.6808)			(1.7466)				
L.inc		0.0064	0.1182		-0.1163	-0.3827**		-0.6942**
		(0.0404)	(0.0759)		(0.1088)	(0.1504)		(0.2752)
LD.inc							-1.0067**	
							(0.4502)	
L.inc_sq			-0.0008**			0.0014***		0.0023***
			(0.0004)			(0.0005)		(0.0008)
LD.inc_sq							0.0032**	
							(0.0014)	
N	1299	1299	1299	1299	1299	1299	1145	1145
N_g				151	151	151		151
j								143
r2	0.79	0.79	0.79	0.51	0.51	0.52	.	
hansenp								0.29
ar2p								0.55

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Income and Democracy - Testing the *U*

Table: Benchmark quadratic specification with Polity IV

	(1) OLS lin-log	(2) OLS linear	(3) OLS quadratic	(4) FE lin-log	(5) FE linear	(6) FE quadratic	(7) AH quadratic	(8) AB quadratic
L.pol	0.8385***	0.8607***	0.8498***	0.5242***	0.5222***	0.5156***		0.5482***
	(0.0241)	(0.0181)	(0.0210)	(0.0396)	(0.0399)	(0.0412)		(0.0735)
LD.pol							0.5571***	
							(0.1026)	
L.inclog	1.6007**			-1.1677				
	(0.6808)			(1.7466)				
L.inc		0.0064	0.1182		-0.1163	**-0.3827****		-0.6942**
		(0.0404)	(0.0759)		(0.1088)	(0.1504)		(0.2752)
LD.inc							-1.0067**	
							(0.4502)	
L.inc_sq			-0.0008**			**0.0014*****		0.0023***
			(0.0004)			(0.0005)		(0.0008)
LD.inc_sq							0.0032**	
							(0.0014)	
N	1299	1299	1299	1299	1299	1299	1145	1145
N_g				151	151	151		151
j								143
r2	0.79	0.79	0.79	0.51	0.51	0.52	.	
hansenp								0.29
ar2p								0.55

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Income and Democracy - Testing the *U*

Table: Benchmark quadratic specification with Polity IV

	(1) OLS lin-log	(2) OLS linear	(3) OLS quadratic	(4) FE lin-log	(5) FE linear	(6) FE quadratic	(7) AH quadratic	(8) AB quadratic
L.pol	0.8385***	0.8607***	0.8498***	0.5242***	0.5222***	0.5156***		0.5482***
	(0.0241)	(0.0181)	(0.0210)	(0.0396)	(0.0399)	(0.0412)		(0.0735)
LD.pol							0.5571***	
							(0.1026)	
L.inclog	1.6007**			-1.1677				
	(0.6808)			(1.7466)				
L.inc		0.0064	0.1182		-0.1163	-0.3827**		-0.6942**
		(0.0404)	(0.0759)		(0.1088)	(0.1504)		(0.2752)
LD.inc							-1.0067**	
							(0.4502)	
L.inc_sq			-0.0008**			0.0014***		0.0023***
			(0.0004)			(0.0005)		(0.0008)
LD.inc_sq							0.0032**	
							(0.0014)	
N	1299	1299	1299	1299	1299	1299	1145	1145
N_g				151	151	151		151
j								143
r2	0.79	0.79	0.79	0.51	0.51	0.52	.	
hansenp								0.29
ar2p								0.55

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Income and Democracy - Testing the *U*

Table: Benchmark quadratic specification with Polity IV

	(1) OLS lin-log	(2) OLS linear	(3) OLS quadratic	(4) FE lin-log	(5) FE linear	(6) FE quadratic	(7) AH quadratic	(8) AB quadratic
L.pol	0.8385***	0.8607***	0.8498***	0.5242***	0.5222***	0.5156***		0.5482***
	(0.0241)	(0.0181)	(0.0210)	(0.0396)	(0.0399)	(0.0412)		(0.0735)
LD.pol							0.5571***	
							(0.1026)	
L.inclog	1.6007**			-1.1677				
	(0.6808)			(1.7466)				
L.inc		0.0064	0.1182		-0.1163	-0.3827**		-0.6942**
		(0.0404)	(0.0759)		(0.1088)	(0.1504)		(0.2752)
LD.inc							-1.0067**	
							(0.4502)	
L.inc_sq			-0.0008**			0.0014***		0.0023***
			(0.0004)			(0.0005)		(0.0008)
LD.inc_sq							0.0032**	
							(0.0014)	
N	1299	1299	1299	1299	1299	1299	1145	1145
N_g				151	151	151		151
j								143
r2	0.79	0.79	0.79	0.51	0.51	0.52	.	
hansenp								0.29
ar2p								0.55

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Income and Democracy - Testing the *V*

Table: Benchmark spline specification for 40K

	(1) OLS lin-log	(2) OLS linear	(3) OLS spline	(4) FE lin-log	(5) FE linear	(6) FE spline	(7) AH spline	(8) AB spline
d_{-1}	0.8385***	0.8607***	0.8414***	0.5242***	0.5222***	0.5148***	0.5261***	0.6156***
	(0.0241)	(0.0181)	(0.0218)	(0.0396)	(0.0399)	(0.0416)	(0.1032)	(0.0971)
$ln(y_{-1})$	1.6007**			-1.1677				
	(0.6808)			(1.7466)				
y_{-1}		0.0064			-0.1163			
		(0.0404)			(0.1088)			
$y_{-1} \leq y_v$			0.1572**			**-0.4283*****	-1.1225***	-0.8344***
			(0.0620)			(0.1626)	(0.3399)	(0.2006)
$y_{-1} > y_v$			-0.1284***			**0.0747***	0.1618***	0.0951**
			(0.0313)			(0.0416)	(0.0588)	(0.0371)
N	1299	1299	1299	1299	1299	1299	1145	1145
Fixed Effects				151	151	151		151
Instruments								100
R^2	0.79	0.79	0.79	0.51	0.51	0.52	.	
p Hansen								0.22
p AR(2)								0.53

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Income and Democracy - Testing the *V*

Table: AB results for the spline specification with different knots

	(1) Knot 35	(2) Knot 40	(3) Knot 50	(4) Knot 70	(5) Knot 100	(6) Knot 135
d_{-1}	0.6032	0.6156***	0.6083***	0.6367***	0.6517***	0.6576***
	(0.3697)	(0.0971)	(0.0940)	(0.0913)	(0.0884)	(0.0888)
$y_{-1} \leq y_v$	-1.0671	-0.8344***	-0.7262***	-0.4726**	-0.3388*	-0.3268
	(1.4589)	(0.2006)	(0.1811)	(0.2041)	(0.1950)	(0.1991)
$y_{-1} > y_v$	0.0826	0.0951**	0.1175**	0.0753**	0.0351	0.1041
	(0.0998)	(0.0371)	(0.0470)	(0.0314)	(0.0538)	(0.1014)
N	1145	1145	1145	1145	1145	1145
Fixed Effects	151	151	151	151	151	151
Instruments	105	100	98	97	89	89
p Hansen	0.31	0.22	0.18	0.10	0.02	0.03
p AR(2)	0.68	0.53	0.53	0.51	0.50	0.49

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

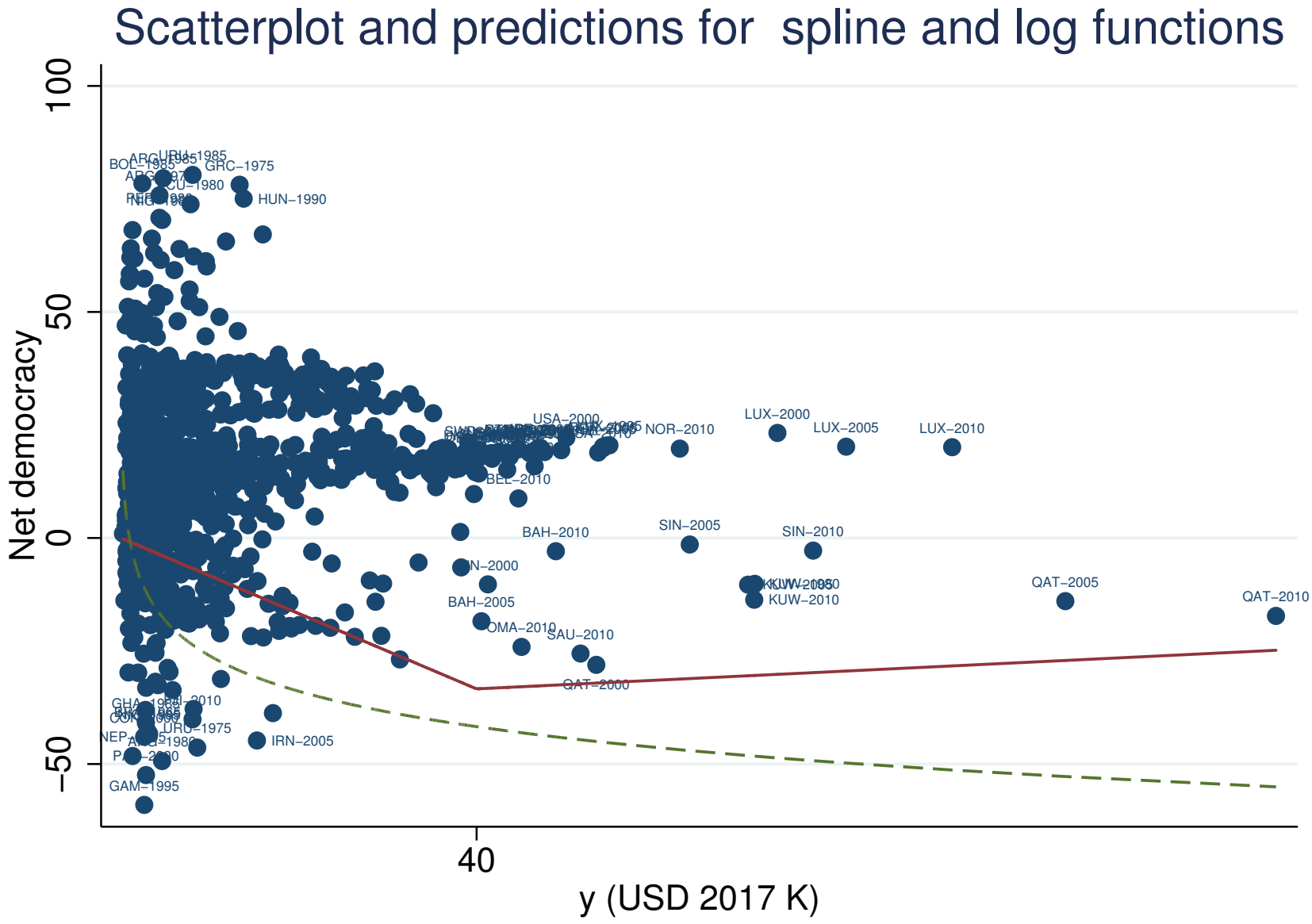


Figure: Income and Democracy.

Testing U with controls (also Human Capital)

Table: AB results for the quadratic specification: Robustness checks

	(1) AB	(2) AB no-LDV	(3) AB Pop	(4) AB HK	(5) AB Both	(6) AB non-Soc
d_{-1}	0.5482***		0.5286***	0.5856***	0.5852***	0.6213***
	(0.0735)		(0.0767)	(0.0802)	(0.0818)	(0.0822)
y^2_{-1}	0.0023***	0.0029***	0.0014**	0.0020**	0.0015*	0.0019***
	(0.0008)	(0.0009)	(0.0006)	(0.0009)	(0.0008)	(0.0007)
y_{-1}	-0.6942**	-0.8328***	-0.2989	-0.6129**	-0.2912	-0.5809**
	(0.2752)	(0.3101)	(0.1887)	(0.2784)	(0.2090)	(0.2280)
$ln(pop_{-1})$			19.7716***		19.9890***	
			(4.5083)		(5.5266)	
$agedep_{-1}$			0.0521		0.1672	
			(0.1597)		(0.1987)	
hc_{-1}				3.2047	16.9981	
				(9.4998)	(12.6298)	
N	1145	1193	1076	1064	996	1070
Fixed Effects	151	151	149	135	133	127
Instruments	143	88	143	124	125	123
p Hansen	0.29	0.16	0.28	0.21	0.18	0.25
p AR(2)	0.55	0.16	0.52	0.47	0.43	0.50

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Testing V with controls (also Human Capital)

Table: AB results for the 40K spline specification: Robustness checks

	(1) AB	(2) AB no-LDV	(3) AB Pop	(4) AB HK	(5) AB Both	(6) AB non-Soc
d_{-1}	0.6156***		0.6211***	0.5868***	0.5998***	0.6180***
	(0.0971)		(0.0943)	(0.0951)	(0.1022)	(0.0920)
$y_{-1} \leq y_v$	-0.8344***	-1.0528***	-0.4773*	-0.9355***	-0.7503	-0.8145***
	(0.2006)	(0.2756)	(0.2850)	(0.2694)	(0.4609)	(0.1775)
$y_{-1} > y_v$	0.0951**	0.1493***	0.1167***	0.1348**	0.1836***	0.0872**
	(0.0371)	(0.0484)	(0.0316)	(0.0604)	(0.0644)	(0.0341)
$ln(pop_{-1})$			11.6462*		8.7254	
			(6.1717)		(8.5016)	
$agedep_{-1}$			0.0587		0.2711	
			(0.1434)		(0.1983)	
hc_{-1}				13.7620	23.7998	
				(11.3673)	(14.8108)	
N	1145	1193	1076	1064	996	1070
Fixed Effects	151	151	149	135	133	127
Instruments	100	101	101	101	102	100
p Hansen	0.22	0.19	0.23	0.22	0.23	0.33

Data span matters: U

Table: Fixed effects and GMM results for the quadratic specification: the temporal relationship

	(1) FE 1960-2000	(2) FE 2 5-yr lags	(3) FE 10-yr lag	(4) FE 20-yr lag	(5) AB 2 5-yr lags	(6) AB 10-yr lag	(7) AB 20-yr lag
d_{-1}	0.4399***	0.5212***	0.2305***	-0.1186	0.5411***	0.2445*	0.0123
	(0.0468)	(0.0550)	(0.0593)	(0.0790)	(0.0862)	(0.1394)	(0.2988)
d_{-2}		-0.0170			0.0213		
		(0.0458)			(0.0559)		
y^2_{-1}	0.0011*	0.0008*	0.0022***	-0.0252	0.0017***	-0.0031	0.1998**
	(0.0006)	(0.0004)	(0.0007)	(0.0242)	(0.0006)	(0.0127)	(0.0783)
y^2_{-2}		0.0009**			0.0012**		
		(0.0004)			(0.0005)		
y_{-1}	-0.2683	-0.2296	-0.7011***	-0.7125	-0.5225***	-0.9698	-15.1380***
	(0.2131)	(0.1394)	(0.2350)	(1.1369)	(0.1921)	(1.0549)	(4.9458)
y_{-2}		-0.2557*			-0.3421**		
		(0.1525)			(0.1657)		
N	1004	1145	642	285	993	490	155
Fixed Effects	151	151	130	151	151	130	114
R^2	0.41	0.51	0.36	0.35			
Instruments					141	40	7
p Hansen					0.34	0.01	.
p AR(2)					0.60	0.99	.

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Data span matters: V

Table: Fixed effects and GMM results for the spline 40K specification: the temporal relationship

	(1) FE 1960-2000	(2) FE 2 5-yr lags	(3) FE 10-yr lag	(4) FE 20-yr lag	(5) AB 2 5-yr lags	(6) AB 10-yr lag	(7) AB 20-yr lag
d_{-1}	0.4382***	0.5190***	0.2290***	-0.1004	0.5534***	0.2345	3.2708
	(0.0471)	(0.0554)	(0.0596)	(0.0819)	(0.0896)	(0.2098)	(2.8024)
d_{-2}		-0.0174			0.0255		
		(0.0458)			(0.0528)		
$y_{-1} \leq y_v$	-0.3953*	-0.0591	-0.7191***	-1.8146***	-0.5963**	-2.2512***	-1.4171
	(0.2200)	(0.1948)	(0.2302)	(0.4342)	(0.2555)	(0.4640)	(4.9155)
$y_{-2} \leq y_v$		-0.4946***			-0.3001		
		(0.1577)			(0.2065)		
$y_{-1} > y_v$	0.1343***	-0.0117	0.0753	0.1717	0.0598*	0.6521**	15.4838
	(0.0417)	(0.0645)	(0.0560)	(0.8632)	(0.0320)	(0.3291)	(125.8546)
$y_{-2} > y_v$		0.1036			0.0543		
		(0.0690)			(0.0609)		
N	1004	1145	642	285	993	490	155
Fixed Effects	151	151	130	151	151	130	114
R^2	0.41	0.52	0.36	0.35			
Instruments					116	28	4
p Hansen					0.34	0.13	.
p AR(2)					0.61	0.93	.

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Is it the data (Polity IV)?

- We replicate all our results using instead the V-Dem database
- More comprehensive database; yet high correlation with Polity IV
- All results are confirmed

Is it outliers?

Table: AB estimations for the quadratic specification: Controlling for income levels and oil reliance

	(1) Base	(2) y<200	(3) y<100	(4) Non-oil l1	(5) Non-oil l2	(6) Non-oil l3	(7) No MENA
d_{-1}	0.5482***	0.5926***	0.5725***	0.6019***	0.6030***	0.6055***	0.6342***
	(0.0735)	(0.0848)	(0.0882)	(0.0911)	(0.0906)	(0.0931)	(0.0923)
y^2_{-1}	0.0023***	0.0021**	0.0093**	0.0137***	0.0130**	0.0132***	0.0161***
	(0.0008)	(0.0008)	(0.0038)	(0.0052)	(0.0052)	(0.0050)	(0.0057)
y_{-1}	-0.6942**	-0.6163**	-1.2696***	-1.7371***	-1.6714***	-1.6842***	-1.9521***
	(0.2752)	(0.2647)	(0.3841)	(0.4344)	(0.4294)	(0.4138)	(0.4759)
N	1145	1145	1139	1011	1030	1056	1023
Fixed Effects	151	151	151	134	136	139	134
Instruments	143	123	123	79	79	79	79
p Hansen	0.29	0.15	0.14	0.02	0.03	0.02	0.03
p AR(2)	0.55	0.53	0.55	0.60	0.60	0.55	0.54

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Is the story valid in the long run?

Table: AB spline specification with different knots (1800-2010)

	(1) Knot 35	(2) Knot 40	(3) Knot 50	(4) Knot 70	(5) Knot 100	(6) Knot 135
d_{-1}	0.5573***	0.5512***	0.5582***	0.5605***	0.5661***	0.5661***
	(0.0582)	(0.0586)	(0.0561)	(0.0542)	(0.0558)	(0.0558)
$y_{-1} \leq y_v$	-1.0403***	-0.9436***	-0.7328***	-0.6763***	-0.6231***	-0.6231***
	(0.2210)	(0.2108)	(0.2003)	(0.1840)	(0.1991)	(0.1991)
$y_{-1} > y_v$	0.1974	0.3780***	0.3931**	3.7400*	0.0000	0.0000
	(0.1221)	(0.1208)	(0.1791)	(2.2241)	(.)	(.)
N	1935	1935	1935	1935	1935	1935
Fixed Effects	145	145	145	145	145	145
Instruments	467	465	457	448	448	448
p Hansen	1.00	1.00	1.00	1.00	1.00	1.00
p AR(2)	0.85	0.84	0.87	0.89	0.90	0.90

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The transmission channel

- Our theory predicts an effect of income (wages) on democracy that operates via incentives to mobilize into political activism
- Although we do control for main alternative explanation (education), there could still be alternative stories underlying our results
  - Data from World Value Surveys :
    - *interest in politics*
    - *have you attended lawful/peaceful demonstrations?*
  - Construct a round-country measure of political interest and attending demonstrations
  - Income is self-reported relative income in WVS, thus we take national income

Testing the channel: political interest

Table: Political interest on Spline with Varying Knots of Income for country-specific fixed effects

	(1) Knot 20	(2) Knot 25	(3) Knot 30	(4) Knot 35	(5) Knot 40	(6) Knot 45
$y \leq y_{knot}$	-0.4733***	-0.3453***	-0.2774***	-0.2291***	-0.1853**	-0.1427*
	(0.1220)	(0.1002)	(0.0855)	(0.0838)	(0.0814)	(0.0792)
$y > y_{knot}$	0.1370*	0.1516**	0.1667**	0.1921**	0.2216*	0.2230
	(0.0744)	(0.0752)	(0.0756)	(0.0869)	(0.1179)	(0.1511)
Observations	289	289	289	289	289	289
Fixed Effects	103	103	103	103	103	103
R^2	0.05	0.04	0.04	0.03	0.03	0.02

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Testing the channel: attending demonstrations

Table: Attending lawful demonstrations on Spline with Varying Knots of Income for country-specific fixed effects

	(1) Knot 10	(2) Knot 15	(3) Knot 20	(4) Knot 25	(5) Knot 30
$y \leq y_{knot}$	-0.7331*	-0.4935*	-0.3649*	-0.2381	-0.1294
	(0.4108)	(0.2663)	(0.2197)	(0.1926)	(0.1676)
$y > y_{knot}$	0.1838*	0.2393**	0.2872***	0.3130***	0.3176***
	(0.0934)	(0.0934)	(0.0912)	(0.1011)	(0.1171)
Observations	279	279	279	279	279
Fixed Effects	99	99	99	99	99
R^2	0.04	0.06	0.07	0.06	0.05

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Second test of the transmission channel

- Admittedly WVS data is not ideal; we complement this with data from *Manifesto project*
  - Data on entire period of interest
  - Only for 56 countries (mostly OECD)
  - *"Should democracy be the only game in town?"*
  - *"Should citizens participate in political decision-making?"*

Testing the channel: Subjective value of democracy

Table: Subjective Value of Democracy on Spline with Varying Knots of Income for country-specific fixed effects

	(1) Knot 35	(2) Knot 40	(3) Knot 45	(4) Knot 50	(5) Knot 55
$y_{-1} \leq y_{knot}$	-0.1444	-0.1276	-0.1180	-0.1108	-0.1056
	(0.0977)	(0.0812)	(0.0725)	(0.0676)	(0.0661)
$y_{-1} > y_{knot}$	0.0480	0.0761	0.1114**	0.1364***	0.1503***
	(0.0570)	(0.0482)	(0.0462)	(0.0476)	(0.0552)
Observations	553	553	553	553	553
Fixed Effects	49	49	49	49	49
R^2	0.01	0.01	0.01	0.01	0.01
	(6) Knot 60	(7) Knot 65	(8) Knot 70	(9) Knot 75	(10) Knot 80
$y_{-1} \leq y_{knot}$	-0.1020	-0.0981	-0.0960	-0.0952	-0.0953
	(0.0647)	(0.0630)	(0.0619)	(0.0615)	(0.0614)
$y_{-1} > y_{knot}$	0.1718**	0.1954***	0.2358***	0.3005***	0.4131***
	(0.0662)	(0.0724)	(0.0837)	(0.1074)	(0.1530)
Observations	553	553	553	553	553
Fixed Effects	49	49	49	49	49
R^2	0.01	0.01	0.01	0.01	0.01

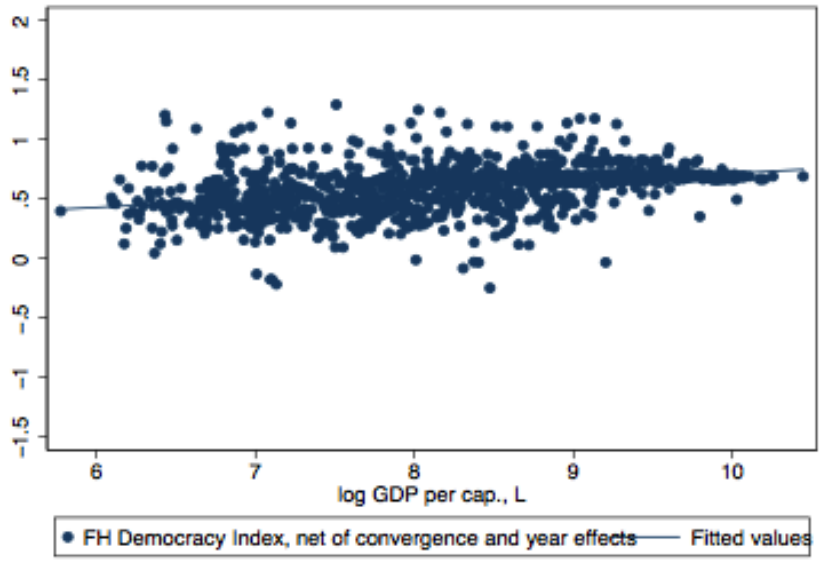
Standard errors in parentheses

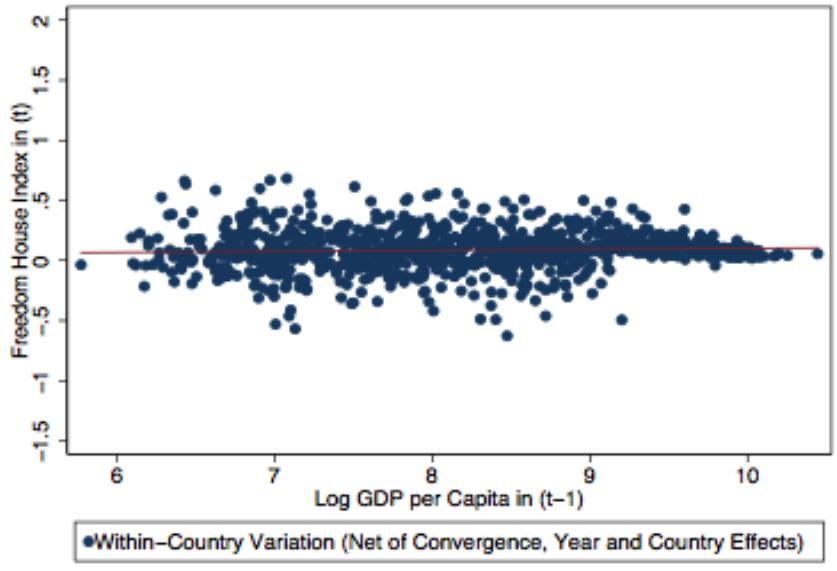
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

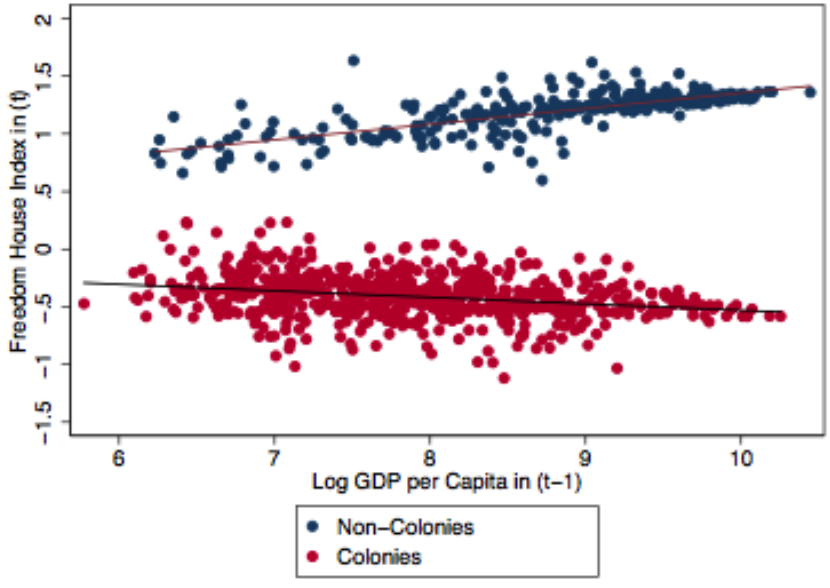
Perhaps findings due to *differential effect of institutions?*

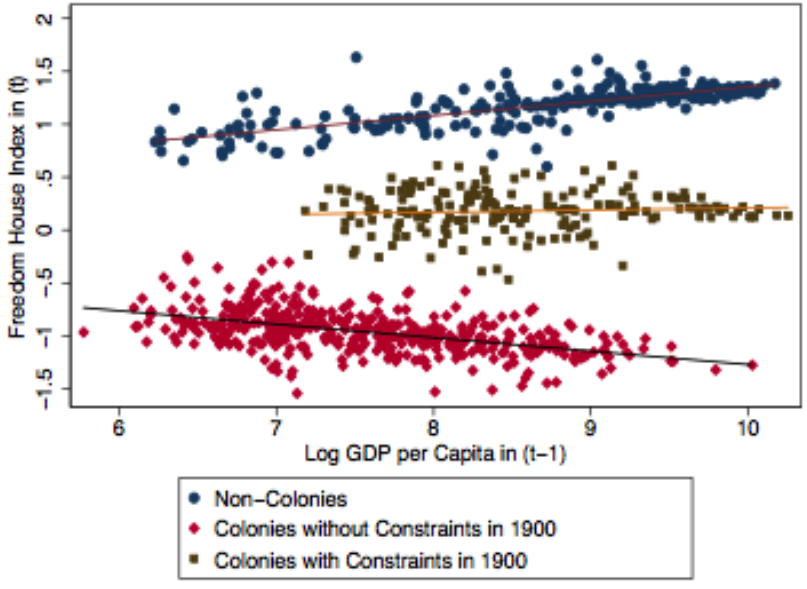
- Cervellati et al. 2014 show that *income matters* in differential manners depending on colonial status
- Ang et al. 2021 show that crop suitability (wheat *vs* rice) matters; perhaps income interacted with crop suitability matters too
- As a general rule, since fixed effects are important, **institutions matter**
- Do institituions matter *interactively* with income, or is everything captured by non-monotonicities?

Cervellati et al. 2014









Our project

Debowicz, D., Dickson, A., MacKenzie, I., and Sekeris, P.G., "**Income, Democracy, and Institutions**"

- Explore the robustness of our empirical findings to various institutional constraints/effects
- Institutions matter, but so does income!

Spline regression with colonies

- Absent colonies, we have our benchmark (spline) estimation

$$d_{it} = \alpha d_{it-1} + \beta_1 y_{it-1|y_{it-1}<\bar{y}} + \beta_2 y_{it-1|y_{it-1}>\bar{y}} + \mu_t + \delta_i + \epsilon_{it}.$$

- With colonies: are c^l and c^h significant?

$$d_{it} = a_0 + a d_{it-1} + b^l y^l_{it-1} + b^h y^h_{it-1} + c^l c_i y^l_{it-1} + c^h c_i y^h_{it-1} + u_i + \mu_t + v_{it}$$

where $c_i = 1$ if former colony

Revisiting the effect of colonies

Table: Fixed Effects Regressions of democracy on income spline and colony (base knot at 40K)

	(1) Colony	(2) non-Colony	(3) Base	(4) HK	(5) non-soc	(6) Knot 35	(7) Knot 50	(8) Knot 50 Vdem
d_{-1}	0.4585***	0.6709***	0.5173***	0.5249***	0.5022***	0.5196***	0.5157***	0.6243***
	(0.0512)	(0.0585)	(0.0417)	(0.0426)	(0.0445)	(0.0413)	(0.0418)	(0.0320)
y^l_{-1}	-0.6538***	-0.1641	-0.3822**	-0.3601**	-0.4200**	-0.3746*	-0.3756**	-0.1252
	(0.2111)	(0.1925)	(0.1757)	(0.1749)	(0.1828)	(0.1925)	(0.1581)	(0.0784)
y^h_{-1}	-0.1237	0.0586**	0.0780*	0.0744*	0.0732*	0.0442	0.1139***	0.0341**
	(0.3111)	(0.0288)	(0.0411)	(0.0427)	(0.0398)	(0.0577)	(0.0288)	(0.0151)
$c * y^l_{-1}$			-0.1948	-0.2275	-0.1366	-0.2111	-0.2036	-0.0463
			(0.1972)	(0.2066)	(0.2005)	(0.2024)	(0.1898)	(0.1064)
$c * y^h_{-1}$			-0.1441	-0.0651	-0.1738	-0.2025	0.0849	0.0463
			(0.2716)	(0.2577)	(0.2754)	(0.2963)	(0.2383)	(0.0881)
hc_{-1}				0.4739				
				(5.4633)				
Observations	809	441	1250	1167	1196	1250	1250	1436
Fixed Effects	85	50	135	124	126	135	135	132
R^2	0.50	0.62	0.52	0.52	0.50	0.52	0.52	0.63

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Revisiting the effect of colonies

Table: Fixed Effects Regressions of democracy on income spline and colony (base knot at 40K)

	(1) Colony	(2) non-Colony	(3) Base	(4) HK	(5) non-soc	(6) Knot 35	(7) Knot 50	(8) Knot 50 Vdem
d_{-1}	0.4585***	0.6709***	0.5173***	0.5249***	0.5022***	0.5196***	0.5157***	0.6243***
	(0.0512)	(0.0585)	(0.0417)	(0.0426)	(0.0445)	(0.0413)	(0.0418)	(0.0320)
y^l_{-1}	-0.6538***	-0.1641	-0.3822**	-0.3601**	-0.4200**	-0.3746*	-0.3756**	-0.1252
	(0.2111)	(0.1925)	(0.1757)	(0.1749)	(0.1828)	(0.1925)	(0.1581)	(0.0784)
y^h_{-1}	-0.1237	0.0586**	0.0780*	0.0744*	0.0732*	0.0442	0.1139***	0.0341**
	(0.3111)	(0.0288)	(0.0411)	(0.0427)	(0.0398)	(0.0577)	(0.0288)	(0.0151)
$c * y^l_{-1}$			-0.1948	-0.2275	-0.1366	-0.2111	-0.2036	-0.0463
			(0.1972)	(0.2066)	(0.2005)	(0.2024)	(0.1898)	(0.1064)
$c * y^h_{-1}$			-0.1441	-0.0651	-0.1738	-0.2025	0.0849	0.0463
			(0.2716)	(0.2577)	(0.2754)	(0.2963)	(0.2383)	(0.0881)
hc_{-1}				0.4739				
				(5.4633)				
Observations	809	441	1250	1167	1196	1250	1250	1436
Fixed Effects	85	50	135	124	126	135	135	132
R^2	0.50	0.62	0.52	0.52	0.50	0.52	0.52	0.63

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Revisiting the effect of colonies

Table: Fixed Effects Regressions of democracy on income spline and colony (base knot at 40K)

	(1) Colony	(2) non-Colony	(3) Base	(4) HK	(5) non-soc	(6) Knot 35	(7) Knot 50	(8) Knot 50 Vdem
d_{-1}	0.4585***	0.6709***	0.5173***	0.5249***	0.5022***	0.5196***	0.5157***	0.6243***
	(0.0512)	(0.0585)	(0.0417)	(0.0426)	(0.0445)	(0.0413)	(0.0418)	(0.0320)
y^l_{-1}	-0.6538***	-0.1641	-0.3822**	-0.3601**	-0.4200**	-0.3746*	-0.3756**	-0.1252
	(0.2111)	(0.1925)	(0.1757)	(0.1749)	(0.1828)	(0.1925)	(0.1581)	(0.0784)
y^h_{-1}	-0.1237	0.0586**	0.0780*	0.0744*	0.0732*	0.0442	0.1139***	0.0341**
	(0.3111)	(0.0288)	(0.0411)	(0.0427)	(0.0398)	(0.0577)	(0.0288)	(0.0151)
$c * y^l_{-1}$			-0.1948	-0.2275	-0.1366	-0.2111	-0.2036	-0.0463
			(0.1972)	(0.2066)	(0.2005)	(0.2024)	(0.1898)	(0.1064)
$c * y^h_{-1}$			-0.1441	-0.0651	-0.1738	-0.2025	0.0849	0.0463
			(0.2716)	(0.2577)	(0.2754)	(0.2963)	(0.2383)	(0.0881)
hc_{-1}				0.4739				
				(5.4633)				
Observations	809	441	1250	1167	1196	1250	1250	1436
Fixed Effects	85	50	135	124	126	135	135	132
R^2	0.50	0.62	0.52	0.52	0.50	0.52	0.52	0.63

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Robustness

- GMM estimation instead of Fixed Effects
- Different knots: "works" for knots from $35K$ to $50K$
- Usual controls: Population human capital, excluding former socialist countries

Revisiting the effect of colonies

Table: Arellano-Bond Regressions of democracy on 40K income spline and interactors

	(1) i0	(2) i1	(3) i2	(4) i4
L.pol	0.6228***	0.6215***	0.6304***	0.6185***
	(0.0956)	(0.0963)	(0.0943)	(0.0906)
y^l_{-1}	-0.8809***	-0.9804**	-0.7127**	-0.8540**
	(0.2048)	(0.3894)	(0.3105)	(0.3428)
y^h_{-1}	0.0968**	0.0993**	0.0955**	0.1035***
	(0.0378)	(0.0392)	(0.0370)	(0.0382)
$c * y^l_{-1}$		-0.3690		-1.8697
		(1.6605)		(1.5537)
$c * y^h_{-1}$		0.1900		0.8659
		(0.8374)		(0.8006)
$ci * y^l_{-1}$			1.9432	2.9871
			(3.3687)	(3.0979)
$ci * y^h_{-1}$			-0.4425	-1.3750
			(0.8838)	(0.9329)
Observations	1112	1112	1112	1112
Fixed Effects	135	135	135	135
Instruments	100	100	100	100
p Hansen	0.22	0.21	0.17	0.18
p AR(2)	0.53	0.53	0.50	0.50

Robustness

- Here too, works for knots varying from $35K$ to $50K$

Crop suitability and collectivism vs individualism

- Ang et al. (EER): explore the effect of rice/wheat suitability index on democracy:
  - Higher rice suitability implies more collectivist societies $\Rightarrow$ more conformism $\Rightarrow$ more authoritarian regimes
  - Higher wheat suitability implies more individualistic societies $\Rightarrow$ less conformism $\Rightarrow$ more democratic regimes
- Is it still the case that there are non-monotonicities?

Revisiting Ang et al. 2021

Table: Fixed Effects Regressions of Democracy on Income Splines and Interactors Across Thresholds

	20K Threshold	30K Threshold	40K Threshold
L.pol	0.5220***	0.5106***	0.5032***
	(0.0418)	(0.0427)	(0.0434)
y^l_{-1}	0.2390	0.0863	0.1079
	(0.2971)	(0.2549)	(0.2401)
y^h_{-1}	0.7941***	0.9273***	0.8810***
	(0.2582)	(0.1841)	(0.1785)
$r * y^l_{-1}$	-2.1350**	-2.2318**	-2.1321**
	(1.0550)	(1.0529)	(1.0488)
$r * y^h_{-1}$	3.9626***	3.9356***	3.4408***
	(0.9401)	(0.8096)	(0.8018)
Observations	1128	1128	1128
Fixed Effects	121	121	121
R^2	0.52	0.53	0.53

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Next steps

- Other institutional factors?

Concluding thoughts

- Our journey started with an observation from reality: we value political freedom per se!
- We explored the theoretical consequences of this idea
- Took results to the empirics, and the findings got validated

$\Rightarrow$**Income matters, yet non-monotonically**

- Improving citizens' material conditions raises their demands for economic freedom
- We do expect more pressure on the regime in China in the coming years
- Likewise, the rise in authoritarianism in the Western world could be attributed to degrading living conditions

Concluding thoughts

- Our journey started with an observation from reality: we value political freedom per se!
- We explored the theoretical consequences of this idea
- Took results to the empirics, and the findings got validated

$\Rightarrow$**Income matters, yet non-monotonically**

- Improving citizens' material conditions raises their demands for economic freedom
- We do expect more pressure on the regime in China in the coming years
- Likewise, the rise in authoritarianism in the Western world could be attributed to degrading living conditions

Concluding thoughts - Follow up ideas

- Test the channel with micro (panel) data
- Explore the role of *inequality*: modernization should have a differential effect on poor/rich
- Extend our theory to political partisanship/ideologies to provide a more micro-founded result of Enke et al.'s (JEEA 2025) result of the "gauche caviar" while also rationalizing the awkward result that poor segments of the US society support Republican party
- Understand the process in a truly dynamic setup (economics $\rightarrow$ politics $\rightarrow$ economics)