

Forbidden Fruits:  
The Political Economy of  
Science, Religion and Growth

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# Introduction

- Key source, supplier of values: religion. Complex social phenomenon:
  - ▶ Unlikely to have unambiguous effects on growth and welfare
  - ▶ More likely: relates via numerous channels, generating **tradeoffs**
- Two main mechanisms emphasized in the economics literature, both with generally positive effects:
  - ▶ Literacy and education (historically)
  - ▶ **Morals, social norms, trust (empirics, theory)**
- Guiso, Sapienza, Zingales (2003) found more religious persons to be:
  - ▶ **More trusting:** of others, public institutions, market outcomes
  - ▶ **More trustworthy:** less willing to break law, accept bribe, cheat on taxes
- Theoretical models (e.g. Bénabou-Tirole 2006, 2011, Levy and Razin 2012)
  - ▶ Beliefs in divine rewards / punishments (or “Calvinistic” self-signaling)  
⇒ individuals behave less opportunistically, more cooperatively
  - ▶ Can make different beliefs self-sustaining at the social level.

## Taboos and Tradeoffs

- Religiosity thus seen as associated to “societal attitudes... conducive to higher productivity and growth.” (Guiso et al.)
- Ultimate driver of long-run-growth: progress of knowledge and technology – more generally, whole spectrum of innovation:
  - ▶ From advances in basic science to the diffusion of new technologies, economic practices, even social change (e.g., inclusion of women) ⇒
- Equally important: examine extent to which **religious beliefs, values, institutions** conducive or detrimental to **creativity & innovation**
- Revisiting age-old theme: religion's periodically tense relationship with science, unorthodox / disruptive ideas, free thought
- Pursue this agenda through theory + empirical work, using both aggregate & individual level-data.



# Two Papers

1. "Forbidden Fruits": interplay of science, religion, politics
  - ▶ Historical and contemporary examples
  - ▶ Model: joint dynamics of religious beliefs and scientific-economic development. Shaped by (and feeds back on) political conflicts and coalition formation, along religious & income lines
  - ▶ Empirics: religiosity and innovation outcomes (patents) at the aggregate level
2. "Religion and Innovation": Individual attitudes toward innovation
  - ▶ Science & technology, new/old ideas, general change, personal risk-taking / aversion, imagination...
  - ▶ Using 5 waves of WVS, relate 11 measures of individual "openness to innovation" to 5 measures of religiosity + controls
  - ▶ Later on: differences between major religions.

# Introduction

- Aim: study interplay of religion, innovation [growth] and politics
  - Throughout history and to this day, periodic clashes between science and organized religion. Political power arbitrates
    - ▶ Sacred texts, doctrines, tied to fixed “world view”. Scientific discoveries recurrently contradict, falsify important aspects
1. Aristotle's lost treatises: Physics, On the Soul, On Generation & Corruption, Metaphysics, Meteorology, On the Heavens...
    - ▶ Rediscovered in 12th century ⇒ declared heretical, banned under penalty of excommunication from 1210 to 1325
  2. Thomas Aquinas (1225–1274): new intellectual construction, making Christian doctrine and Aristotelian natural philosophy compatible
    - ▶ “Medieval synthesis” of reason and faith, became official doctrine

## Introduction

3. Scientific revolution: heliocentrism, atomism, infinitesimals, empiricism. Completely upended Aquinian synthesis  $\Rightarrow$  **banned, severely repressed** by Roman Church (Jesuits, Inquisition)
  - ▶ Copernicus (1453), Bruno (1600), Galileo (1610), Cavalieri (1598-1647), Toricelli (1608-1647), Newton (1687) 
  - ▶ Darwinian evolution
4. Islamic world: following “golden age”, deep and prolonged decline of science and knowledge-seeking, from 11<sup>th</sup> century until present
  - ▶ Printing press (1436): Ottoman Empire forbade it in 1483, under penalty of **death**, until 1727; de facto no printing until 19th century 
  - ▶ **In 2007**: top 46 Muslim countries produced 1.17% of world scientific literature, vs. .48% for Spain. Books translated into Arabic: 330 / year
5. United States: origins of Earth, evolution, stem cell research ban, climate change... in constant flux. Rise of Religious Right, inequality

# Innovation and Religiosity Across Countries

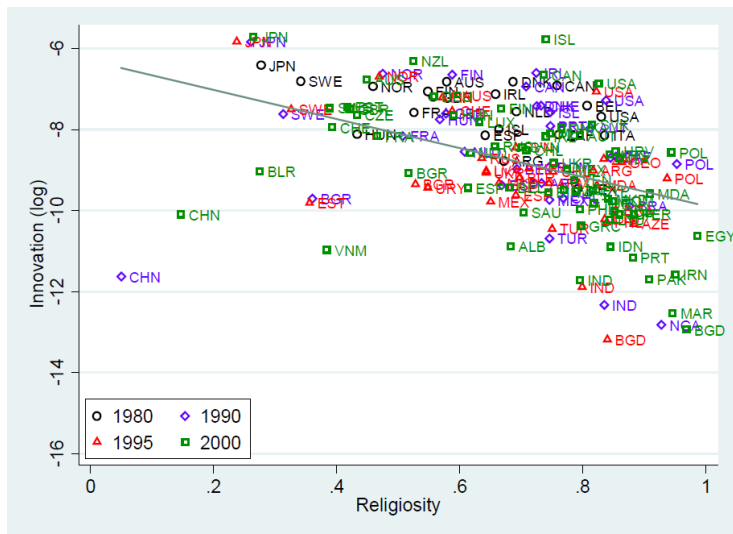


Figure 1

Controls: GDP per capita, Population, Religious Freedom, Intellectual Property Right Protection, Foreign Direct Investment, Years of Tertiary Schooling

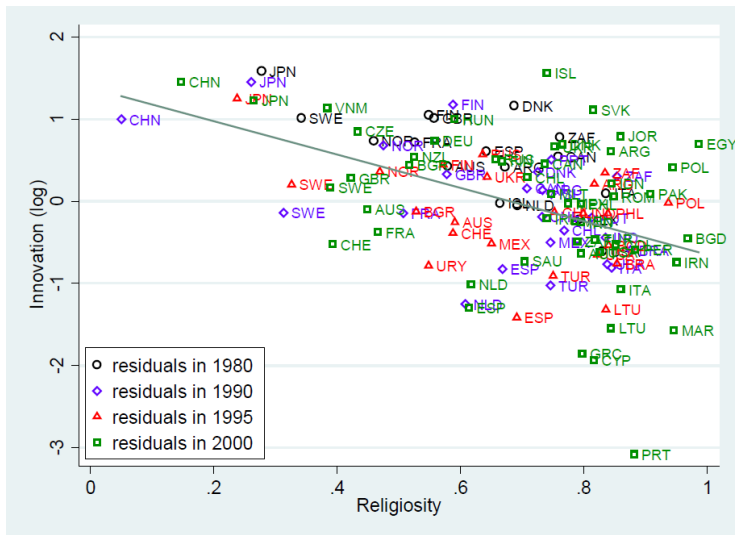


Figure 3



**Table 1: Religiosity and Innovation: Cross-Country Estimates (OLS)**

Dep. var.:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Patents per capita (log)</i>								
<i>Religiosity</i>	-3.584 (1.314)***		-2.23 (0.424)***		-2.079 (0.449)***		-1.478 (0.589)**	
<i>Belief in God</i>		-3.853 (1.235)***		-2.444 (0.56)***		-2.302 (0.566)***		-1.581 (0.66)**
<i>Religious freedom</i>			0.024 (0.007)***	0.028 (0.006)***	0.021 (0.007)***	0.025 (0.006)***	0.015 (0.008)*	0.021 (0.008)***
<i>GDP per capita (log)</i>			1.074 (0.1)***	1.199 (0.107)***	0.928 (0.106)***	1.114 (0.116)***	0.909 (0.133)***	1.071 (0.138)***
<i>Population (log)</i>			-0.135 (0.062)**	-0.09 (0.071)	-0.141 (0.059)**	-0.097 (0.068)	-0.144 (0.059)**	-0.137 (0.061)**
<i>Protection intellectual property</i>			-0.013 (0.095)	-0.11 (0.109)	0.116 (0.104)	-0.048 (0.114)	0.102 (0.103)	-0.001 (0.108)
<i>Tertiary education (years)</i>			0.791 (0.25)***	0.873 (0.277)***	0.985 (0.253)***	1.006 (0.288)***	1.013 (0.28)***	1.043 (0.328)***
<i>Foreign direct investment</i>			-0.056 (0.016)***	-0.041 (0.02)**	-0.043 (0.022)**	-0.036 (0.023)	-0.039 (0.017)**	-0.034 (0.018)*
<i>Years fixed effects</i>					YES	YES	YES	YES
<i>Predominant religion</i>							YES	YES
Observations	146	151	115	116	115	116	115	116
R-squared	0.184	0.165	0.815	0.797	0.834	0.809	0.85	0.832

Notes: Standard errors are clustered by country. Predominant religion includes the following religions: Protestant, Catholic, Muslim, Orthodox. \*Significant at 10%; \*\*significant at 5%; \*\*\*significant at 1%.

# Innovation and Religiosity Across U.S. States

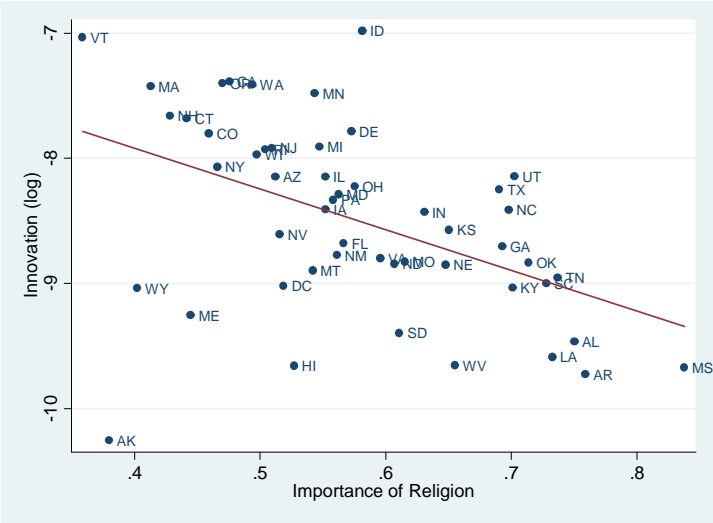


Figure 5

Controls: GSP per capita, Population, Fraction with at least Bachelor's Degree, Foreign Direct Investment,

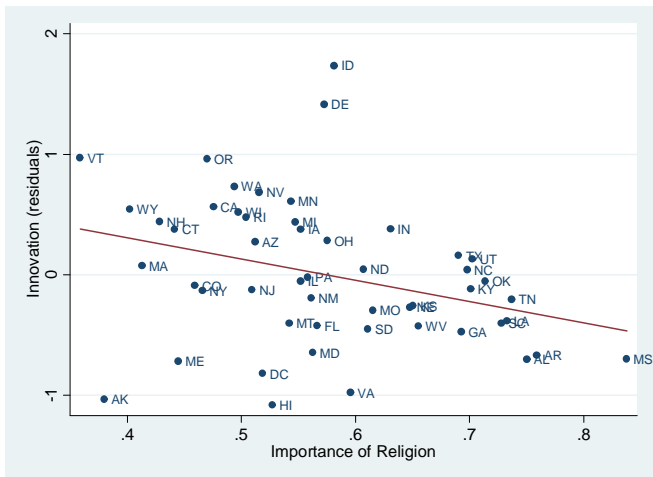


Figure 7

**Table 2: Religiosity and Innovation in the US: Cross-State Estimates (OLS)**

Dep. var.:	(1)	(2)	(3)	(4)	(5)	(6)
<i>Patents per capita (log)</i>						
<i>Importance of religion</i>	-3.245 (1.064)***		-2.803 (0.947)***		-3.922 (0.737)***	
<i>Belief in God</i>		-10.324 (3.289)***		-7.766 (3.861)**		-11.238 (3.275)***
<i>GSP per capita (log)</i>			-1.112 (0.607)*	-1.104 (0.64)*	-0.503 (0.513)	-0.561 (0.62)
<i>Population (log)</i>			0.23 (0.078)***	0.21 (0.079)**	0.185 (0.079)**	0.166 (0.083)*
<i>Tertiary education</i>			0.071 (0.027)**	0.072 (0.032)**	0.028 (0.021)	0.031 (0.03)
<i>Foreign direct investment</i>					-29.877 (5.73)***	-26.677 (6.716)***
Observations	51	51	51	51	51	51
R-squared	0.222	0.203	0.475	0.43	0.597	0.523

Notes: Robust standard errors in parentheses. \*Significant at 10%; \*\*significant at 5%; \*\*\*significant at 1%.

# “Forbidden Fruits”

① Historical and contemporary examples

② Empirical findings

③ Model

① Scientific discoveries: if widely diffused and implemented, yield productivity gains but sometimes also erode religious beliefs

② Government in power can allow these ideas to spread, or spend resources to prevent and impede their diffusion

- Subsequently, chooses taxes + mix of secular / religious public goods: spending, exemptions, laws

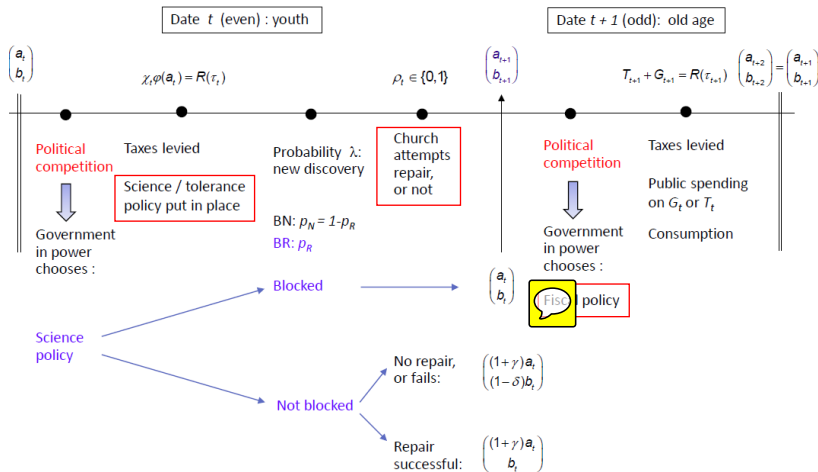
③ Religious sector (e.g., Church) may undertake adaptation of doctrine, making it more compatible with new knowledge

● Remarks:

▶ State variables: stocks of knowledge and religious capital

▶ Scientific progress  $\rightarrow$  religious beliefs  $\rightarrow$  coalition gaining power (religious or secular led)  $\rightarrow$  pace of scientific progress

# “Forbidden Fruits”: The Model



$a_t$  : knowledge, productivity;  $b_t$  : religiosity;  $\tau_t$  : tax rate

$T_t$  : standard, secular public goods; marginal utility  $\nu$ ;

$G_t$  : religious public goods / exemptions / laws; marginal utility  $b_t$  (for religious agents)

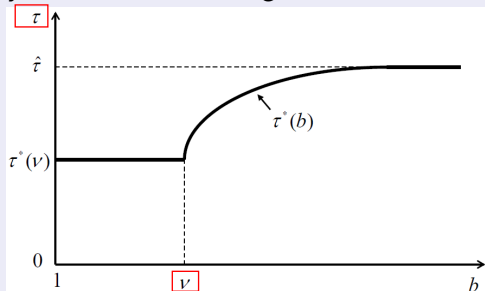
## Equilibrium Fiscal Policy (date $t+1$ )

- No income differences  $\Rightarrow$  religious majority rules

$$\max_{\tau, G} \{1 - \tau + v[R(\tau) - G] + bG \mid 0 \leq G \leq R(\tau)\} \Rightarrow$$

### Proposition

(1) With religiosity  $b$ , tax rate in old age is:



(2) Spending on  $G$  is then  $G(b; v) = 0$  if  $b < v$ ,  $= R(\tau^*(b))$  if  $b \geq v$

## Outcomes Within Each Generation

### Proposition (fiscal policy / religious laws)

*In second period, the policy outcome is:*

(1) *If  $b < v$ , fully secular:  $G = 0$  and  $T = R(\tau^*(v)) \nearrow$  in  $v$ .*

(2) *If  $b \geq v$ , increasingly religious:  $T = 0$  and  $G = 0, R(\tau^*(b)) \nearrow$  in  $b$*

### Proposition (range of doctrinal adaptation)

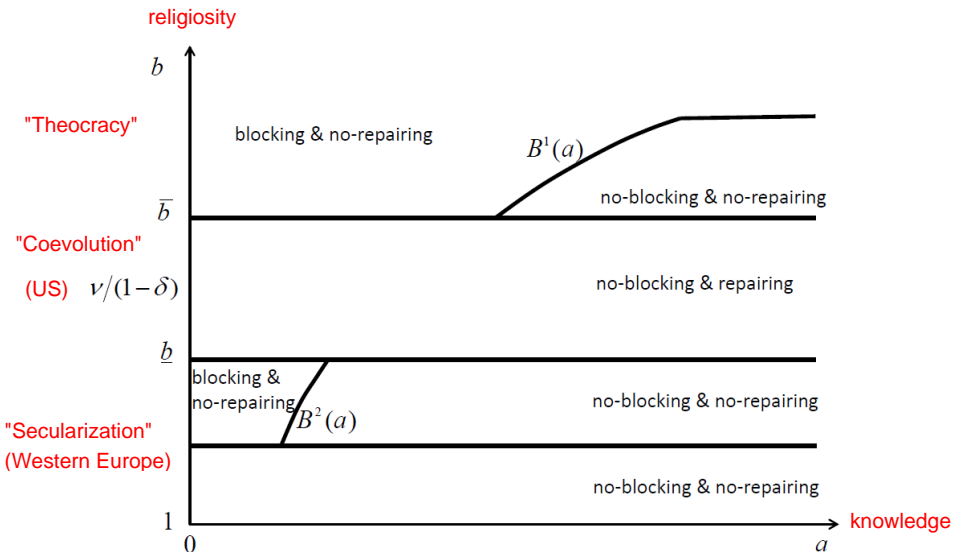
*The Church (religious institutions) attempts to repair / adapt doctrine to belief-eroding innovations (not blocked by the state) when religiosity  $b$  lies within some *intermediate range*  $[\underline{b}, \bar{b}]$ , but not below or above*

### Proposition (policy toward science)

*For  $b \geq v$  and outside the “repairing range,” innovation-blocking occurs when society is *sufficiently religious, relative to its state of knowledge, scientific and technical development*:  $b \geq B(a)$ , with  $B' > 0$*

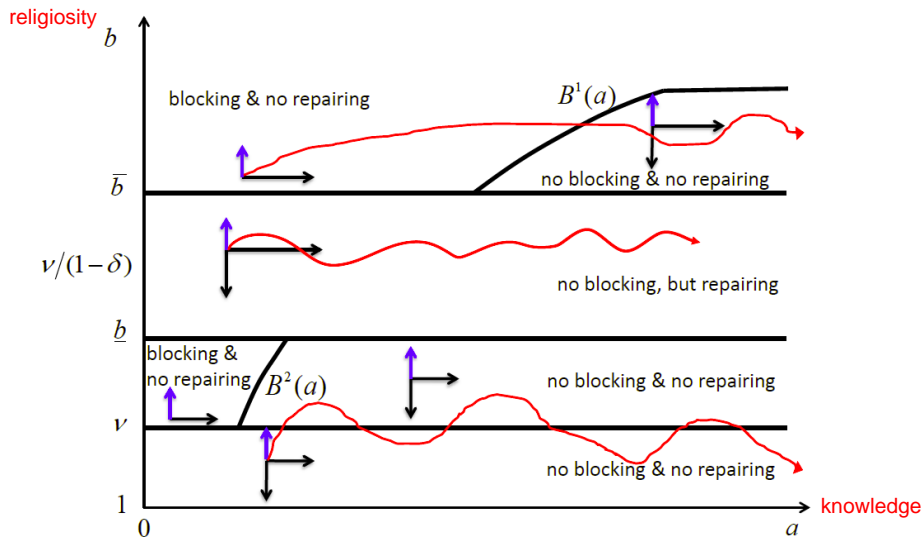


# Intra-Generational Equilibrium



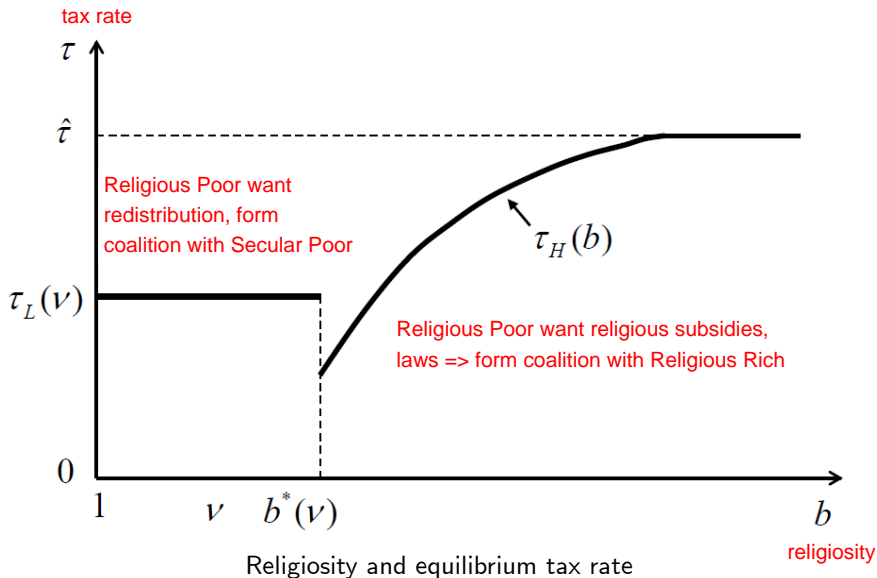
# Dynamics of Scientific Progress and Religiosity

- Religiosity-enhancing shocks: plague, earthquake, flood, war; cultural change, immigration. No link to science:  $a_{t+2} = a_{t+1}$ ,  $b_{t+2} = (1 + \mu)b_{t+1}$  [prob.  $p_E$ ] or  $= b_{t+1}$



# Inequality, Religion and the Politics of Science

- Whom Do the Religious Poor Side With?



# Key Implications

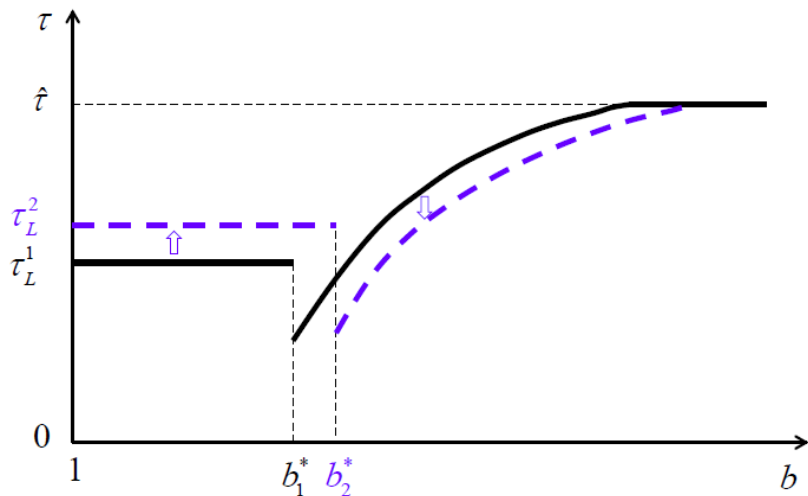
## ① Religion as a “wedge” issue

- ▶ In countries with low religiosity, secular governments come to power, implement welfare-state policies that (mostly) benefit the poor
- ▶ Such countries tax more and have a larger public sector than somewhat more religious ones, such as the US, which provide not only a different set of public goods but also at a lower level
- ▶ In latter countries, **religion splits** the usual pro-redistribution coalition of the poor. Decisive class is then not only more religious, but also richer

## ② Fiscal effects of greater income inequality:

- ▶ Higher taxes and government spending in **low-religiosity** countries (WE)
- ▶ **Lower levels** of both (and different mix) in **more religious ones** (US)

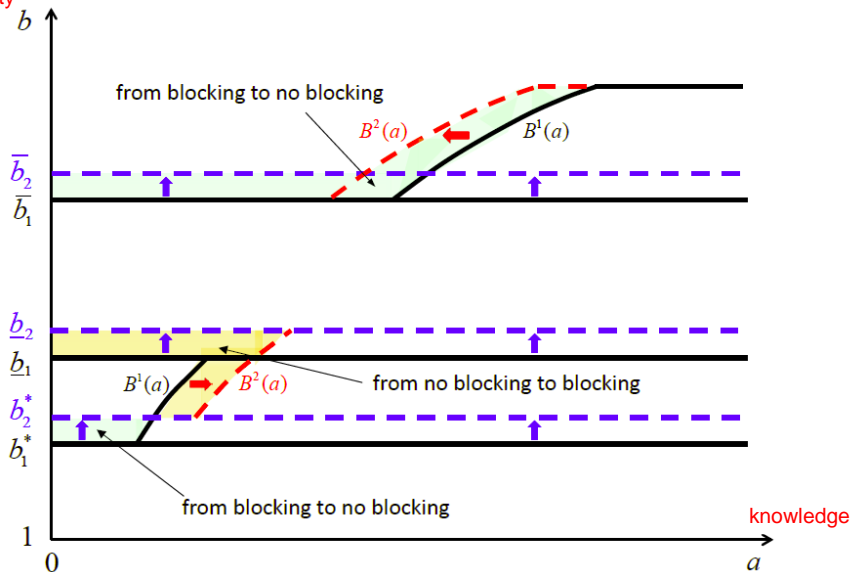
## Effect of Increased Inequality Depends on Religiosity



Mean-preserving spread in incomes:  $nd\theta_H + (1 - n)d\theta_L = 0$

# Income Inequality and Science Policy

religiosity



Mean-preserving spread in incomes:  $nd\theta_H + (1 - n)d\theta_L = 0$

## Proposition (Inequality and the politics of science)

(1) In the “American” regime (intermediate  $b/a$ ), greater *income inequality*  $\Rightarrow$  more blocking of “threatening” scientific findings, and to (weakly) *greater doctrinal rigidity* (less adaptation) of the religious sector.

(2) At high enough levels of religiosity, corresponding to “theocratic” regimes, it has the opposite (“Arab Spring”) effects.

- Inequality  $\rightsquigarrow$  emergence of **Religious-Right alliance**

- 1 At  $t + 1$ , *RP* will support *RR* and their low-tax policy **against own class interest** (represented by *SP*) only if sufficiently religious  $\Rightarrow$
- 2 At  $t$ , *RP* have forward-looking incentive to **“keep them religious”**  $\Rightarrow$  may want to block belief-eroding ideas, even though doing so is more costly to the rich (tax burden & foregone TFP)
- 3 This incentive is **stronger**, the more redistribution would occur at  $t + 1$  if the *RP* (lacking faith) allied themselves with the *SP* instead –hence, **the greater is income inequality**

# Summary of Main Results

- ① “Secularization” (Western Europe): declining religiosity, no repairing of beliefs, unimpeded knowledge, TFP
  - ▶ High taxes, public spending / policies tilted to secular, redistribution
- ② “Theocracy” (Iran, Pakistan): very high religiosity, doctrinal rigidity, blocking of knowledge, TFP stagnation.
  - ▶ High taxes, public spending / policies tilted to religious
- ③ “Coexistence” (US): medium-high religiosity, adaptation of beliefs, usually unimpeded knowledge, TFP
  - ▶ Low taxes, fiscal or other policies tilted to religious
- ④ Inequality & Religious Right: rising inequality can lead to strategic coalition between (religious) rich and religious poor:
  - ▶ Former block science that would erode the beliefs of the latter
  - ▶ Latter then prefer low taxes + religion-tilted policies to high redistribution, favored by secular poor



# “Religion and Innovation”

- World Values Survey: 1980, 1990, 1995, 2000, and 2005
- Religiosity:
  - ▶ *Religious Person*
  - ▶ *Belief in God,*
  - ▶ *Importance of Religion in your life*
  - ▶ *Importance of God in your life*
  - ▶ *Religious Attendance*
- Controls:
  - ▶ *Age, Gender, Social Class, Education, Income*
  - ▶ Religion-specific dummies (almost 90). Aggregate later on
  - ▶ Dummies for town size, country, year

# “Religion and Innovation”

## A. Attitudes toward science and technology

- ① *“We depend too much on science and not enough on faith”*
- ② *“Science and technology make our way of life change too fast”*
- ③ *“The world is better off because of science and technology”*

## B. Attitudes toward new ideas, change, and risk-taking

- ① *Which are better: “Ideas that stood the test of time”, vs. “New ideas”*
- ② *Self-recognition in “It is important to this person to think up new ideas and be creative; to do things one’s own way”*
- ③ *“I worry about difficulties changes may cause”, vs. “I welcome possibilities that something new is beginning”*
- ④ *Self-recognition in “Adventure and taking risks are important to this person; to have an exciting life”*
- ⑤ *Everything is determined by fate”, vs. “People shape their fate themselves”*

## “Religion and Innovation”

**C. Child qualities** Among 11 “*Qualities that children can be encouraged to learn at home,*” respondents pick the 5 they consider “especially important”. Select three most directly related to our inquiry:

- ① *Imagination*
- ② *Independence*
- ③ *Determination and Perseverance*

Table 1: Attitudes Toward Science and Technology

	(1) <i>Too much dep. on science vs faith: disagree (E220m)</i>	(2) <i>Too much dep. on science vs faith: disagree (E220m)</i>	(3) <i>Too much dep. on science vs faith: disagree (E220m)</i>	(4) <i>Too much dep. on science vs faith: disagree (E220m)</i>	(5) <i>Science &amp; Tech. life change too fast: disagree (E219m)</i>	(6) <i>Science &amp; Tech. life change too fast: disagree (E219m)</i>	(7) <i>Science &amp; Tech. life change too fast: disagree (E219m)</i>	(8) <i>Science &amp; Tech. life change too fast: disagree (E219m)</i>	(9) <i>Because Science &amp; Tech. world is better off (E234)</i>	(10) <i>Because Science &amp; Tech. world is better off (E234)</i>	(11) <i>Because Science &amp; Tech. world is better off (E234)</i>	(12) <i>Because Science &amp; Tech. world is better off (E234)</i>
<b>Religious person</b>	-0.232*** (0.047)				-0.181*** (0.039)				0.032 (0.039)			
<b>Importance of religion</b>		-0.419*** (0.024)				-0.137*** (0.021)				-0.019 (0.020)		
<b>Importance of God</b>			-0.144*** (0.009)				-0.094*** (0.007)				0.024*** (0.007)	
<b>Church attendance</b>				-0.046*** (0.009)				-0.007 (0.007)				-0.002 (0.007)
<i>Female</i>	-0.080** (0.032)	-0.038 (0.031)	-0.038 (0.032)	-0.091*** (0.033)	-0.045* (0.027)	-0.051* (0.027)	-0.025 (0.027)	-0.055** (0.028)	-0.134*** (0.027)	-0.125*** (0.027)	-0.139*** (0.027)	-0.134*** (0.028)
<i>Age</i>	-0.004*** (0.001)	-0.002** (0.001)	-0.003** (0.001)	-0.004*** (0.001)	-0.002** (0.001)	-0.002** (0.001)	-0.002* (0.001)	-0.002** (0.001)	0.000 (0.001)	0.000 (0.001)	-0.000 (0.001)	0.000 (0.001)
<i>Education</i>	-0.006 (0.009)	-0.008 (0.009)	-0.007 (0.009)	0.002 (0.009)	-0.047*** (0.007)	-0.049*** (0.007)	-0.048*** (0.007)	-0.042*** (0.007)	0.056*** (0.007)	0.057*** (0.007)	0.057*** (0.007)	0.059*** (0.008)
<i>Social class</i>	-0.037* (0.020)	-0.038* (0.020)	-0.032 (0.020)	-0.048** (0.021)	0.004 (0.017)	0.003 (0.017)	0.010 (0.017)	0.004 (0.018)	0.028 (0.018)	0.029* (0.018)	0.026 (0.017)	0.043** (0.018)
<i>Income</i>	0.042*** (0.009)	0.038*** (0.009)	0.035*** (0.009)	0.044*** (0.010)	0.015** (0.008)	0.016** (0.008)	0.013 (0.008)	0.018** (0.008)	0.074*** (0.008)	0.075*** (0.008)	0.076*** (0.008)	0.069*** (0.008)
<i>Constant</i>	-6.435*** (0.290)	-7.960*** (0.297)	-5.908*** (0.293)	-6.829*** (0.312)	-7.520*** (0.247)	-8.051*** (0.256)	-7.146*** (0.250)	-7.703*** (0.267)	4.743*** (0.204)	4.674*** (0.216)	4.660*** (0.205)	4.746*** (0.227)
<i>Observations</i>	31978	32512	32466	30427	32413	32983	32921	30883	32651	33199	33162	31198
<i>Adjusted R<sup>2</sup></i>	0.140	0.148	0.149	0.141	0.067	0.067	0.072	0.069	0.098	0.096	0.098	0.094

Robust standard errors in parentheses. \*Significant at 10%; \*\*significant at 5%; \*\*\*significant at 1%. OLS estimates. All regressions include controls (not reported) for country, town size, religious denomination and year. Belief in God has not been included because of the absence of observations.

Table 2a: Attitudes Toward New vs. Old Ideas, Creativity, and Risk-Taking

	(1) <i>New ideas are better than old: agree (E046)</i>	(2) <i>New ideas are better than old: agree (E046)</i>	(3) <i>New ideas are better than old: agree (E046)</i>	(4) <i>New ideas are better than old: agree (E046)</i>	(5) <i>New ideas are better than old: agree (E046)</i>	(6) <i>Imp. of new ideas &amp; being creative (A189m)</i>	(7) <i>Imp. of new ideas &amp; being creative (A189m)</i>	(8) <i>Imp. of new ideas &amp; being creative (A189m)</i>	(9) <i>Imp. of new ideas &amp; being creative (A189m)</i>	(10) <i>Imp. of new ideas &amp; being creative (A189m)</i>	(11) <i>Imp. of adv. &amp; risk taking (A195m)</i>	(12) <i>Imp. of adv. &amp; risk taking (A195m)</i>	(13) <i>Imp. of adv. &amp; risk taking (A195m)</i>	(14) <i>Imp. of adv. &amp; risk taking (A195m)</i>	(15) <i>Imp. of adv. &amp; risk taking (A195m)</i>
<i>Religious person</i>	-0.197*** (0.037)					0.073*** (0.020)					-0.094*** (0.023)				
<i>Importance of religion</i>		-0.013 (0.017)					0.039*** (0.011)					-0.038*** (0.012)			
<i>Believe in God</i>			-0.131** (0.063)					0.067* (0.456)					-0.903* (0.522)		
<i>Importance of God</i>				-0.001 (0.006)					0.015*** (0.004)					-0.022*** (0.004)	
<i>Church attendance</i>					-0.022*** (0.007)					0.024*** (0.004)				-0.006 (0.004)	
<i>Female</i>	-0.084*** (0.028)	-0.098*** (0.027)	-0.105*** (0.028)	-0.098*** (0.028)	-0.082*** (0.027)	-0.141*** (0.014)	-0.146*** (0.014)	-0.156*** (0.049)	-0.146*** (0.014)	-0.139*** (0.015)	-0.309*** (0.016)	-0.314*** (0.016)	-0.299*** (0.060)	-0.310*** (0.016)	-0.317*** (0.017)
<i>Age</i>	-0.018*** (0.001)	-0.018*** (0.001)	-0.018*** (0.001)	-0.018*** (0.001)	-0.018*** (0.001)	-0.005*** (0.001)	-0.005*** (0.001)	-0.004** (0.002)	-0.005*** (0.001)	-0.005*** (0.001)	-0.016*** (0.001)	-0.016*** (0.001)	-0.025*** (0.002)	-0.016*** (0.001)	-0.016*** (0.001)
<i>Education</i>	0.013* (0.007)	0.011 (0.007)	0.014* (0.007)	0.012 (0.007)	0.010 (0.007)	0.059*** (0.004)	0.059*** (0.004)	0.074*** (0.011)	0.059*** (0.004)	0.059*** (0.004)	0.011** (0.004)	0.012*** (0.004)	0.019 (0.014)	0.012*** (0.004)	0.011** (0.005)
<i>Social class</i>	0.054*** (0.017)	0.053*** (0.017)	0.054*** (0.017)	0.053*** (0.017)	0.055*** (0.017)	0.076*** (0.009)	0.075*** (0.009)	0.002 (0.033)	0.074*** (0.009)	0.080*** (0.009)	0.063*** (0.010)	0.061*** (0.010)	-0.018 (0.040)	0.060*** (0.010)	0.058*** (0.011)
<i>Income</i>	0.020*** (0.007)	0.025*** (0.007)	0.021*** (0.007)	0.025*** (0.007)	0.025*** (0.007)	0.018*** (0.004)	0.018*** (0.004)	0.023 (0.016)	0.018*** (0.004)	0.016*** (0.004)	0.021*** (0.005)	0.021*** (0.005)	0.067*** (0.020)	0.021*** (0.005)	0.025*** (0.005)
<i>Constant</i>	6.928*** (0.631)	5.864*** (0.341)	6.040*** (0.346)	5.887*** (0.345)	6.740*** (0.632)	-2.504*** (0.123)	-2.339*** (0.130)	-1.937*** (0.658)	-2.539*** (0.124)	-2.319*** (0.134)	-2.661*** (0.139)	-2.827*** (0.146)	-1.403* (0.820)	-2.622*** (0.142)	-2.836*** (0.150)
<i>Observations</i>	40006	41508	39276	40634	41231	35008	35667	2360	35598	33279	34957	35618	2361	35550	33249
<i>Adjusted R<sup>2</sup></i>	0.190	0.188	0.195	0.191	0.190	0.099	0.099	0.044	0.099	0.101	0.156	0.155	0.080	0.155	0.164

Robust standard errors in parentheses. \*Significant at 10%; \*\*significant at 5%; \*\*\*significant at 1%. OLS estimates. All regressions include controls (not reported) for country, town size, religious denomination and year.

Table 2b: Attitudes Toward Change and Belief in Shaping Own Fate

Dependent variable	(16) <i>People</i> <i>shape their</i> <i>fate:</i> <i>agree</i> <i>(F198)</i>	(17) <i>People</i> <i>shape their</i> <i>fate:</i> <i>agree</i> <i>(F198)</i>	(18) <i>People</i> <i>shape their</i> <i>fate:</i> <i>agree</i> <i>(F198)</i>	(19) <i>People</i> <i>shape their</i> <i>fate:</i> <i>agree</i> <i>(F198)</i>	(20) <i>People</i> <i>shape their</i> <i>fate:</i> <i>agree</i> <i>(F198)</i>	(21) <i>Att. Toward</i> <i>Change:</i> <i>welcome</i> <i>possibilities</i> <i>(E047)</i>	(22) <i>Att. Toward</i> <i>Change:</i> <i>welcome</i> <i>possibilities</i> <i>(E047)</i>	(23) <i>Att. Toward</i> <i>Change:</i> <i>welcome</i> <i>possibilities</i> <i>(E047)</i>	(24) <i>Att. Toward</i> <i>Change:</i> <i>welcome</i> <i>possibilities</i> <i>(E047)</i>	(25) <i>Att. Toward</i> <i>Change:</i> <i>welcome</i> <i>possibilities</i> <i>(E047)</i>	(26) <i>Att. Toward</i> <i>Change:</i> <i>welcome</i> <i>possibilities</i> <i>(E047)</i>	(27) <i>Att. Toward</i> <i>Change:</i> <i>welcome</i> <i>possibilities</i> <i>(E047)</i>	(28) <i>Att. Toward</i> <i>Change:</i> <i>welcome</i> <i>possibilities</i> <i>(E047)</i>	(29) <i>Att. Toward</i> <i>Change:</i> <i>welcome</i> <i>possibilities</i> <i>(E047)</i>	(30) <i>Att. Toward</i> <i>Change:</i> <i>welcome</i> <i>possibilities</i> <i>(E047)</i>
<i>Religious person</i>	-0.152*** (0.041)					-0.113 (0.074)					-0.171*** (0.056)				
<i>Importance of religion</i>		-0.163*** (0.021)					-0.035 (0.034)					-0.075*** (0.026)			
<i>Believe in God</i>			-1.311* (0.750)					-0.437*** (0.137)					-0.424*** (0.082)		
<i>Importance of God</i>				-0.045*** (0.008)					-0.019 (0.014)					-0.025** (0.010)	
<i>Church attendance</i>					-0.011 (0.007)					-0.037*** (0.014)					-0.048*** (0.011)
<i>Female</i>	-0.275*** (0.029)	-0.260*** (0.029)	-0.410*** (0.115)	-0.264*** (0.029)	-0.298*** (0.030)	-0.198*** (0.058)	-0.170*** (0.058)	-0.134** (0.061)	-0.136** (0.061)	-0.136** (0.056)	-0.245*** (0.048)	-0.221*** (0.047)	-0.129** (0.054)	-0.208*** (0.049)	-0.166*** (0.046)
<i>Age</i>	-0.005*** (0.001)	-0.004*** (0.001)	-0.016*** (0.005)	-0.005*** (0.001)	-0.005*** (0.001)	-0.022*** (0.002)	-0.023*** (0.002)	-0.022*** (0.002)	-0.022*** (0.002)	-0.024*** (0.002)	-0.025*** (0.002)	-0.025*** (0.002)	-0.023*** (0.002)	-0.023*** (0.002)	-0.027*** (0.002)
<i>Education</i>	0.117*** (0.008)	0.117*** (0.008)	0.080*** (0.026)	0.118*** (0.008)	0.121*** (0.008)										
<i>Social class</i>	0.080*** (0.019)	0.081*** (0.019)	0.185** (0.080)	0.082*** (0.019)	0.086*** (0.020)										
<i>Income</i>	0.081*** (0.009)	0.079*** (0.008)	0.047 (0.040)	0.079*** (0.009)	0.081*** (0.009)										
<i>Constant</i>	7.088*** (0.259)	6.412*** (0.269)	10.373*** (1.181)	7.265*** (0.261)	6.839*** (0.280)	5.564*** (0.736)	4.701*** (0.748)	5.911*** (0.763)	5.690*** (0.766)	5.478*** (0.735)	8.158*** (0.115)	7.230*** (0.119)	8.286*** (0.132)	8.167*** (0.128)	7.878*** (0.141)
<i>Observations</i>	35919	36577	2360	36533	34177	10362	10587	9580	9758	11277	14702	15853	12132	14494	16107
<i>Adjusted R<sup>2</sup></i>	0.191	0.191	0.029	0.191	0.164	0.056	0.058	0.048	0.049	0.060	0.066	0.061	0.059	0.057	0.068

Robust standard errors in parentheses. \*Significant at 10%; \*\*significant at 5%; \*\*\*significant at 1%. OLS estimates. All regressions in columns (16)–(20) include controls (not reported) for country, town size, religious denomination and year. Regressions in columns (21)–(25) include controls (not reported) for country, religious denomination and year. Regressions in columns (25)–(30) only include controls (not reported) for country and year, allowing for about a 50% increase in sample size.

Table 3: Most Important Qualities for Children To Have

Dependent variable	(1) <i>Imp. of child independ. (A029)</i>	(2) <i>Imp. of child independ. (A029)</i>	(3) <i>Imp. of child independ. (A029)</i>	(4) <i>Imp. of child independ. (A029)</i>	(5) <i>Imp. of child independ. (A029)</i>	(6) <i>Imp. of child imagination (A034)</i>	(7) <i>Imp. of child imagination (A034)</i>	(8) <i>Imp. of child imagination (A034)</i>	(9) <i>Imp. of child imagination (A034)</i>	(10) <i>Imp. of child imagination (A034)</i>	(11) <i>Imp. of child determin. (A039)</i>	(12) <i>Imp. of child determin. (A039)</i>	(13) <i>Imp. of child determin. (A039)</i>	(14) <i>Imp. of child determin. (A039)</i>	(15) <i>Imp. of child determin. (A039)</i>
<b>Religious person</b>	-0.045*** (0.005)					-0.032*** (0.004)					-0.041*** (0.005)				
<b>Importance of religion</b>		-0.040*** (0.002)					-0.024*** (0.002)					-0.047*** (0.002)			
<b>Believe in God</b>			-0.054*** (0.010)					-0.038*** (0.009)					-0.066*** (0.011)		
<b>Importance of God</b>				-0.016*** (0.001)					-0.008*** (0.001)					-0.013*** (0.001)	
<b>Church attendance</b>					-0.009*** (0.001)					-0.006*** (0.001)					-0.008*** (0.001)
<i>Female</i>	0.008** (0.003)	0.012*** (0.003)	0.003 (0.004)	0.014*** (0.003)	0.007** (0.003)	-0.010*** (0.003)	-0.008*** (0.003)	-0.011*** (0.003)	-0.008*** (0.003)	-0.011*** (0.003)	-0.019*** (0.003)	-0.014*** (0.003)	-0.020*** (0.004)	-0.017*** (0.003)	-0.022*** (0.003)
<i>Age</i>	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)
<i>Education</i>	0.014*** (0.001)	0.014*** (0.001)	0.017*** (0.001)	0.014*** (0.001)	0.014*** (0.001)	0.011*** (0.001)	0.011*** (0.001)	0.010*** (0.001)	0.011*** (0.001)	0.011*** (0.001)	0.018*** (0.001)	0.018*** (0.001)	0.016*** (0.001)	0.018*** (0.001)	0.019*** (0.001)
<i>Social class</i>	0.001 (0.002)	0.002 (0.002)	-0.001 (0.002)	0.002 (0.002)	0.002 (0.002)	0.004** (0.002)	0.004*** (0.002)	-0.002 (0.002)	0.004** (0.002)	0.004** (0.002)	0.002 (0.002)	0.004** (0.002)	0.001 (0.002)	0.004* (0.002)	0.002 (0.002)
<i>Income</i>	0.007*** (0.001)	0.007*** (0.001)	0.006*** (0.001)	0.007*** (0.001)	0.007*** (0.001)	0.001 (0.001)	0.001 (0.001)	0.002** (0.001)	0.001 (0.001)	0.001 (0.001)	0.005*** (0.001)	0.004*** (0.001)	0.008*** (0.001)	0.004*** (0.001)	0.005*** (0.001)
<i>Constant</i>	0.276** (0.127)	0.159 (0.129)	0.298** (0.129)	0.370*** (0.128)	0.219* (0.129)	0.235*** (0.087)	0.165* (0.087)	0.231*** (0.087)	0.278*** (0.087)	0.199** (0.086)	0.598*** (0.133)	0.474*** (0.130)	0.631*** (0.133)	0.673*** (0.132)	0.542*** (0.132)
<i>Observations</i>	93028	95902	58294	94827	93242	93028	95902	58294	94827	93242	89348	92200	55545	92078	89536
<i>Adjusted R<sup>2</sup></i>	0.141	0.145	0.146	0.145	0.141	0.067	0.068	0.067	0.068	0.069	0.060	0.064	0.065	0.062	0.061

Robust standard errors in parentheses. \*Significant at 10%; \*\*significant at 5%; \*\*\*significant at 1%. OLS estimates. All regressions include controls (not reported) for country, own size, religious denomination and year.