Preferences for redistribution in Europe

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Organization

1. **Introduction**
2. **Exploring data**
3. **Baseline model**
4. **Pseudo panel estimates**
5. **Conclusions**

Literature 1/2

(Meltzer and Richard, 1981 & 1983): the median voter is decisive to push for redistribution when the median income is placed left to the mean of the income.

(Piketty, 1995; Benabou & Ok, 2001): Expectation of upward mobility of people in the low part of income distribution.

Alesina & Angeletos (2005): individual effort vs. luck as the main source of income formation.

Karabarbounis (2011): empirical support for the 'one dollar, one vote' equilibrium.

(Kusiemko et al., 2013; Cruces et al., 2013 ; Schokkaert & Truyts, 2014) informational limitations on inequality levels and the influence of reference groups.

Income distributions with same mean
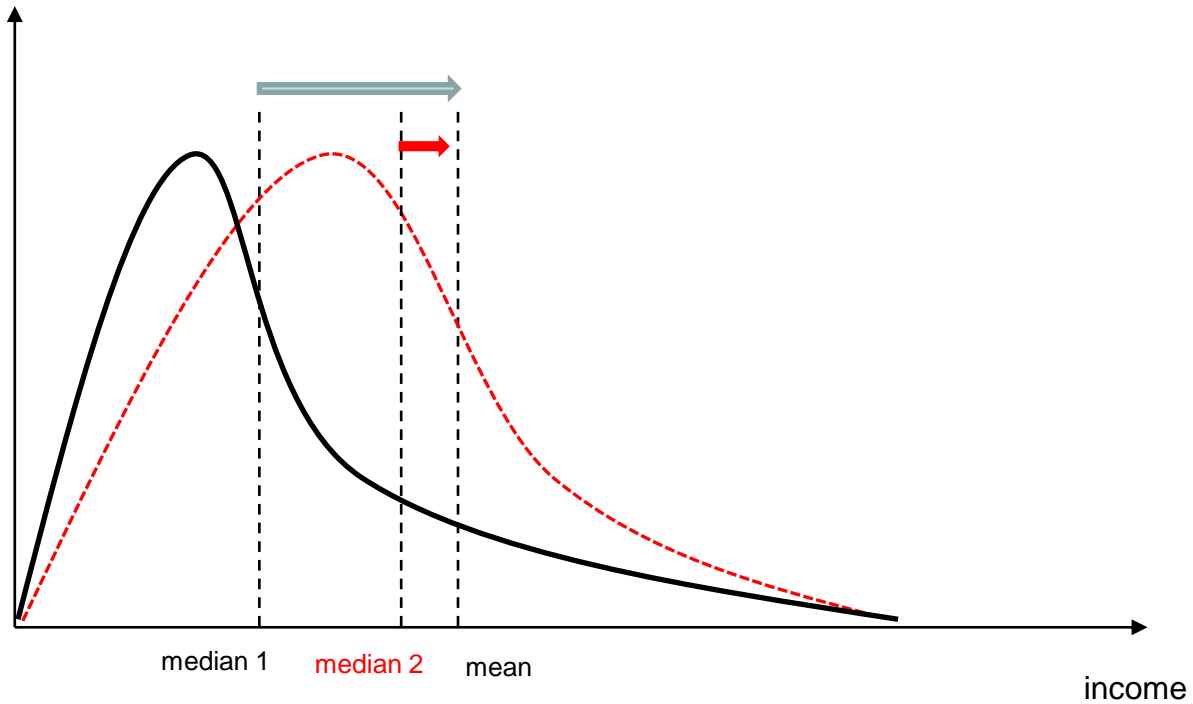
Literature 2/2

Roughly subdivided into two branches:

1) With measures of income inequality and redistribution (most often the gini coefficient and ratio of median to mean income) at country or state level. The effect of inequality on redistribution has not received much empirical support: Rodriguez (1999), Persson and Tabellini (1994), Perotti (1996), Moene and Wallerstein (2001, 2003), Lind (2005) and Shelton (2007).

   Exceptions are Milanovic (2000, 2010) and Karabarbounis (2011).

2) Study of the determinants of individual preferences for redistribution. Few asses the effect of income inequality on these preferences: Pittau et al (2013), Kerr (2014), Tóth and Keller (2011), Yamamura (2012) and Jaeger (2012). The results are mixed, although a majority of studies find a positive effect of inequality on preferences for redistribution.

Empirical literature on preferences for redistribution

Study	Dataset	Region	Modelling	Effect of inequality
Pittau et al (2013)	ESS 2002-2008 GSS 2000-2006	23 EU countries US states	Logit multilevel	+ -
Kerr (2014)	GSS 1972 -2000 ISSP 1987, 92, 99 WVS 1990, 95, 00	US (states) Many countries	OLS IV OLS	+ or insignificant
Tóth and Keller (2011)	Eurobarometer 1999	EU-27	OLS Multilevel	+
Yamamura (2012)	JGSS 2000-2008	Japan	Ordered Probit	+ for high-income earners, otherwise insignif.
Jaeger (2012)	ESS 2002-2008	31 EU countries	FE Pseudo Panels	insignificant
Luttmer and Singhal (2011)	ESS 2002-2006	32 EU countries	OLS	Not studied
Gillaud (2012)	ISSP 2006	33 countries	Ordered Logit	Not studied
Alesina and Giuliano (2011)	GSS 1972-2004 WVS 1981, 90, 95, 99	US Many others	OLS	Not studied
Alesina and Fuchs-Schundeln (2007)	Panel GSOEP 1997-2002	Germany	Probit	Not studied
Georgiadis and Manning (2012)	BSAS	UK	OLS	Not studied
Alesina and La Ferrara (2005)	GSS 1978-91	US	Ordered Probit	Not studied
Corneo and Grüner (2002)	ISSP 1992	12 developed countries	Logit	Not studied
Fong (2001)	Gallup Poll Social Audit Survey 1998	US	Ordered Probit	Not studied

Data

European Social Survey (ESS), 6 waves: 2002 to 2012
About 280,000 respondents in 34 countries

Key question: "To what extent you agree or disagree with the statement: the government should take measures to reduce differences in income levels": strongly agree (5); agree (4); neither agrees nor disagree (3); disagree (2) and strongly disagree (1)
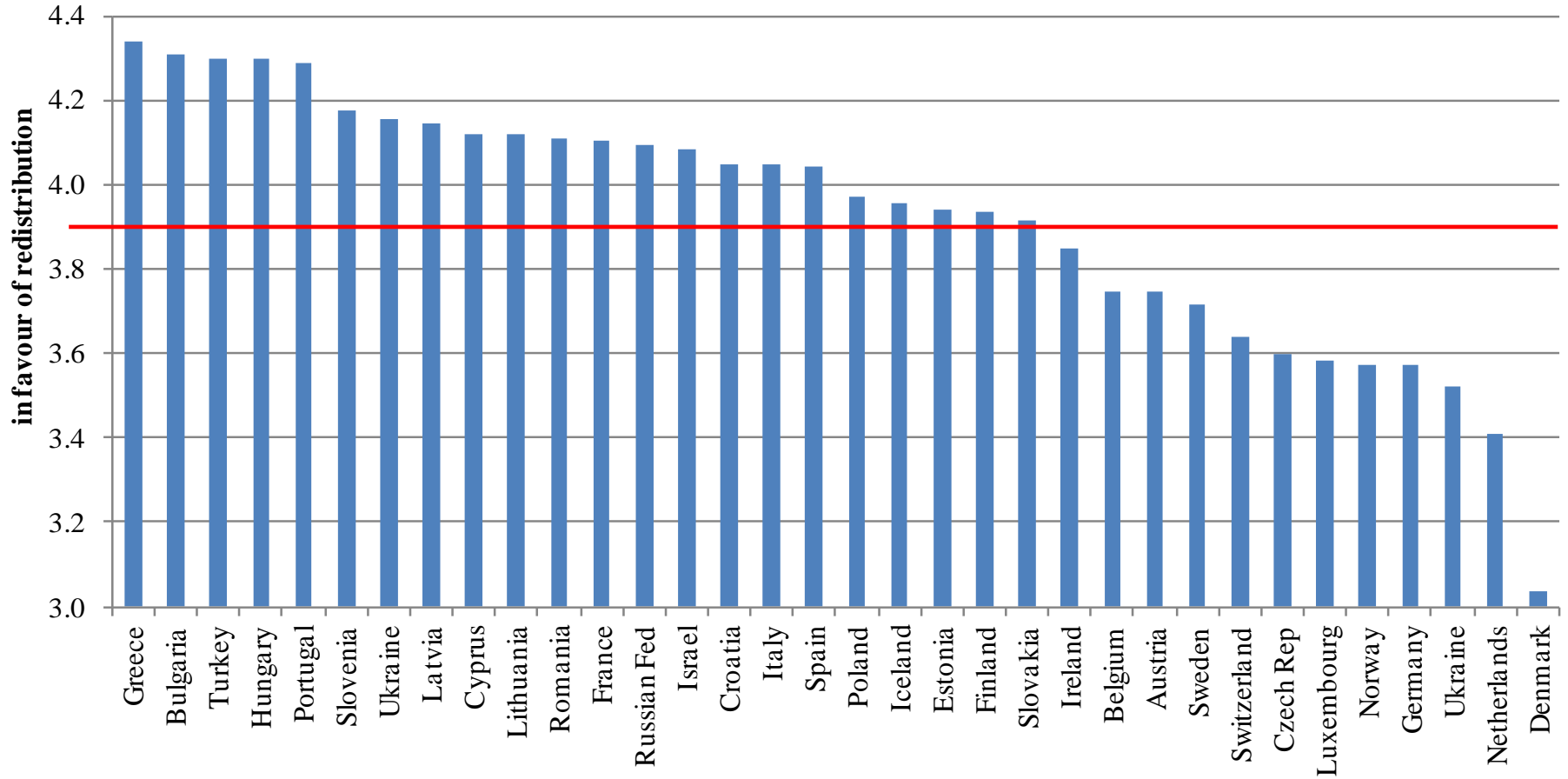
Ginis, 1% income share: Standardized World Income Inequality Database (SWIID)
GDP p.c. in real ppp: World Development Indicators

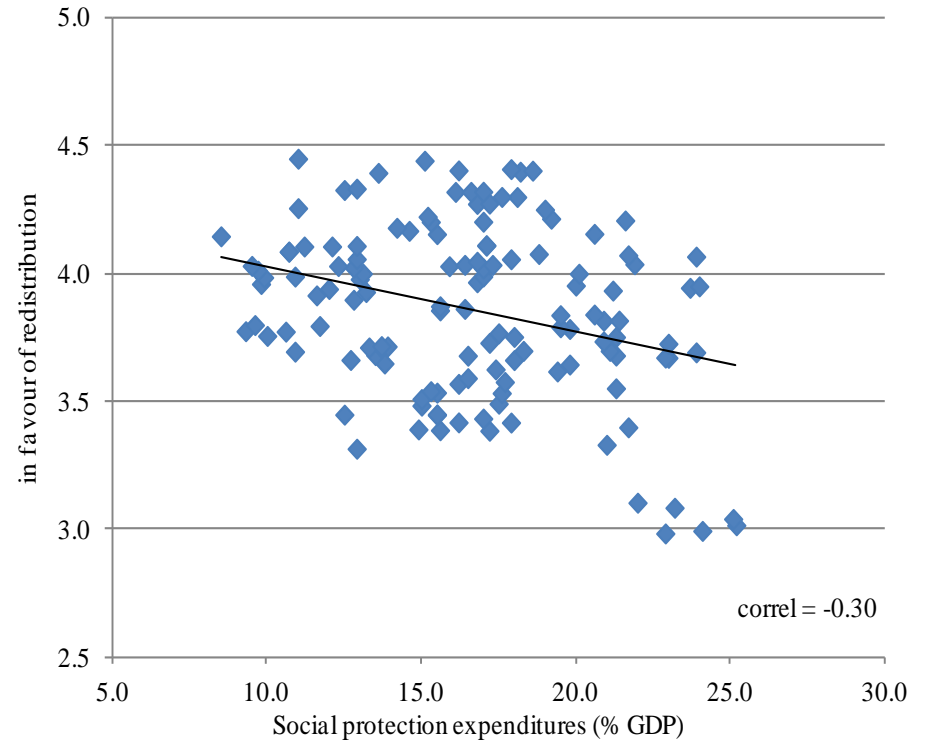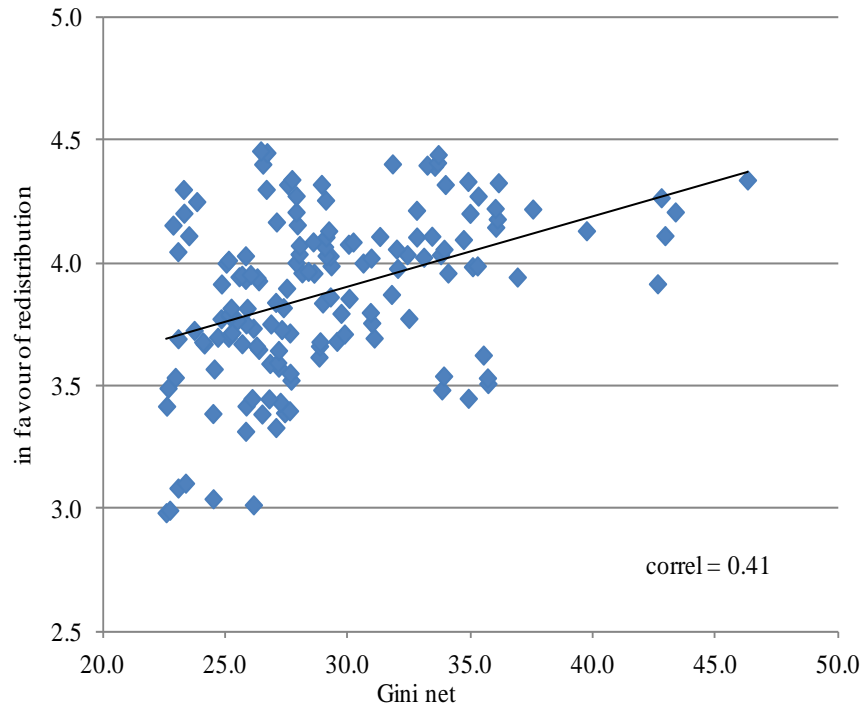*Initial sample*: 153 country-year points. 283,995 individuals
Countries: EU-28 (except Malta) + Norway, Iceland, Russia, Switzerland, Turkey, Ukraine and Israel

Score of preferences for redistribution

Preferences for redistribution, income inequality & redistribution

The baseline model

Pooled OLS estimates

$$y_{i,c,t} = \theta_c + \delta_t + \beta X_{c,t-1} + \gamma Z_{i,c,t} + \varepsilon_{i,c,t}$$

Country effects

Year effects

Dependent variable: preference for redistribution (5 to 1)

Subscripts *i*, *c* and *t* stand for individual, country and time

with robust standard errors

Variables (2002-2012)

Variable	mean	sd	Variable	mean	sd
in favour of redistribution	3.88	1.04	isced: 1	0.13	0.34
gini net incomes	29.53	4.85	isced: 2	0.18	0.39
gini market incomes	42.19	5.28	isced: 3	0.39	0.49
top 1% income share	8.52	2.47	isced: 4	0.03	0.17
log gdp pc	10.10	0.45	isced: 5	0.26	0.44
social protection expend.	16.77	3.91	isced: other	0.00	0.05
left-right scale	5.16	2.20	income: living comfort.	0.27	0.45
male	0.47	0.50	income: coping on	0.44	0.50
living with partner	0.62	0.48	income: difficult on	0.20	0.40
age	46.23	18.19	income: very difficult on	0.08	0.27
ethnic	0.06	0.24	union	0.42	0.49
religious	4.80	2.96	retired	0.23	0.42
			unemployed	0.07	0.25

Some OLS estimates

| Variables	(1)	(2)	(3)	(4)	(5)
gini net	0.0059***	0.0127***			
	(0.0020)	(0.0022)			
gini market			0.0079***		
			(0.0013)		
top 1% income share				0.0135***	
				(0.0022)	
social protection expendit.					-0.0133***
					(0.0022)
log GDP pc	0.1049**	0.1266**	0.1411***	0.0644	
	(0.0494)	(0.0539)	(0.0538)	(0.0551)	
left-right political scale		-0.0767***	-0.0766***	-0.0765***	-0.0838***
		(0.0011)	(0.0011)	(0.0011)	(0.0012)
inc. nowadays: living comfort.	-0.4474***	-0.4122***	-0.4111***	-0.4112***	-0.4217***
	(0.0094)	(0.0106)	(0.0106)	(0.0106)	(0.0112)
inc. nowadays: coping on	-0.2327***	-0.2114***	-0.2111***	-0.2108***	-0.2225***
	(0.0083)	(0.0095)	(0.0095)	(0.0095)	(0.0102)
inc. nowadays: difficult on	-0.0968***	-0.0824***	-0.0824***	-0.0827***	-0.0928***
	(0.0084)	(0.0098)	(0.0098)	(0.0098)	(0.0104)
ethnic	0.0916***	0.0438***	0.0442***	0.0445***	0.0495***
	(0.0092)	(0.0103)	(0.0103)	(0.0103)	(0.0113)
religious	-0.0020**	0.0067***	0.0068***	0.0067***	0.0061***
	(0.0008)	(0.0009)	(0.0009)	(0.0009)	(0.0009)
Observations	265647	229202	229202	229202	202882
R^2	0.134	0.157	0.157	0.157	0.164

With robust standard errors. Each regression includes year and country dummies and full set of variables

Additional OLS estimates

Woman, single, older, in union, unemployed, retired and more religious are more in favour for redistribution.

Interactions between education & political scale show that more educated left-wingers support redistribution. The opposite occurs for right-wingers

Preferences for redistribution and political scale:
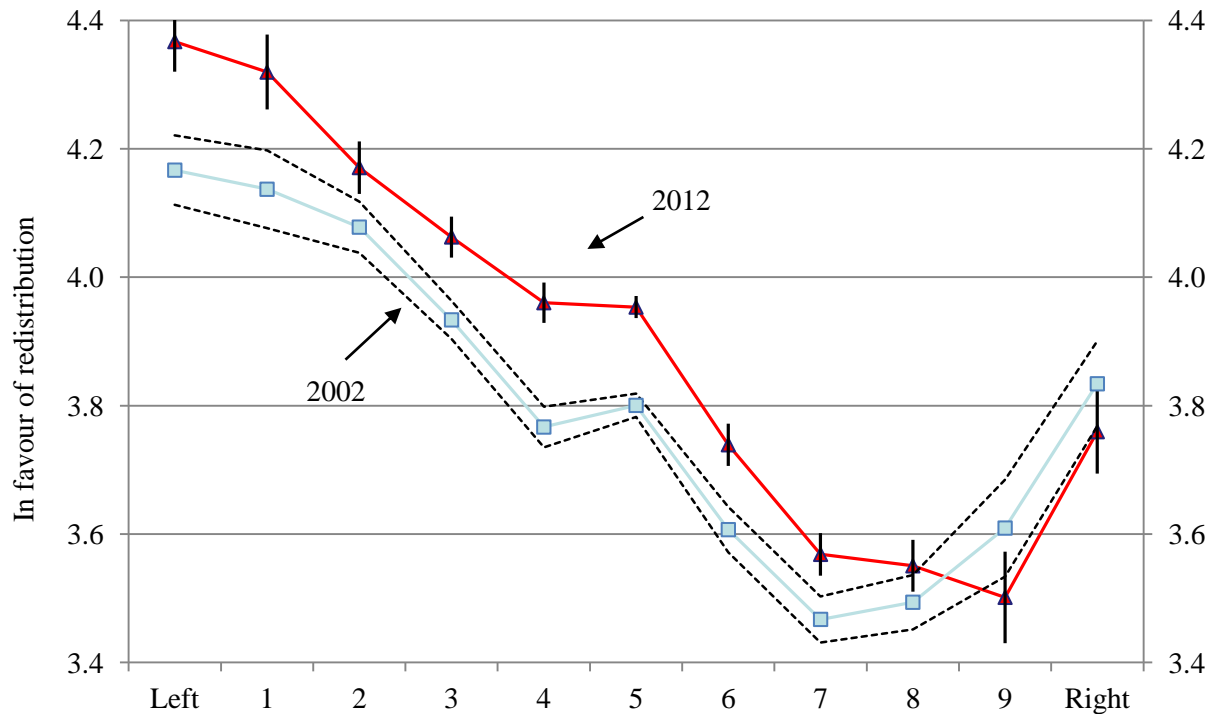
<u>Additional checks</u>

Probit model

Ordinal Probit model

Inclusion/exclusion of Russia (much less democratic)

Inclusion/exclusion of crisis year 2010

Inclusion/exclusion of political scales

Preferences for redistribution over time

Panel data will help to study the effects of income inequality over time because we will be able to follow the same unit over time and study its reactions to changing inequality.

The application of a fixed effects model will allow us to control for time-invariant observed and unobserved effects.

$i = 1,…N$ individuals followed across t=1,…,T periods:

$$y_{it} = \delta_t + \alpha_i + \beta X_{it} + \gamma X_{it} + \mu_{it}$$

Construct a pseudo panel dataset (a practice initiated by Deaton, 1985) with the ESS

Pseudo panels with the ESS

A practice initiated by Deaton (1985)

$$\bar{y}_{gt} = \delta_t + \alpha_g + \beta_g \bar{X}_{it-1} + \varphi_g \bar{Z}_{it} + \mu_{gt}$$

A pseudo panel dataset is conformed by groups -generally individuals grouped in birth cohorts- that can be followed over time. The characteristics of these groups are built averaging that of the individuals identified in each group. These groups must be identified by variables that do not change over time; year of birth, sex and regions are the usual identifiers.

We use 10 birth year cohorts spaced every seven years, sex and country. So, the max number of synthetic observations is 10x2x34x6=4,080.

Composition of pseudo panels in ESS

Cohort	2002	2004	2006	2008	2010	2012	Total of pseudo panels	Total of respondents
1920-26	37	29	22	16	3	2	109	5,037
1927-33	44	48	45	50	42	23	252	15,389
1934-40	44	50	46	62	54	42	298	24,462
1941-47	44	51	46	62	54	43	300	29,301
1948-54	44	52	46	62	54	44	302	33,950
1955-61	44	52	46	62	54	44	302	34,973
1962-68	44	52	46	62	54	44	302	35,674
1969-75	44	52	46	62	54	44	302	33,650
1976-82	44	52	46	62	54	44	302	30,611
1983-89	42	51	46	62	54	44	299	27,097
Total	431	489	435	562	477	374	2,768	270,144

Some pseudo panel FE estimates

	coeff	std error	R^2	obs
gini net [t-1]	0.0074**	(0.0029)	0.188	2711
gini market [t-1]	0.0051***	(0.0018)	0.189	2711
top 1% inc [t-1]	0.0072**	(0.0031)	0.188	2711
social prot exp [t-1]	-0.0114***	(0.0037)	0.188	2711
gini net [t-2]	0.0048*	(0.0026)	0.193	2711
gini market [t-2]	0.0023	(0.0015)	0.193	2711
top 1% inc [t-2]	0.0166***	(0.0042)	0.200	2711
social prot exp [t-2]	-0.0061*	(0.0035)	0.159	2360
gini net [t-1,t-2]	0.0064**	(0.0028)	0.191	2711
gini market [t-1,t-2]	0.0037**	(0.0017)	0.191	2711
top 1% inc [t-1,t-2]	0.0117***	(0.0037)	0.193	2711
social prot exp [t-1,t-2]	-0.0098**	(0.0038)	0.161	2379

With robust standard errors. Each regression includes year dummies and full set of variables at cohort levels

Some checks

We imposed a minimum size for the number of observations (=30) within the pseudo panels

We make estimations with no size limit and with a min of 50. R^2 is slightly reduced in the first case and increased in the second one.

We construct two alternatives datasets by changing the birth year ranges of the cohorts:

1) With 7 birth year cohorts spaced every 10 years; 1,557 Obs.; average cell size is 130. R^2 improves.
2) With 14 birth year cohorts spaced every 5 years; 2,711 Obs.; average cell size is 65.

Concluding Remarks

Income inequality matters for preferences for redistribution, not only when analysing cross-country differences but also when focusing on changes over time.

Increases in pre-, post-tax income inequality and top 1% income share over time raise the demand for redistribution, which is line with early political economy models

At least in Europe and bearing in mind the short length of our dataset, we can observe that increasing income inequality leads to more individual support for redistribution.