Are East European young people's preferences for environmentally friendly policies different from young people from other countries?

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Willing to pay to save the planet? Evaluating support for increased spending on sustainable development and environmentally friendly policies in five countries

Protecting the environment important for 94% of Europeans - Eurobarometer (2017)

	EU28		RO	
	2017	2017-2014	2017	2017-2014
Very important	56	+ 3	47	- 4
Fairly important	38	- 4	40	=
Not very important	4	=	11	+ 4
Not at all important	1	=	1	=
Don't know	1	+ 1	1	=

Evolution 09-10/2017 - 04-05/2014

* Romania has huge problems in achieving the environmental obligations assumed in the eu accession treaty….
* This paper investigates one of the most important worldwide hurdles frustrating the implementation of the policies required to limit environmental degradation and limit pollution, namely the still insufficient public support for the necessary environmental policies and their associated cost.

* Using a comparative database generated through an experimental study on tax compliance and policy preferences run in five countries (USA, UK, Italy, Sweden and Romania), I will evaluate DIFFERENT explanatory models of the degree to which people support environmentally friendly policies by accepting higher tax burdens and increased collective solidarity.
* (1) What are the factors that structure people's willingness to support a state's increased spending on environmentally friendly policies? and
* (2) To what extent is a preference for environmental policies associated with a predisposition toward more or less tax compliance under various institutional rules?

Theoretical modelS of support for environmental spending

* trust in state capacity

H1: people's trust in the state's capacity to negotiate and adequately implement policies is very important in determining people's willingness to support spending on environmental policies.

* the Environmental Kuznets Curve

H2: the more developed a country is, the higher the support for environmental spending.

* ideological preferences

H3: the higher the support for left-wing policies, the higher the support for environmentally friendly policies

Theoretical modelS of support for environmental spending

* ideological polarization

H4: the more the environmental issues are polarized in a country, the higher the explanatory power of ideology in that should be.

* and the pycho-sociological characteristics model

H5: people prone to more altruistic behavior should have a higher predisposition toward supporting more environmentally friendly policies

Theoretical modelS of tax compliance

* trust in state capacity

H1: the higher the trust in state capacity, the higher the level of tax compliance.

* cultural models

H2: we should observe some important country-level effects on tax compliance, and that the more people support collectivistic norms, the lower the level of tax compliance.

* tax morale

H3: the higher the belief in the importance of paying taxes, the higher tax compliance should be.

Methods and experimental protocol

* 2013 to 2017, with subjects recruited through public announcements and selected using ORSEE software using similar procedures in all locations, in order to ensure similar demographic characteristics and unbiased selection mechanisms. In each country, the experiment was run in three to five different locations in different universities that had adequate physical infrastructure for the experiments: Bologna, Rome, and Milan in Italy; Oxford, London, Exeter, and Essex in the UK; Santa Cruz, California, Boulder, Colorado, Boone, North Carolina, Stony Brook, New York, and Honolulu, Hawaii in the United States; Stockholm and Gothenburg in Sweden; Bucharest, two different locations and Cluj in Romania.

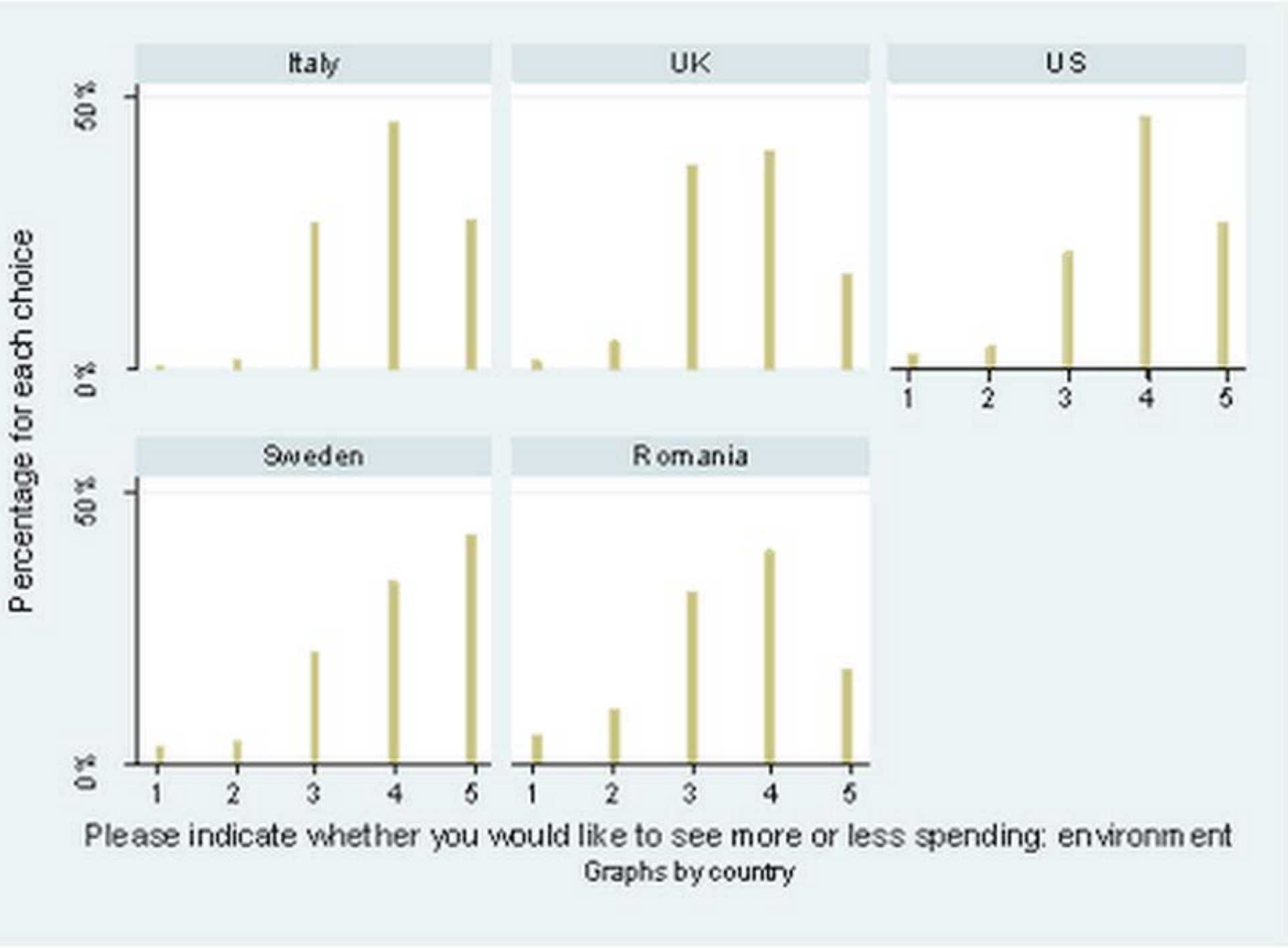
Methods and experimental protocol

* The first three stages started with a five-minute clerical task consisting of copying information from a sheet onto a table.
* 5% cent audit probability, an audit that would fine them double the amount of money they under-reported. Whether a participant was audited was revealed only at the end of all stages in order to avoid any effect of the audit from one round to the next.

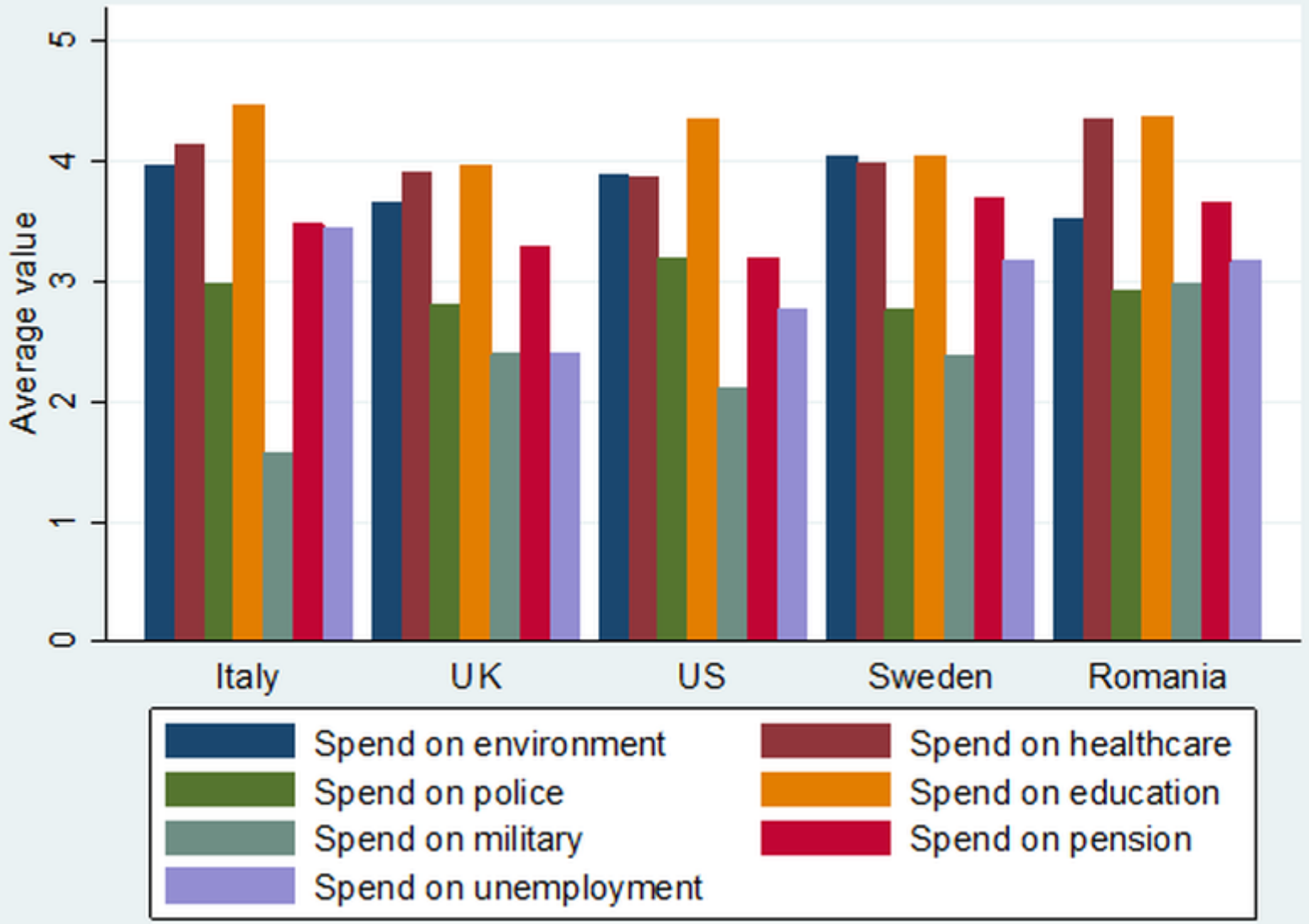
Methods and experimental protocol

* **Stage 1:** *Scenario 1*. Participants were told that the tax rate was 30% (no redistribution of tax revenue was mentioned). *Scenario 2*. The tax rate was 30%, but tax revenue was collected in a general fund, which was subsequently divided equally among all participants. *Scenario 3*. The tax rate remained at 30%, but all tax revenues in the general fund were doubled and then redistributed equally to all participants.
* **Stage 2:** *Scenario 4*. A 10% tax rate, with tax revenues doubled and then redistributed. *Scenario 5*. A 30% tax rate, with tax incomes doubled and then redistributed. *Scenario 6*. A 50% tax rate, with tax revenues doubled and then redistributed.
* **Stage 3:** *Scenario 7*. A progressive system taxed the top 10% of earners (as defined by their self-reported income) at 50%, the bottom 10% of earners at 10%, and the middle 80% of earners at 30%, with tax revenues doubled and then redistributed. *Scenario 8*. A marginal tax system taxed all subjects at 10% on the first 50 units of reported income, at 30% on the next 50 units, and at 50% on all reported income above 100. Taxed units were doubled and then redistributed. *Scenario 9*. A flat tax rate of 30%, with revenues doubled and then donated to charity

* **The dependent variable for the first research question**, *people's willingness to support a state's increased spending on environmentally friendly policies*, is operationalized through the following question from the post-experiment questionnaire:
* "Please indicate whether you would like to see more or less government spending in each area. Remember that if you check 'much more', it might require a tax increase to pay for it."
* The variable had five possible choices: 5=Spend much more; 4=Spend more; 3=Spend the same as now; 2=Spend less; 1=Spend much less.


Italy
UK
US
Sweden
Romania
50%
0%
Percentage for each choice
1
2
3
4
5
Please indicate whether you would like to see more or less spending: environment
Graphs by country

* Romania has the highest number of people preferring less and much less spending and the lowest percentage who prefers much more spending, while Sweden is the opposite, being the only country where those that prefer much more spending represent the largest category.


Average value
0
1
2
3
4
5
Italy
UK
US
Sweden
Romania
Spend on environment
Spend on healthcare
Spend on police
Spend on education
Spend on military
Spend on pension
Spend on unemployment

Explanatory models	Independent variables	All	Italy	UK	US	Sweden	Romania
		b/se	b/se	b/se	b/se	b/se	b/se
H2 country level effects	Romania	-1.026***					
		(0.20)					
	US	0.117					
		(0.16)					
	UK	-0.375*					
		(0.16)					
	Italy	-0.423*					
		(0.20)					
	Tax compliance	0.110	-0.138	0.220	0.072	-0.127	0.570*
		(0.09)	(0.24)	(0.17)	(0.17)	(0.22)	(0.27)
H1	Factor score – *believe in state competence*	0.108	0.298	0.017	-0.106	0.706*	0.048
		(0.11)	(0.31)	(0.24)	(0.19)	(0.29)	(0.26)
H3 H4	Factor score – *pro-redistribution ideology*	2.500***	1.835***	1.758***	3.052***	2.517***	1.620***
		(0.12)	(0.44)	(0.27)	(0.21)	(0.27)	(0.30)
	Factor score – *fiscal responsibility*	-0.073	-0.068	0.167	-0.412*	0.121	0.286
		(0.11)	(0.35)	(0.27)	(0.18)	(0.23)	(0.32)
H5 Psycho-social	SVO angle	0.004	0.012	-0.003	0.006	0.006	0.001
		(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
	Risk acceptance	0.028	0.022	0.007	0.014	-0.008	0.084
		(0.02)	(0.07)	(0.05)	(0.04)	(0.06)	(0.05)
Controls	Age	-0.020**	0.057*	-0.021*	-0.017	-0.025*	-0.010
		(0.01)	(0.03)	(0.01)	(0.02)	(0.01)	(0.02)
	Male	0.318**	0.669*	0.510*	0.386*	0.142	-0.042
		(0.10)	(0.28)	(0.22)	(0.18)	(0.24)	(0.24)
	Participated in other experiments?	0.195	-0.008	0.342	0.087	0.394	0.412
		(0.11)	(0.37)	(0.26)	(0.17)	(0.28)	(0.27)
	Studies economics?	0.155	0.749*	0.002	0.267	-0.449	-0.523
		(0.15)	(0.34)	(0.25)	(0.28)	(0.39)	(0.87)
	BIC	29550.6	3258.1	6617.2	8975.4	4837.4	4913.1
	N	13995.0	1656.0	2988.0	4527.0	2673.0	2151.0
	PseudoR-sq	0.2	0.2	0.1	0.2	0.3	0.2

* The regression coefficients confirm the descriptive data in Fig 1, showing the UK, Italy and especially Romania to have a significantly lower level of preference for environmental spending when compared to Sweden (the data for Sweden is used as a comparison for the other countries).
* The level of tax compliance under various scenarios has no explanatory power, except for Romania. This finding indicates that the direction of causality from tax compliance towards preference for environmental spending is valid only in countries where the overall support for environmental spending is lower.
* While in Romania and Italy the explanatory power of left-wing preferences is lower, it is higher in the US, where the environmental policies are the most polarized. Nevertheless, the highest coefficient is in

* All in all, the statistically significant variables revealed by the first six models presented in Table 1 offer support for H2, as Sweden and the USA have the strongest preference for environmental spending, and Romania the weakest.
* H1 is valid only in cases where a high quality of government is present.
* H4, referring to the country-level political polarization and especially H3 referring to the individual level importance of ideology are both confirmed, with the individual level coefficients being several times higher than any other statistically significant coefficient.

* **The dependent variable for the Second research question** the predisposition towards more or less tax compliance under various institutional rules, is operationalized through the observed compliance rate (calculated as the percentage of the reported income from the obtained income in each round) for each of the nine institutional scenarios of the experiment.

* Overall, the countries are arranged according to their level of development, with Romania, the poorest of the five countries, having the lowest level of environmental preferences, supporting H2 that is based on the EKC model.

Explanatory models	Independent variables	All b/se	y1 b/se	y2 b/se	y3 b/se	y4 b/se	y5 b/se	y6 b/se	y7 b/se	y8 b/se	y9 b/se
Preference for more environmental spending		0.017*	-0.001	0.023*	0.016*	0.012	0.011	0.010	-0.002	0.008	0.023*
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
H2/H6 country level effects	**Romania**	0.083**	0.179***	0.117**	-0.010	-0.005	0.070	0.155***	0.110**	0.078*	0.067
		(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
	US	0.018	0.094**	0.050	-0.031	-0.045	0.031	0.050	0.027	-0.010	0.053
		(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
	UK	-0.031	-0.038	-0.073*	-0.092**	-0.077*	-0.026	0.009	0.001	-0.045	0.076*
		(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
	Italy	0.050	0.120**	0.105**	0.063	0.123**	0.047	0.050	0.040	0.041	0.128***
		(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
H6	**Factor score – *believe in state competence***	0.031*	0.026*	0.026*	0.030**	0.019	0.040***	0.037***	0.031**	0.023*	0.040***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
H7	**Factor score – *pro-redistribution ideology***	-0.002	-0.008	-0.011	-0.009	-0.003	-0.001	-0.005	-0.007	-0.007	-0.009
		(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
H8	**Factor score – *fiscal responsibility***	0.078***	-0.041**	-0.035**	-0.012	-0.017	0.001	-0.000	0.002	-0.014	-0.008
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
	SVO angle	0.007***	0.007***	0.007***	0.007***	0.006***	0.008***	0.008***	0.009***	0.009***	0.006***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
	Risk acceptance	-0.021***	-0.030***	-0.027***	-0.016***	-0.021***	-0.024***	-0.011*	-0.021***	-0.025***	-0.017***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
	Age	0.003**	0.005***	0.003	0.001	0.001	0.004**	0.006***	0.004**	0.004**	0.000
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
	Male	-0.128***	-0.168***	-0.158***	-0.099***	-0.091***	-0.121***	-0.159***	-0.154***	-0.118***	-0.110***
		(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
	Participated in other experiments?	-0.079***	-0.118***	-0.087***	-0.057**	-0.059*	-0.077***	-0.041	-0.097***	-0.088***	-0.046*
		(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
	Studies economics?	-0.056**	-0.046	-0.089**	-0.065*	-0.079*	-0.047	-0.011	-0.069*	-0.054	-0.050
		(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
	constant	0.601***	0.582***	0.641***	0.811***	0.748***	0.578***	0.395***	0.603***	0.605***	0.730***
		(0.06)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.07)
	R-sqr	0.180	0.236	0.247	0.162	0.130	0.191	0.174	0.242	0.233	0.142
	dfres	1630	1412	1412	1412	1413	1413	1413	1415	1415	1415
	BIC	13458.8	1455.9	1347.3	1253.7	1448.7	1366.8	1489.5	1327.0	1199.7	1162.6
	N	14664.0	1427.0	1427.0	1427.0	1428.0	1428.0	1428.0	1430.0	1430.0	1430.0

The models were run using OLS regression with error terms clustered at the individual level using STATA 13.

* While the level of tax compliance measured under experimental conditions does not explain the variation in support for environmentally friendly policies, people's support for environmentally friendly policies is shown to increase compliance in those scenarios that involve tax redistribution.

* When we control for preference for environmental spending, psycho-sociological features, SVO angle and risk acceptance, appear to be the most relevant in explaining variations in tax compliance, while ideological factors and country-level effects are absent, except for Romania.
* The belief in government competence is the only factor score that has a positive effect on compliance in the general model and in almost all scenario based models. This positive effect indicates that improving government's perceived competence can improve tax compliance.