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# Institutional determinants of protest responses in stated preference studies

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## Abstract

In the stated preference literature, the effect of the institutional context on protest responses is unclear. This effect is likely to vary depending on the identification method and the survey's payment vehicle. This paper tries to tackle these issues by merging institutional data with meta-data on stated preference studies for environmental goods. Results show that institutional variables are significant determinants of the protest responses, yet there is no evidence that this effect varies with the payment vehicle.

## 1 Introduction

Stated preference studies use surveys to elicit preferences for a non market good. In these surveys, the respondents state how much they would be willing to pay (WTP) for the non market good provision. However, some of them refuse to state their true preferences and give a zero amount instead, for various reasons. For instance, they think someone else should pay for the good, the choice of payment vehicle is not adequate or the scenario is not credible enough. Usually, these respondents must justify their zero amount by answering to follow-up questions, which enable the practitioner to detect these protest respondents.

Even if the practitioner is able to detect these protest responses and remove them from the sample, the distribution of protest respondents is very unlikely to be random. Then, the samples on which the aggregate WTP is computed are not representative. This poses a threat to some of the fundamental hypothesis of cost-benefit analysis. For this reason, it is important to understand the motivations of protest behaviors and to find ways to mitigate them.

A lot of studies explore the determinants of protest responses. Some determinants are related to survey characteristics (see Meyerhoff and Liebe (2010) for a meta-study). Others are related to individual characteristics of the respondents. While some of these individual determinants come from personal preferences and attitudes ("I can't put a price on nature"), other depend on the respondent's view of the institutional context ("I don't trust the actor providing the good"). However, the effect of the institutional context on the protest responses is not clear yet. It can be better understood by tackling three issues.

First, the effect differs depending on how we look at the institutional determinant of the protest responses. On the one hand, several studies in developing countries find that mistrust in the

government is often the reason stated by the respondents for their protest responses (Hadker et al. (1997); Cunha-e Sá et al. (2012)). On the other hand, two recent articles (Oehlmann and Meyerhoff (2017) and Remoundou et al. (2012)) look at the impact of a change in the authority in charge of the project on stated WTP. Both studies do not find any effect on the WTP. Remoundou et al. (2012) also test for an impact on the protest rate, but they don't find any. Overall, we face a paradox. In some studies, some protest bidders justify their responses with respect to the institutions. But studies that look at the effect of changing the managing institution in the survey don't find any impact.

Second, since most studies are conducted in one place at one time, the institutional context that surrounds the respondents doesn't change. Therefore, these studies cannot tell anything about the effect of the institutional factors that motivate the protest. The two studies mentioned above (Oehlmann and Meyerhoff (2017) and Remoundou et al. (2012)) propose a way to overcome this issue by changing the managing authority in the survey. However, they might not be able to fully mitigate a lack of trust in institutions by this survey design. Indeed, mistrust in the institutions could lead to a systematic defiance towards all public entities. Besides, a distrustful respondent may not believe that the stated managing authority in the survey is the true authority in charge. For these reasons, an identification of the effect of institutional factors through survey design should not be considered as a perfect substitute for an actual variation in the institutional context. One stated preference study uses such a variation: Schläpfer and Bräuer (2007) conduct two identical contingent valuation studies in Switzerland and Germany to account for the variations in perception of the framing. They find significant differences in the results between the two locations, which they suspect are coming from differences in countries institutions (habits of voting for local policies in Switzerland). However, their study does not investigate the effect of specific institutional characteristics on the protest rate.

Third, payment vehicle can affect the protest responses through a mistrust in the institution in charge of the payment. Although this risk has been acknowledged by practitioners, I did not find a thorough analysis on this issue. Nor did I find any study investigating which institutional variables are of importance and which payment vehicles are affected.

In this paper I try to tackle these issues. I rely on meta-data on environmental valuation studies, merged with institutional variables. By using intra-country variations in these institutional variables, I am able to capture the effect of the "real-world" institutional context on the protest rate. I also provide evidence on how the payment vehicle can enhance or mitigate this effect.

The remainder of the paper proceeds as follows. Section 2 provides an explanation of the data, the choice of variables and the identification of the effect of the institutional variables. Section 3 presents the results of the descriptive statistics and the regression analyses. Section 5 concludes.

## 2 Methods and Data

I use meta-data on environmental valuation studies merged with institutional variables to identify the effect of the institutional context on protest rate. In this section I describe the meta-data, the institutional data and the other variables used as controls.

The dataset was built by Meyerhoff and Liebe (2010). It has observations for 222 independent

samples from 131 different stated preference studies from 1988 to 2009 across 34 countries.<sup>1</sup> It contains information about elicitation methods, payment vehicles, survey methods, protest rates, year and country of collection. The data was collected using the Google Scholar search engine and the webpages of journals in the field of environmental economics. Only studies with reported number of protest responses and sufficient information about survey characteristics were used.<sup>2</sup> See Meyerhoff and Liebe (2010) for more details.

I merge the dataset by year and country with institutional variables. The choice of institutional variables is based on the literature on tax morale. Luttmer and Singhal (2014) define tax morale as non-pecuniary (or internal) motivations for tax compliance as well as factors that fall outside the expected utility framework. It is linked with the concept of protesting in stated preferences since both cases feature an unwillingness to contribute to a public good because of a motivation considered irrational. Unlike the literature about protesting in stated preference survey, there are some studies that analyse the impact of institutional factors on tax morale. Daude et al. (2012) find in their literature survey that the most common institutional factors are trust in the institutions and corruption. Therefore I choose these two variables as potential determinants of the protest rate.<sup>3</sup>

I measure trust in the institutions, using the World Value Survey (WVS (2015)) and European Value Survey (EVS (2011)). For these two surveys, respondents from a representative sample of each country state whether they trust the government (from “A great deal” to “Not at all”). There are several waves of surveys for each country, which are not more distant than 10 years. Thus I match each stated preference survey with a WVS wave which is closer than 5 years at most. I compute the mean by country and year to get a global measure of trust in the institutions. I then rescale the variable to be in a range from 0 to 100, where 100 is “A great deal” of trust in the government.

To measure corruption, I use the Transparency International’s Corruption Perceptions Index (CPI).<sup>4</sup> The CPI captures the perception of corruption in the public sector, as seen by business people, risk analysts and the general public.<sup>5</sup> Corruption is defined as the abuse of public office for private gain. This measure is based on perception, which is a desirable feature in my case: perception of corruption is expected to affect respondents’ behaviors more than its true level. As for the trust in government, this variable is scaled from 0 to 100, where 100 is the maximum level of perceived corruption.

I use additional variables as control. I account for the main survey characteristics using the variables collected by Meyerhoff and Liebe (2010): payment vehicle, elicitation format and survey method. I also account for the nature of the good (public vs. private), since it is likely to affect the probability to protest. I add country fixed effects to control for any country specificity (mostly cultural aspects). Consequently, I remove 10 surveys that were the only one in their country. The addition of country fixed effects means that the only variation left in the dependent variable comes from the

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<sup>1</sup>Several studies have split samples.

<sup>2</sup>The protest responses are detected based on answers of follow-up questions after a respondent stated a zero WTP.

<sup>3</sup>Clearly, there is an important link between trust in the institutions and corruption. Morris and Klesner (2010) observe that there is a mutual causal relationship between trust and corruption. Corruption can be a cause of a lack of political trust. For instance, Seligson (2002) finds that exposure to corruption “erodes belief in the political system”. Lack of confidence in government actually favors corruption. (Della Porta (2002))

<sup>4</sup>Transparency International (2015). "Corruption Perceptions Index". Transparency International.

<sup>5</sup>General public only before 2002.

characteristics of the surveys and the variability of context variables across time.<sup>6</sup> I also try one specification with region fixed effect to have more variability, while still being able to capture some unobserved components. I control for tax revenue, because respondents may feel like they give already too much money for the collectivity, thereby affecting their probability to protest. To do this, I use OECD data of Total Tax revenue as a percentage of GDP (OECD (2017b)). I account for GDP per capita, since a correlation between income and the probability to protest has been repeatedly observed in stated preference studies. Finally, one should be aware that countries with low quality of institutions tend to have a low level of public good (Deacon (1999); Bernauer and Koubi (2009)). The marginal utility for public good would tend to be high in these countries, inducing a smaller protest rate. Therefore, I need to introduce a measure of the general level of environmental public good in the model to account for this effect. I use the ratio of public environmental expenditures as a fraction of total public expenditures from OECD (OECD (2017a)), which seems a reasonable solution given the lack of country panel data on different environmental goods.

I use OLS model for the regression analysis. One specification includes quadratic terms for the institutional variable to detect non linearities.

### 3 Results

In this section, I first provide descriptive statistics of the data set. Then I present the main results.

#### 3.1 Descriptive Statistics

Out of the full sample of 222 observations, I delete 69, either because missing or because the survey was the only one conducted in a given country. Figure 1 shows the number of surveys per country. US and UK are the most represented countries, with around 40 surveys each. Western Europe countries are also present, but there are very few developing countries. Since a large share of stated preference studies are conducted in developed countries, the sample is biased towards them. This could be an issue in terms of external validity, but I should be able to provide valid findings for developed countries.

The first part of Table 1 shows the frequency of each survey characteristics, and the second part provides statistics for other variables. One can see that the tax payment vehicle (PV) is the most used. As explained above, the quality of the institutions is likely to affect reactions to tax payments. Therefore, the fact that it is so widely used shows the importance of having a throughout investigation on the impact of payment vehicle on protest rates in different institutional contexts. Regarding survey design (SD), phone interviews are the most frequent, followed by face to face and mail. There does not seem to be a consensus in the literature on the effect of particular survey design on the protest rate. Likewise, there is no clear evidence on the impact of a specific elicitation format (EF) on the protest rate.

On average, 20% of the stated preferences are not valid WTP. This rate can go up to 60%. This shows that protest responses should be a major concern for stated preference studies, and that it

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<sup>6</sup>Regional variations Intra-country could also have an impact, but they are impossible to capture without losing almost all of the variability.

Figure 1: Number of observations by country

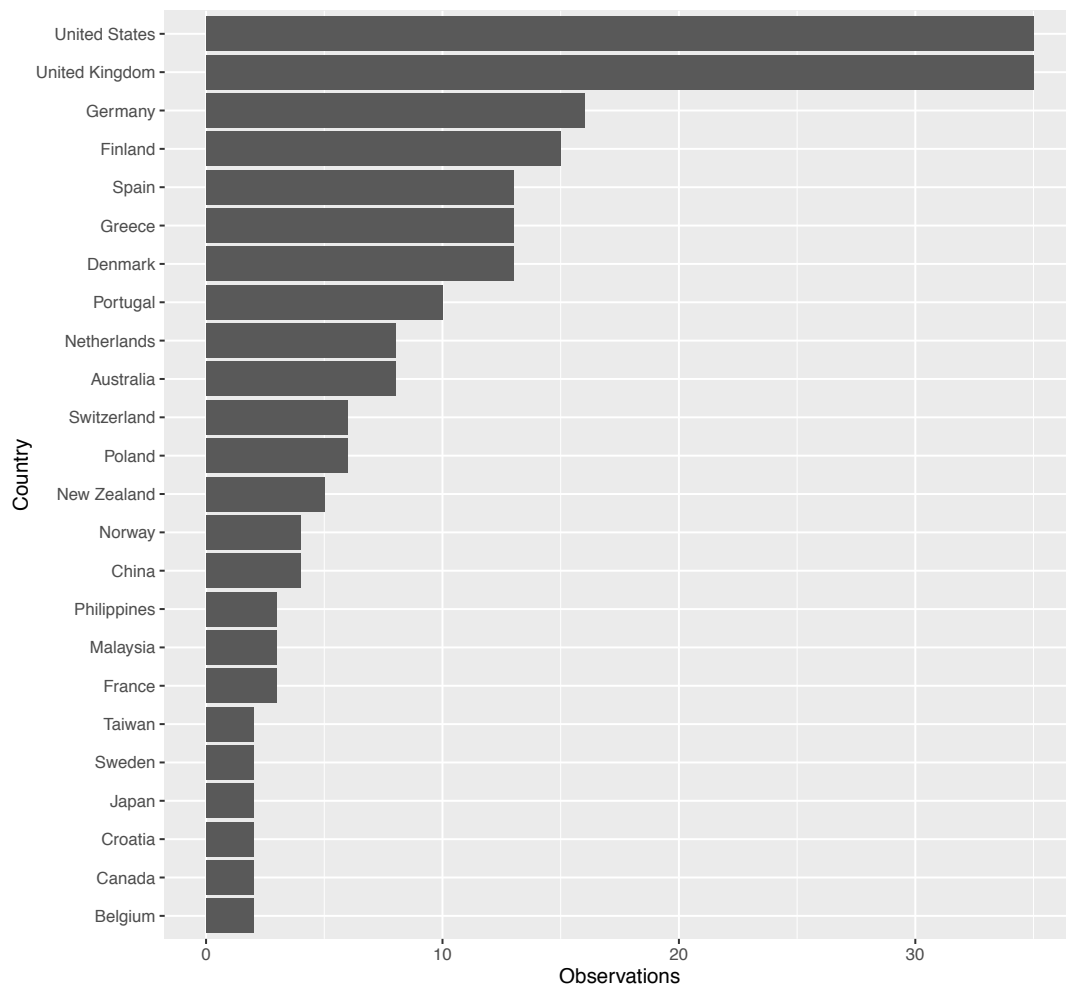


Table 1: Descriptive statistics

PV	Tax	Donation	Bill	Special Fund	Entrance Fee	Other
%	41%	9%	18%	13%	10%	10%
SD	On Site	Mail	Phone	Face to face	Web	Other
%	9%	37%	7%	36%	3%	7%
EF	Choice Experiment	Dichotomous Choice	Open Ended	Payment Card	Other	
%	17%	40%	19%	22%	2%	
	Mean	SD	Min	Max	N	
Protest rate (0-100)	19.0	11.2	0	59.3	212	
Trust in Government (0-100)	43.63	7.20	17.71	54.33	179	
Corruption Perception Index (0-100)	26.21	18.88	3	77	197	
Tax revenue (%)	33.6	6.23	23.02	48.98	196	
Share of environmental public expenditures (0-1)	0.01	0.01	0	0.04	182	
GDP/Capita (\$)	32105	9251.74	5821	62434	200	
Public good (0-1)	0.98	0.15	0	1	211	

can greatly bias the aggregate WTP. Note that the values of the institutional variables are by no mean representative. This is only the values merged with the meta-data, so only for the countries and years corresponding to a valuation study. The mean of trust in the government is below 50, so there seem to be a global lack of trust in the country and the years corresponding to the surveys. The values span from a quite low range since the maximum is only at 54. Perception of corruption seems to be more variable, the standard deviation is twice as large. The distribution is more skewed towards the left since the mean is around 26. Finally, the very high share of public good is noticeable. This is because all the goods valued are environmental goods, which tend to be public by nature.

### 3.2 Regression Analysis

The different specifications are reported in Table 2. Model 1 is the most basic linear model with no fixed effects. Models 2 and 3 add control for region and country fixed effects respectively. Model 4 keeps the country fixed effects and uses quadratic terms for institutional variables. I account for cluster effects between surveys coming from the same studies in the standard errors computations.

Regarding the effect of survey characteristics, the findings are consistent with Meyerhoff and Liebe (2010). Sign and significance of coefficients almost never change across specifications. The choice of payment vehicle seems to have an important impact on the probability to protest. The reference alternative is the tax vehicle. Using tax leads to more protest responses than adding the payment to an existing bill, but it performs better than entrance fees or participation to a fund. Elicitation formats do not have significant effects on the protest rate. Once controlled for country fixed effects, one can observe that on-site survey tends to produce significantly less protest responses than face to face (at the respondent's residence) surveys. Other survey modes also lead to fewer protest responses, but this is likely to be the result of outliers.

Focusing on institutional variables, the first model shows that there is a significantly positive effect of corruption on protest rate. This effect increases once we control for region and country fixed

effect. The impact of corruption is quite large: a 10 point increase in the corruption index leads on average to 11.75 percentage points more in the protest rate. For these three models, the effect of trust in the government is not significantly different from zero. However, the coefficient becomes negative once we account for region or country fixed effects. This suggests that the positive bivariate relation of the previous section is due to some unobserved characteristics of the countries. Model 4 adds the quadratic terms of corruption and trust in the government. For both variables the term of order one is negative and the term of order two is significantly positive. This means that there is a convex relation between these two institutional variables and the protest rate. I compute the marginal effects as a function of the explanatory variable by taking the derivative of protest rate.

Figure 3 shows the marginal effects in vertical axis and the institutional variable in the horizontal axis.<sup>7</sup> The red lines represent the marginal effects for the quadratic specification and the black lines represent the marginal effect for the linear specification. As in the linear model, the effect of corruption is mainly positive. The opposite relation can be observed for the effect of trust in government. The impact is negative for countries with a low level of trust in the government, meaning that the more trusted the political institutions the lower the protest rate. Both effects fade away as countries have a larger level of trust or a lower level of corruption.<sup>8</sup> This implies that the effect of mistrust in the institutions tends to be more important for countries with institutions lacking in credibility.

Due to the small number of observations, the use of country fixed effect could cause identification problems due to a potential lack of remaining variability in the covariates. In order to test this issue, I estimate models keeping only countries with 5 or more and 10 or more surveys. I also estimate a Tobit model with a left censoring at zero to account for the natural lower bound of the protest rate. Results are reported in Table 4. There is very little variations in the results, only a slight increase in the coefficients associated with the institutional variables, suggesting that the coefficients are correctly identified.

## 4 Payment Vehicle Channel

In this section I study whether the payment vehicle enhance or mitigate the effect of perception of the institution on protest rate.

When the survey uses a tax vehicle, a lack of tax enforcement can cause protest responses (Adaman et al. (2011)). Morrison et al. (2000) observe a significant share of respondents thinking that tax vehicle is inappropriate because some people do not pay taxes. Kato and Hidano (2002) are concerned that the easiness for self-employed people in Japan to under report their income may affect the perception of tax payment. I look at how the choice of payment vehicle, and more specifically the tax vehicle, affect the relation between institutions and protest rate. To do this, I introduce interaction terms between the use of a tax vehicle in the survey and the institutional variables.

Institutional context is likely to affect respondent's credibility in the payment vehicle. As explained in Section 2, the tax vehicle is the most likely to have an interacting effect with institutional factors on the protest responses. Table 5 shows the results of a probit model explaining the probability

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<sup>7</sup>How much does the protest rate vary when the covariate increases by one.

<sup>8</sup>The marginal effects even changes signs. This is most likely due to the lack of flexibility of the quadratic form.



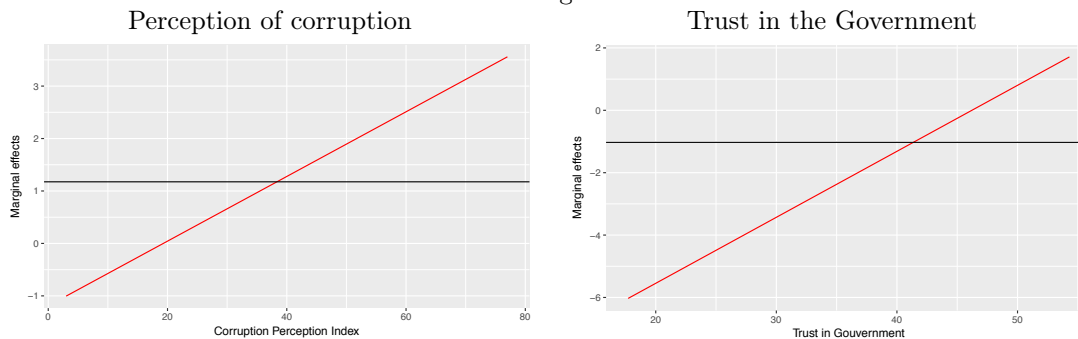
Table 2: Multivariate Analysis

	(1)	(2)	(3)	(4)
PV Bill	-6.578**	-6.241**	-6.465**	-6.415**
PV Donation	-2.366	0.033	-1.086	-0.747
PV Entrance fee	9.278**	12.087***	14.528***	13.980***
PV fee	4.630	10.047***	9.303**	10.670***
PV Other	9.247**	12.671***	11.998***	13.900***
EF Dicho. Choice	-3.552	-3.233	-3.224	-3.335
EF Open Ended	-2.225	1.015	-2.901	-2.419
EF PC	-3.921	-2.891	-3.638	-3.693
EF Other	-10.218	-8.103	-10.265	-12.305
SD Mail	-2.238	-0.395	1.172	3.854
SD On site	-6.518*	-5.702	-8.658**	-9.058**
SD Phone	-0.149	4.847	3.743	4.506
SD Other	-13.536***	-19.588***	-17.204*	-23.880***
SD Web	-3.423	-2.189	-3.649	-1.967
Gdp/capita	-0.0002	-0.00005	-0.0005	-0.0002
Public	-5.128	-4.318	-5.646	-7.758
Env. Exp	88.704	41.719	49.329	-231.693
Tax revenue	-0.344**	-0.140	-0.264	-0.019
Trust gouv.	0.015	-0.248	-1.028	-9.778**
Trust gouv. <sup>2</sup>				0.106**
Corruption	-0.251**	-0.522***	-1.175*	-4.976*
Corruption <sup>2</sup>				0.031*
Region FE		X		
Country FE			X	X
Constant	64.279***	74.316***	197.723**	465.888***
Observations	153	153	153	153
R <sup>2</sup>	0.306	0.367	0.408	0.435
Adjusted R <sup>2</sup>	0.200	0.242	0.210	0.233
Residual Std. Error	10.285	10.012	10.220	10.073
F Statistic	2.904***	2.944***	2.066***	2.155***

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Table 3: Marginal effects



to use a tax vehicle. The two columns show bivariate models with the institutional variables as regressors. The probability of using a tax vehicle decreases with the level of corruption. This result suggests that practitioners tend to be reluctant to use a tax vehicle when they fear that it would lead to protest responses due to the poor quality of the institutions. In order to test for the hypothesis of tax payment vehicle enhancing the effect of institutional context, I introduce in model 4 the interaction of the institutional variables with a tax vehicle dummy. However I am not able to reject the null hypothesis that the coefficients associated to the interactions are jointly null.<sup>9</sup> Therefore, unlike what is often suspected, the impact of the payment vehicle does not seem to be affected by the institutional context, nor does the impact of other types of vehicles.

## 5 Discussion

This paper investigates the relationship between institutional variables and protest rate of environmental valuation studies. Using meta-data merged with institutional variables and exploiting intra-country variations, I find that trust in the institutions and corruption are important determinant of the protest behaviors. More trust in the institutions and less corruption lead to fewer protests. These results contribute to the literature on protest responses by quantifying the impact of institutional context, wiping out the effect of each studies' specificities. It provides insights to practitioners on how the protest rate can be affected depending on the country where a survey is conducted. The influence of institutions does not seem to vary with the payment vehicle, unlike what is often suspected in the literature.

Let us consider again the results of Remoundou et al. (2012), where a change in the managing authority had no effect on the protest responses. Both the payment vehicle and the managing authority used in the survey are unable to affect the protest rate. This fact suggests that some respondents may be unaffected by survey design. Respondents protesting for reasons related to institutions seem to have a lack of trust in the institutions, which can apparently only be mitigated by an actual institutional changes.

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<sup>9</sup>P-values are 0.47 for tax, 0.97 for donations, 0.83 for bills, 0.71 for funds, 0.23 for entrance fees.

Table 4: Robustness checks

	Tobit	5 or more surveys	10 or more surveys
PV Bill	-6.73***	-6.406*	-6.045
PV Donation	-0.666	-1.247	-0.381
PV Entrance Fee	13.9**	13.769**	9.618
PV Fund	10.9***	9.550*	12.596**
PV Other	14***	12.059**	11.278*
EF Dicho. Choice	-3.20	-3.397	-5.706
EF Open Ended	-2.64	-2.127	-3.924
EF PC	-3.88	-4.445	-8.000
EF Other	-12.6*	-12.388	-17.488*
SD Mail	3.72	4.566	4.98
SD On Site	-9.28**	-9.355*	-7.473
SD Phone	4.44	3.195	3.266
SD Other	-23.8***	-23.211***	-21.825**
SD Web	-2.24	-1.978	-7.540
GDP/capita	-0.0002	-0.0004	-0.0003
Public	-8.17	-8.565	-3.686
Env. Exp.	-219	-105.350	1493.783
Tax Revenue	0.119	-0.315	-0.999
Corruption	-4.95**	-5.097**	-5.445**
Corruption <sup>2</sup>	0.03**	0.033*	0.039*
Trust gouv.	-9.67**	-11.624**	-11.580*
Trust gouv. <sup>2</sup>	0.104**	0.126*	0.134*
Country FE	X	X	X
Constant	462***	518.594***	470.579***
Observations	153	139	116
R <sup>2</sup>		0.412	0.360
Adjusted R <sup>2</sup>		0.227	0.144
Residual Std. Error		10.258	10.562
F Statistic		2.229***	1.669**

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Table 5: Use of Tax vehicle and institutions

	<i>Dependent variable:</i>	
	Tax vehicle	
	(1)	(2)
Corruption	-0.010**	
Trust gouv.		0.005
Constant	0.067**	-0.481
Observations	206	186
Log Likelihood	-138.530	-125.337
Akaike Inf. Crit.	281.061	254.675
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01	

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## References

- Adaman, F., Karalı, N., Kumbaroğlu, G., Or, İ., Özkaynak, B., and Zenginobuz, Ü. (2011). What determines urban households' willingness to pay for CO2 emission reductions in Turkey: A contingent valuation survey. *Energy Policy*, 39(2):689–698.
- Bernaer, T. and Koubi, V. (2009). Effects of political institutions on air quality. *Ecological Economics*, 68(5):1355–1365.
- Cunha-e Sá, M. A., Madureira, L., Nunes, L. C., and Otrachshenko, V. (2012). Protesting and Justifying: A Latent Class Model for Contingent Valuation with Attitudinal Data. *Environmental and Resource Economics*, 52(4):531–548.
- Daude, C., Gutiérrez, H., and Melguizo, Á. (2012). What drives tax morale? *OECD Development Centre Working Papers, No. 315*.
- Deacon, R. (1999). The political economy of environment-development relationships: A preliminary framework. *Department of Economics, UCSB*.
- Della Porta, K. L. (2002). Social capital, beliefs in government and political corruption. In *Review of Disaffected Democracies: What's Troubling the Trilateral Countries?*, volume 23, pages 202–230. Political Psychology.
- EVS (2011). European Values Study 1981-2008, Longitudinal Data File. GESIS Data Archive, Cologne, Germany, ZA4804 Data File Version 2.0.0 (2011-12-30).

- Hadker, N., Sharma, S., David, A., and Muraleedharan, T. R. (1997). Willingness-to-pay for Borivli National Park: Evidence from a Contingent Valuation. *Ecological Economics*, 21(2):105–122.
- Kato, T. and Hidano, N. (2002). An empirical comparison between tax payment and donation in a contingent valuation survey: Value of preserving the Satsunai river, Japan. Technical report, Discussion Paper 02-04, Department of Social Engineering, Tokyo Institute of Technology.
- Luttmer, E. F. P. and Singhal, M. (2014). Tax Morale. *Journal of Economic Perspectives*, 28(4):149–168.
- Meyerhoff, J. and Liebe, U. (2010). Determinants of protest responses in environmental valuation: A meta-study. *Ecological Economics*, 70(2):366–374.
- Morris, S. D. and Klesner, J. L. (2010). Corruption and Trust: Theoretical Considerations and Evidence From Mexico. *Comparative Political Studies*, 43(10):1258–1285.
- Morrison, M. D., Blamey, R. K., and Bennett, J. W. (2000). Minimising payment vehicle bias in contingent valuation studies. *Environmental and Resource Economics*, 16(4):407–422.
- OECD (2017a). Central government spending (indicator). (Accessed on 13 March 2017).
- OECD (2017b). Tax revenue (indicator). (Accessed on 13 March 2017).
- Oehlmann, M. and Meyerhoff, J. (2017). Stated preferences towards renewable energy alternatives in Germany – do the consequentiality of the survey and trust in institutions matter? *Journal of Environmental Economics and Policy*, 6(1):1–16.
- Remoundou, K., Kountouris, Y., and Koundouri, P. (2012). Is the value of an environmental public good sensitive to the providing institution? *Resource and Energy Economics*, 34(3):381–395.
- Schläpfer, F. and Bräuer, I. (2007). Theoretical incentive properties of contingent valuation questions: Do they matter in the field? *Ecological Economics*, 62(3-4):451–460.
- Seligson, M. A. (2002). The Impact of Corruption on Regime Legitimacy: A Comparative Study of Four Latin American Countries. *Journal of Politics*, 64(2):408–433.
- WVS (2015). World Value Survey 1981-2014 Longitudinal Aggregate v.20150418, 2015. World Values Survey Association ([www.worldvaluessurvey.org](http://www.worldvaluessurvey.org)). Aggregate File Producer: JDSystems Data Archive, Madrid, Spain.