

Involvement in environmental causes, does the joint effect between subjective income and the performance of the country matter?

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Abstract

Previous research has shown that richer people are more likely to engage in an environmental cause. We extend it by considering the joint effect between subjective income and a set of macroeconomic variables. For doing so, we employ the fifth wave of the World Values Survey (WVS). This study provides clear evidence that even when both factors matter, people's attitudes crucially depend on the interaction effect. Hence, those measures that affect the characteristics of the country would also change the disposition to be involved.

Clasificación JEL: K32, O12, O13, Q50, Q56.

Palabras clave: Economía ambiental, calidad ambiental, desarrollo humano, ingreso

Participación en campañas ambientales, es importante el efecto conjunto entre el ingreso subjetivo y el desempeño del país

Resumen

La literatura previa muestra que los más ricos tienen una probabilidad mayor de involucrarse en causas medioambientales. El aporte de este trabajo es analizar si hay un efecto conjunto entre el ingreso subjetivo y el desempeño del país de residencia sobre esta probabilidad. Para ello, se utiliza la quinta ola de la Encuesta Mundial de Valores. Se muestra que el ingreso subjetivo y las características del país de residencia son determinantes claves de estas actitudes así como lo es el efecto-interacción entre estas variables. Por lo tanto, las medidas que afecten las características de los países podrían tener un impacto relevante en la disposición de los individuos a participar.

JEL Classification: K32, O12, O13, Q50, Q56.

Keywords: Environmental economics, environmental quality, income, human development.

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1 Introduction

There is a large body of research that assesses individual's attitudes towards the environment and environmental commitment. Education and income play a relevant role in determining people's attitudes, there are proofs that higher educational levels and higher income levels make people more interested in participating in environmental causes (Blomquist and Whitehead, 1998; Carlsson and Johansson-Stenman, 2000; Franzen, 2003; García-Valiñas and Torgler, 2007; Kütz, 2007; Popp, 2001; Witzke and Urfei, 2001). Moreover, a set of studies shows that socio-demographic attributes also matter such as gender, age, marital status and political affiliation (Kerkvliet, 1997; Bord and O'Connor, 1997; Davidson and Freudenburg, 1996; Dupont, 2004; Hunter et al., 2004; Tittle, 1980; Vlosky and Vlosky, 1999; Witzke and Urfei, 2001; Zelezny et al., 2000).

We extend previous researches by considering some effects that come from the macroeconomic sphere such as per capita income (measured by the per capita Gross Domestic Product, GDP) and other indicators. Moreover we also assess whether the joint effect between subjective income and some characteristics of the country are key determinants of these attitudes. For doing so, we employ the data set that comes from the fifth wave of the WVS survey. Furthermore, accepting that sustainable development depends on the quality of institutions, (Hall and Jones, 1999; Knack and Keefer, 1995; Rigobon and Rodrik, 2005; Rodrik et al., 2004), we examine whether the Rule of Law favors people's involvement in environmental issues. Moreover, we also consider the existence of interaction-effects between personal income and this set of macroeconomic variables. For instance, the probability of participating in an environmental cause may change among richer people depending whether their live in a richer country.

Given previous findings, we also hypothesize that personal attributes matter (such as gender, educational level, income level, among others). The contributions to the literature are twofold. Firstly, we employ a large and heterogeneous data set and we also show that country characteristics are relevant predictors of people's attitudes towards the environment. Secondly, after controlling by personal attributes, this research explores the significance of interaction terms between personal income and a set of macroeconomic variables. For example, we examine whether, as income rises, richer people are more likely to engage in pro-environment behavior.

This paper is organized as follows. Section two presents some empirical evidence regarding the effect of personal attributes (gender, age, education, income, among others) and the less developed literature about the impact of country characteristic on the probability of being involved in environmental issues. The third section sketches the main features of the data set and econometric methods applied in this study and the description of variables. The fourth section deals with results. Finally, the conclusions are drawn in section five.

2 Environmental issues, people's involvement and sustainable development

This section presents previous literature that shows which are the personal attributes and country characteristics that play a relevant role in determining people's engagement with environmental causes.

Kütz (2007) concludes that education plays a major role in making people aware of the relevance of a sustainable development and improves their willingness to actively participate. In line with this, previous literature on this issue also highlights the role of (formal and informal) education (Blomquist and Whitehead, 1998; Whitehead, 1991; Carlsson and Johansson-Stenman, 2000; Israel and Levinson, 2004; Popp, 2001; García-Valiñas and Torgler, 2007; Witzke and Urfei, 2001).

Past researches provide evidence on the higher involvement among women, this finding has been linked to the socialization process in which women internalize social roles as caregivers and nurturers and hence, women tend to see the world in more cooperative terms and to feel more compassion. All these elements lead to higher concern for the environment (Kerkvliet, 1997; Bord and O'Connor, 1997; Davidson and Freudenburg, 1996; Dupont, 2004; Hunter et al., 2004; Zelezny et al., 2000). However, as gender roles have been changing and environmental issues have become more relevant for everyone, we hypothesized that gender differences are likely to be non-significant.

Regarding age, there is no consensus on the direction of its impact. On one hand, environmental consciousness may be up as people get older and on the other hand, if they consider only the use-value (and they do not take into account the existence value), older people obtain less personal benefits of preserving resources (Vlosky and Vlosky, 1999).

Marital status could also matter. Dupont (2004) and Tittle (1980) point out that marriage is a significant determinant of environmental involvement because people tend to take into account the needs of future generations and in particular, those of their children.

Engel and Pötschke (1998) and Witzke and Urfei (2001) argue that political affiliation also influences this attitude. This is true since ideology is correlated to beliefs and preferences on economic and social issues such as growth, intervention, openness and environmental regulation.

The role of personal income has also been examined (Blomquist and Whitehead, 1998; Bulte et al., 2005; Franzen, 2003; Hidano et al., 2005; Israel and Levinson, 2004; Popp, 2001; Stevens et al., 1994; Veisten et al., 2004; Whitehead, 1991; Witzke and Urfei, 2001). Environmental quality is considered a luxury good and therefore, its demand is up as income rises. Instead of monetary income, we argue that subjective income play a major role, in other words, people's satisfaction with their own welfare or people's perception of it is the key element that shapes attitudes.

We also extend previous research by considering some effects that come from the macroeconomic sphere such as income per capita (measured by the per capita GDP) and other indicators. Additionally, in line with the environmental Kuznets' Curve (an inverted U-shaped curve between pollution and

economic activity), we expect that per capita income registers a positive impact in the case of Europe and Latin America (the relatively richer areas according to our sample of countries) and a negative impact in the case of Africa and Asia (the relatively poorer areas).

In line with this argument, we also hypothesize that per capita GDP has an indirect impact through the subjective income. Thus, we expect the marginal effect of subjective income to vary across countries. For example, richer people might be more engaged in environmental causes in relatively poor countries where the governments have fewer resources to provide environmental protection than those living in richer countries. In line with this, [Owen and Videras \(2006\)](#) find that civic-minded people are much more likely to support environmental protection if they live in relatively poorer countries.

Accepting that sustainable development also depends on the quality of institutions, ([Hall and Jones, 1999](#); [Knack and Keefer, 1995](#); [Rigobon and Rodrik, 2005](#); [Rodrik et al., 2004](#)), we examine whether the rule of law favors people's involvement in environmental issues. In line with this, it is likely that in those countries in which the government is perceived as being corrupt, people participate more because they know that alternative channels (non-governmental organizations, etc.) are needed to pursue their goals (such as improving the environmental quality). [García-Valiñas and Torgler \(2007\)](#) show that engagement in an environmental organization is positively correlated to the perceived level of corruption.

This literature review indicates that there is a large body of research that assesses how personal characteristics determine people's attitudes towards the environment such as commitment and involvement and that the macroeconomic sphere also matters. In this study, we intend to shed light on these impacts by considering a large and widely heterogeneous set of countries (in some of them development drawbacks could seem far away from individuals' daily lives but in some other regions the opposite is true).

We argue that there is a set of personal attributes that favors concern by environmental issues and identifying these attributes may be useful when designing environmental and sustainable policies. Moreover, we also hypothesize that economic performance is also a relevant determinant of these attitudes. Therefore, socio-economic policies that increase per capita income, reduce income-inequality and/ or improve the quality of institutions favors people's interest on the environment, for instance, people living in countries where the quality of life is better (higher per capita income or lower income-inequality) may be more involve in these issues.

3 Data and methodology

Firstly, we use the cross-country data that comes from the fifth wave of the World Values Survey. The WVS is a worldwide investigation of socio-cultural and political change, based on representative national samples. It was first carried out in 1981-83. The fifth WVS allows us to include more than 30,000 observations from 49 economies. This survey contains information on basic

attitudes, beliefs and human values covering religion, morality, politics, work and leisure. The surveys were conducted within the time span from 2005 to 2007. This survey allows researchers to assess a great variety of issues.

The questions used in the WVS questionnaire to identify people's involvement in environmental issues are: 1) "Could you tell me whether you are an active member, an inactive member or not a member of an environmental organization?" And 2) "Have you done unpaid volunteer work for an environmental cause?".

Given this question, we construct the following variable whose weighted distribution of answers is presented in table 1:

PARTICIPATION = 1 if respondent is a member and/ or he/ she has done unpaid volunteer work and 0 in other case

Given that our dependant variable is binary, we estimate probit models. We examine if there are relevant differences among people living in different countries and whether socio-demographic variables such as: age, gender, education, religion, income scale, among others play a relevant role in determining a different pattern of behavior among the public. After estimating the probit models, we compute the probability that the dependant variables equal one and we also estimate the marginal effects of the independent variables. These figures are the changes in the above-mentioned probabilities given a change in the independent variables.

Given our hypothesis, we estimate the same model but with different country characteristics. Firstly, we include the per capita GDP. Secondly, we select a variable whose correlation with per capita GDP is relatively high, the Human Development Index (HDI, computed by the United Nations Development). The HDI is a measure of human development and it implies whether a country is developed, still developing, or underdeveloped based on factors such as life expectancy, education, literacy and per capita GDP. Moreover, model 3 and 4 includes variables connected to the quality of institutions. The Rule of Law index (computed by the World Justice Project) is included in model 3. It presents in what extent a country adheres to the rule of law in practice (it considers factors such as: government powers, corruption, public security, fundamental rights, civil justice, criminal justice and enforcement). Finally, the Corruption Perception Index (CPI, computed by Transparency International) is included in model 4. It reflects how widespread is corruption in a country (higher levels of the index reflect lower levels of corruption). The complete description of the included variables is reported in table 2.

Table 1. Participation, weighted distribution of answers

Africa			Asia			Europe			Latin America		
Country	0	1	Country	0	1	Country	0	1	Country	0	1
Burkina Faso	89.3	10.7	China	89.9	10.1	Bulgaria	98.6	1.4	Argentina	89.6	10.4
Egypt	99.1	1	Hong Kong	97.8	2.2	Finland	90.1	9.9	Brazil	93.1	6.9
Ethiopia	71.6	28.4	India	40.5	59.5	France	85.6	14.4	Chile	87.1	12.9
Ghana	74.1	25.9	Indonesia	64.2	35.8	Georgia	99.5	0.5	Colombia	95.2	4.8
Mali	63	37	Iran	90.2	9.8	Germany	95.1	4.9	Guatemala	96.5	3.5
Morocco	98.1	1.9	Jordan	99.5	0.5	Great Britain	83.6	16.4	Mexico	87.1	12.9
Rwanda	81.4	18.6	Malaysia	88.9	11.1	Italy	92.3	7.7	Peru	93.1	6.9
South Africa	77.5	22.6	South Korea	91.8	8.2	Moldova	92.8	7.2	Uruguay	93.8	6.2
Zambia	78.5	21.5	Thailand	80.3	19.7	Netherlands	84.3	15.7			
			Vietnam	89.3	10.7	Norway	92.8	7.2			
						Poland	92.4	7.6			
						Romania	99.3	0.7			
						Russia	95.4	4.6			
						Slovenia	93.2	6.9			
						Spain	95.3	4.7			
						Sweden	89.8	10.2			
						Switzerland	77.3	22.7			
						Turkey	98.7	1.3			
						Ukraine	96.1	3.9			
Sub-total	82.6	17.4	Sub-total	81.3	18.7	Sub-total	92.8	7.2	Sub-total	92.4	7.6

Note: Values in percentage.

Source: Author's calculation.

Table 2. Description of independent variables

Variable	Description	Mean	Std. Dev.	Expected sign
Age	Respondent's age	40.1	15.6	?
Age2	= age $\times$ age	1,850.8	1,428.1	?
Catholic	1 if being Catholic	0.3	0.5	+
University	1 if having an university degree	0.2	0.4	+
Man	1 being a man	0.5	0.5	non-significant
Married	1 if married or living as married	0.7	0.5	+
Protestant	1 if being Protestant	0.1	0.3	+
Religiosity	1 if attending to religious services at least once a week	0.4	0.5	+
Right	1 if identifying with the right	0.2	0.4	?
Self employed	1 if being self-employed	0.1	0.2	?
Single	1 if being single	0.3	0.4	non-significant
Subjective income	Self-placement in 10 point income scale	4.4	2.4	+
Unemployed	1 if being unemployed	0.1	0.3	-
LCPI	Logarithm of Corruption Perception Index (source: Transparency International)	1.4	0.4	+
Country characteristics	Per capita Gross Domestic Product, in logs, (Atlas method, source: World Bank)	9	0.8	-
LHDI	Logarithm of the Human Development Index (source: United Nations Development Program)	4.4	0.2	+
LRLAW	Logarithm of the Rule of Law Index (source: World Justice Project)	4	0.3	+

Note: Values in percentage.

Source: Author's calculation.

4 Main findings

4.1 Descriptive results

As table 1 suggests, we observe regional differences. Participation varies from 0.47 percent in the case of Georgia to 59.47 percent in the case of India. Considering average participation per continent, the table also shows large dispersion, from 7.16 percent in Europe to 18.73 percent in Asia. Political and socio-economic characteristics of the place of residence may influence these differences. For instance as it was explained, involvement in environmental causes could be higher in developing countries or relatively poorer countries where governments have fewer resources and/ or people should take an active role to pursue their goals (for example, through non-governmental organizations).

Given these findings, we estimate four probit models per continent. In each model we include a different country characteristic and at the same time, an interaction term between this characteristic and the subjective income scale. For example, the first model includes per capita GDP, if the interaction term registers a significant negative impact, it means that among richer people, participation is higher in relatively poorer countries than in relatively richer countries.

4.2 Econometric results

Tables 3 to 6 report the marginal effects after probit models estimation by employing the WVS. As it could be seen, involvement in environmental issues depends on personal attributes and simultaneously on country characteristics. Moreover, in several cases, as it was hypothesized the interaction terms are significant.

4.2.1 Personal attributes

Firstly, we find that only in Latin America and Asia (in some specifications) men are more likely to participate. Secondly, with the exemption of Europe, age has no significant impact on the probability of being involved in an environmental cause. This result may be driven by two opposed pressures, on one hand, as people become older, the present value of the gains obtained from preserving the environment goes down and on the other hand, older people tend to be more aware of the environmental problems. In Europe, this second effect prevails as the probability rises as people become older. It is worth noting that the growth rate is negative given the (negative) sign of age square.

We provide clear evidence on the significant and positive role of education. As it was expected, more educated people tend to be more engaged. Those who have achieved a higher educational level are likely to have better access to the information and at the same time, to have better capabilities to process it. Hence, given the proofs of environmental problems, the overall disposition to participate is likely to be higher among educated people. The exemption

is Africa and the low ratio of professionals among Africans may explain this fact.

Political affiliation seems to be relevant in the case of Africa, Asia and Europe but in opposite direction. Even when political ideology is associated to opinions towards the role of the State and social issues, it is also true that being affiliated to the right wing (or to the left wing) does not mean the same in different countries or continents. As table 3 shows, those who are affiliated to the right are more likely to be engaged in an environmental cause in Africa, while the opposite is true in the case of Asia and Europe.

Furthermore, being married or single, when significant, register a positive sign. Indeed, this result may imply that those who have not experience disruptive family situations (such as divorce) are more likely to be involved. In general, married and single people are more likely to be happy or less likely to be depressed (Melgar and Rossi, 2012) and hence, they may show a higher willingness to participate in a social cause and also they may have a better disposition to consider the needs of other people such as the present and future generations.

Additionally, we shed light on the role of religion and religiosity. Firstly, we prove that religious beliefs matter but the direction of the impact depends not only of the religious group but also on the place of residence. If significant, Catholics and Protestants are less likely to be involved in Asia and Latin America while in Africa and Europe, the impacts of these religious groups are positive. Secondly, in Asia, religiosity is associated to higher participation.

Finally, labor market participation also plays a relevant role. Firstly, unemployed people are less likely to participate (with the exemption of those living in Africa) and the same is true in the case of self-employed people. This finding may indicate that having a more stable position (given the formal job) positively determines people's attitudes towards the environment. It may also imply that those without the pressures of being unemployed were better able to engage.

4.2.2 *The role of subjective income and country characteristics*

The literature on environmental issues has argued that richer people are more likely to be interested because the environmental quality is considered a luxury good. We extend previous finding by considering whether subjective income plays a relevant role. In other words, we assess whether this indicator, (derived from the WVS questionnaire) about subjective self-placement in the income scale, shapes the probability of being involved in an environmental cause. Moreover, we also investigate whether there is a joint effect between subjective personal well-being and the characteristics of the country.

Considering per capita GDP, findings indicate that in Europe and Latin America, the relatively richer areas of the sample (those that register, on average, higher GDP per capita), people are more likely to participate given the positive sign of this variable. Moreover, in Latin America, given the significant negative impact of the interaction term between income and per capita GDP, richer people (those people who perceive themselves as being richer)

that live in richer countries are less likely to participate than richer people who live in poorer countries. This means that even when the environmental quality maybe a luxury good, as people perceive themselves to be richer, the availability of resources in the country becomes more important. In other words, when there are resources that can be destined to improve the environmental quality, richer people are less likely to be involved. The opposite is true in the case of relatively poorer areas, Asia and Africa. Both, per capita GDP and the subjective income are negatively related to participation. However, the interaction term shows a positive sign meaning that richer people are more likely to participate. As before, people are aware of the availability of resources and in this case of fewer resources, richer people tend to participate more.

Given the previous result, we estimate the same model but with different country characteristics. Firstly, we select a variable whose correlation with per capita GDP is relatively high, the Human Development Index (HDI) secondly other two variables connected to the quality of institutions, the Rule of Law index and the Corruption Perception Index (CPI).

Regarding the HDI, we find similar results. It always has a significant impact on the probability of participating which is positive in those regions that register a better performance (Europe and Latin America) and negative in other regions (Africa and Asia). It is highlighted that in this case, the subjective income and the interaction effect is only significant in the case of Latin America. As in model 1.1, table 3 shows that richer Latin Americans are aware of the quality of life (measured by the HDI) and they are less likely to participate in those countries that performed well.

The Rule of Law and the CPI indexes are different measures of the quality of the institutions in a country. Tables 3 to 6 show that a better performance of the country (or a higher value of the index), is associated to more participation in relatively richer areas while in Africa, the poorest zone, a higher Rule of Law index implies lower participation and in Africa and Asia, the perception of corruption does not shape involvement in environmental causes.

In these cases, the interaction terms register specificities that should be highlighted. Firstly, if significant, the interaction term shows the opposite sign that the estimated coefficient of subjective income. Once again richer people tend to take into account the performance of the country when deciding whether to participate. Secondly, once again, it is showed that richer people are aware of the characteristics of their country. On one hand, where the quality of the institutions is good or where corruption perception is low, richer people are less likely to participate because they trust that the (environmental) norms and regulations will be fulfilled and that resources would not be misallocated by corrupt civil servants. On the other hand, if corruption perception is high or the quality of the institutions is not good, richer people are more likely to participate because they are aware of the importance of their contribution.

Table 3. Marginal impacts on the probability of participating, WVS. The performance of the country measured by the per capita GDP

	Africa	Asia	Europe	Latin America
Model	1.1	1.2	1.3	1.4
Probability of PARTICIPATION=1	16.87%	23.68%	7.10%	8.53%
MEN	0.013 (0.012)	0.011 (0.012)	-0.004 (0.004)	0.024 ^a (0.008)
AGE	0 (0.003)	0.004 (0.003)	0.003 ^a (0.001)	0 (0.002)
AGE2	0.001 (0)	0.001 (0)	-0.001 ^a (0)	0 (0)
UNIVERSITY	0.002 (0.018)	0.044 ^a (0.015)	0.037 ^a (0.006)	0.047 ^a (0.014)
RIGHT	0.066 ^a (0.014)	-0.098 ^a (0.013)	-0.016 ^a (0.006)	0.006 (0.01)
MARRIED	0.033 ^c (0.019)	0.038 (0.03)	-0.007 (0.007)	-0.007 (0.014)
SINGLE	0.054 ^b (0.025)	0.061 (0.038)	0.014 (0.009)	-0.009 (0.015)
CATHOLIC	0.024 (0.015)	-0.011 (0.045)	0.017 ^a (0.006)	-0.017 ^c (0.01)
PROTESTANT	0.116 ^a (0.016)	-0.022 (0.028)	0.031 ^a (0.009)	0.01 (0.02)
ATTEND	-0.009 (0.013)	0.025 ^b (0.012)	0.004 (0.007)	0.012 (0.009)
SELF EMPLOYED		-0.139 ^a (0.021)	-0.050 ^a (0.012)	0.025 (0.016)
UNEMPLOYED	0.357 ^a (0.074)	-0.018 (0.027)	0.004 (0.011)	-0.054 ^a (0.017)
S.INCOME	-0.052 ^b (0.025)	-0.193 ^a (0.045)	0.012 (0.014)	0.133 ^c (0.075)
LGDPpc	-0.161 ^a (0.019)	-0.339 ^a (0.028)	0.043 ^a (0.008)	0.156 ^a (0.04)
LGDP × S.INCOME	0.010 ^a (0.003)	0.022 ^a (0.005)	-0.001 (0.001)	-0.015 ^c (0.008)
Observations	6,413	6,526	15,173	4,786

Note: Robust standard errors in parentheses. ^c significant at 10%; ^b significant at 5%; ^a significant at 1%.

Source: Author's calculation.

Table 4. Marginal impacts on the probability of participating, WVS, continued. The performance of the country measured by the HDI

	Africa	Asia	Europe	Latin America
Model	2.1	2.2	2.3	2.4
Probability of PARTICIPATION=1	16.18%	23.25%	7.11%	8.46%
MEN	0.018 (0.011)	0.014 (0.012)	-0.004 (0.004)	0.024 ^a (0.008)
AGE	0.001 (0.002)	0.004 ^c (0.003)	0.003 ^c (0.001)	0.001 (0.002)
AGE2	0.001 (0.000)	0.000 (0.000)	-0.001 ^a (0.000)	0.000 (0.000)
UNIVERSITY	0.017 (0.018)	0.057 ^a (0.015)	0.037 ^a (0.006)	0.048 ^a (0.014)
RIGHT	0.063 ^a (0.014)	-0.034 ^b (0.013)	-0.017 ^a (0.006)	0.008 (0.010)
MARRIED	0.024 (0.018)	0.026 (0.030)	-0.008 (0.007)	-0.007 (0.014)
SINGLE	0.043 ^c (0.025)	0.078 ^b (0.039)	0.013 (0.009)	-0.009 (0.016)
CATHOLIC	0.034 ^b (0.015)	0.054 (0.048)	0.014 ^b (0.006)	-0.018 ^c (0.010)
PROTESTANT	0.128 ^a (0.015)	0.042 (0.031)	0.034 ^a (0.009)	0.001 (0.019)
ATTEND	-0.003 (0.013)	0.016 (0.012)	0.005 (0.007)	0.014 ^c (0.009)
SELF EMPLOYED		-0.103 ^a (0.025)	-0.052 ^a (0.011)	0.012 (0.014)
UNEMPLOYED	0.235 ^a (0.068)	-0.060 ^a (0.024)	0.003 (0.011)	-0.058 ^a (0.015)
S_INCOME	-0.036 (0.046)	0.044 (0.099)	0.050 (0.057)	0.657 ^a (0.249)
LHDI	-0.483 ^a (0.062)	-1.396 ^a (0.112)	0.406 ^a (0.071)	1.342 ^a (0.270)
LHDI × S_INCOME	0.014 (0.012)	-0.009 (0.023)	-0.010 (0.013)	-0.148 ^a (0.056)
Observations	6,413	6,526	15,173	4,786

Note: Robust standard errors in parentheses. ^c significant at 10%; ^b significant at 5%; ^a significant at 1%.

Source: Author's calculation.

Table 5. Marginal impacts on the probability of participating, WVS, continued. The performance of the country measured by the Rule of Law Index

	Africa	Asia	Europe	Latin America
Model	3.1	3.2	3.3	3.4
Probability of PARTICIPATION=1	17.36%	25.77%	7.03%	8.61%
MEN	0.011 (0.012)	0.031 ^a (0.012)	-0.005 (0.004)	0.025 ^a (0.009)
AGE	0.000 (0.003)	-0.002 (0.003)	0.003 ^a (0.001)	0.000 (0.002)
AGE2	0.000 (0.001)	-0.001 (0.000)	-0.001 ^a (0.000)	0.000 (0.000)
UNIVERSITY	-0.006 (0.017)	0.050 ^a (0.015)	0.038 ^a (0.006)	0.042 ^a (0.014)
RIGHT	0.068 ^a (0.014)	-0.043 ^a (0.014)	-0.020 ^a (0.006)	0.008 (0.010)
MARRIED	0.034 ^c (0.019)	0.072 ^b (0.028)	-0.009 (0.007)	-0.008 (0.014)
SINGLE	0.052 ^b (0.026)	0.050 (0.036)	0.011 (0.009)	-0.011 (0.016)
CATHOLIC	0.025 (0.016)	-0.213 ^a (0.016)	0.022 ^a (0.006)	-0.019 ^c (0.010)
PROTESTANT	0.115 ^a (0.016)	-0.168 ^a (0.018)	0.028 ^a (0.009)	0.000 (0.019)
ATTEND	-0.010 (0.014)	0.079 ^a (0.012)	0.003 (0.007)	0.013 (0.009)
SELF EMPLOYED		-0.135 ^a (0.024)	-0.049 ^a (0.012)	0.016 (0.015)
UNEMPLOYED	0.196 ^a (0.067)	-0.040 (0.027)	0.001 (0.011)	-0.059 ^a (0.015)
S_INCOME	-0.183 ^a (0.070)	-0.107 ^b (0.052)	0.015 (0.012)	0.092 ^b (0.039)
LRLAW	0.708 ^a (0.101)	0.307 ^a (0.071)	0.108 ^a (0.016)	0.161 ^a (0.046)
LRLAW × S_INCOME	-0.052 ^a (0.018)	-0.029 ^b (0.013)	-0.003 (0.003)	-0.023 ^b (0.010)
Observations	6,413	6,526	15,173	4,786

Note: Robust standard errors in parentheses. ^c significant at 10%; ^b significant at 5%; ^a significant at 1%.

Source: Author's calculation.

Table 6. Marginal impacts on the probability of participating, WVS, continued. The performance of the country measured by the Corruption Perception Index

	Africa	Asia	Europe	Latin America
Model	4.1	4.2	4.3	4.4
Probability of PARTICIPATION=1	17.36%	25.87%	7.07%	8.70%
MEN	0.011 (0.012)	0.018 (0.012)	-0.004 (0.004)	0.024 ^a (0.009)
AGE	-0.002 (0.003)	0.000 (0.003)	0.003 ^a (0.001)	0.000 (0.002)
AGE2	0.000 (0.001)	0.000 (0.000)	-0.001 ^a (0.000)	0.000 (0.000)
UNIVERSITY	-0.013 (0.018)	0.042 ^a (0.015)	0.037 ^a (0.006)	0.040 ^a (0.013)
RIGHT	0.080 ^a (0.015)	-0.047 ^a (0.014)	-0.021 ^a (0.006)	0.007 (0.010)
MARRIED	0.015 (0.020)	0.071 ^a (0.027)	-0.009 (0.007)	-0.009 (0.014)
SINGLE	0.034 (0.026)	0.050 (0.036)	0.011 (0.009)	-0.013 (0.015)
CATHOLIC	0.065 ^a (0.016)	-0.189 ^a (0.020)	0.023 ^a (0.006)	-0.020 ^b (0.010)
PROTESTANT	0.135 ^a (0.017)	-0.150 ^a (0.020)	0.034 ^a (0.009)	0.003 (0.020)
ATTEND	-0.003 (0.014)	0.063 ^a (0.012)	0.001 (0.006)	0.011 (0.009)
SELF EMPLOYED		-0.155 ^a (0.022)	-0.048 ^a (0.012)	0.008 (0.014)
UNEMPLOYED	0.014 (0.048)	-0.015 (0.028)	-0.003 (0.010)	-0.056 ^a (0.016)
S.INCOME	-0.027* (0.070)	-0.021 (0.013)	0.010 ^b (0.004)	0.029 ^b (0.014)
LCPI	0.067 (0.077)	-0.068 (0.057)	0.081 ^a (0.014)	0.116 ^b (0.048)
LCPI × S.INCOME	-0.005 (0.013)	0.011 (0.011)	-0.002 (0.002)	-0.018* (0.010)
Observations	6,413	6,526	15,173	4,786

Note: Robust standard errors in parentheses. ^c significant at 10%; ^b significant at 5%; ^a significant at 1%.

Source: Author's calculation.

5 Conclusions

This study's main contributions are threefold and may be a factor of influence in further research.

First, by employing a large data set, we present econometric evidence that verifies previous findings. There is a set of personal attributes that shapes the probability of being involved in an environmental cause (such as: education, religion, religiosity and political affiliation).

Second, we also show that people's attitudes are also determined by the characteristic of their country. Therefore, supposing two identical people that are fully aware of environmental issues, their probability of being involved could be completely different depending on the place of residence. Country-effects matters and this study provides the basis for further conceptualization and identifies a number of areas where further research is required.

Finally, new evidence is provided about the joint effects between subjective income and country characteristics. People's attitudes do depend on their own availability of resources and on the performance of the country. Those who perceive themselves to be richer are more likely to participate in those countries with fewer resources or in those countries that registered higher corruption level. This result implies that people are aware of the importance of their role in environmental issues. At the same time, it implies that people are aware of the (un)capability of the country to achieve environmental goals depending on the availability of resources and also on the quality of their institutions. Finally, this finding also has other implications, policies that change the macroeconomic arena would also change the disposition to participate in an environmental cause and the same is true in the case of an economic crisis.

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