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Public opinion's involvement and interests on environmental issues

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Abstract

The aim of this study is to extend previous findings by showing that involvement in environmental issues is shaped by personal attributes such as education and the subjective income but also by country characteristics. The dataset for this research comes from the 2005 World Value Survey and the 2008 Latin-barometer survey that allow us to consider a large and heterogeneous set of countries.

The contributions of the paper are three-fold. Firstly, we provide clear evidence that the economic performance plays a relevant role, one direct consequence of this finding is that policies that change the macroeconomic arena would also change people's attitudes. Secondly, we find that environmental quality could be considered as a luxury good by richer people because people's attitudes depend not only on their income but also on the economic performance. Finally, richer people are aware of the availability of resources and of the quality of the institutions, hence their behavior changes depending on the characteristics of the country: in relatively poorer countries (where there are fewer resources), they tend to participate more than richer people that live in relatively richer countries.

JEL classification: K32, O12, O13, Q50, Q56

Key words: environmental economics, environmental quality, income, human development, cross-country research

Resumen

El objetivo de este trabajo es extender el conocimiento sobre las actitudes individuales hacia temas medioambientales mostrando que el involucramiento depende de atributos personales (como la educación o el ingreso) pero también de las características del país de residencia. La fuente de datos es la encuesta del año 2005 del *World Value Survey* y la encuesta del año 2008 realizada por Latino-barómetro.

Las contribuciones de este trabajo son tres. En primer lugar, se brinda evidencia sobre el efecto significativo del desempeño económico, una consecuencia directa de este resultado es que por lo tanto, toda política con impactos macroeconómicos puede modificar las actitudes individuales hacia el medioambiente. En segundo lugar, se encuentra que la

calidad ambiental puede ser considerada un bien de lujo por las personas más ricas pero esto también depende de las características del país. Finalmente, los modelos muestran que las personas más ricas son conscientes de la disponibilidad de recursos y calidad de las instituciones en su país y entonces, su comportamiento varía dependiendo de estos factores: en países relativamente más pobres (donde hay menos recursos), los individuos más ricos tienden a participar más que aquellos que viven en países más ricos.

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

Palabras Clave: economía ambiental, calidad ambiental, ingreso, desarrollo humano, análisis multi-país

1. Introduction

There is a large body of research that assesses individual's attitudes towards the environment and commitment to activities for improving the environmental quality. Given previous findings, we hypothesized that personal attributes matter (such as gender, educational level, income level, among others) and the contributions to the literature are twofold. Firstly, we employ a large and heterogeneous dataset and we also show that country characteristics are relevant predictors of people's attitudes towards the environment.

This paper is organized as follow. Section two presents some empirical evidence linked to the effect of individuals' characteristics (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 dataset 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

Kühtz (2007) concludes that education play a major role in making people aware of sustainable development needs and improve 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; Carlsson and Johansson-Stenman, 2000; Israel and Levinson, 2004; Popp, 2001; García-Valiñas and Torgler, 2007a and Witzke and Urfei 2001).

Employers are a relevant actor in this process, for instance, the organizational culture, the vision and mission should include responsibilities for the environment and incentives to improving its quality (see for example, Dearing, 1999; Seelos and Mair, 2006; Seelos and Mair, 2005 and Zhao, 2004).

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 (Berrens et al., 1997; Bord and O'Connor, 1997; Davidson and Freudenburg, 1996; Hunter et al., 2004 and Zelezny et al., 2000). However, as gender roles have been changing and environmental issues has 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, older people obtain less personal benefits of preserving resources (Vlosky and Vlosky, 1999).

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 play a relevant role. 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., 2004; Dupont, 2004; Franzen, 2003; Hidano et al., 2005; Israel and Levinson, 2004; Popp, 2001; Stevens et al., 1994; Veisten et al., 2004; Whitehead, 1991 and 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 argued that subjective income play a major role, in other words, people's satisfaction with or perception of their own welfare matters.

We also extend previous research by considering effects that come from the macroeconomic sphere such as income per capita (measured by Gross Domestic Product, GDP, per capita) and other indicators. Additionally, in line with the environmental

Kutznets' 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 GDP per capita has an indirect impact through 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 government has 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 and 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 where 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 (2007b) show that engagement in an environmental organization is positively correlated to the perceived level of corruption.

This literature review indicates that even when there is a large body of research that assesses how personal characteristics determine people attitudes towards the environment such as commitment and involvement, too little knowledge is available to understand the impact of the macroeconomic characteristics. In this study, we intend to shed light on these impacts in 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 hypothesized 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 2005-2007 World Value Survey (WVS, fourth wave) and secondly, given that there are few Latin American countries available in the WVS, we extend our investigation by considering the 2008 Latin-barometer that contains a very similar set of questions. These surveys allow researchers to assess a great variety of issues.

The questions used in the WVS questionnaire to identify people's involvement in environmental issues are: *“Could you tell me whether you are an active member, an inactive member or not a member of an environmental organization? “Have you done unpaid voluntary work for any environmental cause?”*

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

1. PARTICIPATION_1 = 1 if respondent is a member and/ or answers yes and 0 in other case

Insert TABLE 1 – PARTICIPATION_1, weighted distribution of answers

Secondly, we use the 2008 Latino-barometer survey whose questionnaire includes the following question: *“In the last twelve months, could you please tell me if you had collaborated with work(1), has collaborated with money(2), has assisted meetings(3) or hasn't done any of these activities for improving the environmental quality? Considering this question we construct the following variable whose weighted distribution of answers is presented in table 2:*

2. PARTICIPATION_2 = 1 if respondent answers yes in at least one option and 0 in other case

Insert TABLE 2 – PARTICIPATION_2, weighted distribution of answers

Given that our dependant variables are binary, we estimated 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. The complete description of the included variables is reported in table 2.

Insert TABLE 3 - Description of independent variables

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)

In the case of Latin America, Latino-barometer questionnaire includes a very similar question but with a larger set of answers, table 2 shows higher ratios of involvement. In

this case, the participation varies from 20.30 percent in Chile to 59.48 percent in the case of Mexico. As before, this finding is a clear proof of the significant incidence of the country of residence.

Given these findings, we estimate five 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 GDP per capita, 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

Table 4 reports 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.

Insert TABLE 4 – Impacts on the probability of participating, WVS

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, age has no significant impact on the probability of being involved in an environmental cause. This result is maintained worldwide and it 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.

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 the table 4 shows, those who are affiliated with 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, 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 satisfied with their lives than those who transited trough divorce or widowhood and hence, they may show not only a higher willingness to participate in a social cause but also 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. While unemployed people are less likely to participate (with the exemption of those living in Africa), the same is true in the case of self-employed people. As previous literature has shown (Dearing, 1999; Seelos and Mair, 2006; Seelos and Mair, 2005 and Zhao, 2004), this finding may indicate that the organizational culture, the vision and mission are likely to influence on people's behavior.

For example, those working in enterprises that promotes being responsible for the environment and improving its quality are more likely to being involved in an environmental cause than self-employed people.

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 being interested because the environmental quality is assessed as a luxury good. We extend previous finding by considering that richer people also takes into account the characteristics of their country of residence when deciding to participate.

Considering GDP per capita, 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 GDP per capita, richer people that live in richer countries are less likely to participate than those living in poorer countries. This means that even when the environmental quality maybe a luxury good, richer people also consider the availability of resources. In other words, when there are resources that can be destined to improve the environmental quality, richer people are less likely to being involved. The opposite is true in the case of relatively poorer areas, Asia and Africa. Both, GDP per capita and the subjective income are negatively associated 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, participation is higher among richer people.

The previous finding verifies our hypothesis and in order to shed light on the relationship between the standardized values of participation per country and GDP per capita, figure 1 clearly shows that it could be fitted by a U-shaped curve. It could be seen that in general, participation decreases as GDP per capita is up in the case of Africa and Asia and the opposite is true in the case of Europe and Latin America.

Insert FIGURE 1 – U-shaped relationship between GDP per capita and average participation in the country

Given the previous result, we estimate the same model but with a different country characteristics. Firstly, we select a variable whose correlation with GDP per capita is relatively large, the Human Development Index (IDH) 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 than with GDP per capita. It always has a significant impact on the probability of participating which is positive in those regions that register, on average, a better performance (Europe and Latin America) and negative in those that showed the worst performance (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 4 shows that richer Latin Americans are aware of the quality of life (measured by the HDI) and they are less likely of participating in those countries that performed well.

Regarding the HDI, we find similar results than with GDP per capita. It always has a significant impact on the probability of participating which is positive in those regions that register, on average, a better performance (Europe and Latin America) and negative in those that showed the worst performance (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 4 shows that richer Latin Americans are aware of the quality of life (measured by the HDI) and they are less likely of participating in those countries that have showed a good performance.

The Rule of Law and the CPI indexes are different measures of the quality of the institutions in the country. Table 4 shows 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 is 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.

Given the particularities of the Latin American case and that only eight countries are represented in the WVS, we estimate the same models by employing the 2008 Latino-barometer survey that includes 18 countries. These results are presented in the next subsection. We try to extend previous findings by employing the African and Asian barometer surveys but, the questionnaires do not similar questions.

4.2.3. The Latin American case

As mentioned, the World Value Survey database includes eight Latin American countries, and given that the included question in this survey and in Latino-barometer are very similar, we shed light on the impact of the macroeconomic arena by estimating the same models with this second database (see table 2).

Insert TABLE 5 – Impacts on the probability of participating, Latino-barometer

Regarding personal attributes, table 5 provides new elements to the analysis. Firstly, as before, men, more educated people, richer people and those who frequently attend to religious services are more likely to be involved in an environmental cause. Secondly, when considering this larger set of countries, more variables become significant. The probability of being engaged in an environmental cause is higher among those affiliated

with the Right wing, married people, single people, self-employed people, unemployed and Catholics and it is lower in the case of older people.

Table 5 also verifies previous results regarding country characteristics. Richer people in Latin America consider the environmental quality as a luxury good but their involvement depends on other factors such as the economic performance. Model 5.1 shows that a higher GDP per capita favors participation and at the same time, people are aware of the availability of resources and hence, richer people participate less in relatively richer countries and *vice versa*. Model 5.2 includes a different indicator of the quality of life (HDI) and registers similar results. Models 5.3 and 5.4 show that the quality of the institutions plays a relevant role in determining people's attitudes. On one hand, a good quality of the institutions favors participation but richer people seem to be less engaged. On the other hand, even when corruption perception results non significant, the interaction term is relevant. The trustworthiness in the fulfillment of (environmental) norms and regulations could be the main driver of these results. In other words, richer people trust that the resources would not be misallocated by corrupt civil servants.

5. Conclusions

Compared to many previous studies, we present clear evidence that in relatively richer regions such as Europe and Latin America, the environmental quality could be examined as a luxury good. However, in relatively poorer areas this finding is not maintained.

This result is based on the inclusion of country characteristics that allow us to shed light on whether people are aware of the availability of resources and the quality of the institutions in the country. In particular, we show that country-effects are significant and in the expected direction. This finding also has others 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.

Finally, we extend previous findings by showing that richer people also consider these country characteristics when deciding whether to participate. They consider whether there are resources and how these resources could be allocated. Moreover, when they are

significant, the estimated coefficient of the selected country characteristics shows a sign and the interaction term between personal subjective income and this country characteristic registers the opposite sign. For example, richer people that live in regions that register a better economic performance (measured by higher GDP per capita or HDI) seems to participate less than those living in a relatively poorer region.

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Annex 1 – tables

TABLE 1 – PARTICIPATION_1, weighted distribution of answers

	0	1	
Burkina Faso	89.32	10.68	100
Egypt	99.05	0.95	100
Ethiopia	71.62	28.38	100
Ghana	74.07	25.93	100
Mali	63.01	36.99	100
Morocco	98.08	1.92	100
Rwanda	81.40	18.60	100
South Africa	77.45	22.55	100
Zambia	78.50	21.50	100
AFRICA	82.55	17.45	100
China	89.93	10.07	100
Hong Kong	97.84	2.16	100
India	40.53	59.47	100
Indonesia	64.15	35.85	100
Iran	90.21	9.79	100
Jordan	99.50	0.50	100
Malaysia	88.86	11.14	100
South Korea	91.83	8.17	100
Thailand	80.30	19.70	100
Vietnam	89.30	10.70	100
ASIA	81.27	18.73	100
Bulgaria	98.60	1.40	100
Finland	90.13	9.87	100
France	85.61	14.39	100
Georgia	99.53	0.47	100
Germany	95.06	4.94	100
Great Britain	83.58	16.42	100
Italy	92.29	7.71	100
Moldova	92.83	7.17	100
Netherlands	84.33	15.67	100
Norway	92.78	7.22	100
Poland	92.40	7.60	100
Romania	99.32	0.68	100
Russia	95.40	4.60	100
Slovenia	93.15	6.85	100
Spain	95.25	4.75	100
Sweden	89.83	10.17	100
Switzerland	77.28	22.72	100
Turkey	98.66	1.34	100
Ukraine	96.10	3.90	100
EUROPE	92.84	7.16	100
Argentina	89.62	10.38	100

Brazil	93.07	6.93	100
Chile	87.10	12.90	100
Colombia	95.17	4.83	100
Guatemala	96.50	3.50	100
Mexico	87.12	12.88	100
Peru	93.13	6.87	100
Uruguay	93.80	6.20	100
LATIN AMERICA	92.37	7.63	100
TOTAL	87.51	12.49	100

Note: values in percentage

TABLE 2 – PARTICIPATION_2, weighted distribution of answers

	0	1	
Argentina	73.57	26.43	100
Bolivia	60.37	39.63	100
Brazil	53.64	46.36	100
Colombia	49.08	50.92	100
Costa Rica	58.39	41.61	100
Chile	79.70	20.30	100
Ecuador	67.52	32.48	100
El Salvador	67.47	32.53	100
Guatemala	48.39	51.61	100
Honduras	45.46	54.54	100
Mexico	40.52	59.48	100
Nicaragua	61.09	38.91	100
Panama	73.46	26.54	100
Paraguay	56.80	43.20	100
Peru	61.92	38.08	100
Uruguay	76.05	23.95	100
Venezuela	49.36	50.64	100
Dominican Republic	55.65	44.35	100
TOTAL	59.94	40.06	100

Note: values in percentage

TABLE 3 – Description of independent variables

	Variable	Description
Personal attributes	Age	Respondent's age
	Catholic	1 if being Catholic
	University	1 if having an university degree and 0 in other case
	Man	1 being a man and 0 if being a woman
	Married	1 if married or living as married and 0 in other case
	Protestant	1 if being Protestant
	Religiosity	1 if attending to religious services at least once a week and 0 in other case
	Right	1 if identifying with the right and 0 in other case
	Self employed	1 if being self-employed and 0 in other case
	Single	1 if being single and 0 in other case
	Subjective income	Self-placement in 10 point income scale
	Unemployed	1 if being unemployed
Country characteristics	LCPI	Logarithm of Corruption Perception Index (Transparency International)
	LGDPpc	Gross Domestic Product per capita, in logs, (Atlas method)
	LGINI	Logarithm of the GINI Index
	LIDH	Logarithm of the Human Development Index (United Nations Development Program)
	LRLAW	Logarithm of the Rule of Law Index (World Justice Project)

TABLE 4 – Impacts on the probability of participating, WVS

	Africa	Asia	Europe	Latin America	Africa	Asia	Europe	Latin America
	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4
Probability of PARTICIPATION=1	16.87%	23.68%	7.10%	8.53%	16.18%	23.25%	7.11%	8.46%
MEN	0.013 (0.012)	0.011 (0.012)	-0.005 (0.004)	0.024*** (0.008)	0.018 (0.011)	0.014 (0.012)	-0.005 (0.004)	0.024*** (0.008)
AGE	0.001 (0.000)	0.001 (0.000)	0.000 (0.000)	0.000 (0.000)	0.001 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
UNIVERSITY	0.002 (0.018)	0.046*** (0.015)	0.037*** (0.006)	0.047*** (0.014)	0.017 (0.018)	0.059*** (0.015)	0.037*** (0.006)	0.048*** (0.014)
RIGHT	0.066*** (0.014)	-0.098*** (0.013)	-0.016*** (0.006)	0.006 (0.010)	0.063*** (0.014)	-0.034** (0.013)	-0.017*** (0.006)	0.008 (0.010)
MARRIED	0.033* (0.019)	0.041 (0.030)	-0.005 (0.007)	-0.007 (0.014)	0.024 (0.018)	0.031 (0.030)	-0.007 (0.007)	-0.007 (0.014)
SINGLE	0.054** (0.025)	0.056 (0.038)	0.009 (0.009)	-0.009 (0.015)	0.042* (0.024)	0.071* (0.038)	0.008 (0.009)	-0.009 (0.015)
CATHOLIC	0.024 (0.015)	-0.011 (0.045)	0.018*** (0.006)	-0.017* (0.010)	0.034** (0.015)	0.054 (0.048)	0.015** (0.006)	-0.018* (0.010)
PROTESTANT	0.116*** (0.016)	-0.021 (0.028)	0.031*** (0.009)	0.010 (0.020)	0.128*** (0.015)	0.043 (0.031)	0.034*** (0.009)	0.001 (0.019)
ATTEND	-0.009 (0.013)	0.025** (0.012)	0.003 (0.007)	0.012 (0.009)	-0.003 (0.013)	0.016 (0.012)	0.004 (0.007)	0.014* (0.009)
SELF EMPLOYED		-0.138*** (0.021)	-0.050*** (0.012)	0.025 (0.016)		-0.102*** (0.025)	-0.052*** (0.011)	0.012 (0.014)
UNEMPLOYED	0.357*** (0.074)	-0.022 (0.027)	0.005 (0.011)	-0.054*** (0.017)	0.235*** (0.068)	-0.064*** (0.024)	0.004 (0.011)	-0.058*** (0.015)
S_INCOME	-0.052** (0.025)	-0.193*** (0.045)	0.010 (0.014)	0.133* (0.075)	-0.036 (0.046)	0.042 (0.099)	0.040 (0.057)	0.655*** (0.249)
LGDPpc	-0.161*** (0.019)	-0.338*** (0.028)	0.041*** (0.008)	0.156*** (0.040)				
LGDP * S_INCOME	0.010*** (0.003)	0.022*** (0.005)	-0.001 (0.001)	-0.015* (0.008)				
LIDH					-0.482*** (0.062)	-1.394*** (0.113)	0.397*** (0.071)	1.339*** (0.271)
LIDH * S_INCOME					0.014 (0.012)	-0.008 (0.023)	-0.008 (0.013)	-0.148*** (0.056)
Observations	6413	6526	15173	4786	6413	6526	15173	4786

Robust standard errors in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

TABLE 4 – Impacts on the probability of participating, WVS, continued

	Africa	Asia	Europe	Latin America	Africa	Asia	Europe	Latin America
	3.1	3.2	3.3	3.4	4.1	4.2	4.3	4.4
Probability of PARTICIPATION=1	17.36%	25.77%	7.03%	8.61%	17.36%	25.87%	7.07%	8.70%
MEN	0.011 (0.012)	0.031*** (0.012)	-0.005 (0.004)	0.025*** (0.008)	0.011 (0.012)	0.018 (0.012)	-0.005 (0.004)	0.024*** (0.009)
AGE	0.000 (0.001)	-0.001 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.001)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
UNIVERSITY	-0.006 (0.017)	0.050*** (0.015)	0.038*** (0.006)	0.042*** (0.014)	-0.006 (0.017)	0.042*** (0.015)	0.037*** (0.006)	0.039*** (0.013)
RIGHT	0.068*** (0.014)	-0.043*** (0.014)	-0.021*** (0.006)	0.008 (0.010)	0.068*** (0.014)	-0.047*** (0.013)	-0.022*** (0.006)	0.007 (0.010)
MARRIED	0.033* (0.019)	0.071** (0.028)	-0.007 (0.007)	-0.008 (0.014)	0.033* (0.019)	0.071*** (0.027)	-0.008 (0.007)	-0.010 (0.014)
SINGLE	0.054** (0.026)	0.051 (0.036)	0.007 (0.009)	-0.011 (0.015)	0.054** (0.026)	0.050 (0.036)	0.006 (0.009)	-0.012 (0.015)
CATHOLIC	0.025 (0.016)	-0.213*** (0.016)	0.022*** (0.006)	-0.019* (0.010)	0.025 (0.016)	-0.189*** (0.020)	0.024*** (0.006)	-0.020** (0.010)
PROTESTANT	0.115*** (0.016)	-0.168*** (0.018)	0.027*** (0.009)	0.000 (0.019)	0.115*** (0.016)	-0.150*** (0.020)	0.034*** (0.009)	0.003 (0.020)
ATTEND	-0.010 (0.014)	0.079*** (0.012)	0.002 (0.007)	0.013 (0.009)	-0.010 (0.014)	0.063*** (0.012)	0.000 (0.006)	0.011 (0.009)
SELF EMPLOYED		-0.135*** (0.024)	-0.049*** (0.012)	0.016 (0.015)		-0.155*** (0.022)	-0.049*** (0.012)	0.008 (0.014)
UNEMPLOYED	0.196*** (0.067)	-0.039 (0.027)	0.001 (0.011)	-0.059*** (0.015)	0.196*** (0.067)	-0.015 (0.028)	-0.002 (0.010)	-0.056*** (0.016)
S_INCOME	-0.183*** (0.070)	0.106** (0.052)	0.015 (0.012)	0.092** (0.039)	-0.183*** (0.070)	-0.021 (0.013)	0.009** (0.004)	0.029** (0.014)
LRLAW	0.709*** (0.101)	0.307*** (0.071)	0.105*** (0.016)	0.161*** (0.046)				
LRLAW * S_INCOME	-0.053*** (0.018)	-0.028** (0.013)	-0.002 (0.003)	-0.023** (0.010)				
LCPI					0.068 (0.076)	-0.068 (0.057)	0.079*** (0.014)	0.117** (0.048)
LCPI * S_INCOME					-0.006 (0.013)	0.011 (0.011)	-0.002 (0.002)	-0.019* (0.010)
Observations	6413	6526	15173	4786	6413	6526	15173	4786

Robust standard errors in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

TABLE 5 – Impacts on the probability of participating, Latino-barometer

	5.1	5.2	5.3	5.4
Probability of PARTICIPATION=1	38.90%	38.85%	38.93%	38.90%
MEN	0.038*** (0.008)	0.039*** (0.008)	0.040*** (0.008)	0.039*** (0.008)
AGE	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)
UNIVERSITY	0.087*** (0.010)	0.082*** (0.010)	0.089*** (0.010)	0.083*** (0.011)
RIGHT	0.045*** (0.011)	0.050*** (0.011)	0.047*** (0.011)	0.049*** (0.011)
MARRIED	0.063*** (0.013)	0.060*** (0.013)	0.058*** (0.013)	0.059*** (0.013)
SINGLE	0.042*** (0.015)	0.042*** (0.015)	0.039*** (0.015)	0.38** (0.015)
CATHOLIC	0.021** (0.010)	0.020* (0.010)	0.028*** (0.010)	0.019* (0.010)
PROTESTANT	0.054 (0.064)	0.057 (0.063)	0.058 (0.063)	0.054 (0.063)
ATTEND	0.058*** (0.005)	0.056*** (0.047)	0.056*** (0.005)	0.056*** (0.005)
SELF EMPLOYED	0.037*** (0.009)	0.030*** (0.009)	0.031*** (0.009)	0.030*** (0.009)
UNEMPLOYED	0.049*** (0.017)	0.051*** (0.017)	0.047*** (0.017)	0.051*** (0.017)
S_INCOME	0.225*** (0.024)	0.208*** (0.015)	0.482*** (0.090)	0.031*** (0.008)
LGDPpc	0.098*** (0.013)			
LGDP * S_INCOME	-0.025*** (0.003)			
LIDH		0.031** (0.014)		
LIDH * S_INCOME		-0.108*** (0.020)		
LRLAW			0.094*** (0.011)	
LRLAW * S_INCOME			-0.054*** (0.004)	
LCPI				-0.010 (0.035)
LCPI * S_INCOME				-0.019*** (0.007)
Observations	6,413	6,526	15,173	4,786

Robust standard errors in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Annex 2 – figures

FIGURE 1 – U-shaped relationship between GDP per capita and average participation in the country

