



**Departamento de Economía**  
Facultad de Ciencias Sociales  
Universidad de la República

## **Documentos de Trabajo**

**The perception of corruption in a cross-country  
perspective:  
Why are some individuals more perceptive than others?**

**Natalia Melgar, Máximo Rossi  
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**Natalia Melgar \***

**Máximo Rossi \***

**Tom W. Smith \*\***

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\* State University, Uruguay

\*\* NORC / University of Chicago

## Resumen

El concepto de corrupción varía ampliamente dependiendo no solo de cada sociedad sino también de cada individuo. Es esperable que el contexto incida en la percepción del individuo. Algunos trabajos previos demuestran la incidencia de las características individuales juegan un rol relevante al igual que los efectos fijos por país. Por lo tanto, extendiendo la literatura sobre el tema, el objetivo de este trabajo es analizar la incidencia de estos efectos por país, es decir, analizar como el contexto, la cultura y/o la historia influyen en la percepción de corrupción, considerando características específicas de los países incluidos en la muestra. Para ello a partir del módulo de Identidad Nacional de la encuesta del *International Social Survey Program* (ISSP) realizada en 2004, se estiman modelos probit ordenados considerando sub-muestras de países con características en común. Se encuentra que aún entre países que tienen alguna característica en común (por ejemplo, el tamaño, el pertenecer a la Unión Europea etc.) se mantiene la incidencia del efecto país. Se encuentra evidencia sobre la relevancia de la cultura y el contexto y ciertos patrones de comportamiento al considerar características a nivel de país.

Palabras claves: corrupción, comportamiento microeconómico, análisis comparativo, opinión pública, ISSP

Clasificación JEL: D73, K42, O57

## Abstract

The concept of corruption varies widely depending on societies and people. We expect that context influences on corruption perception. Previous studies shed light on the incidence of individual characteristics on the perceived level of corruption and show the effect of country of residence. In order to extend this previous research, the aim of this paper is to analyze how context, culture and/ or history shape corruption perception considering specific country characteristics. The data source is the module on Citizenship of the 2004 *International Social Survey Program* (ISSP). Taking into account some sub-samples (considering country characteristics such us: size, European Union membership, etc.), we estimate ordered probit models. We find that the incidence of country of residence remains even when we consider countries with some characteristic in common.

Key words: corruption, microeconomic behavior, comparative research, public opinion, ISSP

JEL Classification: D73, K42, O57

## **Introduction**

As previous studies emphasize corruption is a cultural phenomenon and consequently, its connotations vary widely depending not only on societies but also on people. Consequently, we expect that background influence on corruption perception. For example, we expect that economic performance, inequality, political conditions etc. play a relevant role in determining individual's perceptions and decisions.

The data source is the module on Citizenship of the 2004 International Social Survey Program (ISSP). The survey asks respondents (approximately 1.000 per country) their opinions on a great variety of issues, including international trade, migration, corruption, politics or religion. In addition, it includes demographic and socio-economic data, such as: age, gender, education and others.

Taking into account country characteristics, we estimate ordered probit models in order to study whether country effects remain even when we consider countries with some characteristic in common. We conclude that there are socio-demographic variables which are significant at determining corruption perception (such as: religion, education, sector of employment, etc.). Additionally, in almost all cases the country of residence remains significant.

The structure of the paper is as follows. The first section is theoretical in nature, and draws on the definition of corruption and the existing and well-developed theory on the subject. The second section sketches the main features of the econometric methods applied in this analysis, the data source and the description of variables. Section three deals with our results. Finally, the conclusions are presented in section four.

### **I. Corruption perception: background**

The first problem of any comparative research on corruption is arriving at a definition which lends itself to cross-cultural and cross-national research. In economic terms, there are several ways to define corruption. This paper focuses on a wide concept of corruption: the misuse of public office with the purpose of making private gains; this definition incorporates the notions of wrongly getting an advantage, pecuniary or otherwise, in violation of official duty and the rights of others.

We expect that background plays a relevant role in shaping people's perception of corruption and differences in context may explain variations across nations. For example, the incident of past experiences of corruption (history), the effects of institutional conditions (political context, law enforcement and the judiciary), economic performance (poverty or inequality), etc.

As Cábellová (2001) argues the actual level of corruption and the authority's level of tolerance influences the incentives to take corrupt actions. This perception may affect both the demand and supply of corrupt actions. On the other hand, rules modify the decision-making process. The fulfillment of rules implies costs that could be seen as the time and information needed. Therefore, if individuals need a lot of time or information to fulfill a rule, the probability of behaving in accordance with the law decreases (Svetozar, 1985).

Moreover, You and Khagram (2005) show that income inequality is a significant determinant of corruption. With increased inequality, the rich, as a class or as an interest group, can use lobbying to influence law-implementing processes and to buy favorable interpretations of the law. According to Ghersi (2006), the most relevant conclusion is that the cost of legality is inversely proportional to an individual's income.

Finally, given an identical background, people's perceptions will vary depending on individual characteristics such as values and moral views, which modify the perception of the expected costs and expected benefits. Moreover, the formation of individual perceptions about the level of corruption is affected by the access to information and the capability to analyze it. Personal experience has a significant role; it depends on the interaction among the citizen and corrupt civil servants.

## **II. Data source and methodology**

As mentioned, the data source is the module on Citizenship of the 2004 *International Social Survey Program* (ISSP).<sup>1</sup> The survey asks respondents their opinions on a great variety of issues, including international trade, migration, politics, taxes and corruption, as well as demographic and socio-economic information, such as age, gender, education, religiosity and others. The question used in the survey to identify respondent's perception of corruption is:

***Taking into account your experience,  
how widespread do you think corruption is in the public service in your country?***

This question seeks to grasp citizen's perception of corruption and answers take values between 0 and 4 which correspond to the following categories: 0 if respondent answers "hardly anyone", 1 if respondent indicates "a small number", 2 if respondent says "a moderate number", 3 if respondent indicates "a lot of people" and 4 if respondent answers "almost everyone".

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<sup>1</sup> More information is available on ISSP website: [www.issp.org](http://www.issp.org).

Table 1 shows the weighted frequency distribution of the answers to this question in the whole sample (more than 45,000 respondents).

Insert Table 1: Answers

Our ordered probit models aim at determining how different individual characteristics and country of residence shape the formation of opinions towards corruption among government employees.

The estimated parameters in ordered probit models do not provide direct information on the relationship between the independents and our dependent variables. Substantive interpretations are usually based on the prediction of probabilities and on the marginal effects of the independent variables.

Insert Table 2: Country abbreviations

Insert Table 3: Description of independent variables

### III. Results

The model includes dummy variables representing individual characteristics and in order to capture fixed effects per country we include dummy variables reflecting country of residence.

We estimated six different sub-samples taking into account the following criteria: 1) *big* and *small* countries (we classified all countries taking into account the population, a country is *big* if the number of inhabitants is higher than the sample mean), 2) European Union (EU) countries and non European Union countries (NOEU)<sup>2</sup> and 3) income level: *middle income* (MI) countries and *high income* (HI) countries (World Bank classification, Atlas Method). Table 4 lists all sub-samples and shows that the groups are not nested, for example, United States is a big country that not belong to the European Union and a high income country.

Insert Table 4: Description of sub-samples

Table 5 shows all estimated models, the general model (ALL) is our reference point and it was taken from Melgar, Rossi and Smith (2008).

Insert Table 5: The models

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<sup>2</sup> As the survey was carried out during 2004, we considered the group of countries that were members in 2003.

Three models (small countries, EU countries and HI countries) show that gender is significant and as in the case of the general model, the results show that women are more likely than men to perceive a higher level of corruption.

Secondly, in all cases, we also find that the variables reflecting individual's age are not significant. Once again, there are no significant differences among age groups.

Thirdly, while the general model shows that those people who are married tend to perceive a lower level of corruption and that the opposite is true for those who are divorced; our sub-sample models show some specificities: five sub-models show that while those people who are married or (live as married) tend to perceive a lower level of corruption than other people. The exemption is MI countries model: divorced people are more likely to perceive a higher level of corruption in small countries, EU countries and HI countries. In the case of big countries and non-EU countries only being married is significant and none of those variables are significant in the case of MI countries.

Moreover, as the general model shows the level of education has a relevant role in determining corruption perception. In all cases, it was found that people who have a university degree are more likely to perceive a lower level of corruption. Moreover, with the exemption of MI countries, people who have completed at least secondary education also tend to perceive a lower level of corruption. It is known that the perceived level of corruption could be very different from the actual level; therefore, this result could imply that access to information and the capability to process this information matter: more educated people have more information about the actual level of corruption and better capabilities to process the information and this fact influences on the formation of the perception of corruption.

Regarding religion and religiosity this sub-models also confirm our hypothesis. Firstly, once again there are no significant differences among religious groups (Roman Catholic, Protestant and others). On the other hand, in the following cases: small countries, EU countries and HI countries; the degree of religiosity (measured as attendance to religious services), does influence the perception of corruption; it decreases the probability of perceiving the higher level of corruption.

In contrast with the general model, taking into account the place of residence, we found that only in one case, MI countries, there is a significant difference among people living in urban areas and others. In this case, people who live in urban areas are less likely to perceive a higher level of corruption than people living in rural areas.

Concerning the labor market, we found again a significant difference among people who are self-employed and other people. In all cases, self-employed people tend to perceive a higher level of corruption. It might be possible that those people are exposed to more incidents of corruption.

Additionally, in all cases the sector of employment is a determinant of corruption perception. Those who are working in a private enterprise are more likely to perceive a higher level of corruption than those who are employed in the public sector.

On the other hand, it is worth noting that only in HI countries model, there is a significant difference among people who are unemployed and those who are employed. Moreover, only in the case of EU countries, those people who belong to a union are more likely to perceive a lower level of corruption. On the other hand, being retired has no significant effect.

Connected with democracy, in all cases, we found that those who have a favorable opinion on democracy are more likely to perceive a lower level of corruption.

Taking into account country dummies, almost all variables are significant. This result might mean that significant cultural and political differences that influence the perception of corruption remain.

Although the sub-models take into account countries with some characteristic in common, it is worth noting that in general, country dummies are significant. This result might mean that there are significant cultural and political differences that influence the perception of corruption.

We calculate the marginal effects and their standard errors after estimation. Rather than reporting coefficients, tables 6.1 and 6.2 report the discrete change in the probability for each model and significant variable. The marginal effects are nonlinear functions of the estimated parameters, so they cannot generally be inferred directly from the parameter estimates.

Insert Table 6.1: Marginal effects (individual characteristics).

As could be seen in table 6.1, the probability of perceiving the highest level of corruption, for the whole sample, is 5.6% (the general model). The highest probability is found in the case of MI countries (20%) and the EU registers the lowest probability (1.9%). This table also reports the change in this probability when the significant dummies variables turn from 0 to 1.



### III.1 Individual characteristics

Firstly, taking into account respondent's gender and in the case of EU countries, we found that the probability of perceiving the highest level of corruption raises 0.5 percent points (pp) when we consider a woman instead of a man which is the same increase registered in the general model. In other cases, this change is smaller (0.3 pp in the case of small countries and HI countries).

Regarding marital status, if we take into account married people we found an important variability in the probability change. This probability decreases between 0.2 pp (EU countries and HI countries) and 0.7 pp (big countries). On the other hand, if divorced, this probability increases between 0.3 pp (EU countries) and 0.6 pp (small countries) when we change to divorced people.

The same happens when we consider the third and fourth levels of education. The general model shows that the probability reduces 1 pp and 2.8 pp respectively. However, in the first case, it reduces between 0.7 pp (small countries and HI countries) and twice more, 1.4 pp (big countries). In the second case the impact and the variability are bigger, the lowest reduction is 1.4 pp (EU countries) and the biggest reduction is 3.8 pp (big countries).

If the person attends religious services once a week or more frequently, the decrease in the mentioned probability is between 0.3 pp (HI countries) and 0.7 pp (small countries). Once again we find that the heterogeneity among countries is relevant.

Additionally, the general model shows that the probability of perceiving the highest level of corruption increases 1.1 pp. However, the sub-samples show that the increase ranges from 0.3 pp (EU countries) and 1.8 pp (MI countries). If the person is self-employed also increases the probability and in this case the change ranges from 0.5 pp (EU countries) and 3.4 pp (MI countries). Moreover, in the case of HI countries, this probability also increases if the person is unemployed (0.6 pp). Belonging to a union is also significant in the case of EU countries and in this case, the probability reduces 0.1 pp. In the case of MI countries, the probability increases 2.1 pp if the person lives in an urban area.

Finally, we also find that the performance of democratic institutions have the most significant impact on corruption perception that also show a relevant change when we compare among the sub-models. The probability reduces between 4 pp (EU countries) and 11.8 pp (MI countries) when we change from someone who believes that the state of democracy in his/her country is not satisfactory to someone who has a favorable opinion.

### **III.2 Country effects**

Table 6.2 summarizes the information about the change in the probability of perceiving the highest level of corruption for each model and country variable.

Insert Table 6.2: Marginal effects (fixed effects per country).

Comparing the general model with our sub-sample models, we find that: 1) the ranking of countries remains and 2) in almost all cases we find a great variability in the change in the probability so country specificities matters. The impact changes because they were computed taking into account a different sample and with respect to a different country.

#### **1. Big countries**

In this model, the changes were computed with respect to Brazil; given that this country ranks first in our previous model all values are negative. The lowest reduction in the probability of the highest level of corruption perception was found, once again, in Latin American: Venezuela (-8.6 pp) and Mexico (-11.5 pp).

Asian countries also show a clear pattern of behavior. All countries are found in the first half of the table: Russia registers the smallest change with respect to Brazil (-17.2 pp) followed by Philippines (-21.1 pp), South Korea (-28.8 pp), Japan (-30.5 pp) and Taiwan (-34.6). In this sub-sample, all EU countries show a significant difference with Brazil and are found in the second half of the table. The smallest impact is found in the case of Germany (Germany East -36.5 pp and Germany West: -36.6 pp) and Great Britain shows the highest impact (-39.6 pp). On the contrary, among Anglo-settlement colonies we found a heterogenous pattern of behavior, while United States is found in the first half of the table (-33.4 pp); Canada and Australia registered higher changes (-37.1 pp and -38.9 pp, respectively). Once again, analyzing political characteristics, we found that the former Socialist states of Eastern Europe included in this sub-sample are located in the first half of the table: Poland (-15.5 pp) and Russia (17.2 pp).

#### **2. Small countries**

Small countries show lower heterogeneity than big countries. In this case, the changes in the probability are computed with respect to Israel and the biggest negative impact was found in European countries: Denmark and Finland (-18.3 pp). Once against those countries register the lowest levels of corruption perception. Latin American countries (Chile and Uruguay) are found in the first half of the table showing the same value (-9.6 pp). In the case of the EU (and considering

the group of countries which belongs to it before 2004), two countries (Portugal and Ireland) and Flanders are founded in the first half of the table and four countries (Sweden, Austria, Finland and Denmark) in the second half. Others European countries could be found in the first half of the table, it is worth noting that those countries belong to Europe but are poorer than the others and belong to the former Socialist states of Eastern Europe: Bulgaria, the sole country that registers a positive change with respect to Israel, (3.6 pp), Slovenia (-8.2 pp), Czech Republic (-8.6 pp), Latvia (-9.7 pp) and Hungary (-12.1 pp).

### **3. EU countries**

In this model the omitted variable is Ireland and as the table 6.2 shows, in almost all cases country variables register a negative sign; this results indicates that inhabitants of those countries tend to perceive a lower level of corruption than Ireland has. Portugal is the only exemption to this group of countries; this variable shows a positive sign. Among EU citizens, people from Portugal are likely to perceive the highest level of corruption than people from others EU countries, the probability increases 6.3 pp. Regarding the others countries, the probability reduces from 0.2 pp (Spain) to 3 pp (Denmark and Finland).

### **4. Non-EU countries**

Taking into account non-EU countries model, once again the omitted variable is Brazil and all values are negative. As in the first model, Venezuela and Mexico are found at the top of the table, indicating the smallest impacts in the probability that reduces 9.5 pp and 12.3 pp, respectively with respect to Brazilians. Regarding others Latin American countries, Uruguay and Chile are situated in the second half of the table (-30.5 pp and -30.6 pp, respectively). Something similar happens in the case of Asia. Only, Japan and Taiwan are found in the second half of the table. The reductions in the probability of perceiving the highest level of corruption are 31.9 pp and 35.6 pp, respectively. On the contrary, Anglo-settlement colonies (United States, Canada and New Zealand) fall in the bottom half as do the majority of rich countries, the probability reduces: -34.6 pp, -37.8 pp and -40.1 pp, respectively. Others European rich countries also show significant reductions in the probability; for example: Switzerland (-39.7 pp) and Norway (-39.8 pp).

Taking into account political characteristics, we found once again, that the former Socialist states of Eastern Europe are located in the first half of the table in the following order: Bulgaria (-15.5 pp), Poland (-17 pp), Russia (-19.1 pp), Slovakia (-20.7 pp), Czech Republic (-28.9 pp), Slovenia (-28.9 pp), Latvia (-30.2 pp) and Hungary (-32.8 pp). As the results shows, those countries registered a lower change in the probability than others European countries that did not belong to the EU in

2003. As mentioned, this result could be related to the past experiences of corruption at the governmental level than to present events.

### **5. High income countries**

In this model, with the exemption of Israel (9 pp), all countries registered a negative value. Finland and Denmark show the biggest negative change: -9.5 pp. It is important to notice that: firstly, Czech Republic and Slovenia (both of them are ex- Socialist states of Eastern Europe) are not significant and secondly, there is no Latin American country in this sub-sample. Something similar happens in the case of Asia, all countries are found in the first half of the table: Israel and Japan (9 pp and -2.3 pp, respectively). In the case of the EU, Portugal shows the smaller negative impact, -1.5 pp and in the other cases the impact in the probability is -7.3 or bigger (in absolute value). Canada and United States are found in the first half of the table: -7.4 pp and -4.3 pp, respectively. However, New Zealand (the other Anglo-settlement colony) is situated in the second half: -9.3 pp.

### **6. Middle income countries**

In this model all country variables are significant and show a negative impact in the probability (once again the omitted variable is Brazil). The biggest negative impacts were found in the cases of Taiwan, Hungary and Uruguay: -36.6 pp, -33 pp and -30.9 pp, respectively. Regarding Latin American countries, Venezuela and Mexico are found at the top of the table, in those cases the probability reduces 7.7 pp and 11.8 pp, respectively. On the contrary, Chile and Uruguay are founded in the second half of the table: -29.7 pp and -30.9 pp. In this model, Brazil is the omitted variable. Only the former Socialist states of Eastern Europe are the European countries in this sub-sample. While Bulgaria (-16.2 pp), Poland (-16.4 pp), Slovakia (-19.6 pp) and Russia (-19.8 pp) are situated in the first half of the table; Latvia and Hungary are founded in the second half of the table (-30.7 pp and -33 pp, respectively).

## **IV. Conclusions**

All estimated models show that some individual characteristics have a significant effect on the probability of perceiving the highest level of corruption. Moreover, taking into account country characteristics we find several specificities. For example: 1) while small countries, EU countries and HI countries register a gender bias the opposite is true in the case of big countries, non EU countries and middle income countries, 2) only in one case, being unemployed is significant (HI countries), 3) living in a city plays a relevant role only among MI and 3) belonging to a union is significant only among EU countries.

On the other hand, we found that some results remains: in all sub-models working in a private enterprise, being self-employed and having a university degree are significant. The relevance of those results is twofold. Firstly, they strengthen the role of education (that reduces the probability of perceiving the highest level of corruption). Secondly, among those who work at the private sector or who are self-employed are the people who bribe (the other part of the transaction).

Taking into account fixed effects, as expected; in most cases country dummies were significant. Regarding countries ranking, in general, we found that all Latin American countries showed changes which are higher than the average and the same is true for ex-Socialist states and the majority of East Asian countries. Moreover, almost all East Asian countries are found in the first half of the table with the exception of Taiwan falling just below the top half. On the contrary, the majority of European countries showed lower changes than the average, only Portugal is found in the top half of the table. We also found that all Anglo-settlement colonies fall in the bottom half as do the majority of rich countries.

When we consider the sub-samples models, we find, in general, that the ranking of countries remains. However, the models show that there are no significant differences among some countries that were included in the same sub-model. Therefore, taking into account background effects weaken countries differences.

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## Annex - Tables

Table 1 - Distribution of answers

<i>Taking into account your experience, how widespread do you think corruption is in the public service in your country?</i>	
Categories	Frequency
Hardly anyone	4,28%
A small number	26,86%
A moderate number	30,55%
A lot of people	26,60%
Almost everyone	11,71%
<b>Total</b>	<b>100%</b>

Table 2 - Country abbreviations

Abbreviations	Country	Abbreviations	Country
AT	Austria	IL	Israel
AU	Australia	JP	Japan
BG	Bulgaria	KR	South Korea
BR	Brazil	LV	Latvia
CA	Canada	MX	Mexico
CH	Switzerland	NL	Netherlands
CL	Chile	NO	Norway
CY	Cyprus	NZ	New Zealand
CZ	Czech Republic	PH	Philippines
DEE	East Germany	PL	Poland
DEW	West Germany	PT	Portugal
DK	Denmark	RU	Russia
ES	Spain	SE	Sweden
FI	Finland	SI	Slovenia
FLA	Flanders	SK	Slovakia
FR	France	TW	Taiwan
GB	Great Britain	US	United States
HU	Hungary	UY	Uruguay
IE	Ireland	VE	Venezuela

Table 3 - Description of independent variables

Area	Variable	Values	Mean
Religion and religiosity	ATHEIST	1 if respondent does not identify with a religious group	0.195
	ATTENDANCE	1 if respondent attends religious services once a week or more	0.189
	R_CATHOLIC	1 if respondents religion is Roman Catholic	0.369
	PROTESTANT	1 if respondents religion is Protestant	0.220
Labor market	UNEMPLOYED	1 if unemployed	0.075
	RETIRED	1 if retired	0.191
	EMP_FT	1 if employed full time	0.438
	PRIVATE_S	1 if working for a private enterprise	0.399
	SELF_EMPLOYED	1 if being self-employed	0.123
	UNION	1 if belonging to an union	2.330
Human Capital	EDU_LEVEL2	1 if respondent is above lowest qualification	0.203
	EDU_LEVEL3	1 if respondent has completed higher secondary or above higher secondary level	0.379
	EDU_LEVEL4	1 if respondent has a university degree	0.146
Place of residence	URBAN	1 if respondent lives in a big city, suburb or outskirts of a big city	0.444
Other socio-demographic variables	GENDER	1 being a woman	0.533
	AGE1	1 if respondent's age is between 18 and 39 years old	0.395
	AGE2	1 if respondent's age is between 40 and 60 years old	0.379
	MARRIED	1 if married or living as married	0.570
	DIVORCED	1 if divorced	0.083
Others variables	DEM_TODAY	1 if respondent places the state of democracy in his country among 5 to 10	0.723

Table 4 – Description of sub-samples

Country	BIG	SMALL	EU	NON_EU	HI	MI
Austria		•	•		•	
Australia	•			•	•	
Brazil	•			•		•
Bulgaria		•		•		•
Canada	•			•	•	
Chile		•		•		•
Cyprus		•		•	•	
Czech Republic		•		•	•	
Denmark		•	•		•	
Finland		•	•		•	
Flanders		•	•		•	
France	•		•		•	
Germany (E)	•		•		•	
Germany (W)	•		•		•	
Great Britain	•		•		•	
Hungary		•		•		•
Ireland		•	•		•	
Israel		•		•	•	
Japan	•			•	•	
Latvia		•		•		•
Mexico	•			•		•
Netherlands	•		•		•	
New Zealand		•		•	•	
Norway		•		•	•	
Philippines	•			•		•
Poland	•			•		•
Portugal		•	•		•	
Russia	•			•		•
Slovenia		•		•	•	
Slovakia		•		•		•
South Korea	•			•	•	
Spain	•		•		•	
Sweden		•	•		•	
Switzerland		•		•	•	
Taiwan	•			•		•
United States	•			•	•	
Uruguay		•		•		•
Venezuela	•			•		•



Table 5 - The models

	ALL	BIG	SMALL	EU	NON_EU	HI	MI
WOMAN	0.042** (0.017)	0.039 (0.025)	0.043* (0.023)	0.099*** (0.024)	0.012 (0.021)	0.067*** (0.021)	0.000 (0.028)
AGE1	-0.004 (0.031)	0.017 (0.043)	-0.015 (0.044)	-0.039 (0.058)	0.014 (0.036)	-0.020 (0.038)	0.040 (0.051)
AGE2	-0.015 (0.022)	-0.022 (0.024)	-0.002 (0.037)	-0.067 (0.049)	0.014 (0.021)	-0.040 (0.029)	0.030 (0.037)
MARRIED	-0.039*** (0.012)	-0.046*** (0.016)	-0.032* (0.018)	-0.051** (0.022)	-0.036** (0.014)	-0.050*** (0.016)	-0.030 (0.020)
DIVORCED	0.057** (0.029)	0.033 (0.051)	0.076** (0.032)	0.067* (0.040)	0.045 (0.039)	0.090*** (0.029)	-0.02 (0.054)
EDU_LEVEL2	-0.001 (0.025)	-0.038 (0.038)	0.026 (0.032)	-0.049 (0.040)	0.033 (0.032)	-0.020 (0.035)	0.020 (0.026)
EDU_LEVEL3	-0.092*** (0.024)	-0.092** (0.037)	-0.094*** (0.031)	-0.174*** (0.035)	-0.046* (0.026)	-0.140*** (0.028)	-0.030 (0.026)
EDU_LEVEL4	-0.287*** (0.044)	-0.278*** (0.076)	-0.303*** (0.045)	-0.416*** (0.060)	-0.219*** (0.054)	-0.390*** (0.047)	-0.104* (0.058)
EMP_FT	-0.031* (0.019)	-0.023 (0.026)	-0.04 (0.028)	-0.032 (0.032)	-0.031 (0.024)	-0.020 (0.021)	-0.050 (0.037)
UNEMPLOYED	0.065 (0.043)	0.082 (0.076)	0.047 (0.042)	0.033 (0.059)	0.077 (0.055)	0.106** (0.045)	0.040 (0.066)
RETIRED	-0.022 (0.030)	-0.048 (0.047)	-0.002 (0.034)	-0.014 (0.056)	-0.024 (0.030)	-0.020 (0.042)	-0.010 (0.031)
PRIVATE_S	0.100*** (0.016)	0.108*** (0.026)	0.093*** (0.021)	0.074** (0.030)	0.104*** (0.019)	0.106*** (0.021)	0.064** (0.026)
SELF_EMP	0.131*** (0.019)	0.139*** (0.027)	0.127*** (0.028)	0.100*** (0.035)	0.143*** (0.023)	0.140*** (0.027)	0.116*** (0.028)
UNION	-0.010 (0.010)	-0.011 (0.012)	-0.01 (0.015)	-0.027** (0.013)	0.000 (0.013)	-0.010 (0.010)	-0.020 (0.023)
ATHEIST	0.052 (0.039)	0.053 (0.054)	0.046 (0.054)	0.004 (0.042)	0.065 (0.050)	0.040 (0.047)	0.090 (0.061)
R_CATHOLIC	-0.001 (0.036)	0.029 (0.055)	-0.036 (0.043)	-0.047 (0.050)	0.010 (0.042)	0.000 (0.045)	-0.020 (0.058)
PROTESTANT	-0.006 (0.039)	-0.012 (0.051)	-0.011 (0.055)	-0.061 (0.056)	0.005 (0.046)	-0.010 (0.043)	-0.040 (0.078)
ATTENDANCE	-0.043** (0.020)	0.000 (0.026)	-0.093*** (0.026)	-0.134*** (0.024)	-0.009 (0.022)	-0.074*** (0.025)	-0.010 (0.030)
DEM_TODAY	-0.509*** (0.028)	-0.469*** (0.032)	-0.549*** (0.046)	-0.581*** (0.049)	-0.478*** (0.031)	-0.597*** (0.033)	-0.407*** (0.030)
URBAN	0.019 (0.021)	0.037 (0.030)	0.005 (0.028)	0.017 (0.036)	0.019 (0.026)	-0.010 (0.023)	0.074* (0.041)
AT	0.110*** (0.019)		-1.265*** (0.064)	-0.281*** (0.027)		-0.914*** (0.040)	
AU		-1.845*** (0.073)			-1.909*** (0.056)	-1.000*** (0.020)	

BG	1.486***		0.126***		-0.432***		-0.441***
	(0.054)		(0.027)		(0.043)		(0.050)
BR	1.936***						
	(0.045)						
CA	0.300***	-1.557***			-1.630***	-0.682***	
	(0.012)	(0.063)			(0.048)	(0.030)	
CH	-0.085***		-1.472***		-1.994***	-1.115***	
	(0.016)		(0.064)		(0.064)	(0.040)	
CL	0.897***		-0.445***		-1.031***		-0.931***
	(0.027)		(0.052)		(0.039)		(0.050)
CY	-0.190***		-1.572***		-2.092***	-1.203***	
	(0.034)		(0.042)		(0.063)	(0.050)	
CZ	0.978***		-0.387***		-0.943***	0.000	
	(0.026)		(0.047)		(0.041)	(0.030)	
DEE	0.317***	-1.493***		-0.083		-0.709***	
	(0.023)	(0.073)		(0.059)		(0.040)	
DEW	0.333***	-1.497***		-0.057		-0.690***	
	(0.013)	(0.069)		(0.039)		(0.030)	
DK	-0.464***		-1.846***	-0.860***		-1.481***	
	(0.019)		(0.071)	(0.054)		(0.040)	
ES	0.337***	-1.523***		-0.028***		-0.671***	
	(0.017)	(0.057)		(0.011)		(0.040)	
FI	-0.421***		-1.811***	-0.824***		-1.447***	
	(0.017)		(0.072)	(0.053)		(0.040)	
FLA	0.296***		-1.081***	-0.106***		-0.722***	
	(0.016)		(0.048)	(0.029)		(0.030)	
FR	0.347***	-1.498***		-0.022		-0.659***	
	(0.015)	(0.056)		(0.024)		(0.030)	
GB	-0.216***	-2.037***		-0.622***		-1.251***	
	(0.011)	(0.077)		(0.041)		(0.030)	
HU	0.746***		-0.620***		-1.164***		-1.096***
	(0.021)		(0.049)		(0.039)		(0.050)
IE	0.331***		-0.999***			-0.660***	
	(0.023)		(0.059)			(0.040)	
IL	1.343***				-0.595***	0.406***	
	(0.044)				(0.039)	(0.040)	
JP	0.820***	-1.033***			-1.110***	-0.144***	
	(0.026)	(0.061)			(0.045)	(0.020)	
KR	0.935***	-0.944***			-1.014***		
	(0.027)	(0.055)			(0.038)		
LV	0.908***		-0.456***		-1.010***		-0.975***
	(0.025)		(0.034)		(0.035)		(0.040)
MX	1.605***	-0.311***			-0.336***		-0.312***
	(0.042)	(0.019)			(0.018)		(0.030)
NL	-0.161***	-2.001***		-0.568***		-1.185***	
	(0.010)	(0.072)		(0.027)		(0.030)	
NO	-0.132***		-1.515***		-2.041***	-1.138***	

	(0.014)		(0.066)		(0.064)	(0.030)	
NZ	-0.245***		-1.625***		-2.147***	-1.263***	
	(0.008)		(0.057)		(0.060)	(0.030)	
PH	1.287***	-0.620***			-0.657***		-0.596***
	(0.040)	(0.030)			(0.026)		(0.040)
PL	1.459***	-0.434***			-0.480***		-0.448***
	(0.044)	(0.028)			(0.024)		(0.030)
PT	0.893***		-0.437***	0.530***		-0.095**	
	(0.026)		(0.045)	(0.027)		(0.040)	
RU	1.362***	-0.486***			-0.547***		-0.553***
	(0.048)	(0.060)			(0.043)		(0.050)
SE	0.145***		-1.244***	-0.248***		-0.856***	
	(0.016)		(0.066)	(0.058)		(0.030)	
SI	0.980***		-0.367***		-0.944***	0.01	
	(0.025)		(0.040)		(0.032)	(0.030)	
SK	1.324***		-0.009		-0.603***		-0.546***
	(0.037)		(0.047)		(0.027)		(0.030)
TW	0.533***	-1.313***			-1.385***		-1.329***
	(0.027)	(0.059)			(0.043)		(0.050)
US	0.646***	-1.220***			-1.297***	-0.309***	
	(0.019)	(0.057)			(0.040)	(0.020)	
UY	0.894***		-0.449***		-1.029***		-0.986***
	(0.023)		(0.043)		(0.032)		(0.040)
VE	1.672***	-0.231***			-0.253***		-0.200***
	(0.047)	(0.030)			(0.027)		(0.040)
Observations	37681	17673	20008	13211	24470	24333	13348
Robust standard errors in parentheses							
* significant at 10%; ** significant at 5%; *** significant at 1%							
	It indicates that the variable is not included						
	It indicates that the variable was omitted due to collinearity						

Table 6.1 - Marginal effects

	<b>ALL</b>	<b>BIG</b>	<b>SMALL</b>	<b>EU</b>	<b>NON_EU</b>	<b>HI</b>	<b>MI</b>
<b>PROBABILITY</b>	0.056	0.099	0.041	0.019	0.092	0.020	0.200
GENDER	0.005		0.003	0.005		0.003	
MARRIED	-0.004	-0.007	-0.003	-0.002	-0.006	-0.002	
DIVORCED	0.007		0.006	0.003		0.005	
EDU_LEVEL3	-0.010	-0.014	-0.007	-0.008	-0.008	-0.007	
EDU_LEVEL4	-0.028	-0.038	-0.020	-0.014	-0.033	-0.015	-0.028
EMP_FT	-0.004						
UNEMPLOYED						0.006	
PRIVATE_S	0.011	0.017	0.007	0.003	0.017	0.005	0.018
SELF_EMPLOYED	0.016	0.023	0.011	0.005	0.025	0.008	0.034
UNION				-0.001			
ATTENDANCE	-0.005		-0.007	-0.006		-0.003	
DEM_TODAY	-0.070	-0.084	-0.056	-0.040	-0.090	-0.043	-0.118
URBAN							0.021
An empty cell indicates that the variable is not significant							

Table 6.2 - Marginal effects – ranking of countries.

ALL		BIG		SMALL		EU		NON_EU		HI		MI	
BR	0.392	VE	-0.086	BG	0.036	PT	0.063	VE	-0.095	IL	0.090	VE	-0.077
VE	0.294	MX	-0.115	SI	-0.082	ES	-0.002	MX	-0.123	PT	-0.015	MX	-0.118
MX	0.271	PL	-0.155	CZ	-0.086	FLA	-0.007	BG	-0.155	JP	-0.023	BG	-0.162
BG	0.232	RU	-0.172	PT	-0.094	SE	-0.015	PL	-0.170	US	-0.043	PL	-0.164
PL	0.223	PH	-0.211	CL	-0.096	AT	-0.016	RU	-0.191	FR	-0.073	SK	-0.196
RU	0.194	KR	-0.288	UY	-0.096	NL	-0.025	IL	-0.204	IE	-0.073	RU	-0.198
IL	0.189	JP	-0.305	LV	-0.097	GB	-0.027	SK	-0.207	ES	-0.073	PH	-0.211
SK	0.184	US	-0.334	HU	-0.121	FI	-0.030	PH	-0.222	CA	-0.074	CL	-0.297
PH	0.174	TW	-0.346	IE	-0.157	DK	-0.030	CZ	-0.289	DEW	-0.074	LV	-0.307
SI	0.102	DEE	-0.365	FLA	-0.162	IE		SI	-0.289	DEE	-0.075	UY	-0.309
CZ	0.102	DEW	-0.366	SE	-0.170	DEE		LV	-0.302	FLA	-0.076	HU	-0.330
KR	0.093	FR	-0.366	AT	-0.171	DEW		KR	-0.303	SE	-0.082	TW	-0.366
LV	0.089	ES	-0.368	CH	-0.178	FR		UY	-0.305	AT	-0.084	BR	
CL	0.086	CA	-0.371	NO	-0.179	AU		CL	-0.306	AU	-0.087	AT	
UY	0.086	AU	-0.389	CY	-0.180	BG		JP	-0.319	CH	-0.090	AU	
PT	0.086	NL	-0.395	NZ	-0.181	BR		HU	-0.328	NO	-0.090	CA	
JP	0.073	GB	-0.396	FI	-0.183	CA		US	-0.346	NL	-0.091	CH	
HU	0.062	BR		DK	-0.183	CH		TW	-0.356	CY	-0.092	CY	
US	0.049	AT		IL		CL		CA	-0.378	GB	-0.093	CZ	
TW	0.036	BG		SK		CY		AU	-0.394	NZ	-0.093	DEE	
FR	0.019	CH		AU		CZ		CH	-0.397	FI	-0.095	DEW	
ES	0.018	CL		BR		HU		NO	-0.398	DK	-0.095	DK	
DEW	0.018	CY		CA		IL		CY	-0.400	KR		ES	
IE	0.018	CZ		DEE		JP		NZ	-0.401	CZ		FI	
DEE	0.017	DK		DEW		KR		BR		SI		FLA	
CA	0.016	FI		ES		LV		AT		BG		FR	
FLA	0.015	FLA		FR		MX		DEE		BR		GB	
SE	0.006	HU		GB		NO		DEW		CL		IE	
AT	0.005	IE		JP		NZ		DK		HU		IL	
CH	-0.003	IL		KR		PH		ES		LV		JP	
NO	-0.004	LV		MX		PL		FI		MX		KR	
NL	-0.005	NO		NL		RU		FLA		PH		NL	
CY	-0.006	NZ		PH		SI		FR		PL		NO	
GB	-0.006	PT		PL		SK		GB		RU		NZ	
NZ	-0.007	SE		RU		TW		IE		SK		PT	
FI	-0.010	SI		TW		US		NL		TW		SE	
DK	-0.011	SK		US		UY		PT		UY		SI	
AU		UY		VE		VE		SE		VE		US	

It indicates that the variable is not significant

It indicates that the variable is not included

It indicates that the variable was omitted due to collinearity