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Are there differences between perception of corruption at public and private sector? A multi-country analysis

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Are there differences between perception of corruption at public and private sector? A multi-country analysis¹

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Abstract

If we accept that the concept of corruption is influenced by culture and personal values then, we should ask: 1) what are the individual characteristics that shape corruption perception? 2) how important is the incidence of the country of residence in determining it? and 3) is there a relationship between private and public perception of corruption? The database is the 2007 GALLUP Public Opinion Survey; our dataset includes 78 countries and more than 57,000 observations and we estimated probit models.

Our main conclusions are that some individual characteristics shape corruption perception (gender, age, marital status, the number of children, religion and religiosity). Moreover, country characteristics also matters. In particular, we find that Gross Domestic Product per capita and inequality play a relevant role. Finally, we also find that perception of corruption at public sector is highly correlated with perception of corruption at private sector.

Key words: corruption, microeconomic behavior, cross-country comparative research. JEL Classification: D73, K42, O57.

Resumen

Si se acepta que el nivel de corrupción percibido por los individuos está influenciado por los valores, entonces, surgen las siguientes preguntas: 1) ¿cuáles son las características individuales que modelan la percepción de la corrupción?, 2) ¿qué tan importantes son las características del país de residencia en su determinación? y 3) ¿existe una relación entre la percepción de corrupción en el sector público y privado? La base de datos es la Encuesta de Opinión Pública GALLUP 2007. Nuestra base de datos incluye 78 países y más de 57.000 observaciones y se estimaron modelos probit.

Nuestras principales conclusiones son: 1) existe un conjunto de características individuales que explican los niveles de corrupción percibidos (sexo, edad, estado civil, el número de hijos, la religión y la religiosidad); 2) las características del país también son significativas, en particular encontramos que el Producto Interno Bruto per cápita y la desigualdad desempeñan un papel relevante y 3) encontramos que la percepción de corrupción en el sector público está altamente correlacionada con la percepción de corrupción en el sector público está altamente correlacionada con la percepción de corrupción en el sector público está altamente correlacionada con la percepción de corrupción en el sector público está altamente correlacionada con la percepción de corrupción en el sector público está altamente correlacionada con la percepción de corrupción en el sector público está altamente correlacionada con la percepción de corrupción en el sector público está altamente correlacionada con la percepción de corrupción en el sector público está altamente correlacionada con la percepción de corrupción en el sector público está altamente correlacionada con la percepción de corrupción en el sector público está altamente correlacionada con la percepción de corrupción en el sector público está altamente correlacionada con la percepción de corrupción en el sector público está altamente correlacionada con la percepción de corrupción en el sector público está altamente correlacionada con la percepción de corrupción en el sector público está altamente correlacionada con la percepción de corrupción en el sector público está altamente correlacionada con la percepción de corrupción en el sector público está altamente correlacionada con la percepción de corrupción en el sector público está altamente correlacionada con la percepción de corrupción en el sector provido.

Palabras claves: corrupción, comportamiento microeconómico, análisis multi-país. Clasificación JEL: D73, K42, O57.

I. Introduction

Considering corruption as a cultural phenomenon, the analysis should not be confined to seeking what there is in common but also in understanding the many relevant differences in political and legal cultures.

One possible explanation for corruption is based on the premise that rules are asymmetric and highly costly; therefore corruption could be interpreted as a tax. The cost of the rule is a function of the lost in time and the information needed to fulfill it; both elements are highly costly so that, people may find it profitable to bribe. As they are costly, rules and laws modify the decision making process (Ghersi, 2006). Therefore, corruption could be seen as a tax or as insurance because rules are asymmetric and costly. Cábelková (2001) studies the incentives to take corrupt actions and he holds that this phenomenon is affected by individual perception about the level of corruption and the authority's level of tolerance. This perception may affect both the demand and supply of corrupt actions.

Given the objective aspects, when the fulfillment of a rule implies high costs, decisions will vary among individuals depending on their values and moral views, which modify the perception of the expected costs and benefits. Ceteris Paribus, to bribe would not mean the same to people depending on their values.

The formation of individual perceptions about the level of corruption is affected by the access to information and the capability to analyze this information. Personal experience has a significant role; it depends on the interaction among citizens and corrupt civil servants. Obviously, there are additional sources of information about corruption such as the communication media (written press and broadcast) or word of mouth.

Our dataset is the 2007 $GALLUP^2$ Public Opinion Survey that contains two questions which allow us to identify people's perception of corruption at both public and private sector. Our dataset includes 78 countries and more than 57,000 observations.

We estimate probit models and compute its marginal effects. The models show that the probabilities of perceiving corruption are high, more than 70%. We find that some individual characteristics matter in shaping corruption perception (gender, age, marital status, the number of children, religion and religiosity). Taking into account country characteristics, we find that people who live in richer countries are more likely to perceived lower corruption. Taking into account the whole sample, we find that inequality reduces the perception of corruption. However, when we take into account sub-sample models (America and Europe), we find that inequality increases corruption perception. Regarding fix effects models, we find that the majority of dummies representing country of residence are significant and the majority of them show a positive sign. We find a negative sign only in 12 cases.

Finally, we find that the perception of corruption at the public sector is correlated with the perception of corruption at the private level (86.9).

The structure of this paper is as follows. Firstly, we present a theoretical introduction to the phenomenon, including the numerous definitions of corruption. Section two is devoted to the theory on the subject. Section three sketches the main features of the econometric methods applied in this analysis, the data source and the description of variables. The forth section deals with the main results. Finally, we present the conclusions in section five.

 $^{^2}$ The Gallup Poll delivers relevant, timely, and visionary research on what people around the world think and feel. Gallup Poll consultants assist leaders to identify and monitor behavioral economic indicators worldwide. Gallup has studied human nature and behavior for more than 70 years. Gallup employs many of the world's leading scientists in management, economics, psychology, and sociology. Gallup's 2,000 professionals deliver services at client organizations, through the Web, at Gallup University's campuses, and in 40 offices around the world. More information is available in www.gallup.com

II. What do we understand as a corrupt action?

We employ the concept of corruption in several areas and its connotations vary widely depending not only on societies but also on people. In economic terms, there are several ways to define corruption. For example, Werlin (1973) characterizes corruption as the use of public office for private needs and Blackburn, Bose and Haque (2004) consider public sector corruption as the illegal, or unauthorized, profiteering by officials who exploit their positions to make personal gains. To emphasize governmental corruption, Shleifer and Vishny (1993), define it as the sale of state assets by civil servants in order to make gains.

As there is no consensus regarding the concept of corruption and its connotations vary widely depending not only on societies but also on people, this paper is focused on a wide concept of corruption: the misuse of public office with the purpose of making private gains. This definition incorporates the notion of wrongly getting an advantage, pecuniary or otherwise, in violation of official duty and the rights of others. Therefore, we take into account some elements that are common to the majority of the definitions.

Considering corruption as a cultural phenomenon, the understanding of corruption could be extended by using concepts of Criminology and Sociology. Nelken and Levi (1996) hold that even if corrupt agreements are often in breach of the criminal law, we must still ask whether corruption is deviant or simply normal in some groups or some countries. But comparison should not be confined to seeking what there is in common but also in understanding the many relevant differences in political and legal cultures.

Maingot (1994) states that the most frequent fallacy regarding the concept of corruption stems from the tendency towards personalization: e.g., believing that one thoroughly corrupt individual is the cause of the phenomenon. Regarding religious beliefs, the author argues that it is also a plausible proposition that in Judeo-Christian societies, personalizing the problem of corruption responds to the propensity to see both redemption and punishment in individual, not systemic terms. There are different theories that explain corrupt behavior at different levels.

- 1. Theories that are premised on cultural behavior (cultural explanations are very common in Latin America). For example, the theory of cultural transmission states that offenders adhere to a unique value system which endorses, rather than condemns, the deviant behavior. This would mean that Latin American officials are corrupt because there exists a bifurcated moral sense in which corrupt behavior, while in office, is not only not condemned but, on the contrary, is actually approved.
- 2. There are theoretical schools which emphasize social conflict or social strain explanations; those theories assume that, if there are obstacles to legitimate social mobility, there is a propensity to resort to deviant means in order to achieve socially approved goals. According to Maingot (1994), this approach tends to be popular among more radical interpreters of the Latin American and Caribbean reality.
- 3. Theories which emphasize individual choice and focuses on the individual as a rational actor, one who makes utilitarian choices in a particular social and economic context. The individual, who sees a corrupt act, is able to weigh rationally his moral scruples, fear of official sanctions, public disapproval, the potential material gains and psychological effects of his/ her action. Evidently, while the desire for gain might be strong, the legal and moral context is subject to change and, thus, is able to alter the outcome of the calculation. In that sense, Maingot (1994) argues that elements such as moral sentiments and fear of public disapproval must carry a powerful counter weight.

III. What are the elements that shape corruption perception?

As we have mentioned above, corruption is a cultural phenomena which varies depending on societies but also on people. Taking this into account, it is possible to consider objective and subjective aspects that influence the perception of corruption. In this section, we emphasize the micro foundations of corruption at the individual and country level.

Cábelková (2001) studies the incentives to take corrupt actions and he holds that this phenomenon is affected by individual perception about the level of corruption and the authority's level of tolerance. This perception may affect both the demand and supply of corrupt actions. The author indicates that the perception of corruption may influence the level of corruption in two opposite ways. 1) When people perceive that the level of corruption is high it is likely that: a) citizens think that a bribe is needed and b) government employees do not consider that a bribe is improper. Hereby, a bribe is thought to be necessary and it seems unlikely that this bribe would not be accepted. 2) In turn, government employees could consider this activity as risk-free and with low probability of detection. Therefore, corruption increases.

According to Rose-Ackerman (2001), there are six categories that capture the most important incentives for corruption: 1) the bureaucracy may be charged with allocating a scarce benefit to many individuals and firms using legal criteria other than willingness to pay, 2) civil servants may have little incentive to do their jobs well, given their pay scales and the level of internal monitoring, 3) private firms and individuals seek to reduce the costs imposed on them by governments (taxes, customs duties and others regulations), 4) governments frequently transfer large financial benefits to private firms through procurement contracts, privatizations, and the award of concessions, 5) the judiciary has the power to impose costs and transfer resources between litigants and 6) elected politicians can accept illegal payoffs both to fund their campaigns and to enrich themselves.

One possible explanation for corruption is based on the premise that rules are asymmetric and highly costly and therefore corruption could be interpreted as a tax. The fulfillment of a rule supposes a benefit and a certain cost. The cost of the rule is a function of the lost in time and the needed information to fulfill it; both elements are costly so that, people may find it profitable to bribe. As they are costly, rules and laws modify the decision making process (Ghersi, 2006). Therefore, corruption could be seen as a tax or as insurance because rules are asymmetric and costly.

When we ignore ethical considerations, the most relevant conclusion is that the cost of legality is inversely proportional to an individual's income. A higher income makes it easier to access information. Consequently, rules and laws have asymmetric effects, which distort individual behavior (Ghersi, 2006).

Moreover, You and Khagram (2005) show that income inequality is a significant determinant of corruption. With the increased inequality, the rich, as a class or as interest group, can use lobbying, political contributions or bribery to influence law-implementing processes (bureaucratic corruption) and to buy favorable interpretations of the law (judicial corruption). Additionally, the authors argue that income inequality also influences corruption perception and habituates norms about corruption in the following way: if inequality is high, "the rich are likely to believe that corruption is an acceptable way of preserving their societal position as this behavior goes unpunished and social networks of corruption expand" and people will more easily justify their corrupt activities as inequality increases".

Corruption also could be analyzed as insurance. Given an asymmetric and costly institutional context, people buy this insurance when they bribe a government employee to protect themselves against costly rules. People's attitudes towards bribes vary depending on their risk preferences; risk averters would be more likely to pay an insurance premium (a bribe) than risk-lovers.

Moreover, the costs associated with a bribe are three-fold. First, the social cost. According to Coase (1960), an actor (business firm, individual, etc.) initiating an action does not necessarily

bear all the costs or reap all the benefits of that action. Those that the actor does bear are the private costs; those that the actor does not bear are the external costs. The sum of these two is the social cost of the action. Second, the money cost of the bribe itself which could be seen as an opportunity cost. Finally, the penalties levied for violations. In the last case, the role of the government matters because the amount of the expected costs depends on individual's perception about the intensity of the actions to avoid corruption (it depends on the enforcement, the likelihood of being caught and prosecuted, and the severity of the punishment if convicted).

Given the mentioned objective aspects, when the fulfillment of a rule implies high costs, decisions will vary among individuals depending on their values and moral views, which modify the perception of the expected costs and expected benefits. Ceteris Paribus, to bribe would not mean the same to people depending on their values. While a person could be against bribery regardless of the perceived level of corruption, someone else' views could depend on the existing level of corruption. For example, Melgar, Rossi and Smith (2008), found that religiosity has a significant role in explaining the level of corruption, people who attend religious services once a week or more frequently tend to perceive a lower level of corruption while some specific religions are not significant (Roman Catholics and Protestant).

Finally, the formation of individual perceptions about the level of corruption is affected by the access to information and the capability to analyze this information. Personal experience has a significant role; it depends on the interaction among citizens and corrupts civil servants. Obviously, there are additional sources of information about corruption such as the communication media (written press and broadcast) or word of mouth.

IV. Data source and methodology

As mentioned, the data source is GALLUP Public Opinion poll, the field work was carried out in 2007. The questions used in the survey questionnaire to identify respondent's perception of corruption are:

- 1. Is corruption widespread throughout the government in this country, or not?
 - a. Yes
 - b. No
- 2. Is corruption widespread within businesses located in this country, or not?
 - a. Yes
 - b. No

In this case, we focus on determining which elements shape people perception of corruption and the impact of those elements. Moreover, given the mentioned questions we generated two binary variables:

- 1. CORRUP_GOV = 1 if respondent answer YES to the first question and 0 in other case
- CORRUP_PRIV = 1 if respondent answer YES to the second question and 0 in other case

Table 1 shows the weighted frequency distribution of the answers to those questions in the whole sample. We do not include other cases such as: do not know or do not answer.

Insert Table 1: Answers

Considering those facts and that probit model aims at determining how different individual characteristics affect the dependent variable (corruption perception), we estimate probit models in each case.

Finally, in order to compare results, in all cases we estimated two versions. In the first version included fix effects, dummies variables that take into account country of residence. Moreover, all models were estimated taking into account the whole sample and two sub-samples: Europe and America. As we expected that some variables representing country characteristics play a relevant role, the second version of the models includes variables such as: Gross Domestic Product per capita, GINI index etc. The complete description of independent variables is included in table 2.

Insert Table 2: Description of independent variables

V. Results

Corruption perception may depend on individual characteristics but it is expected that country characteristics (history, culture, economic performance, politic characteristics, etc.) play a relevant role. Assuming that this is true, we estimate both types of probit models. All models include the same group of individual characteristics and while the first two models include variables regarding countries characteristics, the second group includes fix effects.

In those models, the estimated parameters do not provide direct information on the relationship between the independent and dependent variables. Substantive interpretations are usually based on the marginal effects of the independent variables. With the computation of marginal effects, we could establish the impact of variables such as sex, age, religion among others on individual opinions on corruption. For this reason, tables 4.1 and 4.2 show the change in the probability of thinking that corruption is widespread throughout the government or within businesses in respondent's country.

Insert Table 3: Probit models with country characteristics (marginal effects)

Insert Table 4: Probit models with fix effects (marginal effects)

As it can be seen from tables 3 and 4, the probabilities of perceiving corruption are very high.

1.1. Individual characteristics

We find that there is a significant gender bias. With the exemption of the Americas; in the case of perception of corruption at the private sector, men are more likely to perceive a lower level of corruption. Tables 3 and 4 show two important results: a) the change in the probability is higher when we consider corruption at the public sector and b) this change is weaker in the case of the Americas.

The estimated models also show that age plays a significant and negative role regarding corruption perception at the public sector. However, only in Latin America, age influences corruption perception at the private sector in opposite direction.

Regarding marital status, we find that those who are married tend to perceive lower levels of corruption at the private sector. However, the opposite is true in the case of those who are divorced. Being divorced increases the probability of perceiving corruption at both, private and public sector. It is worth noting that, once again Latin American is the exemption: being divorced does not influence the perception of corruption at the public sector in the Americas.

Moreover, if significant, the number of children (under 15 years old), reduces corruption perception at the public and private sector.

Living in urban areas shows an ambiguous effect. Taking into account fix effect models (table 4), we find that this characteristic does not play a relevant role. However, models in table 3 show that the fact of living in urban areas reduces the perception of corruption at the public sector and only in the case of the Americas, reduces perception of corruption at the private sector.

Finally, religion and religiosity play a relevant role. Those who consider that the religion is an important part of his/ her daily life are more likely to perceive a higher level of corruption (at both private and public sector), while religiosity effect depends on the sub-sample.

1.2. Country characteristics and fix effects

As we have said above, our models include 78 countries and more than 57,000 observations. We find that people who live in richer countries (measured by GDP per capita) tend to perceived lower corruption and the effects are higher in the case of corruption at the public sector.

Moreover, inequality also plays a relevant role. The whole sample models show that inequality (measured by Gini Index) always reduces the perception of corruption. However, taking into account sub-samples models we found that in the cases of the Americas and Europe inequality increases the perception of corruption at the private sector. At the public sector, the same is true for Europe while inequality is not significant for the Americas.

Table 4 reports the marginal effects of the estimated models with fix effects. The table shows that the majority of dummies representing country of residence are significant and they have mostly a positive sign. This result could be interpreted as people who live in those countries perceive higher levels of corruption that people who live in U.S.

It is worth noting that only in 12 cases (among 78); we find a negative sign regarding both private and public corruption. It could be seen that among those countries are some of the nations with the highest standards of life (such as: Denmark, Finland, Netherlands, Norway, Sweden, Switzerland, etc.) and Uruguay.

Moreover, we find that only in one case, Greece, the perception of corruption at the public sector decreases while the perception of corruption at the private sector increases.

Insert figure 2: fix effects

Given our previous results, we analyzed whether there is a relationship between both types of corruption. Figure 2 shows that the rankings seem to be related. In order to prove this hypothesis, we performed a Spearman's rank correlation test, which displays the correlation coefficients for selected variables. The null hypothesis established was that the variables were independent.

As expected we found that those rankings are correlated and the correlation coefficient is 86.87 (the null hypothesis was rejected at 1%).

VI. Conclusions

We analyzed the perception of corruption at the public and private sector. To do that, we estimated probit models and computed its marginal effects. Our dataset included 78 countries and more than 57,000 observations.

The models showed that the probabilities of perceiving corruption are high, more than 70%. We found that some individual characteristics matters in shaping corruption perception. For example, men are more likely to perceive a lower level of corruption than women, and older people tend to perceive lower levels of corruption at the public sector. However, only in Latin America, age influences the perception of corruption at the private sector in opposite direction. Regarding marital status, we found that those who are married tend to perceive lower levels of corruption at the private sector and in general, being divorced increases the probability of perceiving corruption at both, private and public sector. In addition, if significant, the number of children (under 15 years old), reduces the perception of corruption at the public and private sector. Moreover, religion and religiosity play a relevant role. Those who consider that religion is an important part of his/ her daily life are more likely to perceive a higher level of corruption (at both private and public sector), while religiosity effect depends on the sub-sample.

Taking into account country characteristics, we found that people who live in richer countries are more likely to perceive lower level of corruption and the effects are higher in the case of corruption at the public sector. What is more, inequality also matters. While whole sample models show that inequality (measured by Gini Index) reduces corruption perception; taking into account sub-samples models we found that in the cases of the Americas and Europe inequality increases the perception of corruption at the private sector. At the public sector, the same is true for Europe. However, inequality is not significant in the case of the Americas.

Regarding fix effects models, we found that the majority of dummies representing country of residence are significant and the majority of them show a positive sign. This result means that

people who live in those countries perceive higher levels of corruption that people who live in US. We also found evidence that the perception of corruption reduces only in 12 cases, those countries are some of the richest countries of the sample (Denmark, Finland, Netherlands, Norway, Sweden, Switzerland, etc.) and Uruguay. Moreover, we identified that the perception of corruption at the public sector decreases while perception of corruption at private sector increases in only one case: Greece,

Finally, we analyzed whether there is a relationship between both types of corruption and we found evidence that the rankings were correlated and the correlation coefficient was 86.87 (the null hypothesis was rejected at 1%).

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Annex – Tables and figures

	CORRUPT_GOV	CORRUPT_PRIV
Categories	Distribution	Distribution
Yes	73.74%	76.32%
No	26.26%	23.68%
Total	100%	100%

Table 1 - Distribution of answers

Figure 1 -	Distribution	of answers
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|--|

SEX	1 if being a man
AGE	Respondent age
MARRIED	1 if married or living as married
DIVORCED	1 if divorced
WIDOW	1 if widow
URBAN	1 if living in urban areas
RELIGION	1 if religion is an important part of his/her daily life
ATTEND	1 if attending a place of worship or religious service within the last seven days
CHILDREN	Number of children under 15 years of age living in his/her home
LGDPXCAP	Logarithm of Gross domestic Product per capita (Atlas Method, 2005)
GINI	Gini Index (2005)
COUNTRY_I	1 if living in country i

	CORRUPT_PRIV		CORRUPT_GOV			
	ALL COUNTRIES	EUROPE	AMERICAS	ALL COUNTRIES	EUROPE	AMERICAS
PROBABILITY	77.64	76.85	75.53	74.99	71.81	75.59
SEX	-0.023***	-0.039***	-0.009	-0.34***	-0.057***	-0.013*
	[0.004]	[0.006]	[0.008]	[0.004]	[0.006]	[0.008]
AGE	0.000	0.000	0.001**	-0.001***	-0.001***	-0.001***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
MARRIED	-0.012***	-0.011*	-0.020**	-0.006	-0.010	-0.006
	[0.004]	[0.007]	[0.009]	[0.004]	[0.007]	[0.009]
DIVORCED	0.032***	0.034***	0.031**	0.035***	0.055***	0.008
	[0.007]	[0.011]	[0.014]	[0.008]	[0.012]	[0.014]
CHILDREN	-0.010***	-0.008***	0.003	-0.01***	-0.004	0.001
	[0.002]	[0.003]	[0.003]	[0.002]	[0.003]	[0.003]
URBAN	-0.002	-0.004	-0.018**	-0.002**	-0.024***	-0.024***
	[0.004]	[0.006]	[0.008]	[0.004]	[0.006]	[0.008]
RELIGION	0.039***	0.059***	0.046***	0.023***	0.040***	0.038***
	[0.004]	[0.010]	[0.011]	[0.005]	[0.007]	[0.010]
RELIGIOSITY	-0.015***	-0.010	-0.011	-0.004	-0.010	0.021**
	[0.004]	[0.007]	[0.009]	[0.004]	[0.008]	[0.008]
GDP_pc	-0.115***	-0.182***	-0.092***	-0.135***	-0.245***	-0.098***
	[0.003]	[0.005]	[0.008]	[0.003]	[0.006]	[0.007]
GINI	-0.126***	0.227***	0.516***	-0.047**	0.425***	-0.009
	[0.023]	[0.066]	[0.072]	[0.024]	[0.073]	[0.071]
Observations	57,800	24,449	13,268	57,800	24,449	13,268
Pseudo R-squared	0.06	0.10	0.06	0.07	0.13	0.04
Robust standard errors ir	Robust standard errors in brackets					
* significant at 10%; **	significant at 5%; ***	significant at 1%				

Table 3 - Probit models with country characteristics (marginal effects)

	CORRUP_PRIV		CORRUP_GOV		
PROBABILITY	80.40		77.55		
	Robust standard			Robust standard	
	Marginal effect	errors in brackets	Marginal effect	errors in brackets	
SEX	-0.016***	[0.004]	-0.025***	[0.004]	
AGE	0.001***	[0.000]	-0.001**	[0.000]	
MARRIED	-0.011***	[0.004]	-0.008*	[0.004]	
DIVORCED	0.030***	[0.007]	0.024***	[0.008]	
CHILDREN	-0.001	[0.002]	0.001	[0.002]	
URBAN	0.006	[0.004]	0.002	[0.002]	
RELIGION	0.018***	[0.005]	0.010**	[0.010]	
RELIGIOSITY	-0.024***	[0.004]	-0.018***	[0.005]	
ALBANIA	0.176***	[0.005]	0.178***	[0.009]	
ARGENTINA	0.150***	[0.010]	0.156***	[0.123]	
ARMENIA	0.145***	[0.007]	0.186***	[0.007]	
AUSTRIA	-0.051***	[0.086]	-0.120***	[0.023]	
AZERBAIJAN	0.086***	[0.013]	0.150***	[0.011]	
BANGLADESH	0.135***	[0.008]	0.117***	[0.012]	
BELARUS	0.083***	[0.014]	0.088***	[0.016]	
BELGIUM	-0.029	[0.019]	-0.027	[0.021]	
BOLIVIA	0.151***	[0.008]	0.096***	[0.014]	
BRAZIL	0.101***	[0.011]	0.119***	[0.012]	
BULGARIA	0.196***	[0.003]	0.226*** [0.003]		
CANADA	-0.160***	[0.021]	-0.013 [0.017]		
CAMBODIA	0.156***	[0.007]	0.158*** [0.009]		
CHILE	0.032*	[0.016]	-0.010	[0.019]	
COLOMBIA	0.140***	[0.009]	0.141***	[0.011]	
COSTA RICA	0.120***	[0.010]	0.145*** [0.011]		
CROATIA	0.184***	[0.004]	0.206*** [0.005]		
CZECH REP.	0.179***	[0.005]	0.178***	[0.008]	
DENMARK	-0.319***	[0.025]	-0.408*** [0.025]		
DOMINICAN REP.	0.117***	[0.011]	0.072*** [0.017]		
ECUADOR	0.159***	[0.006]	0.021***	[0.004]	
EL SALVADOR	0.122***	[0.011]	0.157***	[0.010]	
ESTONIA	0.123***	[0.011]	0.162***	[0.010]	
FINLAND	-0.446***	[0.025]	-0.537***	[0.023]	
FRANCE	0.036**	[0.016]	0.113***	[0.013]	
GEORGIA	0.099***	[0.012]	0.119***	[0.013]	

Table 4 -	Probit models	with fix	effects	(marginal	effects)
ruore i	1 100n modelb	** 1111 11/1	erreets	(Inter Sinter	crice(b)

GREECE0.157***[0.007]-0.094***[0.022]GUATEMALA0.066***[0.014]0.110***[0.013]HAITI0.156***[0.009]0.173***[0.011]HUNGARY0.183***[0.004]0.182***[0.007]INDIA0.164***[0.005]0.183***[0.006]INDONESIA0.182***[0.004]0.218***[0.004]IRAN0.062***[0.013]0.085***[0.014]IRELAND-0.086***[0.021]-0.109***[0.023]ISRAEL0.172***[0.005]0.199***[0.006]ITALY0.189***[0.003]0.202***[0.005]JAMAICA0.184***[0.005]0.214***[0.005]JORDAN0.072***[0.014]0.034*[0.018]KAZAKHSTAN0.154***[0.007]0.196***[0.006]LATVIA0.188***[0.004]0.215***[0.004]MACEDONIA0.179***[0.004]0.154***[0.010]
GUATEMALA0.066***[0.014]0.110***[0.013]HAITI0.156***[0.009]0.173***[0.011]HUNGARY0.183***[0.004]0.182***[0.007]INDIA0.164***[0.005]0.183***[0.006]INDONESIA0.182***[0.004]0.218***[0.004]IRAN0.062***[0.013]0.085***[0.014]IRELAND-0.086***[0.021]-0.109***[0.023]ISRAEL0.172**[0.005]0.199***[0.005]JAMAICA0.184***[0.005]0.214***[0.005]JORDAN0.072***[0.014]0.034*[0.018]KAZAKHSTAN0.154***[0.007]0.196***[0.006]LATVIA0.188***[0.004]0.215***[0.004]MACEDONIA0.179***[0.004]0.154***[0.010]
HAITI0.156***[0.009]0.173***[0.011]HUNGARY0.183***[0.004]0.182***[0.007]INDIA0.164***[0.005]0.183***[0.006]INDONESIA0.182***[0.004]0.218***[0.004]IRAN0.062***[0.013]0.085***[0.014]IRELAND-0.086***[0.021]-0.109***[0.023]ISRAEL0.172***[0.005]0.199***[0.006]ITALY0.189***[0.003]0.202***[0.005]JAMAICA0.184***[0.005]0.214***[0.005]JORDAN0.072***[0.014]0.034*[0.018]KAZAKHSTAN0.175***[0.006]0.174***[0.006]LATVIA0.188***[0.004]0.215***[0.004]MACEDONIA0.179***[0.004]0.154***[0.010]
HUNGARY0.183***[0.004]0.182***[0.007]INDIA0.164***[0.005]0.183***[0.006]INDONESIA0.182***[0.004]0.218***[0.004]IRAN0.062***[0.013]0.085***[0.014]IRELAND-0.086***[0.021]-0.109***[0.023]ISRAEL0.172***[0.005]0.199***[0.006]ITALY0.189***[0.003]0.202***[0.005]JAMAICA0.184***[0.005]0.214***[0.005]JORDAN0.072***[0.014]0.034*[0.018]KAZAKHSTAN0.175***[0.006]0.174***[0.008]KYRGYZSTAN0.154***[0.007]0.196***[0.006]LATVIA0.188***[0.004]0.215***[0.004]MACEDONIA0.179***[0.004]0.154***[0.010]
INDIA0.164***[0.005]0.183***[0.006]INDONESIA0.182***[0.004]0.218***[0.004]IRAN0.062***[0.013]0.085***[0.014]IRELAND-0.086***[0.021]-0.109***[0.023]ISRAEL0.172***[0.005]0.199***[0.006]ITALY0.189***[0.003]0.202***[0.005]JAMAICA0.184***[0.005]0.214***[0.005]JORDAN0.072***[0.014]0.034*[0.018]KAZAKHSTAN0.154***[0.007]0.196***[0.006]LATVIA0.188***[0.004]0.215***[0.004]MACEDONIA0.179***[0.004]0.154***[0.010]
INDONESIA0.182***[0.004]0.218***[0.004]IRAN0.062***[0.013]0.085***[0.014]IRELAND-0.086***[0.021]-0.109***[0.023]ISRAEL0.172***[0.005]0.199***[0.006]ITALY0.189***[0.003]0.202***[0.005]JAMAICA0.184***[0.005]0.214***[0.005]JORDAN0.072***[0.014]0.034*[0.018]KAZAKHSTAN0.175***[0.006]0.174***[0.008]KYRGYZSTAN0.154***[0.007]0.196***[0.004]MACEDONIA0.179***[0.004]0.154***[0.010]
IRAN0.062***[0.013]0.085***[0.014]IRELAND-0.086***[0.021]-0.109***[0.023]ISRAEL0.172***[0.005]0.199***[0.006]ITALY0.189***[0.003]0.202***[0.005]JAMAICA0.184***[0.005]0.214***[0.005]JORDAN0.072***[0.014]0.034*[0.018]KAZAKHSTAN0.175***[0.006]0.174***[0.008]KYRGYZSTAN0.154***[0.007]0.196***[0.006]LATVIA0.188***[0.004]0.215***[0.004]MACEDONIA0.179***[0.004]0.154***[0.010]
IRELAND-0.086***[0.021]-0.109***[0.023]ISRAEL0.172***[0.005]0.199***[0.006]ITALY0.189***[0.003]0.202***[0.005]JAMAICA0.184***[0.005]0.214***[0.005]JORDAN0.072***[0.014]0.034*[0.018]KAZAKHSTAN0.175***[0.006]0.174***[0.008]KYRGYZSTAN0.154***[0.007]0.196***[0.006]LATVIA0.188***[0.004]0.215***[0.004]MACEDONIA0.179***[0.004]0.154***[0.010]
ISRAEL 0.172*** [0.005] 0.199*** [0.006] ITALY 0.189*** [0.003] 0.202*** [0.005] JAMAICA 0.184*** [0.005] 0.214*** [0.005] JORDAN 0.072*** [0.014] 0.034* [0.018] KAZAKHSTAN 0.175*** [0.006] 0.174*** [0.008] KYRGYZSTAN 0.154*** [0.007] 0.196*** [0.006] LATVIA 0.188*** [0.004] 0.215*** [0.004] MACEDONIA 0.179*** [0.004] 0.154*** [0.010]
ITALY0.189***[0.003]0.202***[0.005]JAMAICA0.184***[0.005]0.214***[0.005]JORDAN0.072***[0.014]0.034*[0.018]KAZAKHSTAN0.175***[0.006]0.174***[0.008]KYRGYZSTAN0.154***[0.007]0.196***[0.006]LATVIA0.188***[0.004]0.215***[0.004]MACEDONIA0.179***[0.004]0.154***[0.010]
JAMAICA0.184***[0.005]0.214***[0.005]JORDAN0.072***[0.014]0.034*[0.018]KAZAKHSTAN0.175***[0.006]0.174***[0.008]KYRGYZSTAN0.154***[0.007]0.196***[0.006]LATVIA0.188***[0.004]0.215***[0.004]MACEDONIA0.179***[0.004]0.154***[0.010]
JORDAN0.072***[0.014]0.034*[0.018]KAZAKHSTAN0.175***[0.006]0.174***[0.008]KYRGYZSTAN0.154***[0.007]0.196***[0.006]LATVIA0.188***[0.004]0.215***[0.004]MACEDONIA0.179***[0.004]0.154***[0.010]
KAZAKHSTAN0.175***[0.006]0.174***[0.008]KYRGYZSTAN0.154***[0.007]0.196***[0.006]LATVIA0.188***[0.004]0.215***[0.004]MACEDONIA0.179***[0.004]0.154***[0.010]
KYRGYZSTAN 0.154*** [0.007] 0.196*** [0.006] LATVIA 0.188*** [0.004] 0.215*** [0.004] MACEDONIA 0.179*** [0.004] 0.154*** [0.010]
LATVIA 0.188*** [0.004] 0.215*** [0.004] MACEDONIA 0.179*** [0.004] 0.154*** [0.010]
MACEDONIA 0.179*** [0.004] 0.154*** [0.010]
MALAYSIA 0.092*** [0.012] 0.114*** [0.013]
MEXICO 0.099*** [0.013] 0.146*** [0.012]
MOLDOVA 0.178*** [0.005] 0.195*** [0.006]
MOROCCO 0.191*** [0.003] 0.204*** [0.005]
NEPAL 0.173*** [0.006] 0.170*** [0.009]
NETHERLANDS -0.052*** [0.020] -0.147*** [0.023]
NEW ZEALAND -0.370*** [0.026] -0.399*** [0.026]
NORWAY -0.098*** [0.021] -0.303*** [0.025]
PAKISTAN 0.165*** [0.006] 0.171*** [0.009]
PANAMA 0.176*** [0.005] 0.199*** [0.006]
PARAGUAY 0.147*** [0.008] 0.187*** [0.007]
PERU 0.167*** [0.006] 0.208*** [0.005]
PHILIPPINES 0.161*** [0.006] 0.184*** [0.007]
POLAND 0.197*** [0.003] 0.223*** [0.003]
PORTUGAL 0.175*** [0.005] 0.152*** [0.010]
ROMANIA 0.199*** [0.002] 0.194*** [0.006]
RUSSIA 0.187*** [0.004] 0.213*** [0.004]
SINGAPORE -0.307*** [0.026] -0.452*** [0.025]
SLOVAKIA 0.138*** [0.004] 0.220*** [0.003]
SLOVENIA 0.129*** [0.009] -0.013 [0.020]
SOUTH KOREA 0.133*** [0.009] 0.130*** [0.011]
SPAIN 0.135*** [0.009] 0.097*** [0.014]

SRI LANKA	0.146*** [0.008]		0.147***	[0.010]	
SWEDEN	-0.088***	[0.021]	-0.140***	[0.026]	
SWITZERLAND	-0.115***	[0.022]	-0.268***	[0.025]	
TAJIKISTAN	0.126***	[0.011]	0.124***	[0.014]	
THAILAND	0.178***	[0.004]	0.202***	[0.005]	
TURKEY	0.188***	[0.004]	0.129***	[0.011]	
UKRAINE	0.185***	[0.004]	0.216***	[0.004]	
UNITED KINGDOM	-0.168*** [0.023]		-0.196***	[0.024]	
URUGUAY	-0.036* [0.019]		-0.206***	[0.025]	
UZBEKISTAN	0.030	[0.018]	-0.015	[0.022]	
VENEZUELA	0.114***	[0.011]	0.064***	[0.016]	
VIETNAM	-0.038*	[0.023]	-0.011	[0.023]	
Observations	57800		57800		
Pseudo R-squared	0.	20	0.22		

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



Figure 2 – Relationship between country effects on corruption perception