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Perception of corruption in Uruguay: the effects of the sector of employment, life-course adjustments and education

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**Perception of corruption in Uruguay: the effects of the sector of
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Abstract

In 2004, Transparency International's Corruption Perception Index ranks Uruguay at 28, seven positions higher than in 2001, scores changed from 5.1 to 6.2 (a higher score means less perceived corruption). In addition, there were no relevant corruption scandals in that period. Hence, we should ask: what are the foundations of corruption perception? We assess this at the micro-level. Our dataset is the module on Citizenship of the International Social Survey Program (that was carried out in 2004) and we estimate ordered a probit model.

We find that some economic variables are significant. In particular we show that those who work in private enterprises tend to perceive higher levels of corruption as do unemployed people. Hence those who may be on the supply side of the bribe “market” perceive a higher level of corruption than those on the demand side (civil servants). In addition, our main contribution to the existence literature is showing that socio-demographic variables play a relevant role. We show that those who belong to the youngest group, who took, at least, high school studies and those who belong to a religious group are more likely to perceive a higher level of corruption.

Key words: corruption, public opinion, microeconomic behavior, ISSP, Uruguay.
JEL Classification: D70, K42.

Resumen

En el año 2004, Uruguay se ubicaba en el puesto 28 del Índice de Percepción de Corrupción de Transparencia Internacional, siete posiciones más arriba del puesto alcanzado en el año 2001. La puntuación de Uruguay, pasó de 5.1 a 6.2 (un puntaje más alto implica un menor nivel de corrupción percibido). Además, en esos años no se registraron continuos o generalizados problemas de corrupción en el país. Dada esta estabilidad, surge la siguiente interrogante: ¿cuáles son los determinantes de la percepción de corrupción? Para responder esta pregunta a nivel micro, se utilizó la base de datos de la red *International Social Survey Program* (del año 2004) y se estimaron modelos probit.

Se concluye que las características económicas son relevantes para determinar el nivel individual de corrupción percibido. En particular, aquellos que trabajan en el sector privado tienden a percibir mayores niveles de corrupción al igual que los desempleados. Por lo tanto, en aquellos individuos que se encuentran del lado de la oferta en el “mercado de coimas”, la percepción de corrupción es mayor que la de aquellos que se encuentran del lado de la demanda (funcionarios públicos). Por otro lado, la contribución más relevante del trabajo, es demostrar que las características socio-demográficas también juegan un rol relevantes. Se encuentra que los más jóvenes, los más educados y aquellos que pertenecen a un grupo religioso, son los grupos que tienden a percibir mayores niveles de corrupción.

Palabras clave: corrupción, opinión pública, comportamiento microeconómico, ISSP, Uruguay.
Clasificación JEL: D70, K42.

1. Introduction

The concept of corruption is employed in several areas and its connotations vary widely depending not only on societies but also on people. Since the definition of corruption depends on social and cultural factors, the same is true for corruption perception. Therefore, we should ask: 1) what are the individual characteristics that shape corruption perception? We analyze the foundations of corruption perception in the case of Uruguay.

Although there are very different definitions, it is possible to find some elements in common which are connected with the misuse of public office with the purpose of making private gains. This paper focuses on this wide concept of corruption.

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: people may pay illegal and informal taxes which allow them to avoid a rule, a penalty etc. The cost of the rule is a function of the lost in time and the information needed to fulfill it. Consequently, rules and laws modify the decision making process (Ghersi, 2006). Moreover, You et al. (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).

You et al. (2005) 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”.

Cábelková (2001) holds that the incentives to take corrupt actions are affected by individual perception about the level of corruption and the authority’s level of tolerance. Olken (2007) argues that the availability of information is relevant; he shows that providing audit results to the public, may be a useful complement to formal punishments

when voting. Therefore, corruption perception is shaped by individual characteristics such as education and the capability to analyze information.

Corruption perception differs from the current level of corruption but the later may influence the former. According to Rose-Ackerman (2001) low salaries and poor monitoring at the public sector are not only incentives for corruption but also those facts hike corruption perception even when a corrupt action does not occur. The same is true when the bureaucracy may be charged with allocating a scarce benefit to many individuals or when the costs imposed on the private sector by governments are high.

Our aim is assessing what are the most important determinants of corruption perception in Uruguay. This issue has not previously study for that country. In the period 2001-2004 there were no press reports that mentioned relevant corruption scandals and Uruguay ranked higher in the Transparency International's Corruption Perception Index (to position 28 from position 35 or to 6.2 points from 5.1 points). Hence, we analyze the foundations of people's perception at the micro-level. We expect that socio-economic factors play a relevant role in shaping corruption perception in the case of Uruguay. For example, live-course adjustments may be relevant as well as the capacity of analyzing the information, and beliefs. Therefore, age, education and religiosity may shape people's corruption perception.

The data source is the module on Citizenship of the 2004 International Social Survey Program (ISSP). The survey asks respondents (approximately 1.000) 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.

Ordered probit models were estimated in order to study the impact of these variables on corruption perception. We conclude that there are socio-demographic variables which are significant at determining corruption perception, variables such us: religion, age and the level of education, among others.

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

2. Corruption: concept and general view

Corruption is interpreted as cultural phenomena. The concept of corruption is employed in several areas and its connotations vary widely depending not only on societies but also on people. In effect, social rules may differ among cultures; while in one society an action could be accepted as normal in another one the same action could be a corrupt action.

When assessing corruption perception, the first problem is arriving at a definition which lends itself to cross-cultural research. As we mentioned, 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. Although all people have a definition of behavior labeled as corrupt, there might be cultural differences in the way "wrongfully" is defined by people. Consequently, there is need for a balance between the generalizations of this concept and the capability of explaining it in a specific historical context and culture in which it occurs.

In economic terms, there are several ways to define corruption. For example, Werlin (1973) characterizes corruption as the use of public office for making private gains and Blackburn et al. (2004) consider public sector corruption as the illegal, or unauthorized, profiteering by officials who exploit their positions to make personal gains. Focusing on public sector, Shleifer et al. (1993), define it as the sale of state assets by civil servants in order to make private gains.

Pope (2000) asserts that corruption can take place where there is a combination of opportunity and inclination. He explains that corruption can be initiated from either side of the transaction: a bribe being offered to an official, or the official requesting an illicit payment. Those offering bribes may do so either because they want something they are not entitled to, and bribe the official to bend the rules, or because they believe that the official will not give them their entitlements without some inducements being offered. On the other hand, officials may refuse to serve clients unless a bribe is paid. In this case, it is possible to differ between small bribes practiced by civil servants and the great corruption of high public officials involving large and hidden bribes in overseas bank accounts.

3. Corruption perception

Institutional stability hardly depends on corruption perception. It might favored not only the growth of instability but also the persistent deterioration of the relationships among individuals, institutions and States. The loss of political legitimacy that many governments have experienced, the polarization of power and bureaucratic inefficiency are some of the political consequences of corruption. Moreover macro-economic consequences of corruption are severe: it reduces investment and the rate of growth (Mauro, 1995); the provision of services such as education and health may be distorted (Mauro, 1997) and it alters public investment projects that could be easily manipulated by high-level officials to get bribes (Tanzi and Davoodi, 1997).

Some previous studies analyzed the link between corruption and political systems. In general, it was found that democratic systems tend to reduce corruption. Olken (2007) argues that when people could vote, the available information may influence on the decision hence providing audit results to the public, may be useful. Montinola et al. (2002) held that political competition was posited to reduce corruption because the freedom of information and association limit the opportunities for corrupt actions (by helping with the monitoring of public officials). Rose-Ackerman asserts that a competitive electoral process can give politicians an incentive to reveal the untrustworthy behavior of their opponents and to be trustworthy themselves. As there are proofs regarding this relationship we will focus on the satisfaction with the democratic system rather than the democracy itself.

Additionally, Kim (2005) study the case of Korea and he find that associational involvement and social trust negatively influence political trust when demographic factors were taken into account. She also holds that political corruption is the most relevant determinant of political trust. Hence, we expect that the interaction with other people shape corruption perception.

Corruption perception differs from the current level of corruption but the later may influence the former. Mauro (2004) find that when a high rate of people is stealing from the government, individual's decisions would be based not only on a higher marginal product of stealing because the chances of being caught are lower and it will be profitable to allocate more time to rent seeking (and less time to productive activities).

In line with the previous argument and considering cot-benefits analysis, Cábelloková (2001) shows that the incentives to take corrupt actions were affected by corruption perception and the authority's level of tolerance. Corruption perception may affect both the demand and supply of corrupt actions. She finds that the cost of legality is inversely proportional to an individual's income: a higher income makes easier the access to information. In line with this, Ghersi (2006) shows that rules and laws have asymmetric effects, which distort individual behavior.

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.

Additionally, 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 the citizen and corrupts civil servants. Obviously, there are additional sources of information about corruption such as the media (radio, TV, written press) or information from relatives and friends.

As Cábelková (2001) indicates, the perception of corruption may influence the level of corruption in two opposite ways. When people perceive that the level of corruption is high it is likely that: 1) citizens think that a bribe is needed and 2) 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. In turn, government employees could consider this activity as risk-free and with low probability of detection. Therefore, corruption increases. On the other hand, when the perception of corruption is high, the government may take greater actions in order to reduce corruption. Therefore, corruption could decrease.

Finally, corruption perception has favored the growth of institutional instability and the deterioration of the relationships among individuals, institutions and states. Moreover, the perception of economic corruption would have more devastating effects than corruption itself; it generates a “culture of distrust” towards some institutions.

4. Data source and methodology

As mentioned, the data source is the module on Citizenship of the 2004 *International Social Survey Program* (ISSP).¹ 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 Uruguay?*

¹ More information is available on ISSP website: www.issp.org.

The answers correspond to the following categories =

- 0 if respondent answers “almost none”,
- 1 if respondent indicates “just a few” or “some of them” and
- 2 if respondent says “many of them” or “almost all”.

Table 1 shows the weighted frequency distribution of the answers to this question.

Insert Table 1: Answers

Given this question, we constructed the dependant multinomial variable and consequently we estimate an ordered probit model. The model aims at determining how different individual characteristics affect the formation of opinions towards corruption among government employees.

The description of the variables is reported in table 2.

Insert Table 2: Description of independent variables

The estimated parameters in ordered probit models do not provide direct information on the relationship between the independent and dependent variables (Long, 2001). Substantive interpretations are usually based on the prediction of probabilities and functions of these probabilities. These predictions are made for different groups of individuals and the marginal effects of the independent variables are calculated. If the independent variable is binary, the marginal effect is the change from not having a particular characteristic to having it.

With the estimation of ordered probit models, the impact of variables such as age, gender, human capital, religion among others, on individual opinion on corruption will be established.

5. Results

The ordered probit model is reported in table 3. As could be seen, all cuts are significant at 1%. We calculate the marginal effects and their standard errors after estimation.

Rather than reporting coefficients, table 4 reports the discrete change in the probability for each significant independent variable. The marginal effects are nonlinear functions of the estimated parameters, so they cannot generally be inferred directly from the parameter estimates.

Insert Table 3: The model

Insert Table 4: Partial effects

As expected, life-course adjustments matter. The first dummy on respondent's age is significant and due to positive sign we can conclude that youngest people are more likely to perceive a higher level of corruption than older people. Additionally, it was found that there is no significant difference among middle-aged people and the oldest group. It is often argued that more recent generations have been socialized in more troubled situations and more impersonal environments. This effect may be causing that young Uruguayans perceive a higher corruption level.

Secondly, as it was also expected, the level of education makes a significant difference. It was found that people who have taken high school studies or a higher level tend to perceive a higher level of corruption (the probability increases 9.7 pp and 8.4 pp, respectively). Hence, the capability of accessing and assessing to information play a relevant role.

Additionally, the sector of employment is determinant of corruption perception. Those who are working in a private enterprise are more likely to perceive a higher level of corruption than civil servants. In this case, the probability to perceiving the highest level of corruption also increases (7.1 pp). This result implies that those who may offer a bribe or may be asked for a bribe consider that corruption is higher than those who might request the bribe.

Regarding employment status, it is worth noting that those who are unemployed tend to perceive a lower level of corruption (due to the negative sign). In particular, the probability reduces 10.7 pp. On the other hand, union membership is not significant as well as there is no significant difference among those who are retired and others.

Moreover, values and beliefs also shape corruption perception. When religious groups are considered, it was found that people who identify with some religious group are more likely to perceive a higher level of corruption than those who do not (the mentioned probability rose 8.2 pp). On the other hand, the degree of religiosity (measured by weekly attendance to religious services) does not influence the perception of corruption.

The estimated model also shows that the interaction with other people plays a relevant role. The variable connected with the number of people with whom respondents interact daily is significant and registered a positive sign. This result implies that when we change from someone who interacts, diary, with less than four people to someone who interacts with more people, the probability increases 9.5 pp.

Finally, regarding socio-demographic variables, it was found that gender is not significant, indicating that there is no significant difference among women and men. Some dummies variables representing different marital status were included but they are no significant as well as the variable on place of residence.

6. Conclusions

We found that some economic variables have a significant impact on corruption perception. Those who are employed in the private sector are more likely to perceive a higher level o corruption than those who are employed in the public sector. Regarding bribes, this result implies that those that may be on the supply side perceive higher corruption that those on the demand side (civil servants). Moreover, those who are unemployed tend to perceive a lower level of corruption.

However, our main conclusion is that there are some non-economic variables which have a significant impact on corruption perception. Summing up, we found that life adjustments, education, beliefs and interaction with others play a relevant role and in the expected direction.

Firstly, people who belong to the youngest group are more likely to perceive a higher level of corruption than older people. Secondly, the level of education matters, people who took high school studies or a higher level tend to perceive a higher level of corruption. Thirdly, regarding values and beliefs, while religiosity is not significant, it was found that people who identify with some religious group are more likely to perceive a higher level of corruption than those who are atheistic. Finally, the estimated model shows that the interaction with others plays a relevant role. This result implies that the greater the number of people with who people interact, the higher the probability to perceive a high level of corruption.

References

- Blackburn, K., Bose, N. and Haque, M.E., 2004. Endogenous corruption in economic development. *University of Nottingham, GEP Research Paper n° 2004/16*.
- Cábelková, I., 2001. Perceptions of Corruption in Ukraine: Are they correct? *CERGE-EI, working paper n° 176*.
- Ghersi, E., 2006. *Economía de la corrupción*. Caracas: Centro de la Divulgación del Conocimiento Económico.
- Kim, J., 2005. Bowling together isn't a cure all: the relationship between social capital and political trust in South Korea. *International Political Science Review*, 26(2), pp. 193-213.
- Mauro, P., 1995. Corruption and Growth. *Quarterly Journal of Economics*, 110 (August), pp. 681-712.
- Mauro, P., 1997. The effects of corruption on growth, investment and government expenditure: a cross-country analysis. In Kimberly Ann Elliot, ed. *Corruption in the Global Economy*. Washington: Institute for International Economics.
- Mauro, P., 2004. The persistence of corruption and slow economic growth. *IMF Staff Papers*, 51(1), pp. 1-18.
- Montinola, G. and Jackman, R.W., 2002. Sources of corruption: a cross-country study. *British Journal of Political Science*, 32, pp. 147-70.
- Olken, B., 2007. Monitoring corruption: evidence from a field experiment in Indonesia. *Journal of Political Economy*, 115(2), pp. 200-49.
- Pope, J., 2000. *Confronting corruption: the elements of a national integrity system*. Berlin: Transparency International.
- Rose-Ackerman, S., 2001. Trust, honesty and corruption: reflection on the state-building process. *European Journal of Sociology*, 42, pp. 27-71.
- Shleifer, A. and Vishny, R.W., 1993. Corruption. *Quarterly Journal of Economics*, 108(3), pp. 599-617.
- Tanzi, V. and Davoodi, H., 1998. Corruption, Public Investment, and Growth. *IMF Working Paper 97/139*.
- Werlin, H., 1973. The Consequences of Corruption: The Ghanaian Experience. *Political Science Quarterly*, 88(1), pp. 71-85.
- You, J.S. and Khagram, S., 2005. A Comparative Study of Inequality and Corruption. *American Sociological Review*, 70(1), pp. 136-57.

Annex – Tables

Table 1 - Distribution of answers

<i>Taking into account your experience, how much is extended corruption among public employees?</i>	
Categories	Frequency
Almost none	5,7%
Just a few or some of them	59,3%
Many or almost all	35,0%
Total	100

Table 2 - Description of independent variables

Area	Variable	Values
Human Capital	SCHOOL	1 if respondent took primary school
	HIGH_SCHOOL	1 if respondent took secondary school
	UNIVERSITY	1 if respondent took university studies
Religion and religiosity	RELIGION	1 if respondent identifies with some religious group
	RELIGIOSITY	1 if the person attends religious services every week or more frequently
Place of residence	MONTEVIDEO	1 if respondent lives in Montevideo
	INTERIOR	1 if respondent does not live in Montevideo
Labor market	UNEMPLOYED	1 if unemployed
	RETIRED	1 if retired
	PUBLIC_S	1 if working in public sector
	PRIVATE_S	1 if working in a private enterprise
	IND_CTAP	1 if being self-employed
	UNION	1 if belonging to an union
Other socio-demographic variables.	GENDER	1 being a woman
	AGE1	1 if respondent's age is between 18 and 39 years old
	AGE2	1 if respondent's age is between 40 and 60 years old
	AGE3	1 if respondent's age is 61 years old or more
	MARRIED	1 if married or living as married

Area	Variable	Values
	DIVORCED	1 if divorced
	WIDOWED	1 if widowed
Others variables	CONTACTS	1 if the number of people with who respondent interact daily is higher than 4 people and 0 in other case

Table 3 - The model

	GOV_EMP
GENDER	-0.015 (0.091)
AGE1	0.300** (0.173)
AGE2	-0.139 (0.162)
HIGH_SCHOOL	0.265*** (0.104)
UNIVERSITY	0.224* (0.137)
PRIVATE_S	0.192** (0.110)
IND_CTAP	0.082 (0.119)
UNEMPLOYED	-0.309** (0.159)
RETIRED	0.030 (0.173)
UNION	-0.104 (0.127)
MONTEVIDEO	0.082 (0.093)
RELIGIOSITY	0.136 (0.176)
RELIGION	0.228** (0.103)
MARRIED	-0.025 (0.110)
DIVORCED	-0.031 (0.141)
WIDOWED	0.176 (0.193)
CONTACTS	0.273** (0.123)
_cut1	-0.908***

	GOV_EMP
	(0.230)
_cut2	1.162***
	(0.228)
Observations	927

Notes: 1 Robust standard errors in parentheses

2. * significant at 10% level; ** significant at 5% level; *** significant at 1% level

Table 4 - Marginal effects

	GOV_EMP
AGE1	0,110
	(0,063)
HIGH_SCHOOL	0,097
	(0,038)
UNIVERSITY	0,084
	(0,053)
PRIVATE_S	0,071
	(0,040)
UNEMPLOYED	-0,107
	(0,051)
RELIGION	0,082
	(0,036)
CONTACTS	0,095
	(0,041)
Observations	927

Notes: 1 Robust standard errors in parentheses